



A Plan for Revenue Enhancement on the Valles Caldera National Preserve: Opportunities and Alternatives

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Prepared for

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Executive Summary

The Valles Caldera National Preserve (Preserve) is rich in geologic, natural, and cultural features that attract and captivate adventurers, scientists, native and local people, and tourists. Visitors to the Preserve often perceive it as a mystical place, filled with natural resource wonders and majestic views. The history of the Preserve is well documented, as is its recent role as an experiment in federal land management. That is, the Valles Caldera Trust (Trust) is a wholly owned federal corporation, mandated to become financially self-sufficient by the Year 2015. The Trust is expected to manage the Preserve so that it becomes self-sufficient, while adhering to the purposes set forth in the Valles Caldera National Preserve and Trust Act (Act), and complying with federal laws regarding environmental and cultural resources. In order to achieve the balanced goals of Preserve management and prepare for the declining appropriations, the Board of Trustees identified the need for a strategic study of revenue enhancement opportunities. To this end, the Economics Group of ENTRIX, Inc. has been retained by the Trust to explore how the Trust might achieve these legislated objectives.

Research conducted by the ENTRIX team for the purpose of this analysis has revealed that the balance between attaining financial self-sufficiency while adhering to federal regulations may be accomplished through a variety of approaches. Essential to this strategic study is an evaluation of different business enterprise activities including; lodging and hospitality, education and research, domestic livestock grazing, hunting, fishing, public programs, commercial film and photography, timber, merchandise, donations, and others. Most of these activities already occur on the Preserve, although in varying stages of development. For example, the hunting and fishing programs were found to be two of the most developed programs, and are already near the maximum level of development. At the other end of the spectrum, the existing lodging and hospitality activities are far less developed.

Two alternatives are used to illustrate the variety of options available. Both alternatives include the development of a visitor center, administrative headquarters, an education and research center, and campgrounds. Both alternatives also build in the renovation of existing cabins and structures, and badly needed road maintenance. Finally, each alternative depends

upon the on-going support of existing public recreational programs, and the continuation of special events.

Short and long term financial resource requirements have been estimated, assuming the Trust carries out facility development, operations, and maintenance for the two alternatives considered in this study. It is recommended that some activities be operated by a concessionaire. In these cases, it will be important to negotiate a contract with the operator (or concessionaire) that will benefit both parties. Along with financial resource requirements, the existing and future staffing needs of the Trust are identified for the next ten years under each alternative. It is anticipated that under Alternative 1 there will be a need for an additional 12 full time staff, and up to 41 seasonal staff, whereas in Alternative 2 there is an anticipated need for 11 full time staff and up to 33 seasonal staff. In addition, staffing requirements for concessionaires are also estimated at 10 full-time and 83 seasonal staff for the lodges and green burial services in Alternative 1. The expected additional concessionaire staff for just the green burial activity in Alternative 2 is four full time employees.

The alternatives presented in this analysis should be understood as suggestions for how the Trust could achieve financial self sufficiency. These alternatives should in no way be construed as a final determination for expansion of programs and activities on the Preserve. It is expected that before any expansion or facility development take place, the proper environmental and cultural resource compliance procedures will be followed. The information presented in this plan for these two alternatives will assist in documenting the development options.

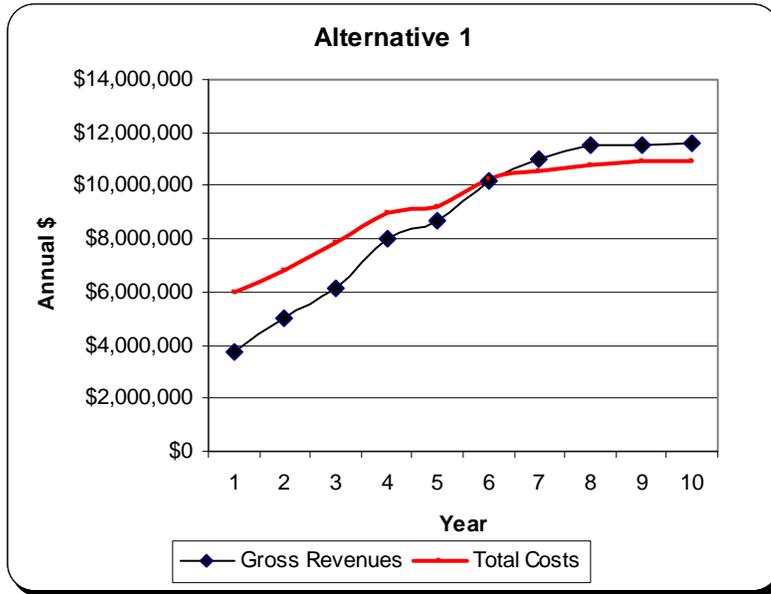
Financial Analysis – Alternative 1

The first alternative relies on developing a visitor base and generating revenue through a particular focus on hospitality and service sector ventures viable on the Preserve. This would include partnering with concessionaires to manage a mid-level lodge with a restaurant, as well as a high-end lodge. Wildlife tent camps are also associated with the hospitality and service sector under this alternative. In this scenario, a new visitor center, recreational programs, and special events will help fill the demand for the hospitality services. Also, diversity in the portfolio of investments is achieved through programs such as green burial services and an education and research center that create a broad source of revenue potential for the Preserve. This approach is referred to as Alternative 1 throughout the document.

Under Alternative 1, the Trust is expected to become financially self-sufficient after the final appropriations are distributed in Year 5. The figure below shows revenue generation from annual operations and annual fundraising but excludes congressional appropriations and one-time funds raised for developing infrastructure. This revenue meets and continues to exceed the costs of managing the Preserve and operating the various ventures considered in

Alternative 1 after Year 6. The costs of managing and operating the Preserve shown in Figure ES-1 exclude certain initial expenditures used to develop infrastructure. These are assumed to come from unfinanced special appropriations from Congress and donations.

**Figure ES-1
Projected Annual Revenues and Costs**



Under Alternative 1, \$22.5 million is assumed to be generated from such special appropriations from Congress and donations from either private parties or universities over the course of ten years. These funds will be used for infrastructure improvements and the development of new facilities. This is the expected amount of unfinanced initial facility development costs referred to above. Table ES-1 displays the projected condensed operating statement for the Preserve over the next ten years. Unless otherwise specified, all monetary figures in this report are in 2007 dollars.¹

¹ Actual future revenues and costs will both increase with inflation. However, because neither costs nor revenues are expected to increase any faster or slower than the other, the net results will be the same whether shown in 2007 dollars, or 2015 dollars.

