Hardner & Gullison

An Evaluation of the Performance of Conservation Projects Funded by the National Fish and Wildlife Foundation and Bureau of Land Management General Call (1995-2002)

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Hardner & Gullison Associates, LLC is a private consulting firm that provides technical assistance in the field of conservation to foundations, conservation groups, governments, and corporations. This is the second of two major evaluations the firm has performed for National Fish and Wildlife Foundation. The firm has conducted other relevant evaluations and studies of conservation effectiveness in Africa, Asia, Latin America, and North America. In addition to evaluation, Hardner & Gullison Associates assists in the establishment of new conservation projects, conservation finance, economic analysis, protected areas management, and corporate environmental management. Members of the firm include among their past and present clients the World Bank, Inter-American Development Bank, Asian Development Bank, U.S. Agency for International Development, The Nature Conservancy, World Wildlife Fund, Conservation International, National Parks Conservation Association, Environmental Defense, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, BP and other corporations. For more information, please visit *www.hg-llc.com*.

EXECUTIVE SUMMARY

In December of 2004, National Fish and Wildlife Foundation (NFWF) contracted Hardner & Gullison Associates, LLC (HGA) to evaluate its grant-making partnership with the Bureau of Land Management (BLM). The objectives of the evaluation were to measure the performance and cost-effectiveness of a portfolio of conservation projects funded under this partnership. Based on these results, HGA was asked to provide suggestions on best management practices to improve future grant making.

The evaluation focused on a portfolio of 179 conservation projects, implemented by 123 grantees. The projects were implemented throughout the western United States. NFWF disbursed a total of US$8.85 million in project grants, and including counterpart "matching" funding from other donors to this portfolio, total project funding reached approximately US$27.8 million.

HGA surveyed 46 experts from academia, government, and conservation organizations, distributed across the geographic area of the project portfolio, to assist in the orientation of the study and to develop metrics with which to evaluate project performance. This work formed the basis of a ranking system for project performance in terms of *design*, *implementation*, and *conservation outcomes*. Using this system, the evaluators interviewed project grantees and visited selected sites to develop project performance scores.

Projects fell into four categories: habitat and species conservation; ecological research and monitoring; environmental education; and capacity building. Research and monitoring projects had the highest ratings for conservation outcomes, followed by capacity building, while performance tended to be poorer for habitat and species conservation and education.

One remediable factor that often limited the success of projects was small geographic scale relative to the ecological needs of conservation target species or ecosystems. Another factor of concern across the portfolio of projects was monitoring. A minority of projects had adequate baseline and periodic monitoring data for their conservation targets, making it difficult to generate quantitative measures of the ecological response to project activities.

Finally, NFWF relies on the dedicated conservation professionals that comprise its pool of grantees. Listening to grantee feedback is one way to ensure that future applicants for grants remain plentiful and competitive. The evaluation indicates that most grantees have high regard for NFWF staff, but are often frustrated with administrative processes. Continuously seeking ways to streamline processes without losing accountability will be an important challenge for the foundation.

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INTRODUCTION

The objectives of this evaluation are to measure the performance and cost-effectiveness of a portfolio of conservation projects funded under a partnership between National Fish and Wildlife Foundation (NFWF) and the Bureau of Land Management (BLM). Building on the lessons learned in the evaluation, the study identifies best management practices for improving future grant making.

The NFWF-BLM grant making partnership is the result of a decision by the federal government to pass funding for conservation on BLM lands through NFWF, which provides administrative oversight over the allocation of those resources and generates financial leverage by facilitating matching funding through its grant-making process. The grant-making partnership, also known as the "General Call," provides grants to regional BLM offices as well as non-governmental organizations involved in conservation projects that impact BLM lands.

The portfolio evaluated in this study includes projects implemented during the period 1995 to 2002. It includes 179 projects, administered by 123 grantees, and a total of $8.8 million in funding from NFWF, and $27.8 million in total project funding including matches. Projects in the portfolio fall into four broad categories: *habitat and species conservation*; *research and monitoring*; *education*; and *capacity building*.

Three major challenges presented themselves in this evaluation. First, the objectives of the NFWF-BLM partnership are very broad. The partnership is guided by the institutional objectives described in the NFWF *Conservation Plan* and BLM's *Strategic Plan*, which are too general for meaningful measurement of the contribution of the portfolio to achieving these objectives. Second, the diversity of project contexts in the portfolio makes it difficult to draw comparisons about their performance. And lastly, most project grantees were unable to measure *directly* many of the ecological changes their projects sought to make. Failure of grantees to measure project performance was due to various causes, such as the absence of baseline data, inability to isolate project impacts in a complex landscape management context, and technical and funding constraints for monitoring.

Our evaluation approach addresses these challenges and generates concrete performance ratings for projects of a variety of types, in a range of ecosystems, and with varying levels of available data. We accomplish this by using direct and indirect indicators of project performance. In doing so, we take a significant step forward in understanding the strengths and weaknesses of the NFWF-BLM General Call, and provide a basis for improving the foundation's future impact.

THE STATE OF CONSERVATION EVALUATION

While there is a burgeoning literature in the field of conservation biology regarding many of the targets of the NFWF-BLM portfolio, literature that describes methodologies for comprehensive evaluation of conservation programs is surprisingly thin. In the last several years a major emphasis by donors and conservationists alike has generated enthusiasm for evaluating conservation effectiveness, but the results to date have been largely disjointed or often too abstract to guide practical application in the field.

In a recent editorial, a cast of prominent scientists challenge the conservation community to improve evaluation (Saterson et al. 2004). In this statement they highlight the importance of systematically evaluating the impacts and costs of individual approaches, and synthesizing site-specific information to enable comparisons of relative effectiveness among conservation approaches.

Indeed, this challenge is warranted in the opinion of Stem et al. (2005), who performed a recent review of existing conservation evaluation approaches. They find that the conservation community has yet to develop a common conceptual basis or terminology for evaluation, or reliable usage of available tools. They conclude that concerted and coordinated efforts are required to develop commonly accepted evaluation systems for the conservation community.

Answering that call are three recent initiatives that have taken collaborative approaches to developing indicators and evaluation systems. The first is The Climate, Community, and Biodiversity Alliance – a partnership of research institutions, corporations, and environmental groups formed to develop standards for conservation projects. The initiative has generated a scorecard system that allows third party evaluators to assess the contributions of projects (www.climate-standards.org).

The second, a joint effort between the energy sector and the conservation community entitled the Energy and Biodiversity Initiative (2004), describes the attributes of useful conservation indicators following the *SMART* philosophy – that is, indicators should be *specific*, *measurable*, *achievable*, *relevant*, and *timely*. Their document runs through a variety of conservation contexts and the application of different biodiversity indicators, emphasizing practicality, reliability, and interpretation of the data they generate.

The third is The Nature Conservancy's *Measures of Success* initiative. Parrish et al. (2003) lay out a framework for measuring the performance of protected areas. Their framework has four main components: 1) identifying a limited number of focal conservation targets; 2) identifying key ecological attributes for these targets; 3) identifying an acceptable range of variation for each attribute as measured by properly

selected indicators; and, 4) rating target status based on whether or not the target's key attributes exceed its acceptable range of variation.

Another recent initiative focuses on how to use monitoring data in the adaptive management of conservation projects. An array of conservation organizations including African Wildlife Foundation, Conservation International, The Nature Conservancy, Wildlife Conservation Society, World Wide Fund for Nature/World Wildlife Fund, Foundations for Success, Cambridge Conservation Forum, Enterprise Works Worldwide, and World Commission on Protected Areas, produced *Open Standards for the Practice of Conservation* (2004). This document develops a systematic approach to the process of monitoring and evaluation in conservation, composed of seven steps: 1) develop a conceptual model of the conservation target; 2) develop a written action plan and monitoring and evaluation system; 3) implement actions and monitoring; 4) analyze evaluation information on an ongoing basis and communicate results within project team; 5) adapt action plan and monitoring based on results; 6) develop a clear dissemination strategy for stakeholders; and 7) iterate the process.

Our study builds directly on concepts and methods presented in *Measures of Success* and *Open Standards for the Practice of Conservation*. Nevertheless, neither approach addresses the complexities of evaluating portfolios, such as the one analyzed in this report, with projects of various types and in different ecological contexts. Another significant difference is that our evaluation examines projects with a supposed final outcome, whereas the other approaches are best used to evaluate protected areas over time with no specified endpoint. In order to develop an evaluation approach for the needs of the NFWF-BLM portfolio, we supplemented techniques found in the literature with suggestions from a panel of experts convened for this study and insights from our own experience in the field.

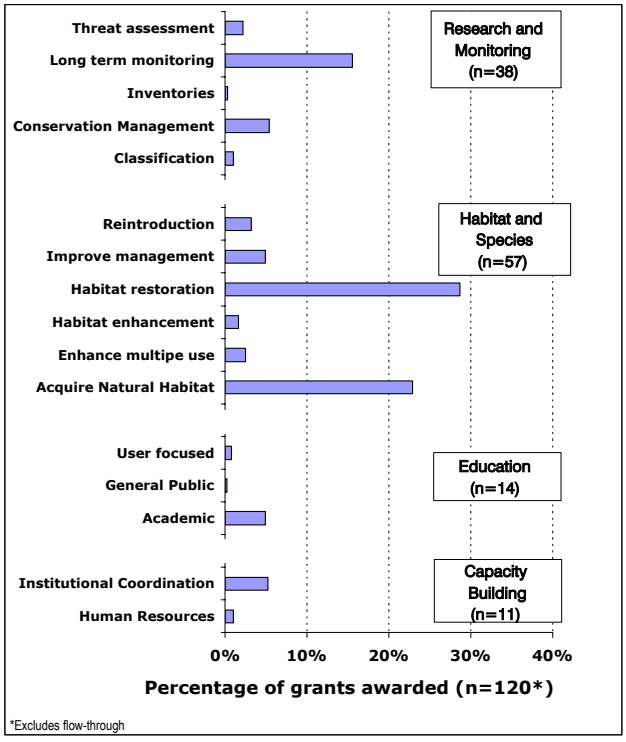
METHODS

Our evaluation involved three basic steps. First we organized the NFWF-BLM portfolio into distinct categories of projects that each required unique evaluation criteria. Second we developed an evaluation rating system. And third, we applied that system using information we collected on the projects in the NFWF-BLM portfolio. We carried out interviews and site visits to support the evaluation; a summary of these activities is provided in Appendix One.

Project Typology

Our first step was to develop a project typology to divide the NFWF-BLM portfolio into natural groupings of projects with similar characteristics (Figure 1). All projects fell into four categories provided to us by NFWF: *habitat and species conservation*; *research and monitoring*; *education;* and *capacity building*. We also divided each category into individual subcategories in an effort to recognize the considerable variation of projects within each category (see Appendix One). However, small sample sizes in each subcategory prevented us from analyzing projects at this level of detail.

Figure 1: Typology Breakdown of NFWF-BLM Portfolio



Evaluation Rating System

We developed a rating system based on conservation evaluation literature, input from 46 experts that we surveyed for the purposes of this evaluation, and our own experience in the field. From this, we identified a manageable set of "factors of success" characteristic of strong conservation projects at three stages of the project cycle: *design*, *implementation*, and *outcome*. Table 1 presents the factors of success for each stage.

Table 1: Factors of Success

Stage	*Factors of Success*
Design	Priority of species or habitat targeted Geographic scale of project Linkage between project activities and outcomes
Implementation	Planning Administration Monitoring Communication
Outcome	Scale of impact *Project Type: Habitat & Species* Response of conservation target Critical threats managed *Project Type: Education* Change in participants' knowledge Change in participants' attitudes Change in participants' behavior *Project Type: Capacity Building* Partnerships Critical threats managed *Project Type: Research & Monitoring* Use/adoption by resource managers Publication in peer-reviewed journals

A rating system describes the performance of a project at four levels ranging from "poor" to "excellent" for each factor of success. For example, *geographic scale* is a very important factor for any conservation project. The appropriate scale of a project is related to the biological needs of the conservation target. A poor project will fail to conserve an adequate spatial area of habitat to ensure the survival of the conservation target, while an excellent project will conserve its entire natural range. Table 2 describes the ranking system for geographic scale. In order to achieve a given ranking, a project must satisfy *all* conditions identified in the project descriptor. Appendix Two provides detailed descriptors for ranking all factors of success outlined in Table 1.

Table 2: Ordinal Ranking System
Factor of Success = *Geographic Scale*

Ranking	Descriptor
Excellent	Project includes established science-based model of conservation biology of target, including MDA, MVP, and SFE* Project scale exceeds minimum necessary to ensure species viability and/or support ecosystem structure and function, and extends over natural range of conservation target
Good	Project includes plausible science-based model of conservation biology of target, including MDA, MVP, and SFE Project scale exceeds minimum necessary to ensure species viability and/or ecosystem structure and function
Fair	Project includes conservation biology model of target, but requires substantial additional scientific research Project scale meets minimum necessary to ensure species viability and/or ecosystem structure and function
Poor	Project does *not* include conservation biology model of target Project scale does not meet minimum necessary to ensure species viability and/or ecosystem structure and function

* *Minimum Viable Population (MVP):* Population has 99% chance of remaining extant for 1000 years despite foreseeable effects of demographic, environmental, and genetic stochasticity, and natural catastrophes. See Shaffer. 1981. Minimum population sizes for species conservation. BioScience 31: 131-134; Primac, R. 2000. *A Primer of Conservation Biology:* Sunderland MA, Sinauer Associates, Inc. Publishers.
Minimum Dynamic Area (MDA): Amount of suitable habitat necessary to maintain minimum viable population (MVP). See *A Primer of Conservation Biology:* Sunderland MA, Sinauer Associates, Inc. Publishers.
Structure and Function of Ecosystem (SFE): Characteristic assemblages of species, demographic distributions, and energy and nutrient dynamics.

Project Evaluation

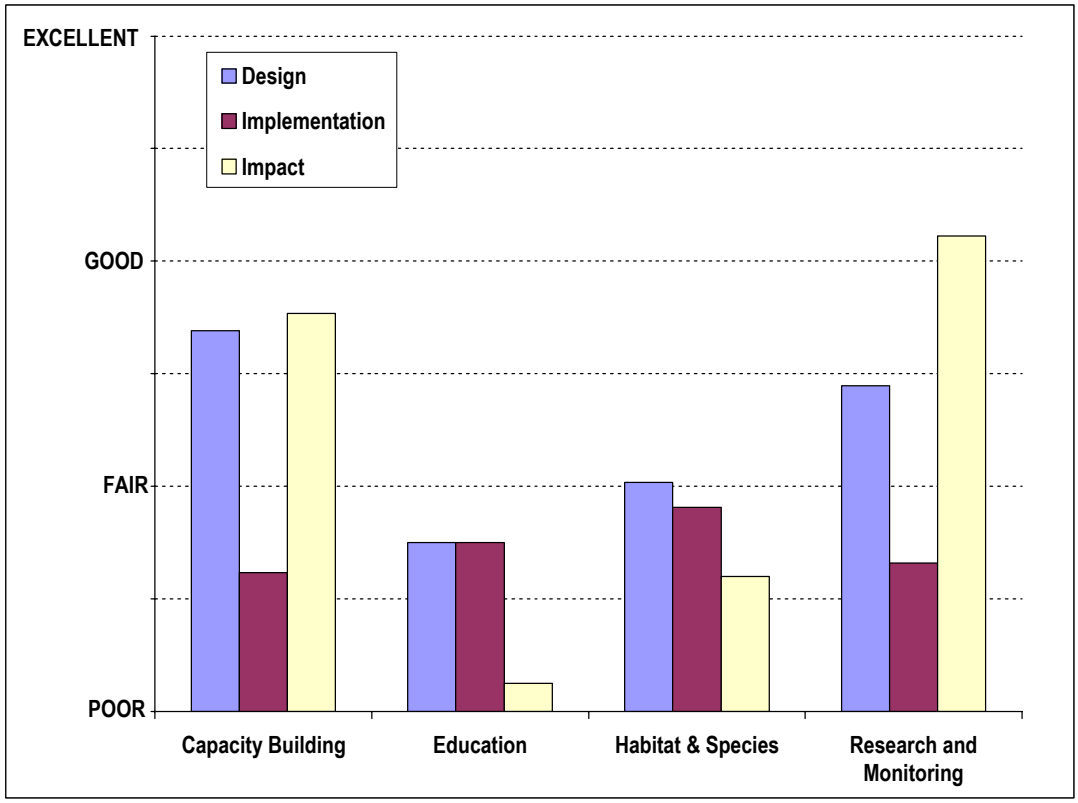
We applied the rating system by interviewing more than ninety percent of grantees of the General Call from the period 1995 to 2002. Results from interviews were cross referenced with project documents (proposals, progress reports, and final reports) in the official NFWF project files. In total, we interviewed 111 grantees who received 165 grants through the General Call. We selected a subset of projects for site visits, where we further validated the results of the telephone interviews, and also took the opportunity to discuss the practicality of performance measurement in the field. We conducted site visits of 34 grants, located in four states (CA, CO, OR, and UT). Appendix I provides a more detailed description of the data collection process.

For each project we generated ratings for the "factors of success" in each of the three stages of the project cycle. We also created an aggregate project score for each stage of the project cycle. Rather than use the average score for the various factors in each stage to create an aggregate score, we used the lowest score attained across the factors. This approach reflects the assumption that all factors are *necessary*, and no single factor or subset of factors is *sufficient*, to ensure successful conservation. In other words, we believe the axiom "a chain is only as strong as its weakest link" applies to the practice of conservation. For example, a habitat acquisition targeting sage grouse habitat may earn high marks for the mechanism chosen and the priority of the conservation target, but the project fails to deliver conservation if it is performed at too small a scale for the species to inhabit the acquired habitat. An average of "excellent" scores for the first two factors and a "poor" score for the third factor earns this project a rating of "fair" to "good." However, our approach generates a score of "poor" because the scale limitation prevents this project from delivering any conservation benefit for sage grouse. The "weakest-link" approach is unique to our evaluation, based on insights from our field experience rather than the evaluation literature.

RESULTS

Using the evaluation approach described in the previous section we measured the performance of projects in the NFWF-BLM portfolio. We rated projects using common criteria for design and implementation, and unique criteria developed for each category's outcome. Overall, the results indicate that the final outcome, or impact, of *research and monitoring* projects as well as *capacity building* were greatest. *Habitat and species conservation* and *education* projects did not perform as well. In all categories, however, the performance of the portfolio has improved over time, as we will illustrate in detail in subsequent figures in this section of the report. Figure 2 summarizes the portfolio's overall performance by project category. We will now present the performance ratings of the portfolio at the *design*, *implementation*, and *outcome* stages.

Figure 2: Overall Performance of NFWF-BLM Portfolio, By Project Stage



A Sample Evaluation: *Blanca Wetlands Restoration*

We evaluated each project in the NFWF-BLM portfolio using the rating matrix found in Appendix Two. Following is an example of a project evaluation, completed for the *Blanca Wetlands Restoration* project. This project received several grants from the NFWF-BLM partnership. Our detailed ratings and a description of our rationale is provided in the following table.

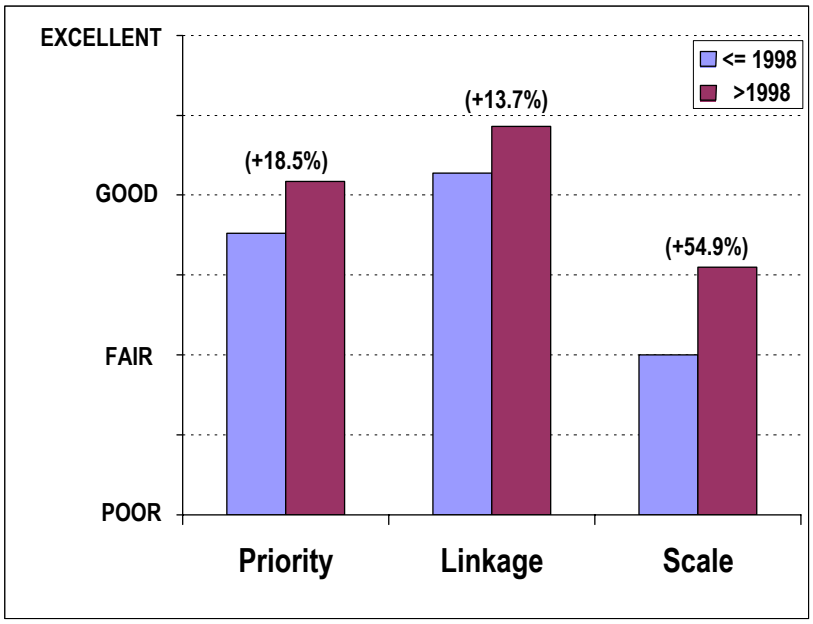
Project: Blanca Wetlands Restoration
Grantee: Bureau of Land Management
Location: Alamosa, Colorado
Project Description: Restored 10,000 acres of wetlands (*playas*) in Southern Colorado by replacing diverted surface water with water drawn from network of artesian wells. The restored habitat is utilized by numerous birds, including multiple threatened and endangered species, and is located along the migratory flyway.

Evaluation ratings for ***BLANCA WETLANDS***					
Factor of Success	**Rating**				**Comments**
	Excellent	**Good**	**Fair**	**Poor**	
Design					
Priority	X				Restored site provides habitat to a number of threatened and endangered species. Historically *playa* wetland ecosystems have been drained throughout Colorado, and restoration is considered a high priority, especially for bird populations. Blanca wetlands are located in narrow geographic funnel of the flyway.
Scale		X			NFWF funding contributed to a 10,000 acre restoration program. The area exceeds the size necessary to ensure the structure and function of the wetland ecosystems that are the target of the project. However, the ecosystem does rely on water reserves that are affected outside the geographic scope of this project, and therefore does not achieve the highest scale rating.
Linkage	X				The ecological mechanism by which the restoration occurs is scientifically understood and has been proven at this site and elsewhere. In large part, restoration is dependent on replenishing water to the site, although timing and water conditions are closely managed.
Implementation					
Planning		X			Project has clear written goals, objectives, and activities, with corresponding workplans and budgets. Stakeholders are clearly identified and there is an engagement strategy. However, project does not receive the highest rating because some critical stakeholders in regional water use management are outside the practical and political reach of this project.
Administration					Given the age of the project (1996), current project manager unable to comment on project administration details.
Monitoring		X			Project employs frequent monitoring of wetlands as part of its management of timing of flooding and water quality management. Monitoring relies heavily of qualitative observations and expert judgment, as funding for comprehensive quantitative ecological studies is not available. Management is directly adaptive to monitoring. Project does not receive the highest rating because project lacks solid baseline data and collects inadequate data to measure long-term trends.
Communication	X				Project clearly communicates, on a periodic and reasonable basis, results of its work to all relevant experts and stakeholders.
Outcome					
Scale of Impact		X			NFWF funding contributed to a 10,000 acre restoration program. The area exceeds the size necessary to ensure the structure and function of the wetland ecosystems that are the target of the project. However, the ecosystem does rely on water reserves that are affected outside the geographic scope of this project, and therefore does not achieve the highest scale rating.
Response of Target		X			The project has partially restored the structure and function of the ecosystem at this site. Complete restoration will require substantial additional time and resources.
Target Secured		X			This site is a secured BLM property, and all local threats appear to be well managed. The project does not achieve the highest rating because water users outside the geographic scope of this project may affect long-term viability of the water source necessary to maintain the wetland.

Design Performance

We evaluated the design of all projects with three core metrics: *priority* of species or habitat targeted; *geographic scale* of project; and, *linkage* of project activities to the expected conservation outcome. Capacity building projects performed best with respect to design, while education projects were the weakest, as shown in Figure 2. All factors improved between the two time periods analyzed (Figure 3).