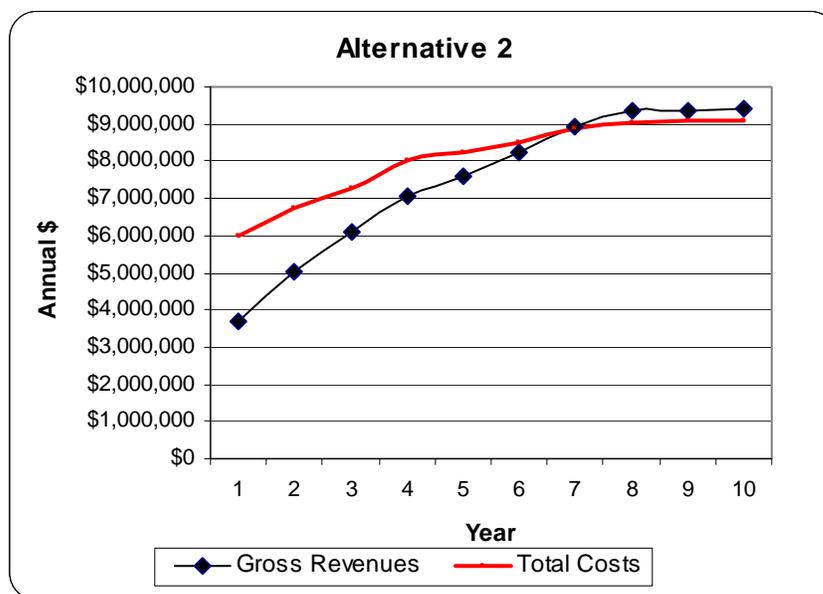
Table ES-1
Condensed Operating Statement for
the Valles Caldera National Preserve - Alternative 1 (\$1,000s)

Revenues / Expenses	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Sales/Funds/Fees Collected	\$3,183	\$4,488	\$5,601	\$7,404	\$8,050	\$9,566	\$10,389	\$10,847	\$10,847	\$10,847
Operating Expenses	(\$1,665)	(\$2,412)	(\$2,548)	(\$3,990)	(\$4,200)	(\$4,461)	(\$4,784)	(\$4,972)	(\$4,972)	(\$4,972)
Personnel Expenses	(\$2,516)	(\$2,516)	(\$2,546)	(\$2,244)	(\$2,244)	(\$2,274)	(\$2,274)	(\$2,303)	(\$2,303)	(\$2,303)
General and Admin. Costs	(\$1,817)	(\$1,767)	(\$1,767)	(\$1,767)	(\$1,767)	(\$1,767)	(\$1,767)	(\$1,767)	(\$1,767)	(\$1,767)
Income from Operations	(\$2,816)	(\$2,207)	(\$1,260)	(\$597)	(\$161)	\$1,065	\$1,564	\$1,805	\$1,805	\$1,805
Annual Fundraising	\$525	\$525	\$525	\$525	\$525	\$525	\$525	\$525	\$525	\$525
Loan Payments	\$0	(\$221)	(\$1,099)	(\$1,099)	(\$1,099)	(\$1,887)	(\$1,887)	(\$1,887)	(\$1,887)	(\$1,887)
Interest Income	\$0	\$11	\$41	\$51	\$70	\$87	\$77	\$90	\$117	\$145
Appropriations	\$2,500	\$2,500	\$2,000	\$1,500	\$1,000	\$0	\$0	\$0	\$0	\$0
Annual Net Profit	\$209	\$608	\$207	\$380	\$335	(\$210)	\$279	\$534	\$561	\$589
Total Retained Earnings	\$209	\$817	\$1,025	\$1,405	\$1,740	\$1,529	\$1,808	\$2,342	\$2,903	\$3,492
Capital Needs (Financed)	\$3,593	\$14,308	\$0	\$0	\$12,833	\$0	\$0	\$0	\$0	\$0
Capital Needs (Donated)	\$11,593	\$0	\$10,742	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Financial Analysis – Alternative 2

The other scenario for achieving self-sufficiency and balancing the goals of the Preserve is less reliant on the hospitality and services sector, but still depends on wildlife tent camps, a campground (though smaller than the campground proposed in Alternative 1), and renovation of existing cabins. Under this second alternative (Alternative 2), revenue generation will come from a broad array of existing and new recreational programs, new services such as green burial, and fundraising. Risks are lessened due to the reduced capital contributions required for developing facilities. However, less risk in investment also corresponds with the expectation of fewer revenues from operations. Figure ES-2 displays how revenues and costs are projected over the upcoming ten years for Alternative 2.

Figure ES-2
Projected Annual Revenues and Costs



Under Alternative 2, it is assumed that approximately \$17.5 million will come from special appropriations from Congress and/or donations from either private parties or universities over the course of ten years. These funds will be used for infrastructure improvements and development of new facilities. Net profits generated from operating activities are expected to be positive in all years except for Year 6, which coincides with the first year that the Preserve would not receive appropriations. Retained earnings accumulated to that point are expected to be sufficient to offset this minor setback in profit generation. Table ES-2 below displays the projected condensed operating statement for the Preserve over the next ten years for Alternative 2.

Table ES - 2
Condensed Operating Statement for
the Valles Caldera National Preserve - Alternative 2, (\$1,000s)

Revenues / Expenses	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Sales / Funds / Fees Collected	\$3,183	\$4,493	\$5,521	\$6,460	\$6,965	\$7,554	\$8,286	\$8,711	\$8,711	\$8,711
Operating Expenses	(\$1,665)	(\$2,233)	(\$2,776)	(\$3,811)	(\$4,021)	(\$4,282)	(\$4,605)	(\$4,793)	(\$4,793)	(\$4,793)
Personnel Expenses	(\$2,516)	(\$2,516)	(\$2,546)	(\$2,244)	(\$2,244)	(\$2,274)	(\$2,274)	(\$2,303)	(\$2,303)	(\$2,303)
General and Admin. Costs	(\$1,817)	(\$1,753)	(\$1,753)	(\$1,753)	(\$1,753)	(\$1,753)	(\$1,753)	(\$1,753)	(\$1,753)	(\$1,753)
Income from Operations	(\$2,816)	(\$2,009)	(\$1,553)	(\$1,348)	(\$1,053)	(\$754)	(\$346)	(\$139)	(\$139)	(\$139)
Annual Fundraising	\$525	\$525	\$525	\$525	\$525	\$525	\$525	\$525	\$525	\$525
Loan Payments (Principal and Int.)	\$0	(\$221)	(\$221)	(\$221)	(\$221)	(\$221)	(\$221)	(\$221)	(\$221)	(\$221)
Interest Income	\$0	\$11	\$51	\$91	\$118	\$137	\$121	\$125	\$140	\$155
Appropriations	\$2,500	\$2,500	\$2,000	\$1,500	\$1,000	\$0	\$0	\$0	\$0	\$0
Annual Net Profit	\$209	\$806	\$802	\$547	\$369	(\$313)	\$80	\$291	\$306	\$321
Total Retained Earnings	\$209	\$1,015	\$1,817	\$2,364	\$2,734	\$2,420	\$2,500	\$2,791	\$3,096	\$3,417
Capital Needs (Financed)	\$3,593	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Needs (Donated)	\$7,089	\$883	\$9,668	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Keys to Self-Sufficiency

In order to achieve the objectives and goals of the Preserve, it will be imperative to manage the Preserve for sustainable use and public access, maintain the Preserve as a working ranch, and at the same time protect and preserve its natural and cultural resources. Under both scenarios, there is a common formula for achieving self-sufficiency while maintaining these objectives and goals of the Preserve. The key factors for self-sufficiency and balancing objectives include:

- Appropriations (while expected to be reduced in the future) are still needed for Years 1 through 5 (2011-2015).
- Annual fundraising contributions of \$525,000 will assist the Preserve in achieving self-sufficiency.
- A capital campaign should be started immediately to raise the \$17.5 to \$22.5 million of capital needed for development over the next ten years.
- Visitation plays a key role in projecting future revenues, and it is recommended that a strong marketing campaign be implemented to advertise the Preserve to international tourists and others unfamiliar with the southwest.
- Visitation rates are expected to increase at a rate of 25 percent annually each year for the next ten years.
- Local community support will aid in matters of fundraising and marketing.
- Partnerships with local organizations, such as the Los Amigos de Valles Caldera, Native American Tribes and Pueblos, local governments, and concessionaires will aid in marketing, as well as reduce operational costs and maximize revenues associated with the ventures.
- Adaptive management operating techniques will aid in satisfying environmental compliance and optimizing natural resource use and conservation on the Preserve.
- Adapting the services offered to the demands of visitors and other public stakeholders will be a critical component of the strong marketing plan.
- An active forest thinning program will need to be implemented to reduce fire risk, while gaining revenues to offset the costs in the small diameter timber market.
- Continued implementation of adaptive management of the range area is also essential for attaining the balance between livestock and wildlife management.

- Cost savings in the arenas of environmental compliance and cultural resource compliance will be achieved through the development of an education and research center.
- Finally, building designs will need to blend with their surroundings, and include ‘green’ elements that reduce energy use.

Other Analyses

Several analyses were completed as part of the overall development of information needed to enhance revenue generation on the Preserve. An analysis of potential conflicts revealed that there is a need for spatial and / or temporal zoning for several enterprises considered, such as grazing and hunting. However, it was also discovered that expanding programs has the potential to build complementary relationships, as many activities are potentially interconnected.

An analysis of stakeholder and public interest was also conducted using data collected from local residents, staff, and the Valles Caldera Board of Trustees (Board). Previous documents completed for the Trust, such as the Public Access and Use Meetings reported by Mary Orton Company LLC were used as reference material. The general theme of information collected from the public was to expand public access and use of the Preserve.

Legislative constraints were identified for each of the revenue generating enterprises. Although there are no actual constraints that were identified, several legislative elements do limit the freedom of the Trust to expand programs and associated revenues. The main elements of concern are: 1) a time limit on lease agreements into which the Trust may enter (ten years), 2) the on-going regulation of hunting and fishing by the State of New Mexico, and 3) a general concern over the possible termination of the Trust in the Year 2020.

Another analysis described in this study is that of the governance and management structure of the Trust. The conclusion of this analysis is that the fundamental management structure currently in operation at the Preserve is satisfactory to achieve the goal of economic self-sufficiency. Although the brief eight year history of the Preserve operations has not been without struggle, there is evidence to suggest an evolving common understanding of the management roles and how they can work together to achieve the goals of the Act.

Finally, a description is provided of a strategy for monitoring progress made with regard to meeting the financial self-sufficiency mandate. Performance indicators are included as a reference tool to assist the Trust in meeting the target goals of the plan.

Conclusion

The two alternatives for development on the Preserve provide representative options to be considered by the Board. As such, this report is not a decision document in itself, but is intended to provide the financial information needed to create a plan for ongoing operations on the Preserve. This study is intended to serve as a planning tool to be shared with Congress, potential partners, and the public.

Ultimately, the management decisions and action plan selected could be a mixture, or 'hybrid' of the two alternatives presented. The ENTRIX team has further developed a tool to assist in the development of a final action plan. The Valles Caldera Financial Model (VCFM) is a spreadsheet-based financial tool that allows users to modify the assumptions used and develop updated cost and return estimates associated with the modified assumptions. Once the assumptions are modified in the VCFM, new revenue and cost projections and financial pro-forma statements are automatically created in the spreadsheet for viewing.

Over the past six years, there have been interim programs introduced on the Preserve at an aggressive pace. Yet infrastructure development and maintenance is still desperately needed. Many lessons have been learned by the staff and the Board during the six-year journey. The time to put these lessons to use and develop a sound strategy for achieving the balanced goals and objectives of the Preserve is at hand. The analysis presented in this study is carried out within the spirit of the Act, and with the goal of assisting in this important planning process.