Figure 3: Design Performance Ratings for NFWF-BLM Portfolio



- *Priority* -- Projects scored high when they clearly identified a conservation target, and that target was known to be a conservation priority, such as threatened or endangered species. Projects scored poorly when they had vague conservation goals and did not identify specific species or ecosystems of concern for conservation. *Capacity building* projects could be improved in terms of their focus on conservation priorities. *Habitat and species conservation* projects, on the other hand, tended to be much more focused on conservation priorities. This might be anticipated, as the relationship between the project and the conservation target is most tangible for this category. That said, a number of *habitat and species conservation* projects did fail to address species and ecosystems generally regarded as conservation priorities, either in terms of threatened or endangered status (or potential for listing) or other species identified by local and regional experts as important. Examples of poorly targeted projects include protection of the brown bat or development of watering holes for pronghorn antelope, neither of which are threatened or endangered species.

- *Geographic scale* -- Projects need to carry out their activities at a scale that is large enough to generate biologically significant long-term results. For *habitat and species* projects, determination of scale is generally straightforward. For *research and monitoring*, scale is interpreted as the area over which the results are scientifically applicable. For *education* projects, we consider the area where the human population is engaged. Lastly, the scale of *capacity building* projects relates to the area to be managed with the new infrastructure, training, personnel, or partnerships resulting from the project. In each case, the scale of project activities is compared to the requirements of the conservation target to determine whether they will impact sufficient populations or area to produce viable long-term ecological benefits. Small projects can achieve sufficient scale by integrating their efforts with complementary projects, or by establishing partnerships. If a project was small, but part of a regional effort to accomplish conservation at a larger scale, we rated the project by the scale of the greater initiative. Insufficient scale was the most common design problem for the project portfolio, and for most categories of projects it was the single most limiting factor in project performance. Often projects were "islands" of conservation in a larger unprotected landscape, or grantees were uncertain about the geographic requirements of their conservation targets.

- *Linkage* -- Grantees should be able to justify how their proposed activities will lead to the desired conservation outcomes, based on either scientific literature or past experience. Projects scored poorly when they could not demonstrate grounding in known and proven conservation practices. Habitat acquisition projects typically demonstrate strong linkage; an area is purchased, has an easement placed on it, and its management as a protected habitat is conducted by a qualified organization. Education projects often have more tenuous linkage, as specific educational experiences do not always have a documented effect on the behavior of the students towards a conservation target. For example, a program to conduct a conventional grade school curriculum outdoors was funded in this portfolio. While it is possible to imagine that such a program might generate more enthusiasm among children about nature, there is no means to verify that this program has an effect on any specific conservation target.

Limiting Factors of Design Performance

The design of a project strongly influences the conservation outcome. Regardless of how well a project is implemented, if it focuses on unimportant species for conservation, is conducted at too small a geographic scale, or is not based on a reasonable understanding of the actions needed to generate the desired outcome, the project will fail to generate conservation benefits. We considered a project to be limited by the factor that received the lowest score. Table 3 displays the frequency with which projects in each category are limited by a specific factor. Three project categories were most often limited by inadequate scale, and the fourth, *capacity building*, too often lacked focus on conservation priorities.

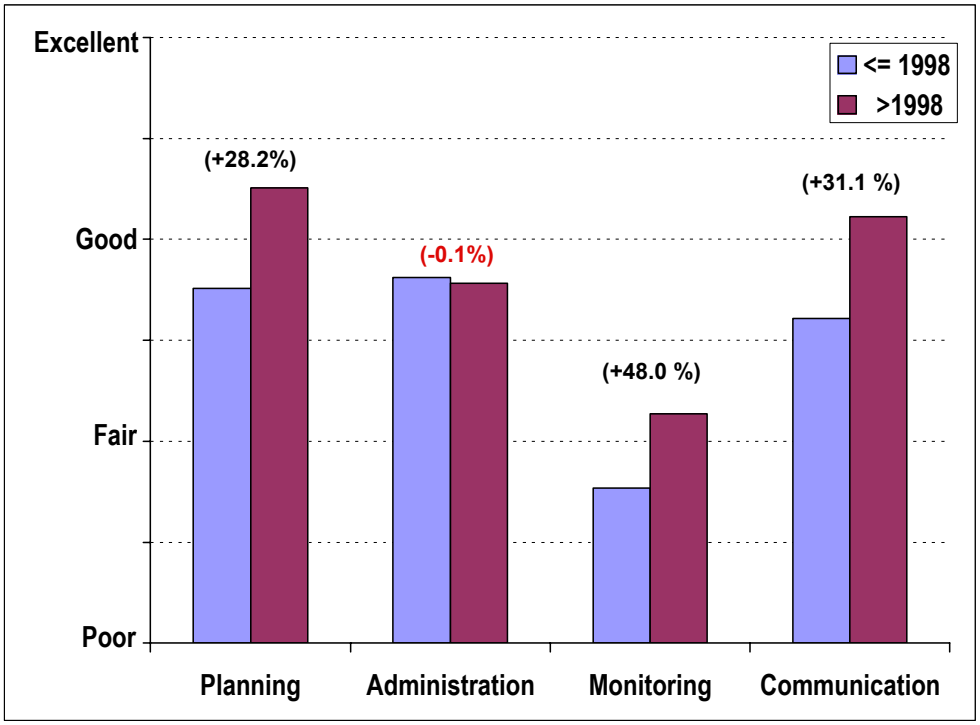
Table 3: Limiting Factors of Design Performance

Project Category	"Factor of Success" Limiting Design Performance		
	Projects limited by "Priority" Score	Projects limited by "Linkage" Score	Projects limited by "Scale" Score
Capacity Building	**53.8%**	7.7%	30.8%
Education	43.8%	43.8%	**68.8%**
Habitat and Species	20.7%	8.6%	**86.2%**
Research and Monitoring	21.6%	5.4%	**73.0%**

Implementation Performance

As is the case with design, we used a core group of metrics to evaluate the implementation of all four categories of projects. In this case, the factors of success were: *planning*; *administration*; *monitoring*; and *communication*. The portfolio of projects scored well on three of the four factors, with relatively poor performance on monitoring (Figure 4), which was the weakest link for performance in implementation. All project categories achieved similar implementation scores (Appendix I). For all factors, performance improved or remained the same between the time periods analyzed.

Figure 4: Implementation Performance Ratings for NFWF-BLM Portfolio



- *Planning* -- The essential elements of conservation project planning are clearly formulated goals, objectives and activities, a coherent workplan and corresponding budget, and a stakeholder engagement strategy. Excellent projects tend to have a logical framework or a similar planning document that lays out the "big picture" and workplans and budgets to provide the supporting detail of how a project will be implemented. Excellent projects also have a stakeholder map that identifies those parties that either are affected by or can affect the conservation project, and a mechanism for engaging them appropriately in planning and executing the project. Projects that most often scored poorly were small and of a short-term nature. Most likely the grantee did not see the need for comprehensive planning, nevertheless the impact of the project could have been enhanced if more planning had occurred because it likely would have resulted in better placement of the project within its regional land use management context.

- *Administration* -- Well administered projects satisfy two straightforward requirements, they are completed on time and within budget. We identified no patterns in the types of grantees or projects that are better administered than others, however, factors relevant to the conservation target, such as seasonality, did influence performance in ways outside the control of some grantees.

- *Monitoring* -- Successful projects monitor their own performance, both as a feedback to their own management, as well as for sharing results with others. Monitoring requires solid baseline data, a monitoring system, and the ability to analyze monitoring data and respond to the results by revisiting the project's conceptual model, key assumptions, project plan, and management techniques to improve project performance. Our evaluation found that baseline data and quality long-term monitoring is scarce for projects funded in the NFWF-BLM portfolio.

- *Communication* -- Excellent projects communicate their results to relevant stakeholders. The methodological basis for conservation is still nascent in many areas, so sharing lessons learned in the field is important. And because conservation rarely is accomplished in isolation of other actors, communicating to those affected by, or that may potentially affect a project is essential to ensuring project success. Projects that scored well communicated their results on a periodic basis with their key stakeholders.

Limiting Factors of Implementation Performance

No strong performance differences emerged across the different categories of projects (Table 4). The performance of all categories was limited by monitoring. This was largely explained by budget constraints for this activity -- a topic that we address in more detail later in the report.

Table 4: Limiting Factors of Implementation Performance

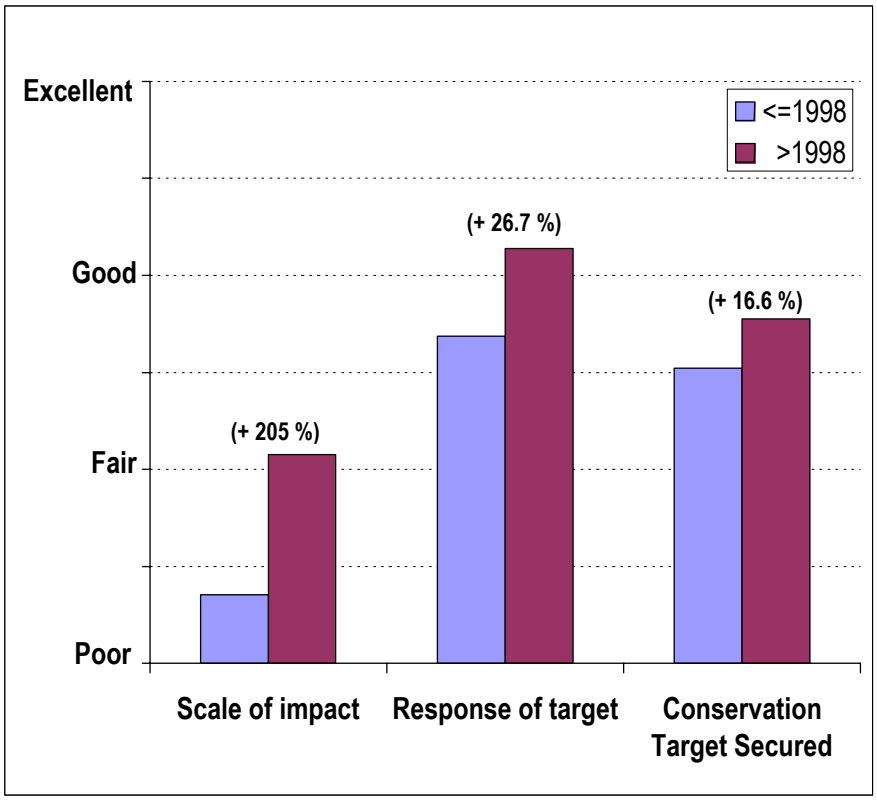
	"Factors of Success" Limiting Implementation Performance			
Project Category	Projects limited by "Planning" Score	Projects limited by "Administration" Score	Projects limited by "Monitoring" Score	Projects limited by "Communication" Score
Capacity Building	15.4%	15.4%	**84.6%**	23.1%
Education	43.8%	43.8%	**100.0%**	18.8%
Habitat & Species	32.1%	39.3%	**75.0%**	33.9%
Research & Monitoring	17.9%	30.8%	**66.7%**	7.7%

Outcome Performance

We rated the performance of project outcomes using unique criteria for each category of project to reflect the inherent differences in the ways they accomplish conservation. The categories with the best outcomes were *research and monitoring* and *capacity building*. *Habitat and species* and *education* projects did not perform as well, although the former category improved markedly over the two time periods examined here. Here, we treat each category in turn.

- *Habitat and Species Conservation* -- Performance of habitat and species projects depends on the geographic *scale* of project impacts relative to the biological requirements of the conservation target, the ecological *response* of the target, and the *management of all threats*. It is important to note that the scale of project's final impact may in fact be quite different from the scale at which the project was intended to impact in its design – for this reason we measure scale again as an outcome factor (the reader will recall that scale was a design factor). Again, the portfolio showed significant improvement for all factors over time, but there is still ample room for improvement (Figure 5). The same geographic scale problems identified in the design evaluation flowed through to project outcomes. Measurement of the conservation target's response was problematic for the many projects that had no baseline data or monitoring system – although this evaluation did accept anecdotal information where plausible. Lastly, many projects dealt with one particular threat to a conservation target, but ignored others. For example, a habitat acquisition may curtail the risk that land is developed, but if it does not also handle the threat of invasive species, the acquisition may not succeed in conserving the target habitat for the long term. Our ability to determine if threats to the target went unaddressed relied largely on our questioning during grantee interviews, but in-depth site visits confirmed that in most cases we did consistently identify the relevant threats in our interviews.

Figure 5: Outcome Performance Ratings for Habitat & Species Projects



Habitat & Species Projects Adapting to Local Conditions

Saguache Creek Corridor Protection and Owl Mountain Partnership

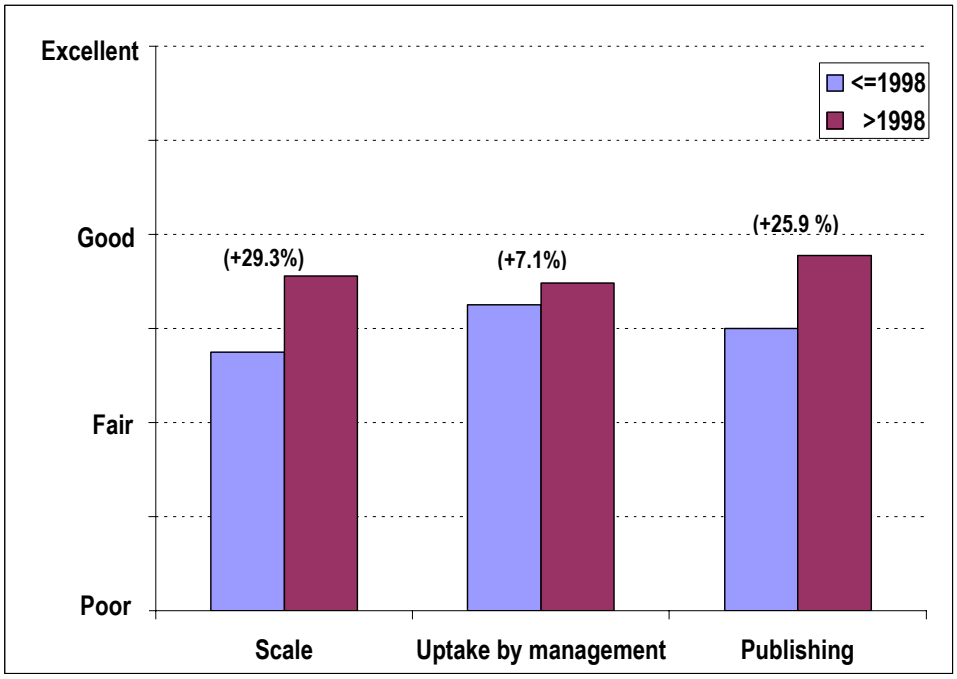
Saguache Creek Corridor Protection (right) and Owl Mountain Partnership (below left) provide an interesting contrast in approaches to habitat conservation in Colorado. At Saguache Creek, the Colorado Cattlemen's Association is working with landowners to place agricultural easements on their properties to prevent future development. While an excellent opportunity to maintain managed grassland, its primary drawback is that conservation is a secondary objective – maintaining rural lifestyles is the first. Landowners do not necessarily welcome external involvement in habitat management or monitoring for priority species on their properties.

In contrast, the Owl Mountain Partnership has developed rangeland management techniques that are beneficial to both the landowner and priority species. This project is entirely focused on direct active management with landowners and an intensive monitoring program for priority species, such as the Sage Grouse. Local landowners do not view easements favorably, so there are no assurances that future development of these properties can be avoided.

Both projects are working in the manner most suitable for local stakeholders, and their progress is impressive. There are, however, implications of these approaches that we are forced to consider in our ratings. Saguache Creek, for example, rates poorly for its lack of focus on conservation priorities, and because agricultural easements do not explicitly protect wildlife, the project does not achieve top marks for securing the target for the long-term. In the case of Owl Mountain, the project missed earning top marks because it also does not secure the target for the long term. Addressing such issues will be a challenge for these projects going forward, but in our opinion both projects are doing the best work possible in the practical context in which they operate.

- *Research and Monitoring* -- We measured the impact of research and monitoring projects with three factors: the number of relevant management regions, or geographic *scale*, where the results of the work were disseminated; the *uptake* and use of results by conservation managers; and, the quality of the work as measured by acceptance in peer-reviewed *publications*. The results indicate that research and monitoring projects performed at a consistently high level for all three factors, and that significant progress has occurred during the time period analyzed (Figure 6).

Figure 6: Outcome Performance Ratings for Research and Monitoring Projects



Successful Research and Monitoring
Great Salt Lake Waterbird Survey

A grant from NFWF enabled the BLM to participate in a large-scale long-term shorebird monitoring project in Utah. The grant covered BLM costs to incorporate the Salt Wells area into monitoring efforts of the neighboring Great Salt Lake. The results from the project demonstrated the tremendous importance of the area for birds, which in turn has led to strengthened management, and the area being designated an Important Bird Area. As a result, the project earned top marks for *uptake* of results by conservation managers.

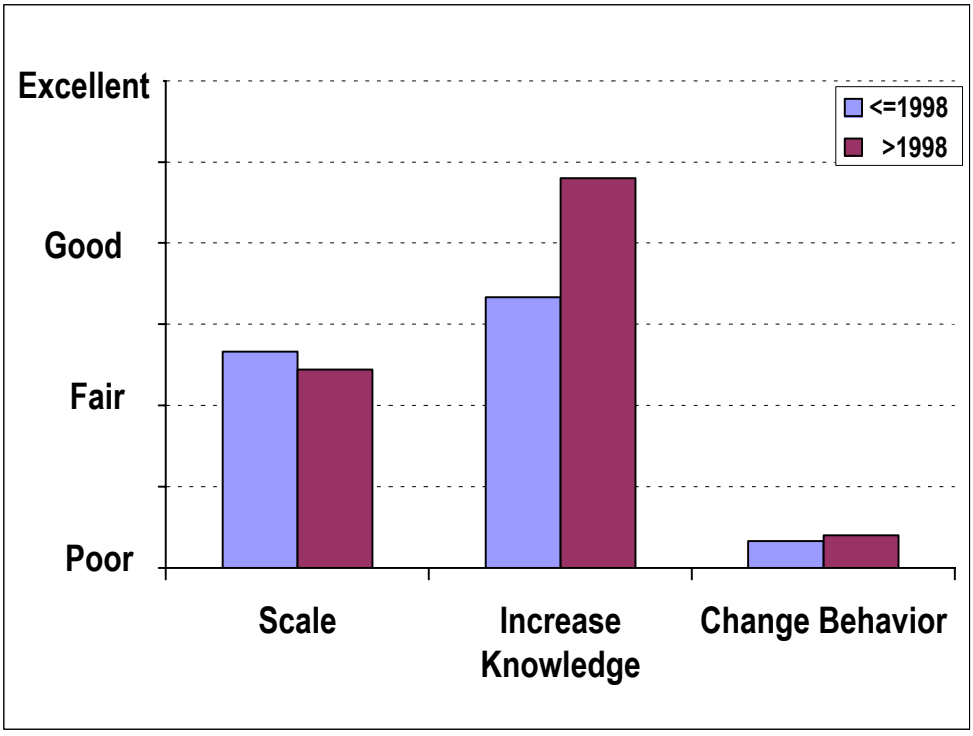
- *Education* -- Education projects were the most problematic in the portfolio. Successful projects should have an impact at a *scale* relevant to the conservation target, increase the *knowledge* of participants in the program, and through the educational process affect their *behavior* towards a conservation target.

  It is important here to distinguish between the objectives of *general* education and *targeted* education. Unlike general education which strives to increase the knowledge of the student for intellectual growth, targeted education seeks to change the way in which the student behaves. For example, a targeted education program to reduce forest fires seeks to change the behavior of outdoor recreationists and their use of campfires, whereas a general education program might cover a wider breadth of issues such as the role of fire in forest ecosystem

dynamics without regard to how this will affect behavior that prevents forest fires. It is our view that targeted conservation education fits the goals of the NFWF-BLM partnership, but general education does not. For this reason, we emphasize change in student behavior towards a conservation target as an indicator of project success. To our knowledge, the literature on environmental education does not address change in behavior in an analytic manner; however, in areas where evaluation of targeted education is more sophisticated (e.g. evaluation of HIV education programs) change in behavior is closely analyzed. We recognize that this approach may not be universally accepted, so we also include as a measure of performance the change in knowledge of the target population (Figure 7).

Our evaluation shows that education projects were very successful in increasing the knowledge of participating students, but in most cases there was no measure of changes in behavior that might affect specific conservation targets (Figure 7). One interpretation of these results is that the education projects were ineffective in generating measurable conservation outcomes. Another interpretation is that the impacts of education projects are too difficult to measure.

Figure 7: Outcome Performance for Education Projects



Measuring Success in Conservation Education
Hutton Junior Fisheries Biology Program

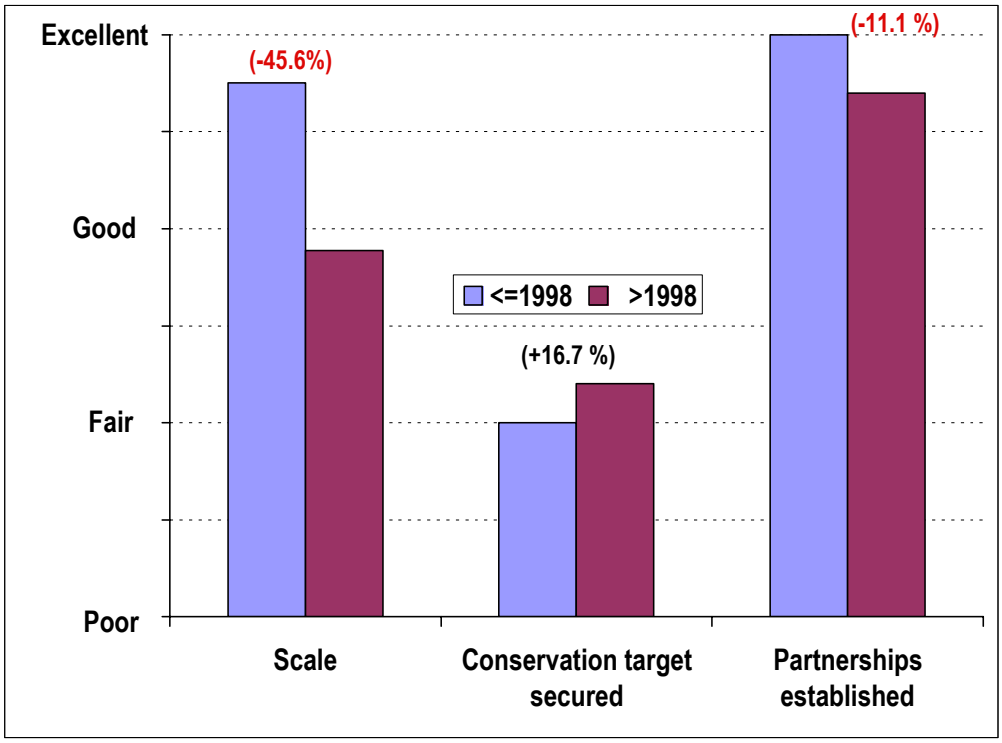
The Hutton Junior Fisheries Biology Program is an example of an education project that rated highly. This summer mentoring program teams high school students with fisheries professionals in the field and in the lab. The program was developed in response to projections that a large percentage of fisheries professionals will retire in the next five years, and few university students are being trained to fill those positions.

A strength of this program is its ability to monitor the response of student participants. Each student is tracked for 10 years to see whether their experience results in the election of fisheries science as a college major and ultimately a profession. By its fourth year, 160 students had completed the program, of which 113 have been successfully tracked. Of them, 46 are now in college studying fisheries, 42 are considering a fisheries focus, and 15 are in related fields.

- *Capacity Building* -- Excellent capacity building projects meet an institutional need for managing a conservation target. In this case, it is important to revisit the issue of *scale* – did the project succeed in improving management capacity over an area sufficient for the target species' or habitats' long-term survival? A capacity building project should also result in a long-term management solution, including *secure* funding, training, and infrastructure necessary for management activities. In many cases it is not necessary to build management capacity in a single institution – *partnerships* can be very effective for piecing together capacity for managing a given conservation target.

The portfolio of capacity-building projects performed best with respect to carrying out activities at a meaningful scale and establishing partnerships (Figure 8). It was weakest in terms of securing management capacity for the long term. At the root of this problem for many projects is the temporary nature of funding for conservation. Unless endowed conservation management can be arranged, long-term solutions are unlikely to be possible. We also noted a significant drop in performance as it relates to scale during the two time periods analyzed, but were unable to determine the underlying cause.

Figure 8: Outcome Performance for Capacity Building Projects



A Model for Capacity Building
Sustainable Northwest

Sustainable Northwest is an impressive grantee in the category of capacity building. Although each of their projects have different conservation targets they all follow a similar model: convene the community to determine the issue, build towards an informal working group, conduct an ecological and economic assessment, conduct a small demonstration project, monitor with scientists and the community, spread the learning to the community, and leave the informal stewardship group with enough capacity to start more projects and take the solution on themselves. Examples of independent groups spun off by Sustainable Northwest include Wallowa Natural Resources and Lake County Resources Initiative.

Limiting Factors of Outcome Performance

The limiting factors for outcome performance varied according to project category (Table 5). *Habitat and species* projects were most often limited by poor to fair performance in the scale of impact. *Research and monitoring* projects arguably had no standout limiting factor. *Education* projects were markedly limited by their ability to demonstrate changes in behavior of students towards a specific conservation target. And finally, the most frequent limiting factor for *capacity building* projects was the ability to secure the management of its conservation target for the long term.

Table 5: Limiting Factors of Outcome Performance

PROJECT CATEGORY	"Factors of Success" Limiting Outcome Performance (% projects)		
	Scale of impact	Response of target	Conservation target secured
Habitat and Species	**92.7%**	34.5%	25.5%
	Scale	Increase Knowledge	Change Behavior
Education	37.5%	0.0%	**87.5%**
	Sharing	Uptake by Management	Publishing
Research and Monitoring	40.5%	**45.9%**	43.2%
	Scale	Conservation Target Secured	Partnerships
Capacity-building	23.1%	**61.5%**	7.7%

Cost Effectiveness

In an effort to identify the most cost-effective projects in the NFWF-BLM portfolio, we used the evaluation ratings to perform a variety of comparisons among project types. We ultimately concluded, however, that both the statistical basis (see Appendix Three) and theoretical rationale for these comparisons was lacking. The sheer diversity of project types and geographic contexts did not permit for meaningful comparison.

Rather than identify a type of project that is most cost effective for all contexts, we found that NFWF could best improve the cost-effectiveness of its portfolio by *first* selecting project types needed in each geographic context, and *second* making certain that they display the characteristics most likely to result in good conservation. The evaluation results point to three key conclusions on this point.

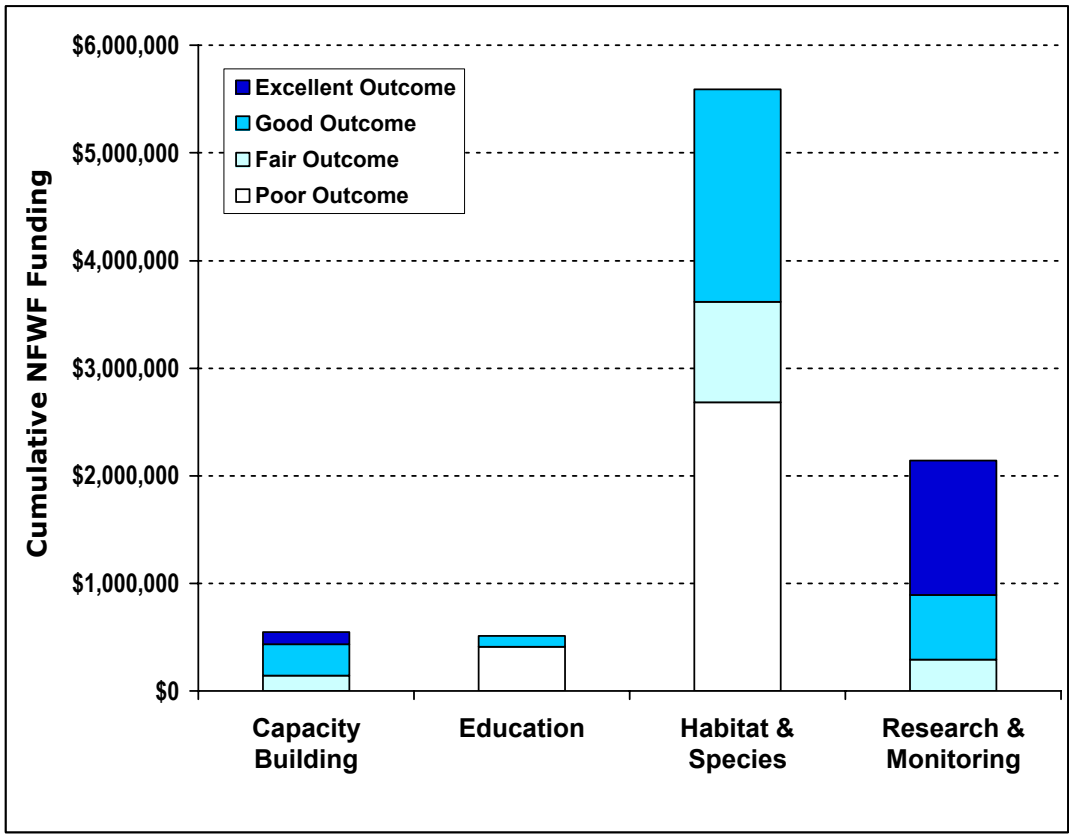
- First, the majority of NFWF funding during the period of analysis went to projects in the category of *habitat and species* (Figure 9). It is also the category in which NFWF funded the most projects with "poor" to "fair" performance. Assuming that this project category includes types of projects such as habitat acquisition that are deemed useful and necessary for conservation, a focus on improving *habitat and species* projects offers the greatest opportunity for improving overall cost-effectiveness of the NFWF portfolio.

- Second, we have identified the most common limiting factors for the performance of each project category, at each stage in the project cycle. Addressing these limitations in the project selection and oversight process should serve to enhance project outcomes, and thus cost-effectiveness. We find that there is a strong correlation between project design and outcome (see Appendix I), which means that greater focus on design characteristics in the project selection process is one straightforward way to improve the portfolio's cost effectiveness.

- Third, a statistical analysis of the evaluation results shows that projects that receive greater funding perform better (see Appendix I). This may be attributable

to a number of causes. Most likely, better funded projects may achieve greater geographic scale – a very common limiting factor for project performance. They may also have sufficient funding for monitoring, another very common limiting factor. A focus on larger projects may serve to improve cost-effectiveness of the NFWF portfolio by avoiding smaller projects that tend to be constrained by various factors.

Figure 9: Spending and Performance Outcome



RECOMMENDATIONS

Based on the evaluation results, we formulated a series of recommendations for improving NFWF's management of the General Call. The recommendations fall into three categories: *project selection*, *monitoring and evaluation*, and *administration*.

Project Selection

Our evaluation indicates that projects with strong design generate better conservation outcomes. The implications for NFWF management are straightforward: select projects to fund that exhibit factors of success for strong design. That is, they address conservation priorities, their activities are carried out at a geographically significant scale with respect to the conservation target, and there is strong linkage between project activities and conservation outcomes.

In particular, NFWF should pay closer attention to ensuring that projects are designed at a scale appropriate to the biological needs of the conservation target. For example, applicants currently complete a logical model for their proposed project. Within the model one indicator should be the percentage of the area impacted that is required to address the ecological needs of the conservation target. Following that, baseline and subsequent measurements of area impacted should be expressed as a percentage of the total area needed to ensure the ecological integrity of the target. This is in contrast to the current approach where acreage or stream-mile measures are presented without reference to the amount actually needed to ensure survival of the target.

Achieving scale may be closely related to the amount of funding available to the grantee. NFWF should consider whether fewer, but larger, grants in a given year would result in stronger portfolio performance.

The cost effectiveness of the General Call can be improved by selecting projects with the best design, *and* that are appropriate to the conservation needs of the area in which they are to be implemented. We do not recommend that NFWF identify one project type as more cost-effective than another. We do recommend, however, that NFWF focus on addressing the limiting factors of project types that are selected. This will be especially rewarding for the habitat and species category, where the greatest amount of funding has gone to "poor" and "fair" projects.

Building on the methods developed for this evaluation, we recommend that NFWF use the evaluation matrix (Appendix II) as a template for grantees that are developing proposals and implementing projects. Factors of success for *design* can be used for project selection, factors for *implementation* can be used for project oversight, and factors for *outcomes* can be used for final evaluation. The matrix offers an opportunity to

standardize the application, oversight, and evaluation criteria of the foundation. Sharing rating descriptors with grantees will make NFWF's performance expectations clear.

Monitoring and Evaluation

This, and future evaluations, are only as strong as the data available for analysis. At present the protocols and systems in place for monitoring projects needs a great deal of improvement. Without scientifically credible monitoring, it is very difficult to discern what projects are working, which are not, and how they relate to changes in species and habitats of concern for conservation. The limiting factors for monitoring project performance at present are: 1) lack of baseline data on conservation targets; 2) availability of funding for monitoring; and 3) lack of expertise in ecological monitoring and evaluation.

NFWF could improve this situation by taking three measures.

- First, support collection of baseline data for priority conservation targets. Without baseline data, it is very difficult to determine if projects are making a difference. It is unlikely that prospective grantees will be able to, or will be inclined to try to collect baseline information on their own; funding is limited for this type of activity and it is often considered a distraction from the normal activities of many grantees.
- Second, fund monitoring *after* projects are implemented. NFWF projects typically extend from 12 to 18 months. This time period is too short for meaningful monitoring of ecological change. Indeed, most ecological monitoring should be performed on a time scale of at least five to 10 years. One way to handle this issue would be to make it possible for grantees to return to NFWF in years after a project is executed and apply for grant funding to perform periodic monitoring.
- Third, develop partnerships for long-term monitoring. In many cases, either the program grantee does not have the appropriate expertise to monitor impacts, or the relevant ecological processes are occurring at a scale greater than that of the project. In these cases it makes more sense to partner with organizations, such as universities and state agencies that specialize in monitoring specific species or habitats in the region. NFWF could request that prospective grantees forge partnerships on their own, or NFWF could establish these partnerships as an institution, creating a parallel monitoring program that covers an area of projects in a particular region over time.

Administration

Without capable grantees in the field, willing to do the hard work of conservation, NFWF cannot fulfill its mission to conserve species and habitats. For this reason, NFWF should

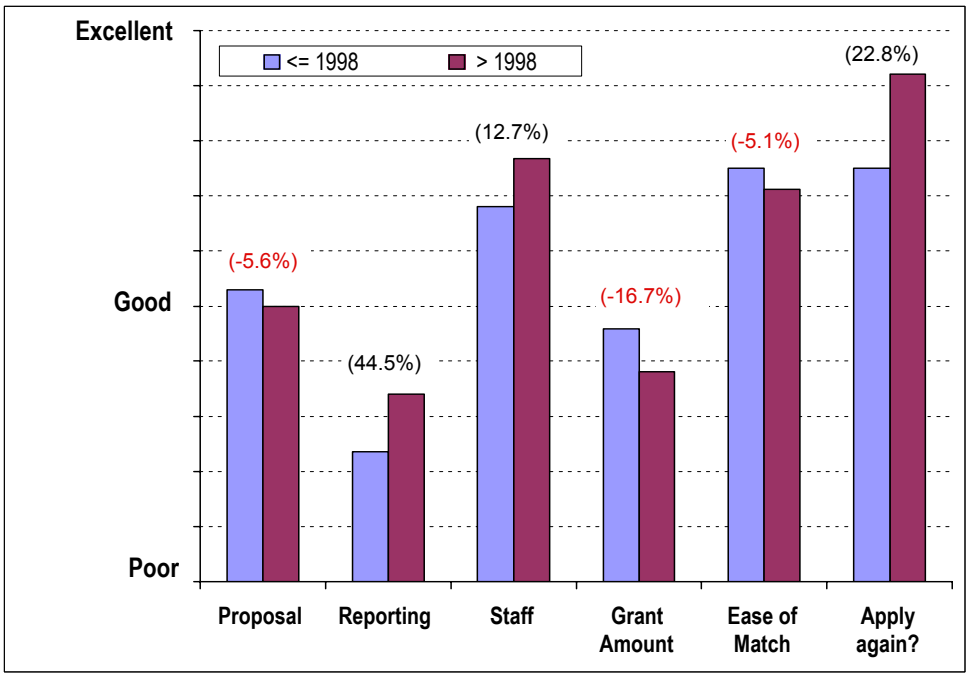
seek to maximize the number of strong proposals that it receives by excelling in its administration of the NFWF-BLM portfolio. To assess grantee perception of NFWF as a donor, we asked grantees to provide feedback on six important attributes. Figure 10 shows how grantees rated NFWF's administrative performance relative to other donors.

Partnerships for Long-Term Monitoring
Wood River Wetland Restoration

Wood River Wetland Restoration provides a strong example of partnerships for long-term monitoring. This project had among the best monitoring of any *habitat & species* project evaluated, including waterfowl counts from aerial surveys three years before the project and every year since its implementation, several years of spotted frog egg counts, larval counts of endangered fish species, brood counts, brood success, and water temperature among other variables.

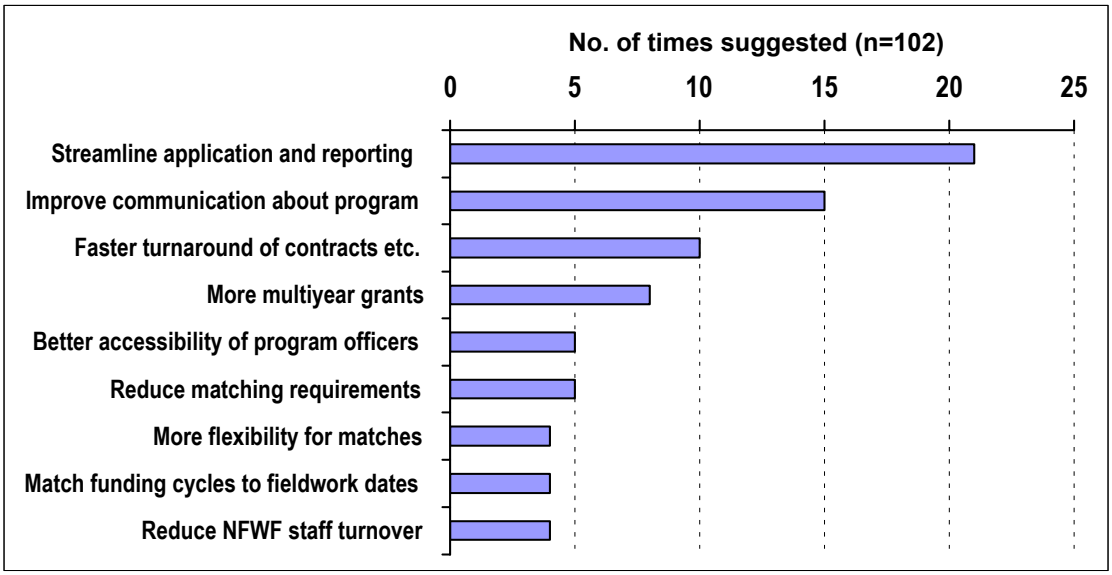
The monitoring is conducted largely by partners. US Fish and Wildlife Service performs aerial bird counts twice a month, Bureau of Reclamation handles water quality monitoring, a local college performed recreational user surveys, and students participated in spotted frog egg mass surveys. The project manager estimates the value of these in-kind monitoring partnerships to be $30,000 per year.

Figure 10: Grantee Rating of NFWF Relative to Other Donors



Grantees found that NFWF staff are professional, dedicated, knowledgeable, and helpful. However, the majority indicated that administrative processes could be streamlined. This included suggestions to: reduce paperwork in grant applications and progress reports; improve communication about grant opportunities; and, reduce delays in awarding grants and disbursing funds. Figure 11 provides a tabulation of open-ended feedback from grantees on how best to improve NFWF's administration.

Figure 11: Grantee Suggestions for Improving NFWF Administration



CONCLUSIONS

Conservation is complex and NFWF provides grant funding to a wide diversity of grantees working to conserve myriad conservation targets over a vast geographic area. We acknowledge that this is a tremendous challenge. Our evaluation uses a rigorous rating system, with the understanding that few projects will attain top scores. That said, in cases where evaluation results are not as strong as expected, rest assured that we've been tough graders. The reader is also invited to interpret these results in a variety of ways – the appendices of this report provide ample data and methodological information to allow for this.

It is fair to say that the NFWF-BLM portfolio has made significant strides in conserving priority species and habitats. Past projects have generated significant positive outcomes in three out of four categories. And in almost all cases, project performance has improved over time.

It is also fair to say that the staff of NFWF proves to be professional and dedicated, and the majority of NFWF grantees impressed us with their talent, creativity, and dedication. We hope that these evaluation results will serve as a roadmap for fine tuning future projects rather than a critique of the hard work that has gone into past efforts.

As evaluation becomes a standard practice in this field, it will be possible to measure performance against other portfolios to provide a better idea of how NFWF is doing relative to the competition. At present, this is not yet possible.

This evaluation is an important step in the adaptive management of NFWF's grant making. Hopefully, the results and recommendations here will provide a basis for improving the foundation's performance going forward.

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APPENDIX ONE – METHODS AND RESULTS

This appendix presents a detailed description of the methods and results of our evaluation of the NFWF-BLM General Call. It follows an eight-step approach, as described in our original project proposal to NFWF.

Step 1: Develop Detailed Project Typology

The original database of the NFWF-BLM grant portfolio divided projects in to four categories: *habitat and species*, *education*, *capacity building*, and *research and monitoring*. These broad project categories mask considerable variation in project type. For example, the category of *habitat and species* contains projects including species reintroductions, improving management planning, and restoration of habitat. In order to maximize our ability to relate project attributes to performance, we developed subcategories within each of the four broad project categories.

Our approach was empirical, reviewing the range of types of projects that had been funded within each category, then identifying subcategories that defined natural groupings. In some cases we added subcategories to fill obvious gaps, even if there were no examples of projects in the portfolio. Our hope was to increase the usefulness of the typology for future applications. The number of subcategories per project category ranged from three to six, as described in **Table One**.

Summary statistics of the allocation of both funding and number of projects among subcategories are shown in **Figures One A and B.** Note that in some cases project activities spanned multiple subcategories, but for ease of analysis we assigned each grant to the single subcategory that best described the project emphasis. Note also that it was difficult to distinguish between basic science and long-term monitoring projects for many of the projects in the category of research and monitoring, so we combined these two subcategories into one.

The results of applying the typology to the NFWF-BLM grant portfolio show that within the category of *research and monitoring*, long-term monitoring/basic science and conservation management were allocated the most funding and grants. Habitat restoration projects and projects to acquire or protect natural habitats dominated the *habitat and species* category. *Education* projects were primarily academic (K-12), and the majority of *capacity building* projects focused on enhancing institutional coordination.

Figure One B shows that only seven of the 16 subcategories have five or more projects. These small sample sizes presented a serious obstacle to evaluating projects at the subcategory level.

Table 1: Project Typology

CATEGORY	SUB-CATEGORY	DESCRIPTION
Species and Habitat		
(Site-based activities that lead directly to the conservation of species and habitats)	Reintroduction of species	Reintroducing species in areas where they have been extirpated
	Habitat enhancement	Improvements to habitat beyond historic baseline (e.g., creating bat roosting sites where none previously existed; creating water resources where none previously existed)
	Habitat restoration	Improvements to habitat to achieve historic baseline (e.g., restore water flows to river; recreate lost wetlands; eradicate exotic species). Tend to be short-term intensive management efforts.
	Improvements to management	Ongoing improvements to management (e.g., reinstituting historic fire regime; land use planning). Tend to be long-term permanent changes to management practices (as compared to intensive short term investments to restore habitat properties).
	Acquisition/protection of natural habitat	Fee-simple purchase or purchase of conservation easements or grazing rights to permanently protect natural habitats; zoning for conservation; and, transfer of development rights.
	Multiple use management	Short-term intensive actions taken to improve the ability of species and habitats to coexist with other legally permitted land uses (e.g., installing guard gates to keep tourists from getting too close to bat colonies; installing fences to keep cattle out of sensitive riparian areas)
Education		
(Changing human behaviors to improve species and habitat conservation)	User/landowner	Education of resource users (e.g., hunters and ranchers) that may or may not own the resource in question
	Decision-maker	Education of resource managers or natural resource policy makers
	Academic	School-based educatior
	General Public	Broad-based education aimed at increasing general awareness
Capacity Building		
(Improving the ability of individuals and organizations to conserve species and habitats)	Infrastructure	Investments in buildings, equipment, vehicles, tools, field gear etc. that increase the ability of individuals to perform species and habitat conservation
	Human resources	Investments in the capacity of individuals and single organizations to do conservation (e.g., investments in training and education)
	Institutional coordination	Investments that enhance the ability of multiple institutions to work together to do conservation. Typically involves leveraging existing resources and knowledge rather than conducting new research or requiring additional activities
Research and Monitoring		
(Science to monitor the status of species and habitats, and to enable appropriate species and habitat conservation management)	Identification materials	The tools for doing field work on species and habitats (e.g., field guides, keys, sound libraries etc. that faciliate identification)
	Inventories/classifications	Field inventories of plant and animal communities that inform on the distribution and abundance of species
	Basic science	Studies on the basic ecology and short-term population trends necessary to construct a demographic model or understanding of the population of interest. Does NOT include research to investigate the impacts of specific threats.
	Long-term monitoring	Long-term (4+ years) studies to monitor population numbers and demographic parameters to assess conservation status. Includes collecting baseline information before experimental management.
	Threat assessment	Evaluating threats to species and habitats
	Conservation management techniques	Evaluation of specific management techniques which mitigate threats to species and habitats and promote multiple use
	Evaluation	Monitoring and evaluation of the performance of projects in all four categories.

Figure 1A: Funding Allocation by Typology

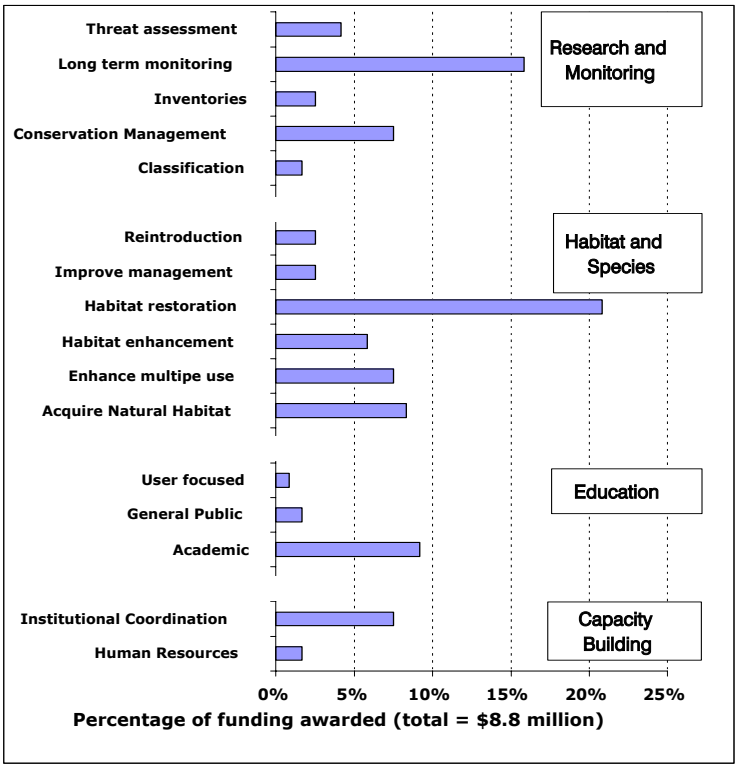
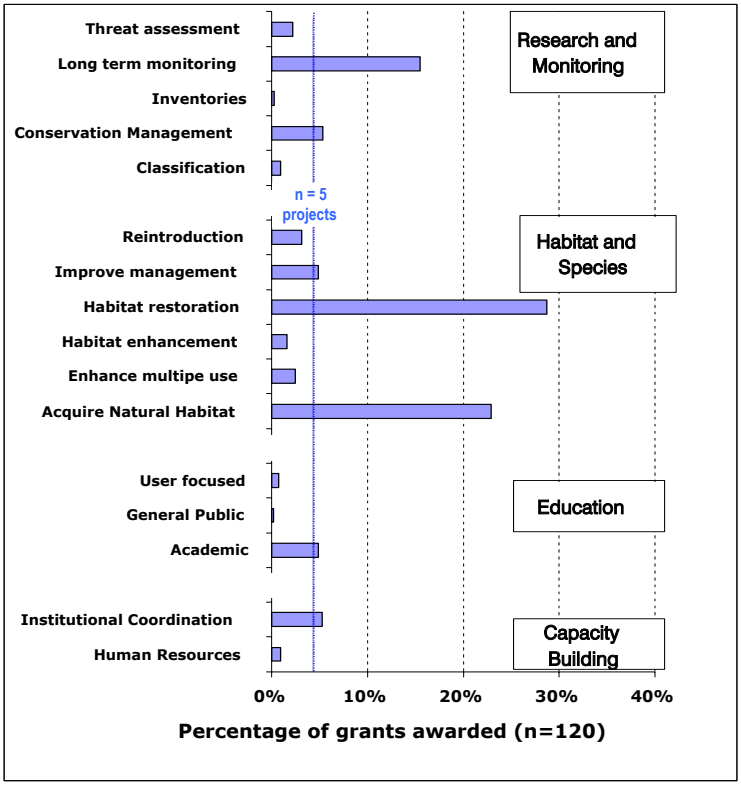


Figure 1B: Number of Grants by Typology



Step 2: Compare Project and Institutional Goals

The second step in the evaluation was to interview NFWF and BLM staff to determine funding priorities of the NFWF BLM General Call. The NFWF-BLM Advisory Committee vetted the survey instrument (**Appendix Three**), and telephone interviews were carried out during December, 2004 and January, 2005. Interviewees from the two institutions are shown in **Table Two**.