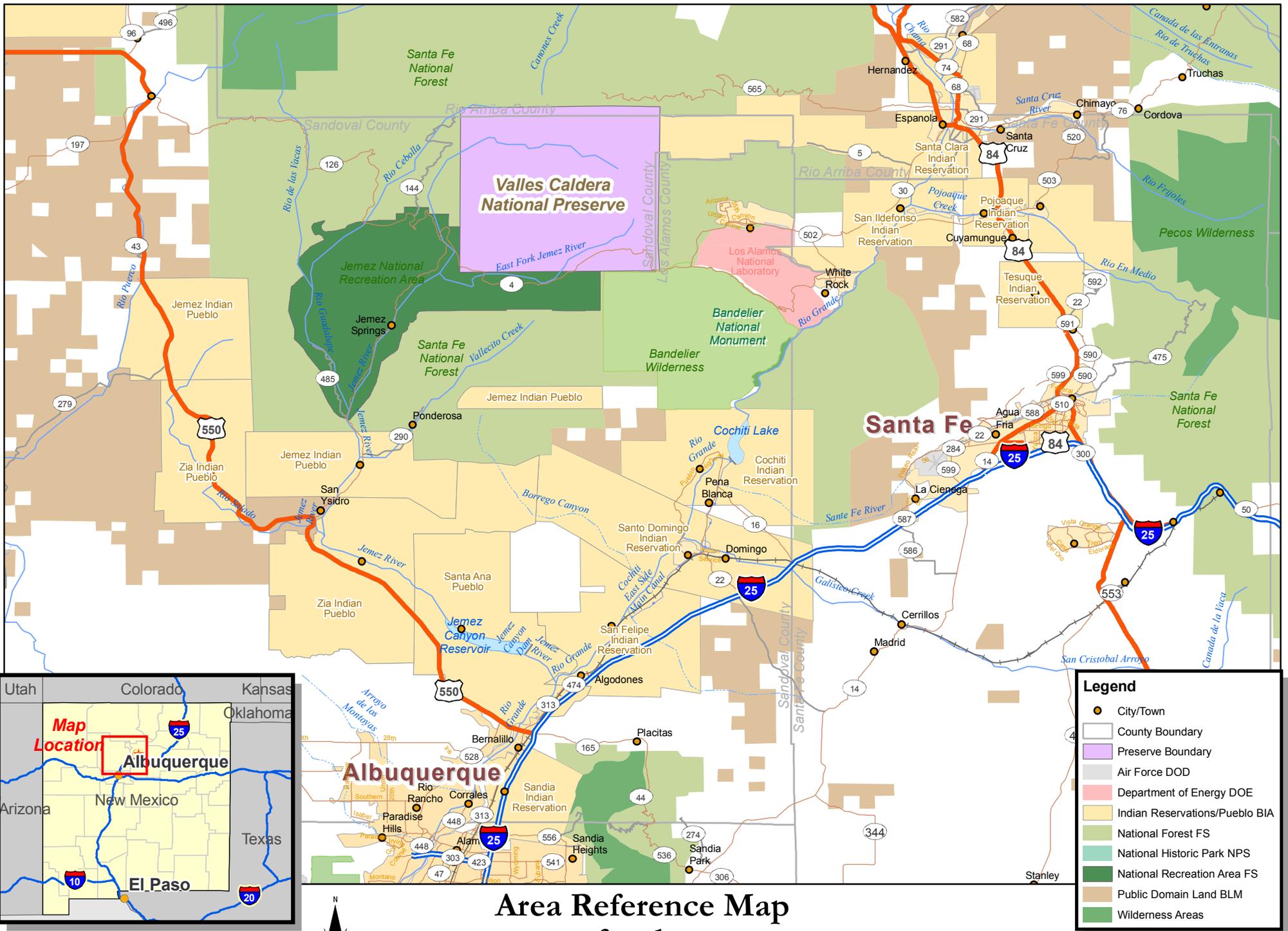
1.0 Introduction

The Valles Caldera National Preserve (Preserve) was created in 2000 when the federal government purchased the Baca Ranch in northern New Mexico (see Figure 1). As defined in the enabling legislation,² the purpose of the acquisition was to protect and preserve the natural and cultural values of the ranch, provide opportunities for public recreation, create a demonstration area for an experimental land management regime incorporating elements of both public and private administration, and to provide for sustained yield production of timber and rangeland for livestock grazing. The Preserve is managed by the Valles Caldera Trust (Trust), which is a government corporation governed by a nine-member board of Trustees (Board).

In January 2008, the Board identified the need to create a business model for the Preserve, where revenues from programs, activities, and commercial uses would equal or exceed operational expenses. In cooperation with the Trust, the Economics Group of ENTRIX, Inc. has developed such a model, and this report contains a plan which the Trust could use to achieve the goal of financial self-sufficiency by the Year 2015.

As requested by the Board and staff of the Preserve, this study comprises several elements that are each important in understanding how a business model may be successful. Within each of these elements, flexibility is provided in the analysis so that the Trust may continue to use the information herein as it proceeds through the more formal planning process required for public land management. The elements of this report include an assessment of the current status of the Preserve and Trust in terms of progress toward meeting the legislated goals of the Preserve; an analysis of the revenue-generating potentials of each of 11 different business enterprise activities; a review of the management structure of the Preserve and recommendations for future staffing requirements; a complete pro-forma financial analysis of two alternative approaches to Preserve development; and a plan for monitoring and evaluating the implementation process of carrying out the plan.

² *Valles Caldera National Preserve and Trust*, Public Law 106-248-July 25, 2000, Section 102(b), hereafter referred to as the *Act*.



Area Reference Map for the Valles Caldera Preserve



Legend	
	City/Town
	County Boundary
	Preserve Boundary
	Air Force DOD
	Department of Energy DOE
	Indian Reservations/Pueblo BIA
	National Forest FS
	National Historic Park NPS
	National Recreation Area FS
	Public Domain Land BLM
	Wilderness Areas

To facilitate the analysis of on-going modifications to the alternative plans that are expected to occur through the National Environmental Preservation Act (NEPA) process, a financial spreadsheet model has been developed that will allow the Trust to quickly evaluate the economic feasibility of proposed changes. This model is described in the report, and provided separately in electronic format.

The remainder of this introduction covers background information about the Preserve and Trust, a description of the methodology used to develop this study, and a synopsis of the organization of the report.

1.1 Background

Situated in a unique geologic landscape, the Preserve is rich with natural resources and scenic, scientific, historic, cultural, recreational, and educational value. This wealth of resources has the potential to generate a steady stream of revenue for the Trust; however, to ensure the long-term viability of the Preserve, a comprehensive plan must balance financial inflows with other goals mandated by the Act.

1.1.1 Enabling Legislation

The Act includes a number of objectives, which potentially compete for emphasis in the ongoing management of the Preserve. As described in the Act, these goals are to provide for:

(1) operation of the Preserve as a working ranch, consistent with paragraphs (2) through (4);

(2) the protection and preservation of the scientific, scenic, geologic, watershed, fish, wildlife, historic, cultural and recreational values of the Preserve;

(3) multiple use and sustained yield of renewable resources within the Preserve;

(4) public use of and access to the Preserve for recreation;

(5) renewable resource utilization and management alternatives that, to the extent practicable—

(A) benefit local communities and small businesses;

(B) enhance coordination of management objectives with those on surrounding National Forest System land; and

(C) provide cost savings to the Trust through the exchange of services, including but not limited to labor and maintenance of facilities, for resources or services provided by the Trust; and

(6) optimizing the generation of income based on existing market conditions, to the extent that it does not unreasonably diminish the long-term scenic and natural values of the area, or the multiple use and sustained yield capability of the land.

Over the years that the Trust has been in operation, interpretation of these potentially competing goals has varied depending on the makeup of the Board, the views of the Executive Director, and the nature of the tasks facing each. However, as Trust operations have and continue to evolve, balancing these several objectives has become a more comfortable part of the day-to-day management of the Preserve.

Other important sections of the enabling legislation include the stated purpose of the Preserve:

(b) PURPOSES.—The purposes for which the Preserve is established are to protect and preserve the scientific, scenic, geologic, watershed, fish, wildlife, historic, cultural, and recreational values of the Preserve, and to provide for multiple use and sustained yield of renewable resources within the Preserve, consistent with this title. (Section 105(b))

Another important feature of the Act is the definition of self-sufficiency, which is found in Section 103(4), titled, “Definitions.” This definition has been used throughout the process of developing this revenue enhancement study:

(4) FINANCIALLY SELF-SUSTAINING.—The term “financially self-sustaining” means management and operating expenditures equal to or less than proceeds derived from fees and other receipts for resource use and development and interest on invested funds. Management and operating expenditures shall include Trustee expenses, salaries and benefits of staff, administrative and operating expenses, improvements to and maintenance of lands and facilities of the Preserve, and other similar expenses. Funds appropriated to the Trust by Congress, either directly or through the Secretary, for the purposes of this title shall not be considered.

Finally, one part of the Act which is perhaps at the heart of the motivation to complete this study is the following passage that explains the alternative to achieving self-sufficiency (from Section 110, “Termination of the Trust”):

SEC. 110. TERMINATION OF THE TRUST. (a) IN GENERAL.—The Valles Caldera Trust shall terminate at the end of the twentieth full fiscal year following acquisition of the Baca ranch under section 104(a). (b) RECOMMENDATIONS.— (1) BOARD.— (A) If after the fourteenth full fiscal years from the date of acquisition of the Baca ranch under section 104(a), the Board believes the Trust has met the goals and objectives of the comprehensive management program under section 108(d), but has not become financially self-sustaining, the Board may submit to the Committees of Congress, a recommendation for authorization of appropriations beyond that provided under this title. (B) During the eighteenth full fiscal year from the date of acquisition of the Baca ranch under section 104(a), the Board

shall submit to the Secretary its recommendation that the Trust be either extended or terminated including the reasons for such recommendation.....