Table 2: Interviewees at NFWF and BLM

NFWF	BLM
John Berry	Dwight Fielder
Lorraine Howerton	Susan Giannettino
Kathryn Reis	Don Simpson
Beth DeCarolis	Helene Aaron
Claire Thorpe	Jill Silvey
Krystyna Wolniakowski	

Our interviews revealed that the General Call did not have programmatic priorities for funding specific project types, species, or conservation themes. Rather, the program reacted to locally identified conservation needs that fall within general institutional goals. NFWF staff revealed that their general institutional funding priorities are threatened and endangered species (and those species on the brink of listing) and control of invasive species. BLM staff stated that they relied on the General Call to fund institutional priorities that might change from year to year, and include themes such as fire management, control of exotic species, conservation of sagebrush steppe habitat, and selected threatened and endangered species. BLM also viewed the General Call as a source of funding for all types of conservation projects that are not normally covered by BLM budgetary funding, including locally defined priorities.

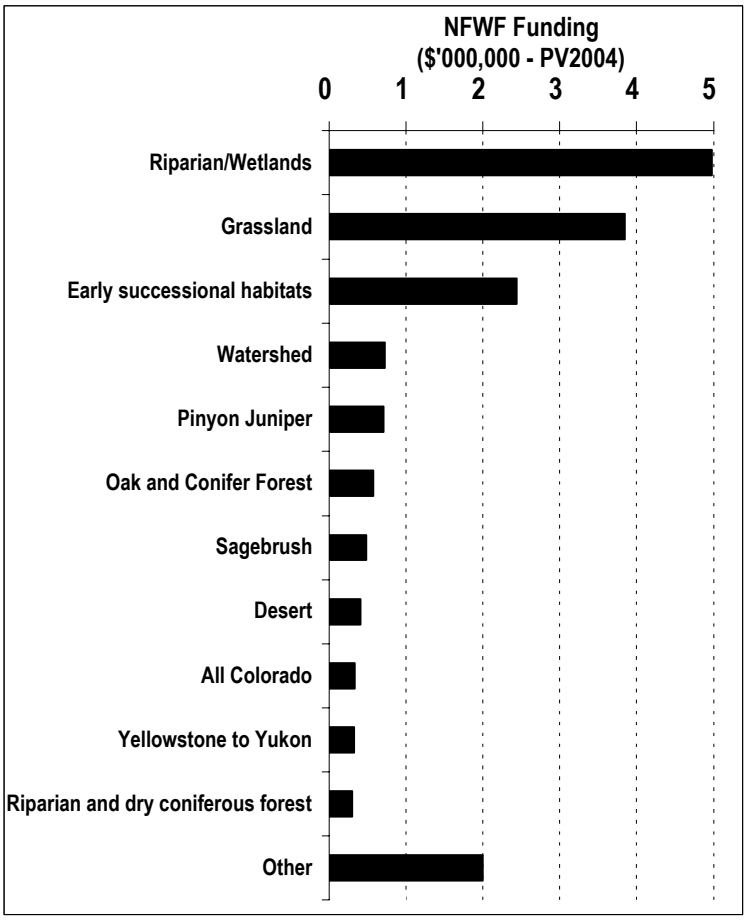
The absence of specific programmatic objectives made it impossible to quantitatively assess whether the General Call is allocating funding according to its self-stated objectives. We can however look at broad funding patterns with respect to habitats and species to see if they correspond to institutional priorities.

With respect to *habitat* priorities[1], the only specific habitat type mentioned as a conservation priority by NFWF and BLM staff was sagebrush steppe. Looking at funding allocations by habitat type shown in **Figure Two**, sagebrush is only 7th on the list of habitat types when ranked by total funding received. Riparian and wetland projects, grassland projects, and projects focused on improving productivity of early succession habitats received the majority of funding. We conclude that funding allocations do not

[1] In order to facilitate future analyses of funding by habitat type, we recommend that NFWF adopt a standardized ecosystem classification approach for its projects.

seem to correspond to stated priorities for habitat conservation, although we also note that sagebrush steppe only recently became an institutional priority.

Figure 2: Funding Allocation by Habitat

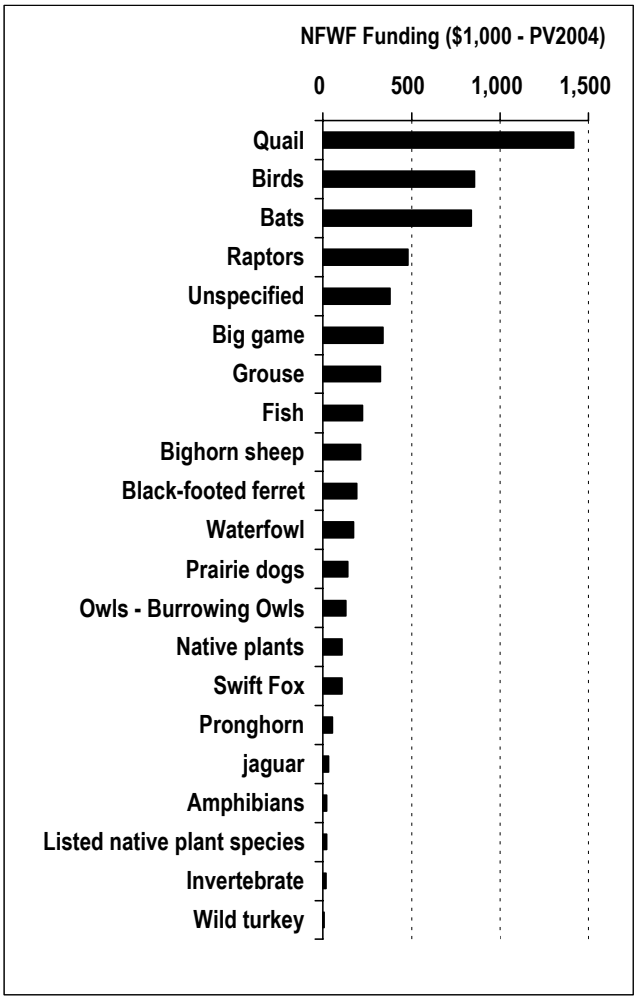


With respect to *species* priorities, NFWF and BLM staff both mentioned an institutional preference for funding projects for threatened and endangered species, and those species on the brink of listing. **Figure Three** shows that this stated preference is not well reflected in funding allocations. The taxonomic group that received greatest funding is quail and other upland game birds (note that the masked bobwhite – the only North American endangered quail species - was not the target of any of these funds). Projects meant to benefit the entire bird community and big game both received more support than high profile species such as the sage grouse.

On the other hand, the NFWF-BLM portfolio included funding for threatened and endangered bats, raptors, and fish. Other endangered species such as bighorn sheep, black-footed ferrets, and swift foxes received little funding. Overall, it seems fair to conclude that threatened and endangered species have not been a dominant priority for funding.

Both NFWF and BLM staff mentioned that control of exotic species was an important thematic area of funding. Projects with a specific emphasis on exotic species numbered nine in the portfolio, accounting for approximately 5% of total funding. BLM staff also specified that fire management was an important theme. Fire management projects numbered 13, and accounted for 9% of total funding.

Figure 3: Funding Allocation by Species



In summary, it appears that the lack of programmatic objectives and the reactive nature of grant making have precluded the General Call from achieving an emphasis in any area, even for those broad goals such as threatened and endangered species which are institutional priorities for both NFWF and BLM.

Step 3: Conduct expert interviews to identify funding priorities and suggested metrics for evaluating projects funded under the NFWF BLM General Call

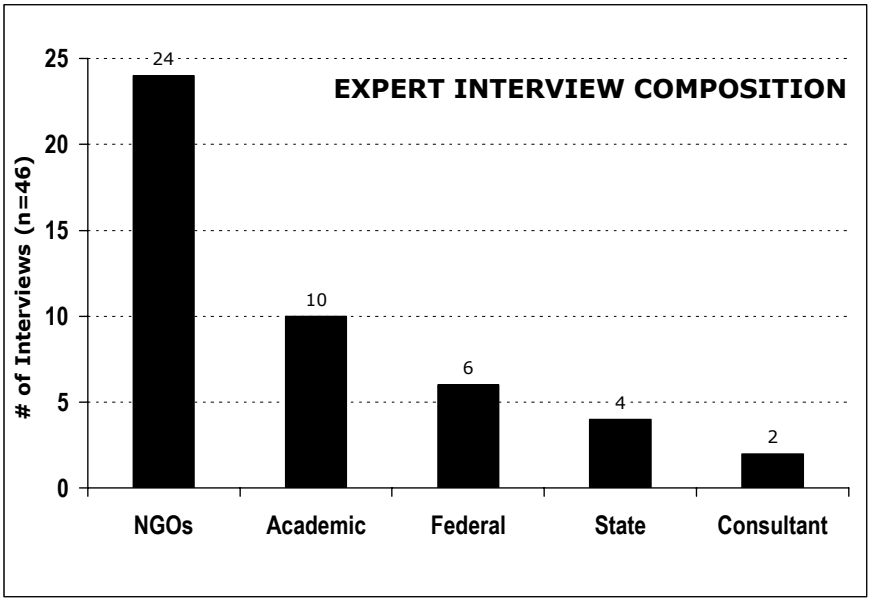
The goal of the expert survey was to supplement our own expertise with that of regional and local experts. Our objective was to interview 40-50 experts from academia, NGOs, and relevant state and federal agencies. The survey was not meant to be a random sample, rather we attempted to find and interview a reasonable number of the most knowledgeable experts we could find to help ground our study. Because this was not a statistical sample, stratified for example across ecosystems of expertise, it is important not to draw strong conclusions based on the frequency of responses concerning priority conservation targets. That said, we attempted to select experts with a broad understanding of regional conservation issues.

Experts were asked about their opinions on: conservation priorities for funding on BLM lands; factors that lead to successful conservation projects; metrics of conservation project performance; and, projects are most appropriate for funding by the General Call. The NFWF-BLM Advisory Committee vetted the survey instrument, which is attached as **Appendix Four**.

We selected experts by three means. First, NFWF and BLM staff recommended individuals. Second, we identified experts by internet searches. Third, we collected additional suggestions from experts we interviewed, using a "snowballing" approach.

We included a total of 46 experts in the survey, the majority (24) drawn from the NGO community, followed by academics, and biologists from federal and state agencies (**Figure Four**). Conducted the expert survey in January and February of 2005.

Figure 4: Expert Interviews



Conservation priorities on BLM lands

The 46 experts provided 105 recommendations of conservation priorities (**Table Three**). The most commonly cited priority was to better understand and mitigate the ecological impacts of livestock grazing on BLM lands. Grazing was identified as a priority because it is widespread throughout BLM lands, and its impacts on habitats and species are poorly understood.

The second most commonly cited priority was improving the status of threatened and endangered species. The third priority was control of exotic and invasive species. Two of the top three cited expert priorities – threatened and endangered species conservation, and the control of exotic species – are among the stated priorities of NFWF and BLM, though neither dominates General Call funding, as noted in the previous section.

Table 3: Expert Conservation Priorities

Priority Conservation Themes for BLM Lands	No. of Recom-mendations
Impacts of Livestock Grazing	23
Conservation of Endangered and Threatened Species	12
Control of Invasive/Exotic species (plants, fish)	11
Impacts of Energy development	8
Conservation of Riparian/wetland ecosystems	7
Need for general experimental/adaptive management/monitoring for better multiple use	6
Impacts of ORV	6
Conservation of Rare plants	5
Restoration of fire ecology; fuel management	5
Conservation of sage brush ecosystems	5
Impacts of habitat fragmentation	4
Conservation of native fish assemblages	2
Conservation of prairie dogs (a keystone species) + ecosystem	2
Conservation of sage grouse	2
Improved water management	2
Build capacity of BLM to do botany	1
Enhance public's understanding of BLM land use options	1
Better understanding of mammal communities	1
Monitoring of wilderness areas	1
Conservation of pollinators	1

Recommendations for NFWF Funding

The second goal of the expert survey was to seek recommendations for the *type* of projects that the General Call should fund. We asked this question in two parts. First, we asked what types of projects are needed to address conservation priorities. We then explained that the NFWF-BLM General Call is limited in the size and term of its grants, and then asked what types of projects were most appropriate given those constraints.

The most frequent suggestion was large-scale, long-term integrated research and monitoring to support adaptive management, which is necessary to enable BLM to achieve its goal of species and habitat conservation on multiple-use landscapes (62 out of 106 individual recommendations: see **Table Four**). There is widespread sentiment both

within BLM and by independent experts that current knowledge of how economic activities affect species and habitats is insufficient for BLM to meet its conservation mandate. Most experts either: a) made general recommendations that BLM should implement experimental management, long term monitoring and adaptive management over all of its lands; or, b) recommended that specific land uses be the focus of projects to enhance BLM's ability to perform adaptive management.

Table 4: Expert Recommended Conservation Projects

Expert Recommendations for Projects To be Funded	(No. of Recommendations)
Capacity Building	
Capacity building - BLM staf	3
Develop transparent land use planning tools	2
TOTAL	**5**
Education	
Education	3
Education - fire	3
Education - BLM	2
Education - grazing leasees	1
Education - ORV	1
TOTAL	**10**
Habitat and Species	
Habitat Restoration and Conservation	10
Aquire/protect habitat	3
Buy grazing rights	3
ESA species conservatior	3
Fire - restore historic regimes	3
Improve grazing management	3
Exotic species contro	2
Improve oil and gas management	1
Water - restore historical hydrological regimes	1
TOTAL	**29**
Research and Monitoring	
General Research	14
Monitoring - baselines and long term	13
Research - fragmentation	6
Research - grazing	6
Ecological inventories	5
Research - exotic species detection and control	3
Research - endangered, threatened, rare species	2
Research - energy development	2
Research - pollinator ecology	2
Research - sage grouse - response to land uses	2
Research - water management	2
Research - conservation management	1
Research - fire	1
Research - impacts of ORV	1
Research - large scale habitat restoration	1
Research - rare plant ecology, distribution	1
TOTAL	**62**

The next most frequent suggestion was conservation of threatened and endangered species. This included species with official threatened or endangered status, but also rare and endemic species. Education and capacity building projects received relatively little support.

After learning the characteristics of the NFWF BLM General Call – namely that grants run for 12-18 months and have a median size of $30-$50,000 – most experts felt that the General Call was not suitable for funding long-term, large-scale conservation projects (see **Text Box One** for selection of expert quotes). They explained that research and monitoring projects should be carried out *at least* 3 years in order to capture ecological variation in parameters of interest. Some experts recommended that monitoring of key species and habitats be done on a permanent basis. Even ecological inventories (e.g., inventorying plant communities, or bat colonies) are best treated as multi-year endeavors

to capture inter-annual variation. Nevertheless, some types of small, short-term projects could support longer-term initiatives. Some examples included:

- Short-term research projects nested within larger, more comprehensive studies;
- Mapping of habitat types;
- Monitoring incidence of exotic species with remotely sensed imagery;
- Developing monitoring protocols that can be implemented with other sources of longer-term funding; and,
- Providing seed grants to fund design of large-scale long-term research and monitoring projects.

Experts also suggested that NFWF should increase funding for multi-year projects. The General Call could accomplish this by increasing the duration of grants, or by favoring proposals from grantees that are re-applying to continue previously-funded activities.

Text Box 1:
Quotes from Expert Interviews

"NFWF grant restrictions are aggravating the problem of BLM's focus being too small-scale. NFWF's opportunity is to force big picture thinking."

"A pot of money specifically for multi-year projects would be good."

"By restricting grants to one year, particularly for restoration, NFWF is really limiting the projects that are possible, and its capacity to determine which projects work, and which don't."

"The NFWF grant program has pretty serious limitations, which are fundamentally at odds with their goals. 18-month $30,000 projects don't do much, frankly."

"We need to recognize that little disconnected projects and programs are not adding up to the ultimate conservation goals that we want to achieve."

Other priorities identified through the expert survey were projects that support conservation of threatened and endangered species and habitats. Again, these types of projects typically have financial needs that are longer and larger than NFWF grants. However, a variety of smaller project types of short duration could support such efforts, provided they are part of a larger, integrated approach.

Other examples of projects suitable for General Call funding are: capacity building for BLM staff; public participation in land use planning; educating land users on better stewardship practices; habitat restoration and conservation projects in ecosystems with fast dynamics (e.g., riparian areas); buying and retiring grazing or water rights; reducing grazing impacts through fencing; installing anti-perching devices on power lines to reduce raptor predation; funding easements or acquisition of critical properties; and, funding early stages of restoration projects, such as project organization, and preparation of site plans.

Recommendations for Metrics of Project Success

The final objective of the expert survey was to collect recommendations on the most effective ways to measure the performance of conservation projects. Experts were first asked their opinion on key factors or project attributes that led to successful projects. The most commonly cited factors are: long-term relationships with key stakeholders; a strong scientific basis, both with respect to linkage between project activities and desired impacts on the conservation target, and whether the design of a project is scientifically robust; adequate staff qualified to achieve project objectives; and an adequate outreach strategy to ensure that results reach all relevant stakeholders (**Table Five**).

Table 5: Expert Factors of Success

Critical Factors for Project Success	No. of times cited
Partnerships with key stakeholders (including private landowners, BLM etc.)	21
Strong scientific basis	14
Adequate staffing/capacity for project (No., qualifications, experience)	10
Good dissemination/outreach strategy	7
Adequate Spatial Scale (landscape)	5
Adequate long term monitoring	5
Well designed and implemented	4
Adequate Temporal Scale	3
Adequate methods	3
Baseline information available	3
Located within regional/agency initiatives and priorities	3
Focus on conservation priorities	2
Tangible significant conservation benefits	2
Quantifiable measurable objectives and goals	2
Likely to produce knock-on benefits	1
Addresses social context	1
Comprehensive threat mitigation	1
Realistic objectives	1
Low overhead costs	1
Avoids duplication	1
Creativity evident	1
Understands ecosystem function	1
Local NGO involvement - important for sustainability	1
Grantee's leadership qualifications	1

We asked experts to provide indicators for measuring the performance of projects (**Table Six**). The most frequent recommendations for indicators that can be applied to *all project types* include: presence of a long-term monitoring plan that includes measuring the performance of the project against quantifiable objectives; whether the project meets its self-defined objectives; and finally, whether stakeholders and partners are satisfied with project performance.

Experts also suggested metrics specific to different categories of projects. For *education* projects, experts suggested the percentage of people in the target group who are reached by the initiative, and change in knowledge that results. For *research and monitoring*, the most commonly cited metrics were: that research focused on important knowledge deficits; that it made the findings quickly available to managers; and finally, that research was scientifically robust, including having a good experimental design which leads to

unambiguous findings. With respect to *habitat and species* projects, recommendations were made for both long-term and short-term indicators. The most commonly cited long-term indicators were changes in population status of conservation targets, or at the community level, to measure changes in species diversity and composition at various trophic levels. Recommended short-term indicators included: habitat quality (e.g., physical attributes of soil and water quality, or vegetation composition and structure, or changes in wildlife use); the area or lineal distance impacted by projects; changes in occurrence of threats (e.g., reduction in occurrence of fires, or occurrence of exotic species), and changes in wildlife distribution.

These recommendations formed an important input to the design of the project evaluation rating system, which is detailed in **Appendix Two**.

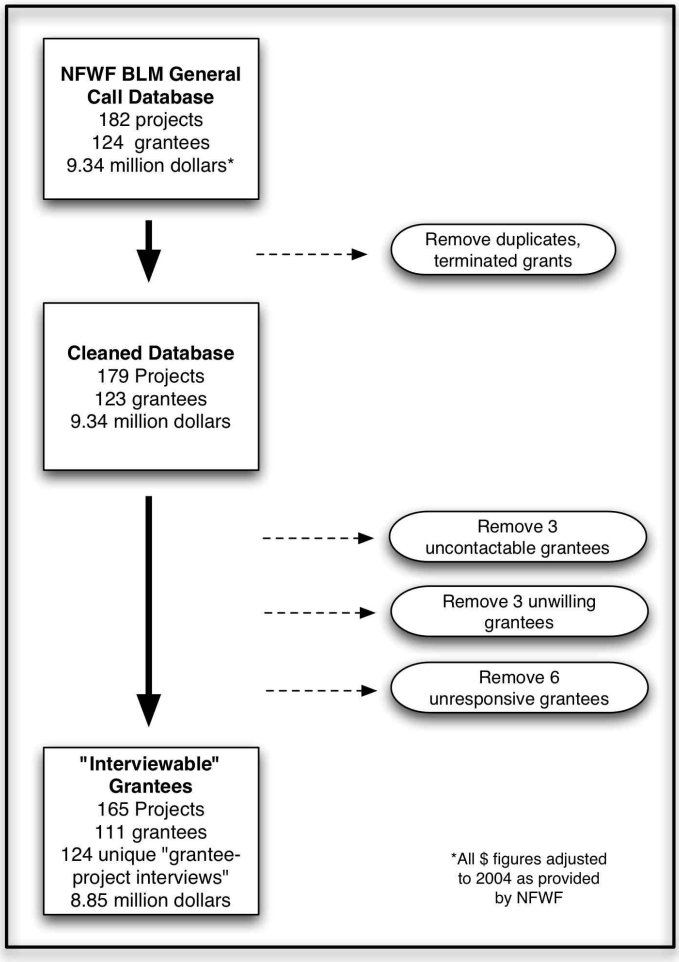
Table 6: Expert Performance Metrics

Recommended General Metrics for all Project Types	**# of times cited**
Project includes long-term monitoring against quantifiable objectives	9
Meets self-defined objectives	6
Stakeholders and partners are satisfied with project performance	3
Dissemination of useful lessons from either success or failure of project	1
Short-term measurement of linkages between project activities and ultimate intended impacts	1
Number and types of partnerships established	1
Focus of project is a conservation priority	1
Recommended metrics for Education Projects	
Reach of project (% of target) and change in knowledge	2
Recommended Metrics for Research and Monitoring	
Generates important information that is made available quickly to managers	8
Research is well designed, leads to clear, convincing findings	7
Published in peer-reviewed journa	2
Number of citations	1
Recommended <u>Long-term Metrics</u> for Habitat and Species Projects	
Population status of target	9
Species diversity/composition at various trophic levels	4
Population status of indicator species	2
Conservation target free from all threats over long term	1
Top carnivore densities	1
Full recovery of habitat or species	1
Recommended <u>Short-term Metrics</u> for Habitat and Species Projects	
Habitat quality (e.g., soil, water, vegetation structure)	11
Area impacted; or miles of linear habitats (e.g., streams)	7
Reduction of occurrence of threat (e.g., frequency of fires, or area invaded by exotics)	6
Wildlife use of habitats	5
Population distribution over the landscape	2
Relative area impacted by project (e.g., with respect to species range)	1
Ecosystem function	1
The extent that the project has been replicated	1
Conservation target free from all threats over the short-term	1
The project is part of an adaptive approach to management	1
Critical factors for conservation target (e.g., nesting success)	1

Step 4: Evaluate NFWF BLM General Call Projects

The core of the evaluation was to evaluate the performance of the portfolio of projects funded by the NFWF BLM General Call. NFWF provided a database of grants funded under the General Call, including details on 182 grants awarded to 124 unique grantees, totaling 9.34 million dollars (adjusted to year 2004 dollars, as provided to us by NFWF). After duplicates and terminated grants were removed, details remained on 179 projects awarded to 123 grantees, totaling 8.85 million dollars (**Figure Five**).

Figure 5: Evaluation Process



We attempted to interview all grantees. We made up to three email requests and two phone calls in order to schedule grantees for a telephone interview. If the grantee had left the institution, we asked for contact details at their new place of work. If these were not available, we tried to find new contact information ourselves through a web search. If this was unsuccessful, we asked whether there was another person qualified to speak about the project at the grantee's original institution. Despite the fact that projects were up to ten years old, we were unable to schedule only 12 of the 123 grantees (9.8%). Three had changed institutions and contact details were unavailable. Three were unwilling to be

interviewed because projects were completed too long ago for them to remember details, and six never responded to repeated requests by email and telephone to participate

We designed the survey to collect information on three stages of a project cycle: *design*; *implementation*; and *outcome*. The NFWF-BLM Advisory Committee vetted the survey instrument, and the interview team field-tested it with four grantees. After slight modifications, the remainder of the interviews were carried out in March and April 2005. The grantee survey instrument is attached as **Appendix Five**.

We evaluated all project categories using common metrics for *design* and *implementation*, but metrics specific to each project category for *outcomes*. We present composite results for the entire portfolio, as well as by project category. We also display results for two time periods, 1995 through 1998, and 1999 through 2002, to show any trends in performance over time.

Design

We assessed project design using three core criteria, again based on the literature, expert opinion, and our own experience in the field – the end result is an original approach to evaluating conservation performance. First, we determined whether the project addressed a priority conservation target (e.g. listed threatened and endangered species, or habitat of concern). Second, we assessed the evidence for linkage between project activities and desired conservation outcomes. Finally, we assessed projects on their scale relative to the biological needs of the conservation target. For example, projects designed to impact less than the minimum biologically viable population size would receive a poor rating, while those that occurred across the entire range of the target species would receive an excellent rating. The project design criteria are presented in detail in **Appendix Two**.

The results of the evaluation of design performance for the entire portfolio are shown in **Figure Six.** The portfolio scored quite well with respect to priority and linkage. Performance was weakest with respect to scale. Performance improved considerably over the two time periods, with the greatest percentage gain shown in scale.

Design performance by project category is shown in **Figure Seven.** *Research and monitoring* projects scored highest with respect to addressing conservation priorities, while *education* projects did quite poorly against this measure. *Capacity-building* projects scored highest with respect to scale, generally being carried out over very large geographic areas. *Habitat and species* projects performed the worst with respect to scale, particularly in the first time period, though they showed great improvement over time. *Education* projects scored lowest with respect to linkage, with many projects failing to demonstrate a convincing connection between activities and the desired change in the conservation target. *Research and monitoring* projects scored highest with respect to linkage, most being able to demonstrate that their activities were focused on areas where lack of knowledge was a key impediment to improving the conservation status of the target.

Figure 6: Design Performance

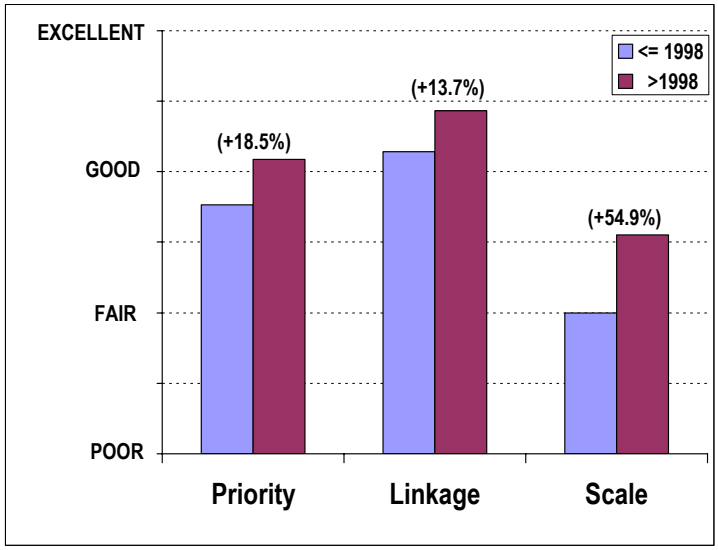
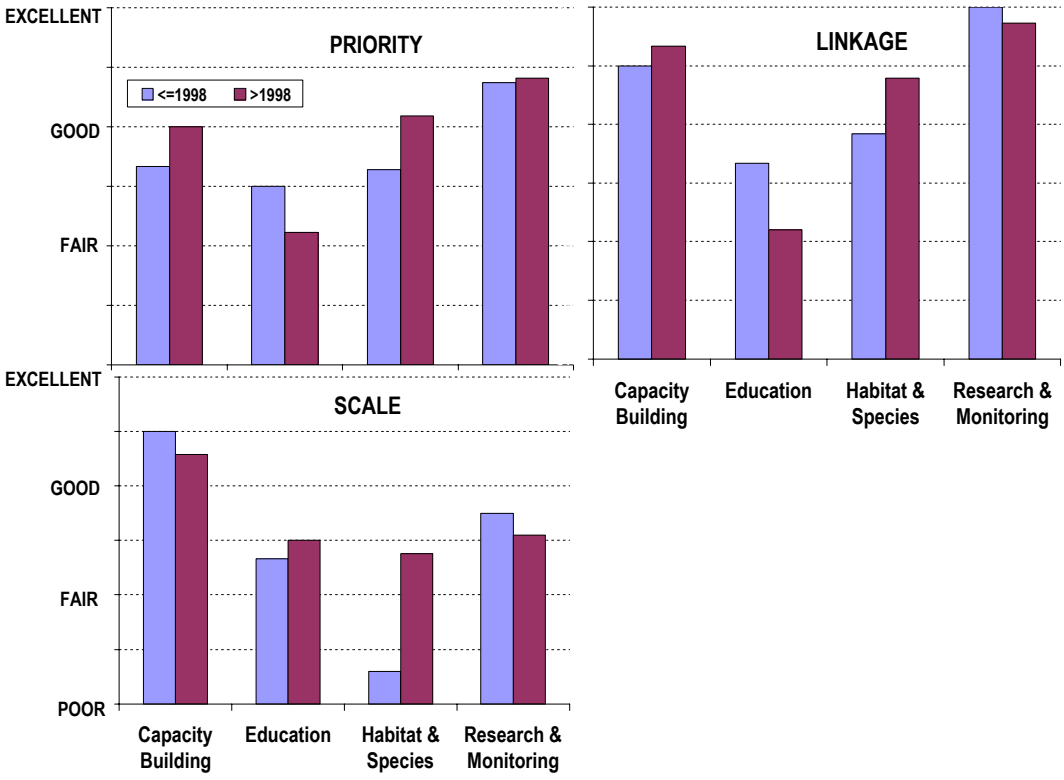


Figure 7: Design Performance by Category of Project

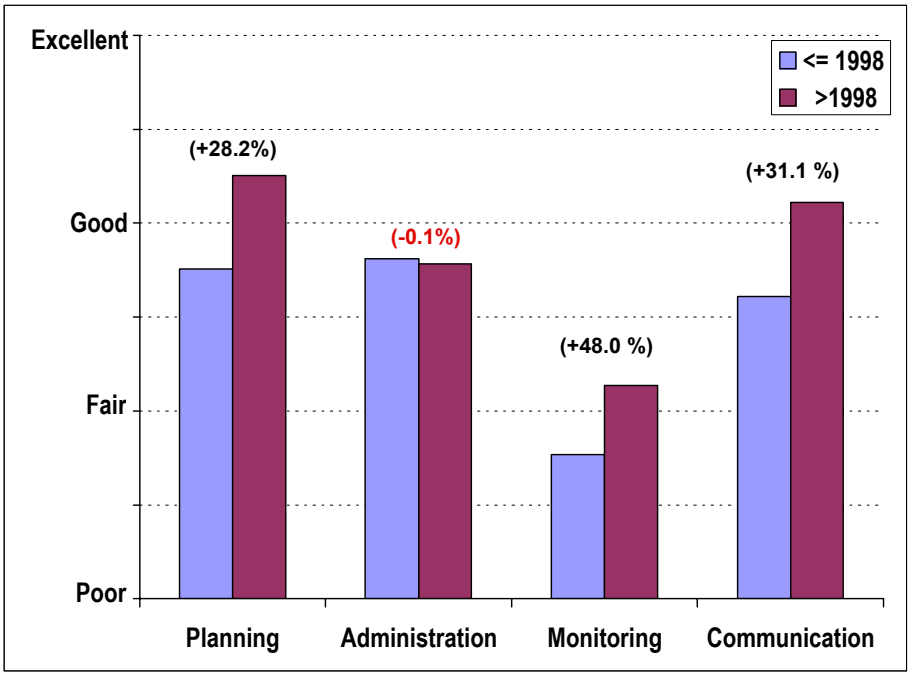


Implementation

We assessed project implementation using four core criteria. First, we evaluated quality of project planning. To receive top marks, project planning had to logically relate activities to desired outcomes, describe a monitoring and evaluation plan that was appropriate for the project, develop a stakeholder map and communication strategy. Second, projects were evaluated with respect to their administration – whether they were able to finish on time and on budget. Third, projects were assessed on the degree that they implemented monitoring and evaluation after project completion[2]. Finally, projects were assessed on the extent that they had shared project results with key stakeholders.

The results of the implementation evaluation are shown in **Figure Eight**. Projects scored relatively well with respect to planning, administration, and communication. However, projects scored quite poorly in their ability to carry out monitoring after project completion, typically because of lack of funding. Significant improvements in project performance in planning, monitoring and communication are evident over the two time periods.

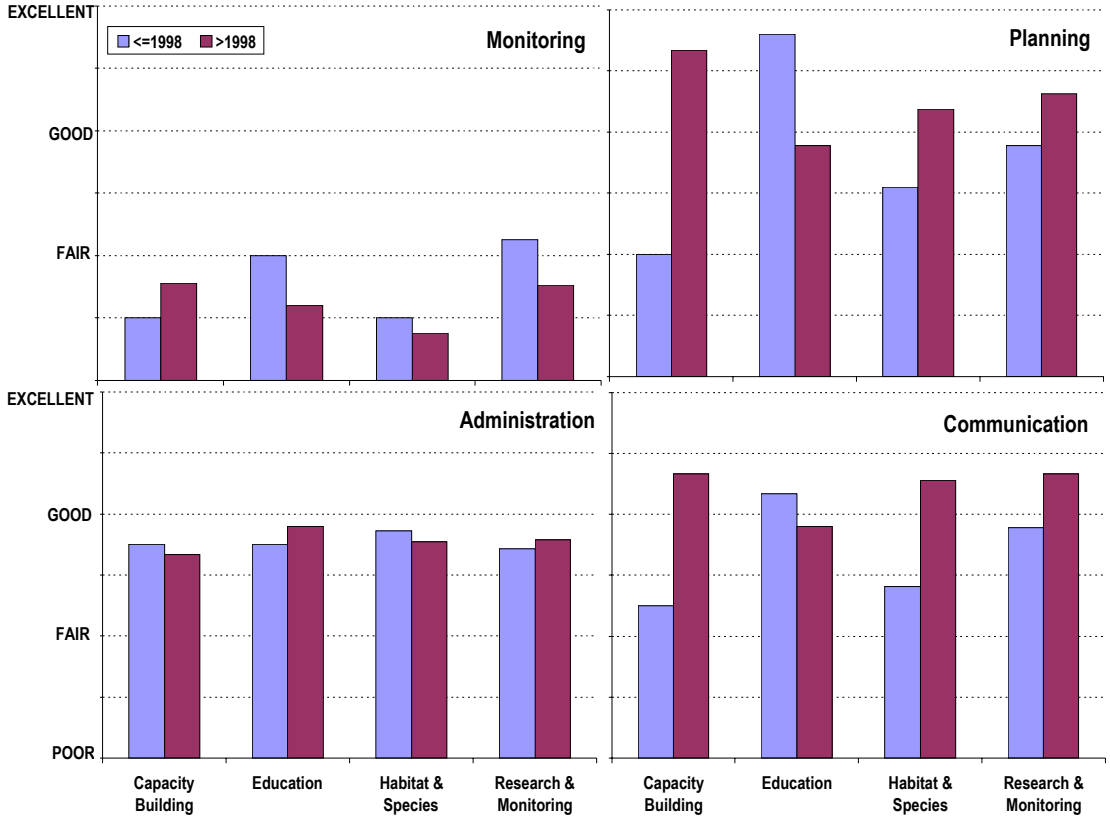
Figure 8: Implementation Performance



[2] The survey instrument questions #19-#21 were recoded to a single score with the following ratings: poor – no monitoring, or unknown; fair – non-quantitative and/or sporadic monitoring; good – regular monitoring of at least some quantitative attributes; excellent – comprehensive, long term monitoring in place.

Unlike design performance, there are no large and consistent differences in implementation performance across categories (**Figure Nine**). The four categories of projects perform consistently poorly in monitoring, and consistently well in planning, administration, and communication, particularly in the most recent time period.

Figure 9: Design Performance by Project Category



Outcomes

Due to a lack of quantitative information, we were generally not able to measure long-term conservation outcomes of projects in terms of changes in species populations. Instead, we used quantitative and qualitative indirect indicators that have a high likelihood of being linked to desirable conservation outcomes. Indicators differed among project categories because the path through which each category of project impacts the conservation target is unique. For example, consider that a range of project types might be funded to help secure the long-term conservation status of rare plants in a particular locale. A *habitat and species* project might focus on controlling exotic weeds, while an *education* project might focus on explaining to visitors why they should refrain from picking endangered plants. For both projects, the ideal long-term measure of project success would be the actual population status of the rare plant species in question. However, in the course of this evaluation we found that information on the population status of species is rarely available because it is expensive and time-consuming to collect.

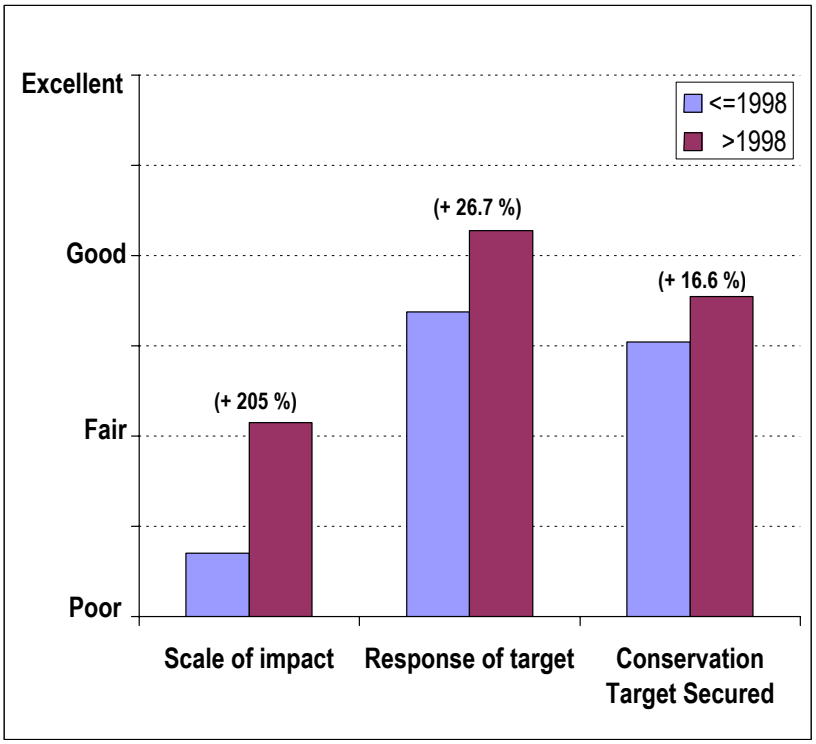
Nevertheless, it is possible for grantees to measure the linkage between their project activities and the intended conservation outcome. Even though it would be impractical for an education project to measure the population status of rare plants, we felt it reasonable to expect that they measure how successfully the initiative changes knowledge, and ultimately behavior towards those plants.

In the following sections we describe the performance criteria and present the results for the main project categories.

Habitat and species: The outcomes of *habitat and species* projects were evaluated against three criteria. First, we determined whether the completed project had impacted a biologically significant area with respect to the needs of the conservation target. Second, we asked whether there was any qualitative or quantitative evidence demonstrating a positive response of the target to project activities. Finally, we asked whether threats remained after project completion that would compromise long-term viability of the conservation target.

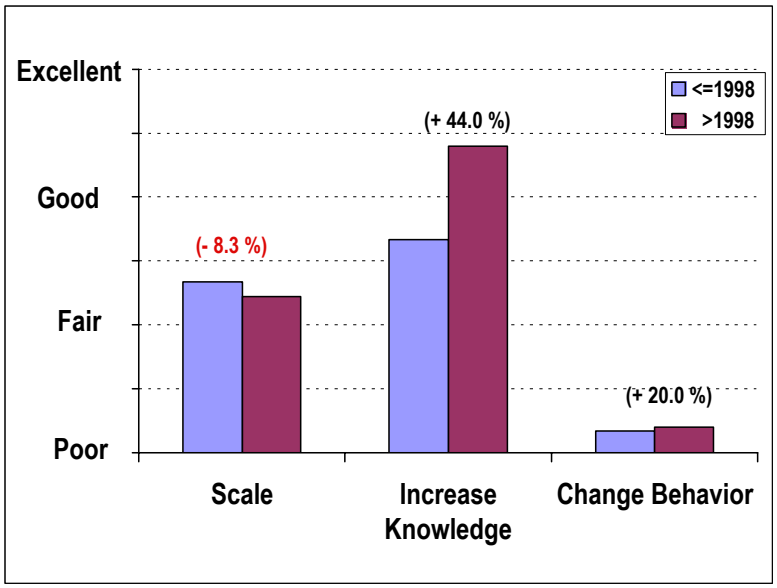
Results of the evaluation are shown in **Figure Ten**. *Habitat and species* projects performed well with respect to demonstrating a positive response of the conservation target to project activities, and in their ability to secure the long-term conservation status of the target. Projects performed poorest with respect to their ability to implement activities at biologically meaningful scales, although they did show considerable improvement over the two time periods.

Figure 10: Outcome Performance -- Habitat and Species



Education: We used three criteria to evaluate the outcomes of *education* projects. First, scale – was the initiative successful in reaching the majority of the target group in an area that was biologically significant with respect to the target? Second, was the initiative able to demonstrate an increase in knowledge as a result in project activities? And finally, was the project able to demonstrate actual changes in behavior towards the target that would lead to desired conservation outcomes. As a group, *education* projects performed slightly better than fair with respect to scale. Projects did quite well with respect to being able to demonstrate an increase in knowledge as a result of project activities. However, with a few notable exceptions, projects were generally unable to demonstrate that their activities resulted in changes in behavior that would improve the status of conservation targets (**Figure Eleven**).

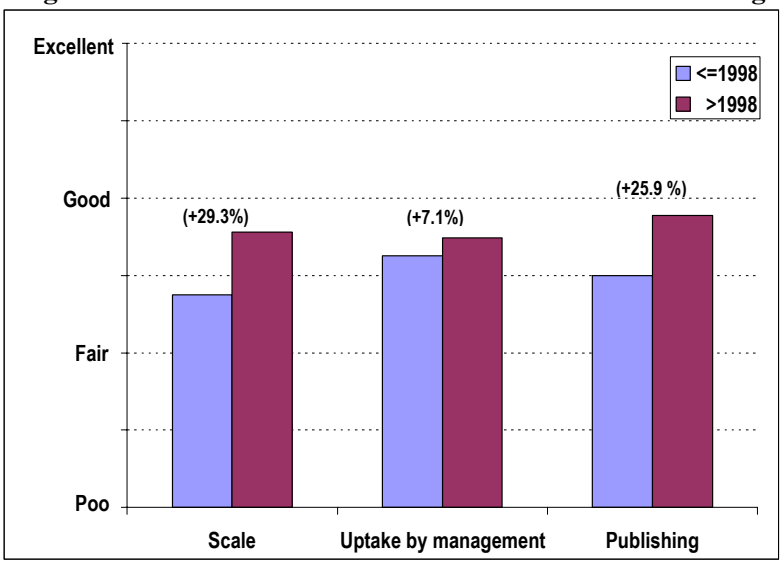
Figure 11: Outcome Performance -- Education



Research and monitoring: We used three criteria to evaluate *research and monitoring* projects: geographic area over which results were shared with conservation managers relative to the occurrence of the conservation target; the extent to which conservation managers used results of the research; and, the quality of the research as evidenced by publication in peer-reviewed journals.

Project performance was consistently strong across the three criteria, with significant improvement across the two time periods of the evaluation (**Figure Twelve**).

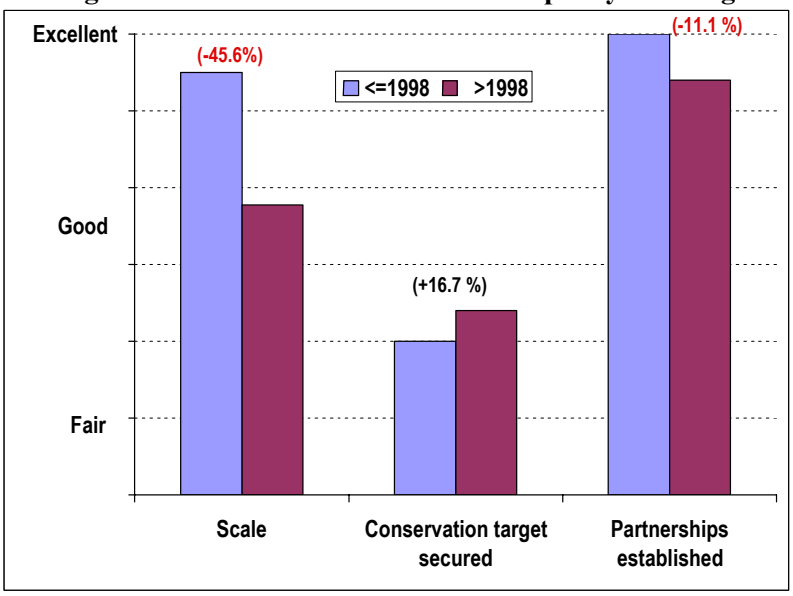
Figure 12: Outcome Performance – Research & Monitoring



Capacity Building: We evaluated capacity building projects using three criteria: geographic area over which management was affected relative to biological needs of the conservation target; extent to which conservation management was secured for the long term; and, establishment of long-term partnerships to fill gaps in management capacity.

Projects performed well with respect to scale. For example, there were various examples of multi-state projects. Projects were also quite successful in their ability to create long-term partnerships. The weakest aspect in performance was securing conservation management for the long term (**Figure Thirteen**).