(c) EFFECT OF TERMINATION.—In the event of termination of the Trust, the Secretary shall assume all management and administrative functions over the Preserve, and it shall thereafter be managed as a part of the Santa Fe National Forest, subject to all laws applicable to the National Forest System.

If the Board were to recommend termination of the Valles Caldera Trust as a government corporation, it is presumed that the Trust will not have fulfilled its mission – either in terms of financial self-sufficiency or otherwise. Under this circumstance, it should be noted that the long term financial burden and obligation will shift from the Trust back to the federal government, and the net cost to the government will be greater than it will be if the Trust is to succeed.

1.1.2 A New Model for Public Land Management

The Trust is designed to manage federal land in a new way. Instead of being administered by a public agency, the Preserve is managed by the nine-member Board of Trustees, an Executive Director appointed by the Board, and staff overseen by the Executive Director. The Trust is exempt from taxation under 26 United States Code Section 501(c)(1). It is a wholly-owned federal corporation organized under an Act of Congress, and is an instrumentality of the United States (U.S.). The Act also states that

“the Trust and all properties administered by the Trust shall be exempt from all taxes and special assessments of every kind by the State of New Mexico, and its political subdivisions including the counties of Sandoval and Rio Arriba.”

Echoing a land management approach used to establish a government corporation led by a Board of Trustees at the Presidio in San Francisco, the Preserve is intended to operate more like a private business than most public entities. The objective is to be able to put unique natural resources into public hands so that more people can benefit from the resource, while not committing the government to ongoing financial responsibility. One of the justifications for this management structure provided in the Presidio Act, which created the Presidio Trust, is to manage in a way “that minimizes the cost to the United States Treasury and makes efficient use of private sector resources.”³ Another motivation for creating the Preserve, using the unique trust and government corporation model, is to experiment with the concept of “charter forests,” designed to bring more local control to the management of federal land.

³ Section 101 (7) of *The Presidio Trust Act* (as amended through December 28, 2001), enacted as Title I of H.R. 4236, P.L. 104-333, 110 Stat. 4097, November 12, 1996. See Appendix A for a discussion on the Presidio Act.

A discussion of the relative economic and political merits supported by charter forest supporters may be found in Little, Berrens, and Champ (2005).⁴

1.1.3 Need for a Study of Revenue Enhancing Opportunities

The Trust must not only ensure the sustainable use of the natural resources on the Preserve, but also immediately begin to use those resources to put the Trust on the path to financial self-sufficiency by 2015. Following the adaptive model of the Preserve, the way to do this must evolve naturally and be grounded in the best available research. The interim public access programs (e.g., hiking, skiing and snowshoeing, fishing, and hunting) have been adjusted over time in response to scientific information, public input, and financial considerations. The inventory, monitoring, and research programs conducted by the Trust generate an abundance of information that is used to establish the sustainable-use levels of Preserve resources. In keeping with the unique science-based adaptive management style of the Preserve, the business model should be designed to allow flexibility in implementation and adjustments to programs over time.

Currently, public access programs are limited by existing infrastructure. Potential new programs, such as overnight camping, are similarly restricted by the need for capital improvements on the Preserve. The evaluation of potential programs for this report therefore involved examination of returns based on new infrastructure investment. Proposed facilities, such as a permanent visitor center, were reviewed in terms of capacity to support the greatest number of current and potential programs, enhance overall profitability, and satisfy the areas of highest stakeholder demand. New public access programs and associated infrastructure were also analyzed assuming that these would have a minimal or manageable impact on the ecosystems and resources of the Preserve.

Beyond managing the sustainable use of renewable resources, achieving financial self-sustainability by 2015, and meeting the needs of the visiting public, the Trust exists to operate the Preserve as a working ranch, and to work collaboratively with neighboring communities. The traditional use of Preserve rangeland for grazing and the potential benefits of the livestock grazing program to local ranchers highlight the importance of including a livestock grazing program in the business model/plan.

⁴ Little, J., R. Berrens, and P. Champ, 2005, "Uncharted Territory – The Charter Forest Experiment on the Valles Caldera National Preserve: An Initial Economic and Policy Analysis," *Natural Resources Journal* 45(1):33-76.

1.1.5 The Goal of Self-Sufficiency

Valles Caldera National Preserve Framework and Strategic Guidance for Comprehensive Management (*Framework*) includes provisions to ensure that all actions taken by the Trust are

“...subjected to rigorous economic evaluation. It does not, however, mean that the generation of income should take precedence over other goals” [pg. 50].

This goal works in concert with Section 106(e)(3)(a) and Section 111 of the *Act* to emphasize the need for the Trust to become financially self-sufficient by 2015. Section 106(e)(3)(a) specifies that each of the Trust’s annual budgets must have the goal of achieving financial self-sufficiency within 15 fiscal years of the date of acquisition of the Baca Ranch. Section 111 required the Trust to submit to Congress a financial plan within two years after the first meeting of the Board that would include a “schedule of annual decreasing appropriated funds that will achieve, at a minimum, the financially self-sustained operation of the trust” within the same time frame.

Since the inception of the Preserve, interpretation of this goal and the challenge presented by accomplishing the rigorous economic analysis without compromising the other goals have been the subject of some debate and much discussion among the Trust, staff, stakeholders, and user groups. Nonetheless the Trust has been operating under the guidance of this mandate. To date, however, little formal economic analysis has been completed.

1.2 Methodology

The approach used to conduct this study is described below. First, background information about the Preserve was compiled and reviewed. Next, revenue enhancement strategies were identified and investigated using a feasibility screening tool. The results of the screening process were then presented to the Board and two alternatives were selected for further analysis. One alternative covers the maximum income-generating potential for the Preserve subject to the environmental and legislative limitations that prevail. The second approach represents a slower-paced and lower level of development. Finally, strategies for each alternative were fully developed.

1.2.1 Review Current Conditions

The ENTRIX team reviewed a large number of documents related to the creation and operation of the Preserve to date (see reference list). Throughout this report repeated

reference is made to several key documents listed below. In each case, for the remainder of this report, the complete report title is shortened. In addition, the ENTRIX team interviewed Preserve staff, knowledgeable representatives from the local community, including recreational user-groups, and business people from a variety of the target enterprises. The interviews focused on the strengths and challenges of the interim programs over the past six years. The team also reviewed information about the local agriculture and recreation markets, their history, maturity, and future expectations. The results of this review are summarized in Chapter 2.

Document	Short Name
AldrichPears Associates, June 2005, <i>Valles Caldera Trust Master Plan for Interpretation</i> , Document prepared by Rourke McDermott and reviewed and edited by Dennis Trujillo on 11/29/05.	<i>Master Plan for Interpretation</i>
Mary Orton Company LLC, 2007, “Valles Caldera Trust – Public Access and Use Public Meetings, July 31 – August 16, 2007, Public Meetings Summary – Combined Report.”	<i>Public Meeting Summary</i>
PUBLIC LAW 106–248, July 25, 2000, <i>Valles Caldera National Preserve and Trust</i>	<i>Act</i>
Valles Caldera Trust, 2003, <i>Valles Caldera National Preserve: Framework and Strategic Guidance for Comprehensive Management</i> , Valles Caldera Trust, Jemez Springs, NM.	<i>Framework</i>
Valles Caldera Trust, 2007, <i>State of the Preserve, 2002-2007</i> , Valles Caldera Trust, Jemez Springs, NM	<i>State of the Preserve</i>

1.2.2 Identify Revenue-Generating Options

Following this review, the ENTRIX team compiled a list of current Preserve programs around which future enterprises could be developed. Market trends and competition within emerging sustainable industries were analyzed. For recreational enterprises, future demand was forecast for the region based on population projections for the target markets and changing recreational preferences. The analysis considered competition on the basis of price, product, promotion, or other criteria. Some of the key competitive questions addressed included:

- Who are the primary competitors?
- Where are they located?
- What markets do they serve?