Figure 13: Outcome Performance – Capacity Building



Aggregate Performance Scores for Project Categories

We calculated an aggregate performance score at each stage of the project cycle. Rather than use the average rating for the various factors in each stage, we used the lowest score attained across the factors. This approach reflects the assumption that all factors are *necessary*, and no single factor or subset of factors is *sufficient*, to ensure successful conservation. In other words, we believe that the axiom "a chain is only as strong as its weakest link" applies to the practice of conservation. We developed this approach based on our own field experience, and to our knowledge it is not described in the conservation evaluation literature.

Table Seven shows the difference in scoring between averaging and the "weakest link" approach when applied to a hypothetical *habitat and species* project. With respect to design performance, the project scored very highly on priority and linkage, but very poorly on scale. In other words, the project activities are being carried out at too small a scale to produce a lasting and biologically significant outcome. Using the average approach to calculate an integrated design score yields a rating of "good", which we think is misleading. Using the minimum performance approach to calculate an integrated project score yields a rating of "poor", which we feel better represents the project's performance. In this case, no matter how great in importance the target is, and how strong the linkage between the proposed activities and the desired changes in the conservation target, it will not yield conservation benefits because it is carried out at too small a scale.

Table 7: Comparison of Performance Scoring Systems

Overall performance of hypothetical habitat and species projec

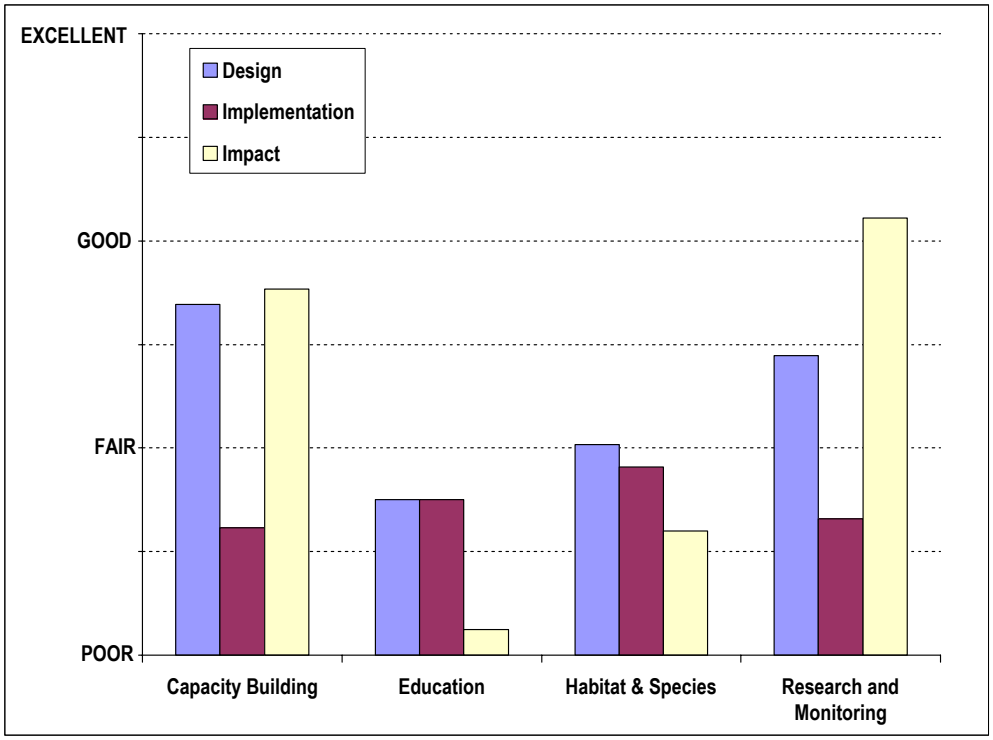
Evaluation Stage	Criteria Used	Performance	Integrated Scores	
			Average[1]	Minimum
Design	Scale	Poor		
	Priority	Excellent	Good	Poor
	Linkage	Excellent		
Implementatior	Planning	Fair		
	Administration	Fair		
	Monitoring	Poor	Fair	Poor
	Communication	Good		
Outcome	Scale	Poor		
	Response of targe	Good	Fair	Poor
	Critical threats	Fair		

1. Poor=0; Fair=1; Good=2; Excellent=3.

A second reason for using the minimum performance approach is that it is a better management tool. Project and portfolio managers can only improve their rating by focusing on those criteria where performance is weakest. In contrast, the average approach would reward improvement in any criteria, even those that were not limiting overall project performance.

Aggregate project scores for the four categories of projects are shown in **Figure Fourteen**. Overall, *capacity-building* projects scored quite well with respect to design and outcomes, but poorly with respect to implementation. *Education* projects scored poorly in design and implementation, and even worse with respect to outcome. *Habitat and species* projects also scored quite poorly overall. *Research and monitoring* projects scored well with respect to design and outcome, and poorly with respect to implementation. In order to improve the performance of future projects, the design of *education* and *habitat and species* projects should be improved. *Education* projects are weak in priority, scale and linkage, while *habitat and species* projects are weakest in scale. All categories of projects need to improve implementation, and within this, focus on ensuring that long-term monitoring improves. With respect to project outcomes, again, work is needed primarily on *education* projects, and *habitat and species* projects. *Education* projects are weak in scale, increasing knowledge, but in particular demonstrating links between activities and desired changes in behavior. *Habitat and species* projects need to focus on increasing the scale of the impact of projects in relation to the needs of conservation targets.

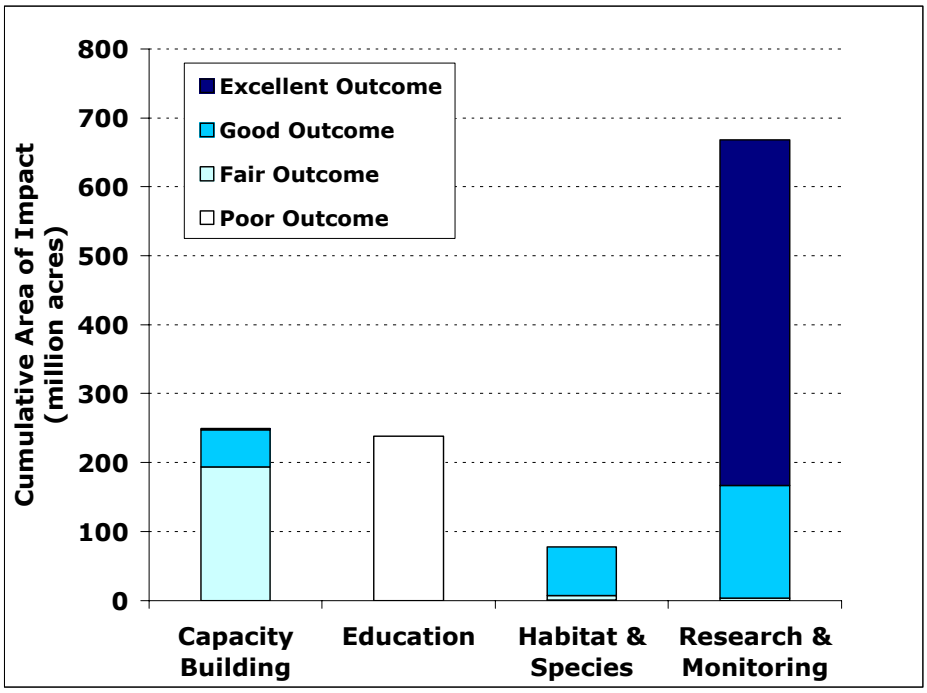
Figure 14: Aggregate Performance Scores



Area of impact of projects

As a measure of the reach of the General Call, **Figure Fifteen** shows the cumulative area that has been impacted by each project category. The area impacted by projects generating excellent outcomes is shown in navy blue. Good and fair outcomes are indicated by progressively lighter shades of blue, and the area with poor outcomes in white.

Figure 15: Area of Portfolio Impact



Research and monitoring projects have impacted by far the greatest area, nearly 670 million acres, and the majority with excellent outcomes. *Capacity-building* projects have impacted approximately 250 million acres, the majority with fair outcomes. *Education* has impacted a similar area as capacity-building, with all the projects generating poor outcomes. *Habitat and species* projects have impacted the smallest area, some 78 million acres, but the majority with good outcomes.

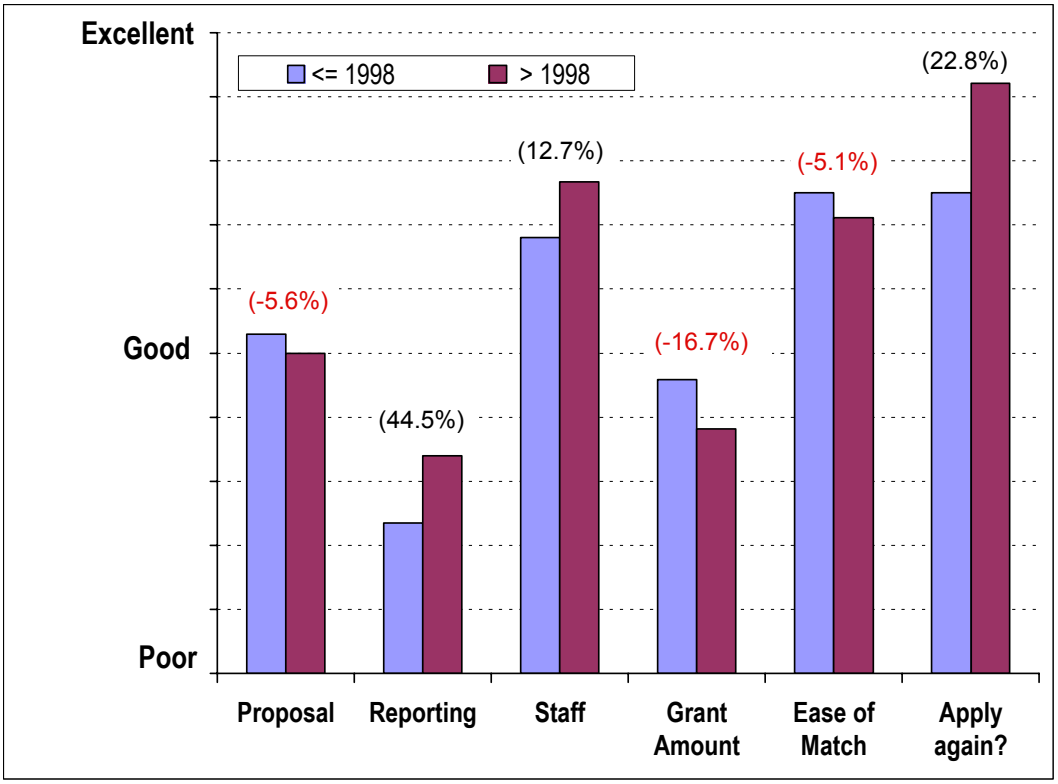
The performance of the portfolio looks favorable when presented in terms of area. For example, the outcomes of *research and monitoring* on average rank about at the level of good, yet the majority of area impacted by *research and monitoring* projects is excellent. This is because of the correlation between the scale of projects and their performance, with large-scale projects tending to generate better outcomes.

Performance in Administering the General Call

The performance of a grant portfolio depends not only on how well grantees design and implement their projects, but also on how well administration supports grantees throughout the project cycle. We therefore collected grantee feedback on their experience with the administration of the General Call. NFWF's performance relative to other donors was evaluated on six criteria: proposal requirements; reporting requirements; NFWF staff support; grant amounts relative to funding needs; ease of finding matching funds; and, whether grantees would consider applying for another grant, based on their past experience with NFWF.

NFWF performed well with respect to proposal requirements, and even better in terms of staff support to grantees. Grantees did not, on average, have difficulty satisfying NFWF's requirements to match funding. The weakest areas were reporting requirements, which were deemed excessive, and grant amounts which were considered too small. As an indicator of overall satisfaction with NFWF, nearly all grantees in the second time period would consider applying for another grant (**Figure Sixteen**).

Figure 16: NFWF Administrative Performance



It is worth noting that we only interviewed successful grant applicants. It may be that results would differ if a pool of *potential* applicants were sampled. We did receive feedback that BLM staff were discouraged from applying to the program by the administrative requirements of NFWF.

Grantees were also given an opportunity to provide open-ended suggestions for improving the grant program. The top three recommendations were: streamline application and reporting requirements; provide better communication about grant opportunities; and reduce processing time for reviewing proposals, releasing payments, and turning contracts around (**Table Eight**).

Table 8: Grantee Suggestions to NFWF

Grantee Suggestions to Improve Administration	No. of times Cited
Reduce application and reporting requirements	21
Better explanation of how to apply for NFWF, reporting requirements, various funding streams, and what NFWF program objectives are	15
Reduce delays for accepting proposals, releasing funds, turning contracts around	10
Provide more multiyear funding	8
Improve accessibility/communication of program officers	5
Reduce matching requirements	5
Broaden eligibility and reduce reporting requirements for in-kind matching	4
Match funding cycles with field work cycles	4
Reduce NFWF staff turnover	4
Standardize reporting categories and fiscal years between grantee institutions and NFWF	3
Reduce the number of letters of reference that are required, or provide more flexibility in who they can befrom	3
More site visits and monitoring by NFWF staff, including long term followup	3
Provide forum for NFWF grantees to communicate among themselves	3
Simplify accounting proedures	3
Help grantees finding matching funds	2
Eliminate phased approach to releasing payments	2
Increase allotment for indirect expenses	2
Improve tone of contract wording	1
Improve communications with financial officers	1
Eliminate need for congressional approval	1
Improve the online reporting tool	1
More support from program officers in developing proposals; technical support in projects	1

Step 5: Conduct Site Visits

We conducted site visits to accomplish three objectives: first, to verify information gathered from grantee telephone interviews; second, to discuss in detail issues of interest that arose during telephone interviews; and third to learn from grantees the practical implications of better ecological monitoring.

Our proposal to NFWF allocated four person-weeks for site visits. Possible criteria for selecting sites included: maximizing the number of project sites visited; ensuring proportionate sampling of the four main project categories; and, ensuring geographic representation of the portfolio. We ultimately chose a compromise among these criteria, electing to visit four states with the greatest number of projects but that would also ensure good geographic representation (Oregon, California, Utah and Colorado), and when scheduling site visits within those states, we chose projects in the same approximate proportion as they occurred in the portfolio. **Figure Seventeen** shows that we were reasonably successful in visiting a representative sample of projects that closely matched the overall portfolio composition. In all, our 22 site visits covered 34 of the 179 grants in the portfolio. Our discussion guide for site visits is attached as **Appendix Six**.

Figure 17: Site Visit Distribution by Project Category

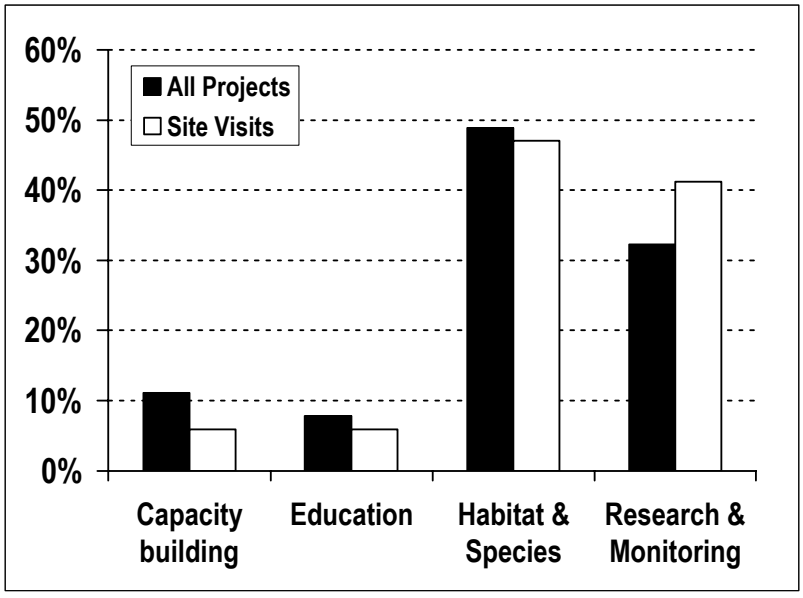


Table Nine A summarizes the changes made to data collected by the original telephone evaluation of project performance after visiting projects in person. The numbers shown in the table are the adjustments for each of the main attributes or "factors of success" that we considered. Each attribute consisted of four ordered performance categories, meaning that adjusted values could range from –3 (a ranking based on the telephone interview of the highest performance category, subsequently downgraded to the lowest performance

category based on the site visit) to +3 (a ranking based on the telephone interview of the lowest performance category, subsequently upgraded to the highest performance category based on the site visit). A score of 0 meant that there was no change in assessed project performance after the site visit. For example, the table shows that field visits confirmed the information obtained by phone interviews for 19 of the 22 sites with respect to the ranking of the "priority" of project design (first row of data in table). One project was downgraded three categories, and two projects were upgraded three categories.

Table 9A: Interview Error Based on Site Visit Verification

		Change in scoring after site visit						
		-3	-2	-1	0	1	2	3
Design	Priority	1			19			2
	Linkage				22			
	Scale			1	17	4		
Implementation	Planning				22			
	Admin				22			
	Monitoring budget			1	21			
	Communication				20	2		
Outcome	Scale of Impact		1		9	1		
Habitat & Species	Response of target				11			
	Other Critical Factors				11			
Outcome	Scale				5			
Education	Increase Knowledge				5			
	Change Behaviour				5			
Outcome	Scale				2	1		
Capacity-building	Partnerships				3			
	Ensure Mgt				3			
Outcome	Sharing				6			
Research & Monitoring	Uptake by management		1		5			
	Publishing				6			

The table shows that the majority of the information yielded by telephone interviews was verified by the site visits (93.8% of the individual *project x attribute* assessments). The largest readjustments were made with respect to assessing the conservation priority of projects. One project was downgraded three performance categories because the site visit revealed that a cited conservation priority was not in actual fact a beneficiary of the project. Two other projects were upgraded by three performance categories because the phone interview had failed to fully reveal the regional planning context within which the projects were taking place. The results also show that assessing scale during the telephone interview was in some cases problematic, both with respect to the design of all projects, and for outcome for habitat and species projects.

Another way to look at the data is to ask simply what number of projects in each category had adjustments made based on information obtained during site visits. This information is shown in **Table Nine B**.

Table 9B: Interview Error Based on Site Visit Verification

	Number of changes made to individual project rating				
Project Category	**0**	**1**	**2**	**3**	**Grand Total**
Capacity Building	2		1		3
Education	3	2			5
Habitat & Species	4	3		1	8
Research & Monitoring	1	5			6
Grand Total	**10**	**10**	**1**	**1**	**22**

The performance information obtained from telephone interviews was unchanged for ten projects (45.3%), and a further ten required only a single adjustment. Unfortunately, due to the very small sample sizes within each category, it is not possible to drill down in to the characteristics of these projects and reliably relate project characteristics to the number of adjustments required. It is possible to offer a few anecdotal comments though. Telephone interviews failed to adequately capture the extent of project activities for the two that required two or more adjustments. The first project was large and long-term, and the phone interview was insufficient to understand the full scope of project activities. The phone interview for the second project failed to capture the full extent of past grantee experience and justification for project activities. One other notable feature of the table is that research and monitoring projects are distinct in that five of the six projects required at least one adjustment. Three of the five adjustments were to award higher points for the scale at which the research was being conducted.

Overall though, the results from the site visits support the veracity of the information collected during the grantee telephone interviews. Only 6.2% of the individual *project x attribute* assessments were changed after visiting projects. Although a few of the individual changes were large, once averaged out over the group of projects, they tended to cancel each other out. For those cases where the site visit resulted in changing a performance category, the average magnitude of change was only +15/100 – in other words, site visits resulted in a slightly higher ranking of project performance, between one- and two-tenths of a performance category, for 6.2% of the *project x attribute* assessments that were made. The remainder of the assessments remained unchanged.

Finally, we reiterate that we did not randomly select sites to be visited. Rather, we chose sites to maximize the number of projects we could visit, and to obtain a stratified sample of the four main project categories. Any statistical inferences should take this into account.

Step 6: Determine which projects have yielded the greatest conservation benefits

For the sixth step of the evaluation, we originally proposed to compare the outcome performance of different types of projects within each of the four main project categories.

Through the course of the evaluation we discovered three characteristics of the NFWF-BLM portfolio that make this a difficult, if not impossible, task to complete.

- *Insufficient sample size*: as pointed out in **Step 1**, only seven of the 16 sub-categories of projects had five or more projects in them (the minimum we feel is necessary to draw any conclusions about the performance of a group of similar projects. Depending on the variation in project performance, even this number is generally too small).

- *Varying contexts*: the context within which projects have been carried out varied tremendously. For example, within the sub-category of "habitat restoration projects", the range of habitats restored included sagebrush steppe, grassland, and riparian areas or wetlands. Projects also varied by restoration technique, abiotic factors, climate, and time period of project activities. Controlling for this variation further reduced sample sizes.

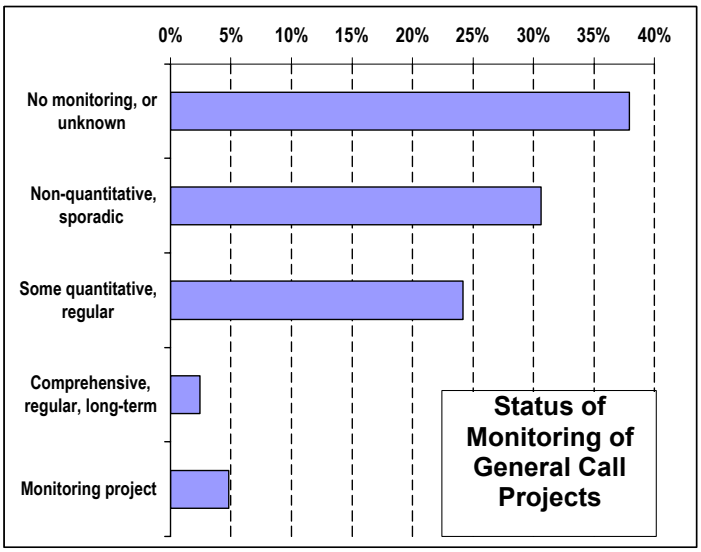
- *It's probably the wrong question to ask*: for each particular context, there is probably a type of project that is most appropriate. For example, if the most important threat to sage grouse in a particular valley is degraded breeding habitat, it makes little sense to fund *species re-introduction* rather than *habitat restoration*, simply because the former is thought to be, on average, more cost-effective. Rather than viewing the problem solely through the lens of "cost-effectiveness", we think that it is more appropriate to identify the most important category and sub-category of project for the conservation target, and make this project as effective as possible.

With these caveats in mind, for the sake of completeness, we will now present the original sequence of analyses of cost-effectiveness put forward in our proposal.

Question 1*: Are NFWF grantees using the correct metrics to measure project success?* The answer to this question is quite certainly "no," for the simple reason that most grantees conduct little or no long-term monitoring of their projects. **Figure Eighteen** shows the status of long-term monitoring of projects that have been funded by the General Call. Almost 40% of the projects have no monitoring, and another 31% have only sporadic monitoring, using non-quantitative metrics based on the occasional observational site visit. Only 24% of projects perform periodic collection of quantitative measures. An example would be a *habitat restoration* project that periodically takes photos and basic habitat quality measurements, or an *education* project that follows its graduates to see how they were influenced by the project. Only slightly more than two

percent of projects had good baseline information and regularly monitored a suite of indicators that related directly to desired conservation outcomes.

Figure 18: Monitoring of NFWF Projects



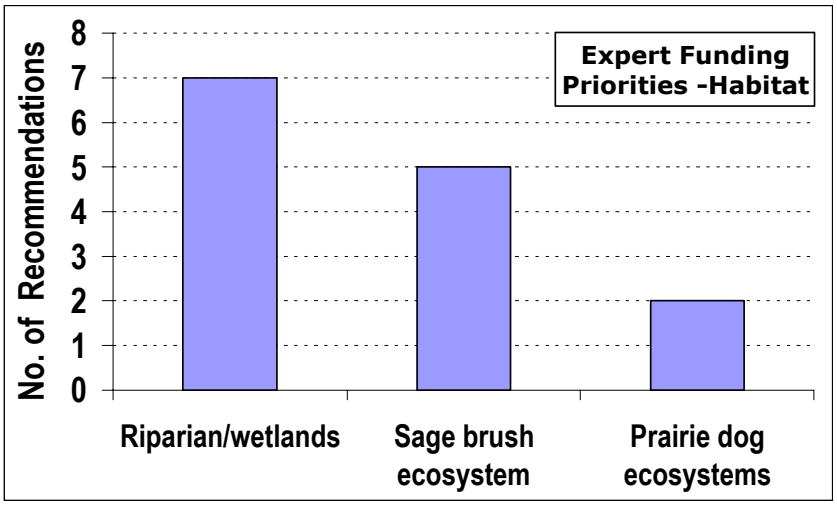
***Question 2**: Is NFWF choosing projects in alignment with expert priorities?*

In **Step 2** we found that the patterns of funding in the General Call were not strongly aligned with the broad institutional priorities of NFWF and BLM. With respect to whether NFWF is allocating funding in alignment with expert priorities, we found that funding allocations are reasonably in line with expert priorities for habitat types, but not for species.

Figure Nineteen shows habitat priorities identified by the experts[3]. Riparian/wetland areas are the top priority, followed by sagebrush ecosystems and prairie dog habitat. This agrees reasonably well with General Call funding (see **Figure Two** in **Step 2**), with the exception of sage brush steppe which was identified as the third priority by experts but is seventh in funding.

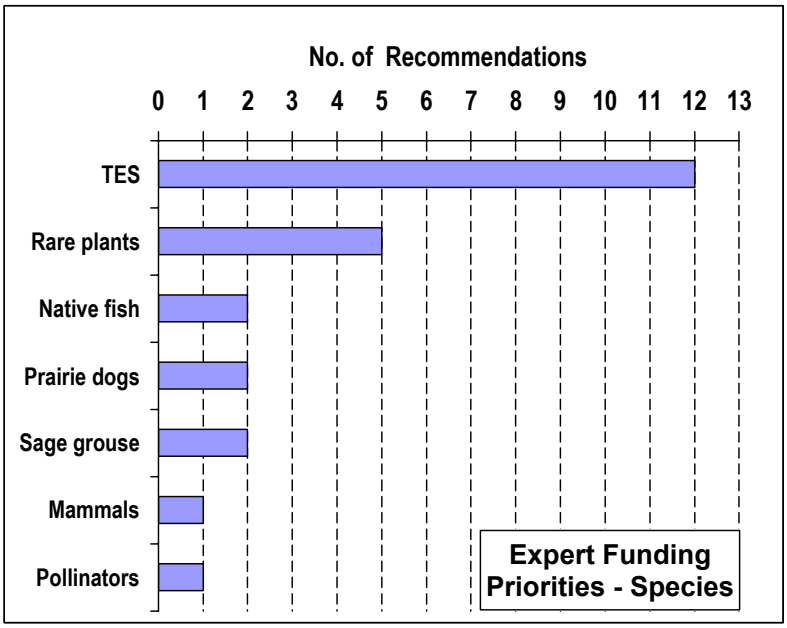
[3] Note that experts were only asked to identify thematic priorities for conservation, which could include habitats, species, or other themes, such as adaptive management or exotic species. These three habitat priorities should not be mistaken for overall thematic priorities, which have been discussed previously.

Figure 19: Expert Funding Priorities -- Habitat



Experts identified threatened and endangered species as the top priority for funding at the species level, followed by rare plants, native fish and prairie dogs (**Figure Twenty**). These differ significantly from funding allocations in the General Call (see **Step 2**). The dominant allocation by species group in the General Call is first, quail and other upland game birds, second, overall bird communities. Rare plants and native fish are 14th and 8th respectively.

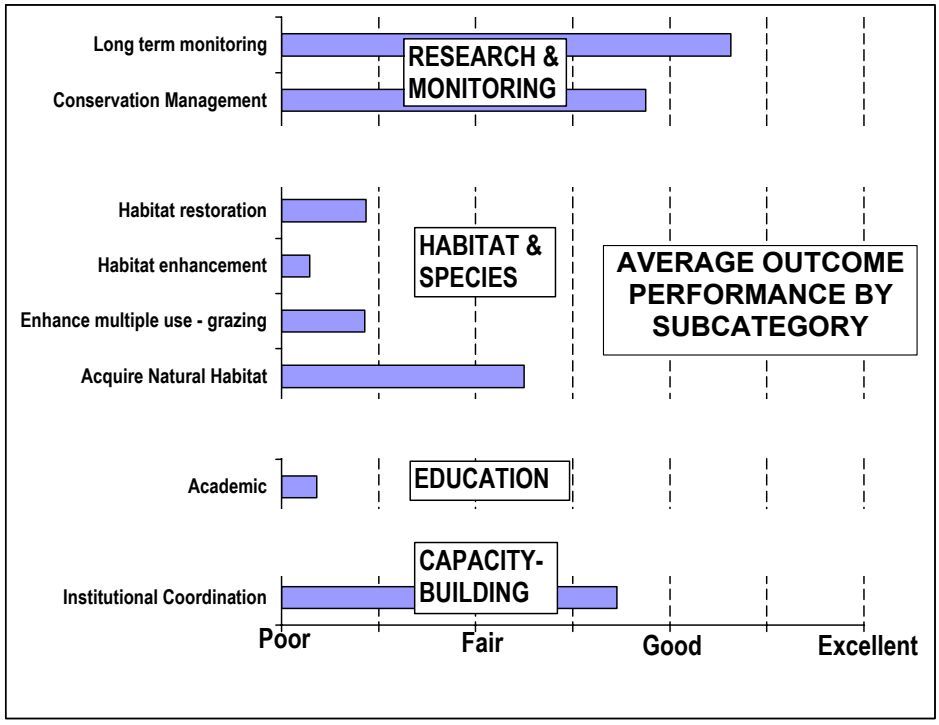
Figure 20: Expert Funding Priorities -- Species



***Question 3 and 4**: How do projects perform within their project types, and which types of projects have yielded the greatest benefits?*

Figure Twenty-One summarizes outcome performance for subcategories with at least five projects [4]. For the reasons given above, we do not feel it is useful to compare the performance of projects across categories or subcategories. We present this information not to encourage comparisons, but rather so that it is clear which subcategories of projects are not reaching their potential.

Figure 21: Average Project Performance by Sub-Category

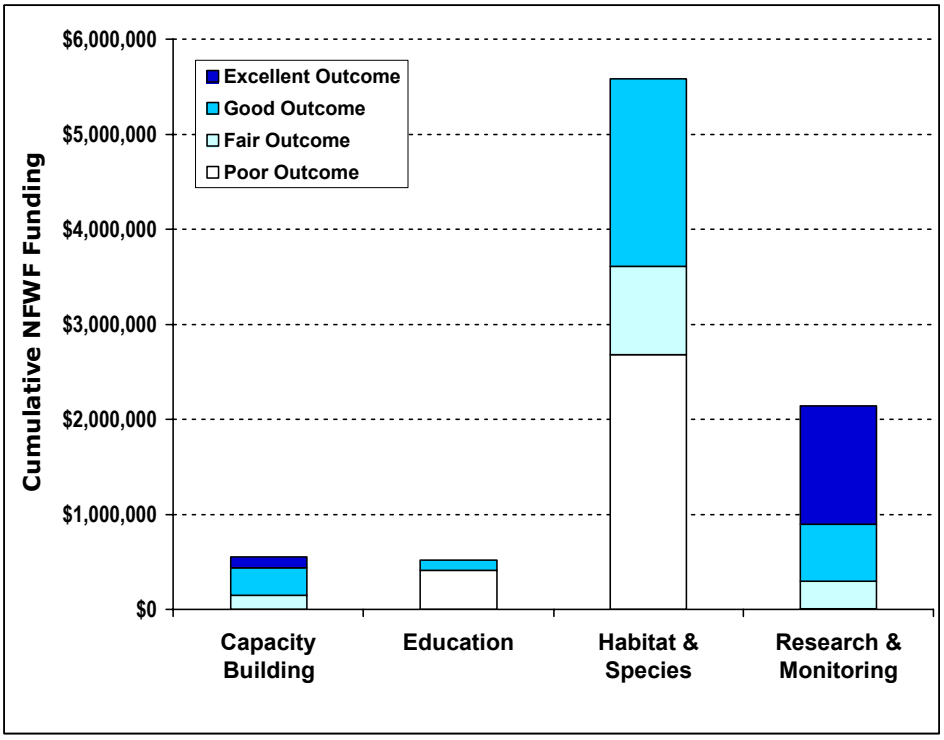


[4] Average outcome is calculated by first assigning each project an overall outcome score, which in this case is the minimum performance in any single criteria, and then averaging these scores for all projects within the subcategory.

Step 7: Calculate cost-effectiveness of grants

General Call funding in relation to performance is summarized in **Figure Twenty-Two**. *Habitat and species* projects received the greatest funding, and approximately half this amount funded projects that achieved fair performance or better. *Research and monitoring* projects received the next greatest amount of funding, and virtually all of it funded projects with fair performance or better. *Capacity-building* and *education* projects have received relatively little funding, but performance of all projects was fair or better. *Education* stands out in that the majority of funding to this category financed projects with poor performance.

Figure 22: Funding by Level of Performance

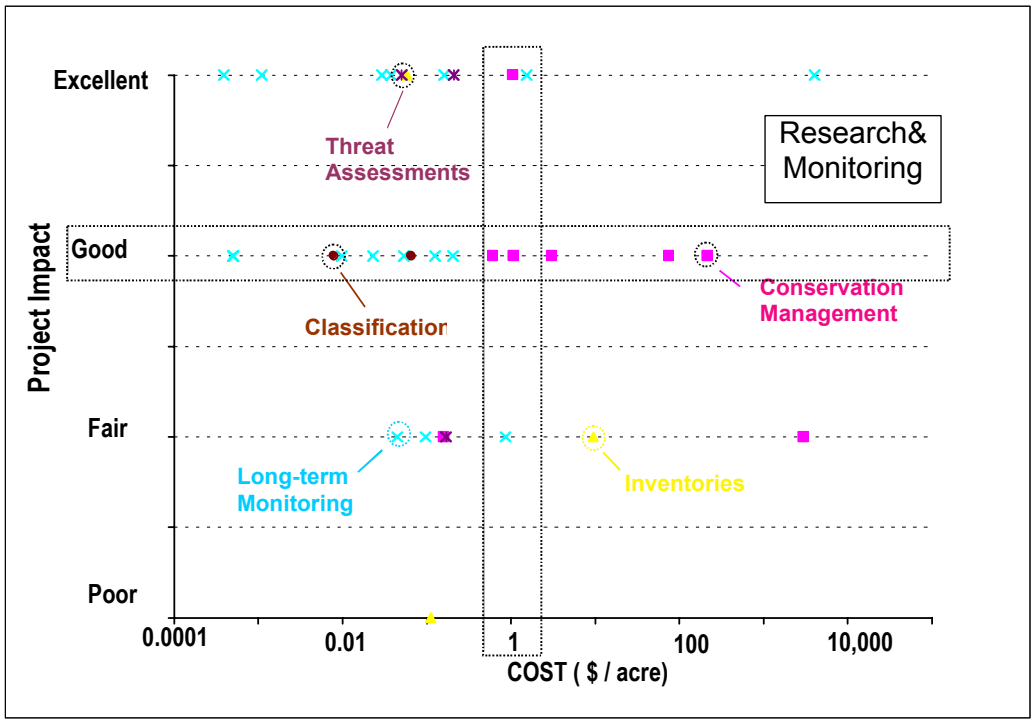


Our original intention was to compare the *cost-effectiveness* of different subcategories of projects within the four main project categories. For the same reasons explained in **Step 6**, we realized that this is not a reasonable exercise. Not only are sample sizes very small in most project subcategories, and the conservation targets and ecological contexts in which they are carried out varying tremendously, but the economic contexts also differ considerably. These factors combine to thwart any attempt at a meaningful cost-effectiveness analysis.

For example, **Figure Twenty-Three** shows the cost-effectiveness of all projects in the research and monitoring category. The y-axis displays performance, as measured by a

project's outcome, and the x-axis shows the cost of the project per unit area. Each subcategory of project has a unique color and symbol. The large variation introduced by varying ecological and economic contexts is readily evident. For example, looking more closely at conservation management projects (indicated by the square pink symbols), one can see that the cost of projects that have demonstrated a "good" level of performance varies from less than one dollar per acre, to more than 200. Conversely, for a cost of about one dollar per acre, some projects have obtained an excellent rating, while others have obtained only a "good" rating. The same variation is present when looking at other project subcategories within research and monitoring, as well as the subcategories within the other three main project categories.

Figure 23: Cost Effectiveness of Research and Monitoring Projects



A cost-effectiveness analysis might be possible if the General Call had focused objectives, targeting a very small number of habitats or species, in a tightly circumscribed geographic area. However, as we have seen in **Step 2**, the program funded a very broad array of project types, focused on different species and habitats, and located in very different contexts.

We believe that given the wide economic and ecological contexts within which the General Call funds projects and the broad diversity of project types proposed by grantees, the General Call needs to remain as flexible as possible. The challenge in awarding funding is not to fund the most cost-effective type of project, but rather, to ensure that the program is funding the type of project most appropriate to the context, and within this constraint to ensure the project is as effective as possible.

Step 8 – Establish best management practices to guide future grant making

In order to determine where NFWF should focus its efforts on improving project outcomes, we regressed average project impact scores on both design and implementation performance for those project categories which had a sample size of at least five projects. For example, we broke *habitat and species* projects down into four categories of design performance (poor through excellent), and for those categories with at least five projects, we then calculated the average project impact score.

We found that project design was a good predictor of project impact (**Figure Twenty-Four**). In contrast, implementation performance did not correlate significantly with outcome performance (r^2=0; p=0.6; n=9). These results suggest that the overall outcome performance of the General Call can be improved by focusing on improved design of projects. The lack of relationship between implementation and outcome performance is attributable to low variation in implementation performance – most projects performed reasonably well in planning, administration and sharing, and reasonably poorly in monitoring. It is also possible that refinements to our existing measures of implementation performance would increase their predictive power with respect to project outcomes.

Figure 24: Relationship between Design and Outcome Scores

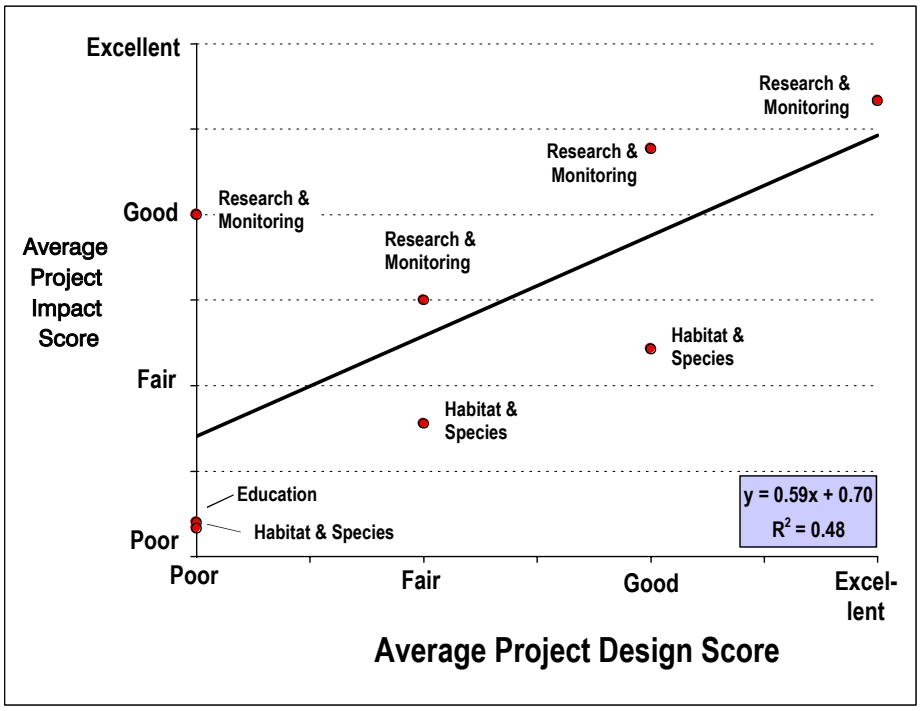


Table Ten shows the percentage of projects in each category whose design performance is limited by priority, linkage or scale. Poor performance with respect to priority is the most common limiting factor of design performance in *capacity building* projects,

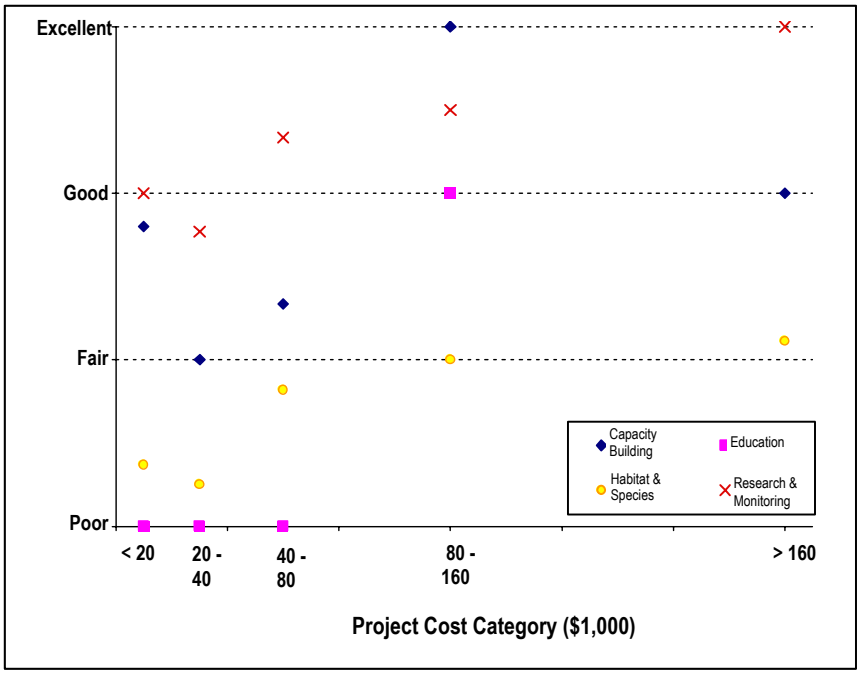
although scale is also a common weakness. Scale is the most common problem in the design of *education* projects, but priority and linkage are also limiting many projects in this category. The design of *habitat and species* projects, and *research and monitoring* projects, is mainly being held back by problems of scale.

Table 10: Design Scale as a Limit to Project Success

	"Factor of Success" Limiting Design Performance		
Project Category	Projects limited by "Priority" Score (%)	Projects limited by "Linkage" Score (%)	Projects limited by "Scale" Score (%)
Capacity Building	58.3	8.3	33.3
Education	28.0	28.0	44.0
Habitat and Species	17.9	7.5	74.6
Research and Monitoring	21.6	5.4	73.0

Supporting evidence for the importance of scale is found in the relationship between project cost and average project performance (**Figure Twenty-Five**). Small sample sizes prevent testing for correlations between performance and project cost *within* project categories (although they do appear to be related from a visual inspection), but there is a significant relationship when all data points are combined (spearman rank correlation: $\rho = 0.489$, $0.01 < p < 0.05$).

Figure 25: Project Cost vs. Performance



Further interpretation of evaluation results and their implications for best management of the NFWF-BLM General Call are detailed in the main text of the report.

APPENDIX TWO – EVALUATION RATING MATRIX

This appendix describes a conservation project rating system based on conservation evaluation literature, input from a panel of 46 conservation experts, and our own experience in the field. From this, we identified a manageable set of "factors of success" characteristic of strong conservation projects at three stages of a project cycle: *design*, *implementation*, and *outcome*. The rating system describes the characteristics of a project that performs at four levels ranging from "poor" to "excellent" for each factor of success.

For example, *geographic scale* is a very important factor for any conservation project. The appropriate scale of a project is related to the biological needs of the conservation target. A poor project will fail to conserve adequate spatial area to ensure the survival of a conservation target, while an excellent project will conserve its entire natural range.

The following tables provide descriptors used in rating project performance for each factor of success. In order to achieve a given ranking, a project must satisfy *all* conditions identified in the project descriptor.

In addition, metrics of performance for each factor of success are suggested. The quality of information available to measure performance will vary across projects. For this reason, the project descriptors have definitive logical breakpoints – either a condition is clearly satisfied or it is not, discernable using available information and professional judgment.

This rating system can be used in the retrospective evaluation of projects as well as in the selection of projects for grants. Factors of success in project design are highly correlated with successful project outcomes.

Another recommended use of the evaluation matrix is as a guide to prospective foundation grantees, as it provides a framework of the information needs and performance conditions they will be expected to satisfy. This provides an excellent opportunity for the foundation to ask of its grantees in applications to "show us how you will achieve an excellent rating," allowing them to tailor their metrics to meet the matrix's descriptors of excellence. This is superior to providing a uniform set of metrics for monitoring and performance reporting that may *not* be appropriate for all projects. When approached from this angle, the challenges of universal evaluation become far more tractable for a foundation that funds projects of many types.