- How will competitors respond to the new business?
- What are the strengths and weaknesses of the Preserve versus its major competitors?
- What are the marketable differences between the offerings of the Preserve and its competitors?
- What are typical pricing strategies in this industry?
- What are the barriers to entry in this industry?

Additional ecological and social constraints were assessed for each enterprise activity since they may impact the quality of life for local people and for visitors to the Preserve. Impacts to natural environment and ecosystem services, such as the maintenance of water and air quality, soil resources, viewsheds, and biodiversity, were also important. Because the *Act* states that the working ranch operating on the Preserve is subject to “sustained yield use of renewable resources,” activities that exceed sustainable limits were, in general, not considered. Among activities that were deemed environmentally feasible, the different types of environmental impacts were identified and assessed. Other community impacts, legal implications, and spin-off potential were also considered. The results of this analysis are contained in Chapter 3, and a screening tool used to facilitate the assessment is described and presented in Appendix A.

1.2.3 Establish Two Alternatives

The ENTRIX team presented a preliminary analysis and a proposed blend of enterprise activities to the Preserve managers at a mid-project meeting on July 14, 2008. At this meeting, it was determined that two alternatives would be considered further. Alternative 1, the maximum income-generating option, includes consideration of a new visitor center and administrative headquarters, an education and research center, deferred maintenance and Preserve upgrades, a mid-level lodge with restaurant, a high-end lodge, wildlife tent camps, a campground, renovation of existing cabins, green burial services⁵, and development and enhancement of existing public programs. Alternative 2 involves a lesser amount of development but includes a new visitor center and administrative headquarters, an education and research center, Preserve updates, wildlife tent camps, campground, renovation of existing cabins, green burial services, and existing programs.

⁵ During the March 2009 update of this document, management and the Board of Trustees decided to table the green burial option due to cultural sensitivities. Further consideration will be undertaken *only* at the request of the Native American community. The analysis remains in the report because of the potential of this activity to generate significant revenue and because the option was identified through the public meeting process in 2007.

1.2.4 Develop Revenue Enhancement Strategies

The financial analysis of Alternatives 1, and 2, includes descriptions of all the operating, managerial, and financial characteristics of the Trust under each scenario. It explains the structure of operations, short- and long-run strategies and goals, and the markets in which the Preserve does, or will compete. It is intended to communicate goals, operating criteria, trade-offs, and risks and rewards. Such a study requires absolute clarity and candor about what the business is to be, whom it is to serve, competitors, and short- and long-run plans for growth and success. The plan emphasizes sustainable growth and recognizes not only environmental, but also cultural constraints.

The goal is to provide direction and a path for the future. It will be particularly useful in helping managers to incorporate competitive conditions and promote opportunities into ongoing operational practices. The study is designed to focus on activities that are most germane to the business and which, in the process, give managers greater flexibility and control over marketing, operations, and finances. By emphasizing the critical issues described above, the study will enable managers to be flexible and responsive to the changing needs of the growing clientele of the Preserve, as well as the changing ecological, climatic, and economic conditions to be faced in the years to come.

1.3 Organization of the Report

The report (or plan) is divided into six additional chapters. Chapter 2 is an assessment of current conditions at the Preserve. Chapter 3 covers the feasibility of revenue-generating ideas that were evaluated. Chapter 4 provides a description of the proposed facilities to be developed. These facilities are conceptual in nature, and are described for purposes of estimating costs and revenues, rather than for the purpose of determining locations or design. Chapter 5 introduces the business model, and the two alternatives that are further analyzed. Chapter 6 addresses the management and governance of the Trust, including staffing requirements and a discussion of potential conflicts and complementary relationships between different Preserve activities. A seventh chapter covers the financial details associated with the two alternative models. Chapter 8 identifies an approach to monitoring progress toward successful Preserve operations as well as indicators that may be used to measure progress.

Appendices cover additional details regarding some of the topic areas. Appendix A contains the results of the feasibility screening activity that preceded the more detailed model evaluation. Appendix B presents background information used to determine the costs of complying with NEPA and cultural regulations. Appendix C presents a discussion of the estimated potential visitors to the Preserve. Appendix D describes the management of the

Presidio in San Francisco, which is also a government corporation. Appendix E describes fundraising activities, both through the activities of Los Amigos de Valles Caldera, non-profit organization, and through the Trust itself. Finally, Appendix F contains a User Manual for the Valles Caldera Financial Model, or VCFM.

2.0 The Valles Caldera Preserve Today

In December 2007, the Trust produced the *State of the Preserve* which provides an excellent overview of the activities and history of the Preserve. This chapter is not meant to repeat the information in that document. Rather, it supplements the 2007 report with more recent information and includes insights to assess the capacity of the Preserve to achieve self-sufficiency.

2.1 Revenue Generation on the Preserve

Both revenue generation and visitation (see Table 1) have steadily increased on the Preserve over the past six years. This is in part the result of a variety of interim programs that have been introduced and refined over the short history of the Preserve (see Table 2). In light of the fact that very little marketing has occurred, and the existing facilities are minimal, the recent history of visitation and revenue generation demonstrates that the potential to generate revenue through visitation is strong.

Some of the trends in this table are worth noting. First, the steady increase in visitation suggests that there is a growing demand for the types of recreational, cultural, and educational programs offered by the Preserve. There has been an annual average increase in visitation of just under 25 percent per year in the years between 2003 and 2007. If this trend were to continue, the expected visitation for 2008 would be around 15,400, and for 2009 this number would be 19,100. In the absence of better information, these data provide some indication of the interest for the types of programs and the natural environment that are available on the Preserve. However, extending trends based on the brief and recent history is limiting for several reasons. First, the interim programs have been in a developmental stage – and the Trust has been on a learning curve to figure out what might work; second, there has been very little marketing effort to date and most of the visitors have either come from the local area or have learned about the Preserve via word of mouth. Third, the programs are very ‘bare bones’ types of programs given the limited infrastructure that is currently available

at the Preserve. The exceptions are the hunting and fishing programs, both of which are much more developed than the other programs offered, and have limited capacity for expansion.

Table 1
Annual Visitation and Revenues for the Preserve, 2002-2007

Year	Number of Visitors	Total Revenue	Revenue per Capita
2002	690	\$320,750	\$465
2003	5,217	\$647,350	\$124
2004	8,178	\$517,461	\$63
2005	9,220	\$652,219	\$71
2006	9,938	\$794,844	\$80
2007	12,405	\$749,957	\$60
Average	7,608	\$613,764	\$144

Source: *State of the Preserve, 2002 – 2007*, Valles Caldera Trust, 2007, Table 7, pg. 29, hereafter referenced as *State of the Preserve*.