Design Evaluation Matrix					
Attribute	**Metrics**	**Rating**			
		Excellent	**Good**	**Fair**	**Poor**
Priority	Definition of conservation target Peer references and other proof of priority	Project is clear and specific about conservation target Project addresses conservation priorities, as defined by scientific community	Project is clear and specific about conservation target Project addresses conservation priorities, as defined by scientific community	Project is clear and specific about conservation target Project could better addresses conservation priorities, as defined by scientific community	Project is *unclear* and *not* specific about conservation target Project does *not* addresses conservation priorities, as defined by scientific community
Scale	Peer references and other proof of scientific basis Expected Δ in conservation target relative to MVP[1], MDA[2] or SFE[3]	Project includes established science-based model of conservation biology of target, including MDA, MVP, and SFE Geographic scale of project, or regional strategy of which it is a part, exceeds minimum necessary to ensure species viability and/or support ecosystem structure and function, and extends over natural range of conservation target	Project includes plausible science-based model of conservation biology of target, including MDA, MVP, and SFE Geographic scale of project, or regional strategy of which it is a part, exceeds minimum necessary to ensure species viability and/or ecosystem structure and function	Project includes conservation biology model of target, but requires substantial additional scientific research Geographic scale of project, or regional strategy of which it is a part, meets minimum necessary to ensure species viability and/or ecosystem structure and function	Project does *not* include conservation biology model of target Geographic scale of project, or regional strategy of which it is a part, does not meet minimum necessary to ensure species viability and/or ecosystem structure and function
Linkage	Quality of references and base of experience supporting conservation activities	Project activities based on established scientific model, proven to generate predictable conservation outcome	Project activities based on plausible scientific basis	Scientific basis of project activities could be improved	Project activities have no clear basis in science, and conservation outcome is not predictable

Implementation Evaluation Matrix					
Attribute	**Metrics**	**Rating**			
		Excellent	**Good**	**Fair**	**Poor**
Planning	Logical framework or similar statement of goals, objectives, and activities	Project has clear goals, objectives, and activities, organized into a *logical framework*, with corresponding work plan and budget	Project has clear goals, objectives, and activities, organized into *a written statement*, with corresponding work plan and budget	Project goals, objectives, and activities *could be better defined* and linked in logical manner	Project has *no* clear goals, objectives, and activities, or they are not linked in logical manner
	Work plan and budget, corresponding to logical framework	Work plan and budget is well organized and detailed, *more than adequate* to track project administration	Work plan and budget is well organized and detailed, and *adequate* to track project administration	Work plan and budget *could be improved, but adequate* to track project administration	Work plan and budget either *absent or not adequate* to track project administration
	Stakeholder map	Stakeholders are clearly identified, described, and engagement strategy developed and *integrated into regional conservation strategy*	Stakeholders are clearly identified, described, and engagement strategy developed	Stakeholders are clearly identified, described, but *engagement strategy not developed*	Stakeholders are *not clearly identified*
Administration	Progress reports and project completion documents, accounting, submitted to donor	Project is implemented on schedule and within budget	Project is implemented on schedule and within budget, *with minor adjustments*	Project is not implemented on schedule and within budget, *but is eventually completed*	Project is *not* completed
Monitoring	Baseline Data	Scientifically sound baseline data for conservation target acquired and accessible for analysis in M&E	Scientifically defensible proxies for conservation target acquired and accessible for analysis in M&E	Scientifically defensible proxies for conservation target acquired but *not directly useable for analysis in M&E*	No baseline data or proxies collected
	M&E Plan	Project has M&E plan	Project has M&E plan	Project performs some	Project performs no

		that tracks progress towards goals	that tracks progress towards goals	measures of effectiveness, or tracks progress at infrequent/irregular intervals	measures of effectiveness
	Documentation of data & analysis from M&E	Project analyzes M&E results on continuous basis	Project analyzes M&E results on intermittent basis	Project analyzes limited metrics of effectiveness, on intermittent basis	Project neither collects nor analyzes measures of effectiveness
	Evidence of project response to M&E -conceptual model -key assumptions -project plan -management	Project adapts fully to M&E results, revisiting conceptual model and key assumptions, project plan, and addressing management shortfalls, and attains project's objectives	Project adapts to large degree to M&E results, although some identifiable changes are not made	Project adapts in small part to M&E	Project *does not* adapt to M&E
Communication	Evidence of sharing M&E with other experts for opinion and analysis Evidence of stakeholder communication, based on stakeholder map (see *Planning*)	Project clearly communicates, on periodic and reasonable basis, results to all relevant experts and stakeholders	Project clearly communicates, on periodic and reasonable basis, to some relevant experts and stakeholders	Project infrequently communicates results to some relevant experts and stakeholders	Project does *not* communicate with relevant experts or stakeholders

Outcome Evaluation Matrix					
Attribute	**Sample Indicators**	**Rating**			
		Excellent	**Good**	**Fair**	**Poor**
Scale of project or larger program/strategy of which it is a part	Conserved species population relative to MVP[1] and natural range	Conserved species population exceeds MVP, extending over significant portion of natural range of species	Conserved species population exceeds MVP	Conserved species population meets MVP	Conserved species population does not meet MVP
	Conserved habitat relative to MDA[2], SFE[3], and natural range	Conserved habitat exceeds MDA or SFE, and extends over significant portion of natural range of habitat	Conserved habitat exceeds MDA or SFE	Conserved habitat meets MDA or SFE	Conserved habitat does *not* meet MDA or SFE
	Potential to scale/replicate pilots	Pilot project demonstrates capability to scale up to exceed MVP, MDA, or SFE, and extend over natural range of species or habitat	Pilot project demonstrates capability to scale up to exceed MVP, MDA, or SFE	Pilot project demonstrates capability to scale up to meet MVP, MDA, or SFE	Pilot project does *not* demonstrate capability to scale up to meet MVP, MDA, or SFE

Species and Habitat Improvement					
Response of Conservation Target	Δ target species population Δ target habitat area, structure and function	Project increased and fully restored population of target species Project increased habitat area with *fully* restored structure and function	Project increased population of target species Project increased habitat area with *partially* restored structure and function	Project maintained population of target species Project maintained habitat area at baseline condition	Project did *not* maintain population of target species Project did *not* maintain area of target habitat at baseline condition
Critical Threats Managed	Δ in factors affecting population or habitat recovery/maintenance	*Long-term* management of a*ll* factors affecting population or ecosystem secured	*Long-term* management of s*ome* factors affecting population or ecosystem secured	*Temporary* management of factors affecting population or ecosystem secured	Project does *not* manage factors affecting population or ecosystem

Education					
Change in knowledge, attitudes, and behavior	Δ knowledge of population impacting conservation target Δ attitudes of population impacting conservation target Δ behavior of population impacting conservation target	Project changed behavior towards conservation target among *entire* population impacting conservation target	Project changed behavior towards conservation target among *majority* of population impacting conservation target	Project changed behavior towards conservation target among *less than majority* of population impacting conservation target Project changed knowledge and attitudes about conservation target among *majority* of population impacting conservation target	Project did *not* change behavior towards conservation target among population impacting conservation target Project did *not* change knowledge or attitudes about conservation target among *majority* of population impacting conservation target

Capacity Building					
Capacity Growth and Partnerships	Δ staffing, infrastructure, equipment, training relative to needs for managing conservation target Δ partnerships that resolve capacity shortfalls for managing conservation target	Project increased capacity of organization(s) managing conservation target, and resolved *all* shortfalls to ensuring adequate long-term management of conservation target	Project increased capacity of organization(s) managing conservation target, and resolved *several* shortfalls, but does not ensure adequate long-term management of conservation target	Project increased capacity of organization(s) managing conservation target, and resolved at least *one* shortfall, but does not ensure adequate long-term management of conservation target	Project did not increase capacity of organization(s) managing conservation target, and organization(s) still unable to ensure adequate long-term management of conservation target
Critical Threats Managed	Δ in factors affecting population or habitat recovery/maintenance	*Long-term* management of a*ll* factors affecting population or ecosystem secured	*Long-term* management of s*ome* factors affecting population or ecosystem secured	*Temporary* management of factors affecting population or ecosystem secured	Project does *not* manage factors affecting population or ecosystem

Research and Monitoring					
Sharing of Information	Breadth of distribution of information relative to field	Project results disseminated across *all* management regions	Project results *widely* disseminated across management regions	Project results disseminated, but *not widely* across management regions	Project results *not* disseminated across management regions
Use/Adoption by Managers	Δ conservation managers using knowledge generated by project Δ conservation management resulting from knowledge generated by project	Project produces basic or applied science that is used by managers of conservation target across significant portion of natural range	Project produces basic or applied science that is used by managers of conservation target in multiple regions	Project produces basic or applied science that is used by managers of conservation target in one region	Project does *not* produce basic or applied science that is used by managers of conservation target
Publication	Publications in peer-reviewed journals Publications in gray literature	Project results published in *leading* peer reviewed journal in field	Project results published in peer reviewed journal	Project results published in gray literature	Project results not published

Notes

1) *Minimum Viable Population (MVP):* Population has 99% chance of remaining extant for 1000 years despite foreseeable effects of demographic, environmental, and genetic stochasticity, and natural catastrophes. See Shaffer. 1981. Minimum population sizes for species conservation. BioScience 31: 131-134; Primac, R. 2000. *A Primer of Conservation Biology:* Sunderland MA, Sinauer Associates, Inc. Publishers.
2) *Minimum Dynamic Area (MDA):* Amount of suitable habitat necessary to maintain minimum viable population (MVP). See *A Primer of Conservation Biology:* Sunderland MA, Sinauer Associates, Inc. Publishers.
3) *Structure and Function of Ecosystem (SFE):* Characteristic assemblages of species, demographic distributions, and energy and nutrient dynamics.

APPENDIX THREE: NFWF-BLM INTERVIEW TEMPLATE

Introduction

My name is _____. I'm a partner with Hardner & Gullison Associates, the firm performing the evaluation of the National Fish and Wildlife Foundation's partnership with the Bureau of Land Management. You may know of us from previous work we performed for the Foundation in an evaluation of the Shell Marine Habitat Program. We are starting our evaluation process by speaking with a number of managers within the Foundation and BLM, to get a clear idea of the goals and priorities of the program, and if possible to learn a little more about the institutional relationships that make this program work. My hope is that by speaking with you today we can further develop our understanding of the program, while only using a few minutes of your time. Before we get started, do you have any questions you'd like us to answer about ourselves or the evaluation process?

[Questions and comments from respondent.]

Ok, if you're ready, let's move on to the questions.

Background Questions

[First clarify name and position, if needed]

1. Name: _____

2. Title: _____

3. Geographic area of expertise

   BLM
   a. National (all regions)
   b. Pacific Northwest (WA, OR)
   c. Intermountain West (CO, UT, WY, MT, ID)
   d. Southwest (NM, AZ, UT, NV, CA)
   e. Other: _____

   NFWF
   a. National (all regions)
   b. Northwest
   c. Southwest
   d. Texas/Oklahoma
   e. Central
   f. Southern
   g. Eastern

Conservation Objectives for NFWF-BLM Biodiversity Conservation Program

One of the most important elements of an evaluation is a clear description of a program's goals and priorities against which to measure the performance of grantees. I'd like to spend a few minutes discussing the goals and priorities of the partnership between National Fish and Wildlife Foundation and the BLM over the nine-year period of 1995 to 2003. Just to clarify terminology, when we speak about goals, an example would be "protection of threatened and endangered species," and when we speak about priorities within those goals we are focusing on the specific species or their habitats. In other words, goals are general and priorities are more specific and fall within each goal.

4. Broadly speaking, what were the overall goals of the NFWF-BLM collaboration during the nine year period of 1995-2003?

5. Were there specific regional goals? [May not comment on all regions].
   BLM
   a. Pacific Northwest (PNW)
   b. Intermountain West (IMW)
   c. Southwest (SW)
   d. Other
   NFWF
   a. Northwest
   b. Southwest

6. Within each of the goals you've identified, can you comment on specific priorities?

7. Can you tell us how these goals and priorities were identified? Who is involved in setting them? How often they are reviewed?

8. Have there been any notable changes in the goals and priorities of the partnership over the 9-year period?

9. For each of the program goals, can you comment on what categories of projects are best able to meet program goals, and how you chose that approach? For example, you may have decided that a major goal is sage grouse conservation, and that "habitat restoration projects" would be the preferred approach to achieve this goal. This approach was developed in consultation with BLM biologists.

10. Could you describe how individual projects and grantees are selected to ensure that the program's goals and priorities are addressed? [do the constraints on grants (small grants, short time frame) influence your ability to achieve the desired results?]

11. Are there any major gaps in project or grantee selection that you are aware of? For example, do you have a sufficient number of applicants for your priority areas? Is any class of project particularly weak?

12. How does the partnership decide how many grants are awarded to BLM applicants, and how many to third parties? Do third parties perform any particular niche roles? Are there different criteria for selecting non-BLM grantees?

Performance Metrics

13. One of the major priorities of our evaluation will be to develop metrics for use in evaluating the performance of future grants, but right now, we would like to learn from you about how you currently go about measuring the performance of grantees and their projects. We would like to know your opinion about the most and least useful measures of project performance for the project categories you have identified as the best able to meet the program's goals. For example, referring to the same example of habitat restoration projects to enhance sage grouse populations, what have you found to be the best measures of the performance of these projects? Perhaps through simple measures as the number of hectares restored? Or more complex measures, such as changes in recruitment in the sage grouse population of interest?

14. Can you tell me about how the Foundation and BLM monitored projects under this program? For example, what resources were there to follow a project's implementation and evaluate its performance? Are there limits to these resources?

Referrals

15. Are there any specialists in the field of conservation outside of the Foundation and BLM that you would recommend that we speak with in the course of our evaluation? We are hoping to interview a number of experts in fields related to the program to develop a comprehensive understanding of what is most needed and what projects are most effective in the field.
    a. _____
    b. _____
    c. _____
    d. _____
    e. _____

Wrap Up

16. In case we didn't capture everything, is there any other input you might like to provide to guide the framing of our analysis? [One example: significant new program goals for the next granting cycles.]

17. We will be presenting our results, as we progress through the evaluation, to senior management and to the Board of the Foundation. Are there other ways you would like to receive information about our evaluation as we move forward? We will relay your suggestions to Matt Birnbaum, who is our lead contact for the evaluation.

Ok, that's it. Thanks very much for your participation in the evaluation. We will use the information we've gathered to develop further our evaluation strategy for conservation projects performed on BLM lands. Your input is of great help to make our evaluation as useful as possible to your organization.

APPENDIX FOUR: EXPERT INTERVIEW TEMPLATE

Introduction

Hello, is this XXXXX?

Hi, my name is _____.

I'm working on a project with the National Fish and Wildlife Foundation, to evaluate its grant program with the Bureau of Land Management.

Our company, Hardner & Gullison Associates, is contacting independent experts about their views on conservation priorities on BLM lands. We are also interested in learning about the sort of conservation projects that have been most successful in your area.

Have we correctly identified you as somebody that has expertise either with BLM lands or the types of ecosystems found on BLM lands, such as grasslands, sage steppe, and desert?

[IF "NO"]
Probe: "Is there someone you might recommend we speak to?"
Probe: "Anyone else you can think of?"
TERMINATE CALL – "OK, thank you for your time."

[IF "YES"]
By speaking with you today, we are hoping to refine the framework for our evaluation, while only using a few minutes of your time.

Are you comfortable answering some questions in this area?
Before I start, do you have any questions?

Ok, if you're ready, I'll start with our questions.

Background Questions

[First clarify name and position, if needed]

18. Name: _____
19. Title: _____
20. Geographic area of expertise (PNW, SW, IMW):
21. Ecosystem or species of expertise:
22. Thematic area of expertise:

23. Do you wish to remain anonymous?

24. If no, may we attribute information directly to you?

Awareness of NFWF/BLM

25. Are you familiar with any grant programs between National Fish and Wildlife Foundation and BLM?

26. [IF "YES"] Please describe [e.g, interviewee has heard about it; knows of projects; has written references; has received a grant]

    [IF APPLICANT KNOWS PROJECTS] Which projects are familiar with? What is your opinion of these projects?

    [IF "NO": go to Question 10]

Conservation Priorities

27. One important component of our evaluation is to examine the thematic priorities that National Fish and Wildlife Foundation and BLM have used to guide their grant making. In this regard, we are interested in asking independent experts such as you their opinions about what they feel conservation priorities should be on BLM lands. Could tell us what you think are three top conservation priorities for BLM in your region.

28. Given the priorities you mentioned, what sort of conservation projects do you feel do the best job at addressing them?

    PROBE: Sometimes we talk about four broad classes of projects – I'd like to just go over them, and get your thoughts on the usefulness of each of these types of project: (1) research and monitoring, (2) habitat and species conservation, (3) conservation education, and (4) capacity building.

29. Now, thinking of your OWN experience, what would you say are the key "factors" or "issues" which determine whether a conservation project succeeds or fails?

    PROBE: How critical are issues such as size of organization implementing the project, partnerships, science, or others to project success?

30. What about scale? Is there a minimum scale at which a project should be carried out?

    PROBE: How does it compare with the scale of the problem? How big does a project need to be to ensure you are actually making a difference that will last? Can we talk about some examples from the list you gave us?

31. Evaluating the success or failure of projects is critical to the National Fish & Wildlife Foundation. In your experience, what are the best ways to measure the performance of

conservation projects? Are there any measurement approaches the Foundation should avoid?

The Niche for the NFWF-BLM Program

32. The grant program we are evaluating has certain characteristics and limitations. Let me describe these for you:

    - Grants are small to medium size (about $75 thousand)
    - Grants are short term, 12 months
    - Projects must generate conservation benefits on BLM lands, and
    - Applicants must obtain a minimum 1:1 match with non-federal funds.

    Given these characteristics, what sort of priorities and projects is the program best suited to fund?

33. Are BLM's conservation practices in line with what conservation science is telling us should be done?

    Probe: Would you recommend that BLM consult experts more frequently or participate in different ways with the conservation community?

Referrals

34. Are there any experts in the field of conservation outside of the Foundation and BLM that you would recommend that we speak with in the course of our evaluation? We are seeking people with a broad background and experience that can comment on priorities across species and ecosystems:
    a. _____
    b. _____
    c. _____
    d. _____
    e. _____

Wrap Up

35. Our evaluation will be concluded by September or October of this year. Would you like to receive a summary of the results? [IF "YES"] What is the best way to send these to you? [Collect email or postal address].

Ok, that's it. Thanks very much for your time. Your input is of great help to make our evaluation as useful as possible to the National Fish and Wildlife Foundation and BLM. If you have any questions about the evaluation, you can contact Matt Birnbaum at the Foundation [Matt's number is (202) 715-0700].

APPENDIX FIVE: GRANTEE INTERVIEW TEMPLATE

Introduction

Hello, is this _____?

Hi, my name is _____, calling with regard to the evaluation of the National Fish and Wildlife Foundation and Bureau of Land Management grant program.

Is this still a good time to talk?

[IF "NO"]
OK, could you suggest a time to reschedule? Why don't you give me a couple options to make sure we can find one that fits. [GET NEW TIME AND CONCLUDE CALL]

[IF "YES"]
Terrific. Well, as we mentioned in our prior communications, our company, Hardner & Gullison Associates, is contacting grantees of the General Call from the National Fish and Wildlife Foundation and Bureau of Land Management grant program. The idea is to help both organizations evaluate the effectiveness of the grant program. An essential element of that evaluation is to speak with grantees to learn about their experiences with the grant program.

We've got a series of questions, which will hopefully take no more than 30 minutes to cover. We'll give you an opportunity to provide some direct and confidential feedback about the grant program. We'll also ask some questions about the design, implementation, and impacts of your project funded under this program. The information from our discussion will be aggregated and no single response will be attributed to you.

Having said that, do you have any questions before we proceed?

[IF "NO", PROCEED TO NEXT SECTION]

[IF "YES", ANSWER QUESTIONS, THEN PROCEED TO NEXT SECTION]

Background Questions

Ok, if you're ready, I'll start with our questions.

36. Can you give me a brief synopsis of the project?
37. What was your role in the project?
38. Can you tell me how large your organization [or office/department, if BLM] is in terms of annual budget and staffing?
39. What was your position in the organization when you conducted the project?

On NFWF/BLM

40. Tell me a bit about the grant process. How did you find the time requirements for proposal writing relative to other sources of grants?
41. How about project reporting to NFWF relative to other sources of grants?
42. How about the ease of working with the Foundation?
43. Did you find NFWF to offer grants large enough for what you wanted to get done?
44. Did you have trouble finding a funding match?
45. Would you consider applying to NFWF again for another grant?
46. Any suggestions to improve the grantee experience?

On Project Design and Implementation

47. Based on what you've told me, the conservation target for your project is XXXX, is that accurate?

48. How does this fit with regional conservation priorities? Are there any specific regional conservation strategies, plans, or other guiding work behind your identification of this target as a priority?

49. What was the thinking behind how your project would affect the conservation target? Were you building on experience, drawing upon scientific literature, or some type of theoretical model for how your project would have an impact?

50. How did you establish the scale you wanted to work at? [Probe: Tell me a bit about how this fits with conservation principles like natural range of target species or habitat, minimum viable population size, minimum dynamic area for populations, or minimum habitat size to maintain ecosystem structure and function?]

51. Did you specifically plan to improve, just maintain, or simply do something to slow the deterioration of your conservation target?

52. What kind of planning did you undertake? [Probes: Did you develop a: logical framework; monitoring and evaluation system; stakeholder map; communication or information dissemination plan?]

53. How'd the project go? Were you able to finish on schedule and within budget?

54. Did you have adequate budget to monitor project impacts?

55. If you had a monitoring and evaluation system, were you able to analyze the data collected?

56. Were you able to use project results to modify the way you completed this project, or conducted subsequent projects?

57. Did you share results from the project with others? How broadly?

On Project Performance (Questions by Project Category)

Species and Habitat Improvement

58. When all was said and done – what kind of impact did the project have for conservation?
    a. At what geographic scale did you have an impact? [Probe: How did this compare with your project design?]
    b. How did your conservation target respond? [Probe: Change in target species population? Change in target habitat area? Changes in ecosystem structure and function?] Would you consider the conservation target fully restored, partially restored, maintained, or did you just slow the decline of the target?
    c. How did your project impact the factors that are important for ensuring the long-term conservation of your target population or habitat? [Probe: Threats? Key ecological attributes?] Do you feel that the management of these factors is secured for the long-term? Are there remaining threats or critical factors that need to be addressed?
    d. How did you measure your impacts? Over what time period?

Education

23. When all was said and done – what kind of impact did the project have for conservation?
    a. At what geographic scale did you operate? [Probe: How did this compare with your project design?] Where you able to get to most people that might impact the conservation target, or did you focus on a select group of folks? What about those not included in your program – are they being educated through other programs?
    b. Were you able to increase knowledge about your conservation target among most people participating in the program?
    c. Were you able to improve the attitudes towards your conservation target among most people participating in the program?
    d. Were you able to improve the behavior towards your conservation target among most people participating in the program?
    e. How did you measure these impacts? Over what time period?

Capacity Building

23. When all was said and done – what kind of impact did the project have for conservation?
    a. What's the geographic scale of the area you believe was reached by the project's activities? [Probe: How did this compare with your project design?]
    b. Did your project build partnerships with other organizations to fill capacity needs?
    c. Was it possible to better manage your conservation target as a result of the project? How so? Was there still additional capacity needed to ensure the proper management of your target after the project?
    d. Did you measure the impacts of the project? How so? Over what time period?

Research and Monitoring

20. When all was said and done – what kind of impact did the project have for conservation?
    a. Were you able to get your results around to conservation managers in other places? Any folks not reached that might find this work useful?
    b. Are conservation managers using the results of your work? Whereabouts? In the location you performed the work? Other places? Are there places you think this work would be useful where it is not currently being used? [Probe: How about in relation to the natural range of the conservation target?]
    c. Did you have an opportunity to publish your results in a peer-reviewed journal? [If "YES", get cite]

Closing

59. We'll be following up with a select group about possible visits to the field to help round out our understanding of how projects have been working on the ground. Would a site visit give us a better understanding of how your project works? How so?

60. Would you like to receive a summary of our evaluation results? They should be ready for distribution in September.

61. Well that about does it for the questions. Is there anything else you'd like to tell me about the grant program or your project that you feel the Foundation or BLM ought to know?

OK. Well thank you for your time, your collaboration in this process is much appreciated.

APPENDIX SIX: SITE VISIT GUIDE

Site Visit Objectives

Hardner & Gullison Associates, LLC, an independent firm hired by NFWF, will be visiting select grantees of the NFWF-BLM General Call. All grantees have been interviewed by phone, and some have been selected for site visits based on a variety of criteria. The objectives of the visits are threefold.

- First, we will take the opportunity to verify information we collected during telephone interviews.
- Second, we would like to understand better the project context, including landscape-level issues that guide your decision making, stakeholder issues, and threats to the conservation target.
- Third, we would like to understand better how you measure the outcomes of your project, how this could be done better if additional support for monitoring were available, and what types of performance measures are most useful or practical.

Site Visit Discussion Guide

1. Visit to project site (if site based), and/or review of materials (maps, photographs, monitoring results) of project.
2. Discuss how project fits into larger strategy of the organization and regional strategies for conservation (including with other organizations.)
3. Review how organization measured outcomes of project. Have measurement techniques changed/improved since this project? What are the most useful indicators/metrics? How much does it cost (absolute and percentage of project budget) to measure performance? Are there better measures that would be used if more monitoring money were made available by donors? Which measures are most practical *and* useful? Which are *not*?

4. Following are metrics suggested by experts for various categories of projects. What are your opinions on their usefulness and practicality?

    a. What is the geographic scale of the project impacts relative to:
        i. Minimum viable population size of target species;
        ii. Minimum dynamic area of target species;
        iii. Minimum area to ensure continued structure and function of ecosystem target;
        iv. Has the project been replicated, here or elsewhere, to increase scale?

b. For *Site-Based Species and Habitat Conservation/Restoration* projects:
    i. Changes in target species population;
    ii. Changes in habitat area;
    iii. Change in factors affecting population or habitat.

c. For *Education* projects:
    i. % target population that increased knowledge;
    ii. % of target population that changed attitudes;
    iii. % of target population that changed behavior.

d. For *Capacity Building* projects:
    i. Change in capacity shortfalls to adequately manage conservation target;
    ii. Change in partnerships to address shortfalls.

e. For *Research and Monitoring* projects:
    i. Change in % conservation managers using knowledge generated by project;
    ii. # publications in peer-reviewed journals;
    iii. Changes in conservation management resulting from knowledge generated by project, relative to overall area where conservation target occurs.

5. If your capacity for monitoring is restricted, what entities beside yourself could assist with measuring performance?

6. How often should monitoring be conducted and over what time period?

7. What additional support could NFWF provide to assist in monitoring project performance?