A breakdown of the recent revenue generation by source is provided in Table 2 below. Noticeable in Table 2 is that the miscellaneous category, which includes donations, cattle grazing leases, grants, and facility rentals generated around \$200,000 in 2006 and 2007. ‘Other Events’ which covers public recreation, education and other events brought in around \$100,000 annually over the period.

Although there has been a steady increase in visitation rates, the Preserve has conducted very little marketing. There is a website run by the Trust which allows interested parties to sign up in advance for a wide variety of activities on the Preserve. Visitation is expected to grow rapidly with a more aggressive marketing campaign, led by a new marketing and communications director, and with the development of new facilities at the Preserve.

Table 2
Annual Revenues by Public Program Source for the Preserve, 2002-2007

	2004 ¹	2005	2006	2007
Hunting ²	\$210,850	\$285,625	\$317,365	\$350,556
Fishing	62,793	71,645	60,415	67,392
Other Events	129,562	109,449	76,656	93,828
Concession Sales	13,256	9,558	48,496	42,513
Subtotal	\$416,461	\$475,277	\$502,932	\$554,289
Commercial Rental ³	8,000	5,000	45,095	6,810
Grazing	42,110	39,654	0	5,800
Miscellaneous ⁴	50,890	131,288	246,817	183,058
Total	\$517,461	\$652,219	\$794,844	\$749,957

1/ Data for all programs except elk hunting are for fiscal years (October 1 through September 30); data for elk hunting are calendar years (elk hunt access permits are sold in one fiscal year and the hunting occurs in the next fiscal year).

2/ Data for 2004 through 2006 are for elk hunting; data for 2007 are for elk and turkey hunting combined.

3/ Includes rental fees for commercial film and photography events

4/ Includes donations, sales of livestock, direct grants, facilities rental, etc.

Source: *State of the Preserve*, Table 9, pg. 30.

2.2 Legal Status

The *Act* established the Trust as a 501(c)(1), or government corporation, that has the authority to operate according to the Government Corporation Control Act (GCCA) and that is an instrumentality of the U.S. The *Act* also states that “the Trust and all properties administered by the Trust shall be exempt from all taxes and special assessments of every kind by the State of New Mexico, and its political subdivisions including the counties of Sandoval and Rio Arriba.”⁶ The tax exempt status provides the Trust with a competitive advantage over many types of private facilities.

As is shown later in this document, (see “Funding,” section 7.1.2), government corporations enjoy the freedom to borrow money from the Federal Financing Bank, or FFB. Furthermore, as a 501(c)(1) corporation, the Trust is free to accept and use donation monies. Another important freedom afforded the Trust that is not typical in the world of public lands is that it

⁶ *Act*, Section 106(f).

may customize procurement practices. Finally, the Trust as a government corporation follows a different set of National Environmental Policy Act (NEPA) procedures than other federal agencies (See Appendix B).

2.2.1 Wholly owned Government Corporation

The Trust is subject to the Government Performance and Results Act (Results Act). Under the GCCA, the Trust must obtain independent annual financial audits and report annually to Congress. Under the Results Act, the Trust must prepare a strategic plan and an annual performance plan with measurable goals and objectives, and submit annual performance reports to Congress and the President.⁷

2.2.2 Donations

Additional statements in the *Act* govern the ability of the Trust to collect and use donation monies:

(g) DONATIONS.—The Trust may solicit and accept donations of funds, property, supplies, or services from individuals, foundations, corporations, and other private or public entities for the purposes of carrying out its duties. The Secretary, prior to assumption of management of the Preserve by the Trust, and the Trust thereafter, may accept donations from such entities notwithstanding that such donors may conduct business with the Department of Agriculture or any other department or agency of the United States.

(h) PROCEEDS.—(1) IN GENERAL.—Notwithstanding sections 1341 and 3302 of title 31 of the United States Code, all monies received from donations under subsection (g) or from the management of the Preserve shall be retained and shall be available, without further appropriation, for the administration, preservation, restoration, operation and maintenance, improvement, repair, and related expenses incurred with respect to properties under its management jurisdiction⁸

The *Act* was amended in 2005 with the following statement,

(c) SOLICITATION OF DONATIONS.—Section 106(g) of the Valles Caldera Preservation Act (16 U.S.C. 698v-4(g)) is amended by striking ‘‘The Trust may solicit’’ and inserting ‘‘The members of the Board of Trustees, the executive director, and one additional employee of the Trust in an executive

⁷ *Act*, Section 106(e).

⁸ *Act*, Section 106(g)-(h).

position designated by the Board of Trustees or the executive director may solicit’’.(d) USE OF PROCEEDS.—Section 106(h)(1) of the Valles Caldera Preservation Act (16 U.S.C. 698v–4(h)(1)) is amended by striking “subsection (g)” and inserting “subsection (g), from claims, judgments, or settlements arising from activities occurring on the Baca Ranch or the Preserve after October 27, 1999,’’.

2.2.3 Insurance and Bond

The following comments from the *Act* affect potential concessionaires on the Preserve, and other partner organizations that might operate within the Preserve:

(1) INSURANCE AND BOND.—The Trust shall require that all holders of leases from, or parties in contract with, the Trust that are authorized to occupy, use, or develop properties under the management jurisdiction of the Trust, procure proper insurance against any loss in connection with such properties, or activities authorized in such lease or contract, as is reasonable and customary.

2.3 Preserve Management

The management of the Preserve and Trust is conducted through a nine-member governing Board that appoints an Executive Director to oversee all operations. The Board comprises seven presidential appointees as well as the Supervisor of the Santa Fe National Forest and the Superintendent of Bandelier National Monument. Two of the appointed members may reside outside New Mexico, and the rest must be New Mexico residents. The Board supervises the Executive Director, whose responsibilities are to carry out the vision and mission of the Trust and to effectively implement the Trust goals and objectives as outlined in the *Act* and in concordance with federal laws, statutes and regulations.

2.3.1 Board of Trustees

The appointed members of the Board are selected from each of seven areas of expertise. These are,

- 1. Domesticated livestock management, production, and marketing, including range management and livestock business management;*
- 2. Management of game and nongame wildlife and fish populations, including hunting, fishing, and other recreational activities;*
- 3. The sustainable management of forest lands for commodity and non-commodity purposes;*
- 4. Nonprofit conservation activities concerned with the Forest Service;*

5. *Financial management, budget and program analysis, and small business operations;*
6. *The cultural and natural history of the region; and*
7. *State or local government activities in New Mexico, with expertise in the customs of the local area.*⁹

Board members serve four-year terms. The first Board was sworn in on January 10, 2000, but did not assume responsibility until August 2, 2002.

2.3.2 Preserve Staff

Currently, the Trust employs 45 people, including a permanent staff of 22. The 45 employees include 11 in Preserve administration, 16 in recreation, four in maintenance, five in archaeology and cultural resources, two on maps and GIS, and seven in biological sciences.¹⁰

2.4 Resource Inventory

Presently, Preserve resources reflect both built and natural environments. Extensive documents describe in detail the infrastructural and structural resources on the Preserve (the existing structures); the archeological and cultural resources; and the biologic, geologic, and other extensive natural resources. This section provides very brief overviews of each of these categories to highlight how the various resources may affect the success of future revenue-generating activities.

2.4.1 Roads and Infrastructure

The Preserve has numerous roads that are in need upgrading, and is in the process of developing a road inventory and plan.¹¹ Part of this process will involve determining which roads to keep, and which to rehabilitate. Since 2002, 13 miles of a 26 mile long loop of road have been upgraded, but funding is needed to complete these upgrades, and the cost of upgrading is estimated at between \$50,000 and \$100,000 per mile, excluding environmental and cultural compliance costs. These costs are based on the assumption that the upgrades will use native materials from borrow pits on the Preserve, which dramatically reduces costs.

⁹ Valles Caldera Trust, 2003, *Valles Caldera National Preserve: Framework and Strategic Guidance for Comprehensive Management*, 47, hereafter referenced as *The Framework*.

¹⁰ Information based on spreadsheet provided to ENTRIX by the Trust, titled, "Personnel Roster 0811 for ENTRIX.xls" received on June 26, 2008.

¹¹ *State of the Preserve*, pg 63.

Based on a draft funding request for 2009 developed by the outgoing Executive Director, there is a current need to upgrade twenty-five miles of Preserve roads to all-weather roads with pull-outs. This includes upgrades to sixteen miles of dirt roads through the Valle San Antonio and Valle Seco, which would render the 'long loop' accessible, and another nine miles around the Valle Grande, which would then provide a short loop around the Preserve. Once completed these could be opened to the public for self-guided tours on a limited basis, and/or can be used by Preserve vans to provide enhanced visitors access to the Preserve.

Currently, the information and coordination needs of visitors are served by the following:

- Main Gate Visitor Center Administration Building: A 200 square-foot portable structure located at the southwest area of the Valle Grande approximately three miles from NM State Highway 4. This structure is not serviced with electrical lines, heating, or water. However, restroom facilities are provided by several porta-potties.
- Visitor Center Gift Shop: A 288 square-foot additional temporary portable structure located at the Center of the Valle Grande approximately three miles from NM State Highway 4. This is adjacent to the visitor center administration building. This structure also does not have plumbing, electricity, or heating.
- Preserve Administrative Headquarters: Located in Jemez Springs, over 20 miles from the Main Gate of the Preserve.

At present, there are nine cabins and lodges at the Preserve that can potentially be used to accommodate visitors. Two of these, Bunkhouse Cabin and Casa de Baca Lodge, are already being rented to the public. All are older structures and require varying amounts of updating and renovation. The existing structures are mainly concentrated in the headquarters region on the Preserve in areas with scenic views, and are accessible by gravel or dirt road. A list of structures considered for this analysis is presented below:

- Cowboy Cabin
- Otero Cabin
- Foreman's Cabin
- Lower A Frame
- Upper A Frame
- Movie Set # 3
- San Antonio Cabin
- Bunkhouse Cabin
- Casa de Baca Lodge

2.4.2 Natural Resources

Range and Wildlife

The Preserve consists of 89,000 acres of montane forests and large grassland valleys, most of which is used by various wildlife throughout the year. The Preserve is the primary summer range of elk in the Jemez Mountains and is an important calving ground for elk in this area. The Preserve's grasslands provide valuable nutrition to support female elk during spring and summer and are a key element in the health and production of elk in the Jemez Mountains. The presence of the Jemez Mountains elk herd contributes to the local economies adjacent to the Preserve, and to Trust revenue, through attracting hunters, wildlife enthusiasts, and photographers to the area. Maintaining grassland and forest habitat within the Preserve and implementing effective management strategies on the Preserve are key to effectively protecting habitat for this species throughout the Jemez Mountains.

The Preserve also provides habitat for numerous other wildlife species and rangeland for grazing livestock. Prior to the Preserve's inception, private landowners focused on livestock operations and elk hunting to generate income. Moderate to heavy livestock grazing along stream channels resulted in some loss of valuable riparian vegetation and damage to streams and impacted wildlife species. Following purchase by the federal government, the Trust has implemented several management strategies to reduce damage to streamside vegetation and improve stream quality for many wildlife species. If managed to ensure minimal impacts to streamside vegetation and upland plant resources, livestock grazing can be provided in much of the extensive grasslands and adjacent forests. The Jemez Mountain elk herd moves freely through out the greater landscape of Bandelier National Monument, Santa Fe National Forest, Los Alamos National Laboratory and neighboring communities and pueblos. Maintaining and ensuring productive habitat on the Preserve has a significant influence on providing habitat for species that also occur on these other properties.

Forest Resources

A century of grazing, fire suppression and aggressive logging practices has changed the composition, structure and function of the Preserve's forests. Currently, over two-thirds of the Preserve's 55,000 acres of forest are mixed conifer composed primarily of densely stocked, pole-sized trees. Nearly all of the 6,700 acres of aspen are mature closed canopy with little or no regeneration occurring. Much of the 8,000 acres of spruce-fir forest is infected with spruce budworm. In their current state, Preserve forests are unlikely to support profitable commercial logging for decades. The overcrowded stands pose several management challenges, including i) lowered water yield by reducing the amount of moisture from winter snow pack absorbed by the soil, ii) reduced forest health and greater

vulnerability to pest outbreaks, and iii) elevated risk for stand replacement fire that strips steep slopes of soil-protecting vegetation. The 2000 Cerro Grande fire that severely burned over one-third of the mixed conifer forest surrounding neighboring Los Alamos and Bandelier National Monument provides testimony to the threat posed by fire to many of the Preserve's natural assets. Stand replacing fire could reduce the aesthetic value of the Preserve's scenery for years to come, destroy critical wildlife habitat and make the forest less resilient to changes in climate over the next century.

The Preserve is a major watershed that protects seventy-five miles of perennial stream and the headwaters of two tributaries of the Jemez River. Loss of forest cover in uncontrolled fire would severely impair the capacity of this important watershed to regulate flow and control soil erosion, reversing the recent improvement in function accrued under the Trust's stewardship. Restoration is critical to the reestablishment of forest health and multi-age structure, natural fire regimes and future sustainable timber harvests. It is also of great importance to communities downstream that rely on healthy forests to protect the flow, purity and wildlife of waters in rivers and streams.

2.4.3 Cultural Resources

The prehistoric and historic land use of the Preserve is well-documented in the report by titled, *More than a Scenic Mountain Landscape: Valles Caldera National Preserve Land Use History*.¹² This document argues in favor of a historical – ecologic interpretation of the people who have through history occupied and used the landscape. The prehistoric cultural resources of the Preserve include obsidian artifact scatter sites and quarries. The archeological staff on the Preserve has an active surveying program and each year is able to survey more of the land. The staff often partners with local universities which allows for greater survey effort while supporting the community through educational opportunities. Recently the staff has attempted to target sites that may be useful for facility development so that the Preserve will be able to move forward as quickly as possible once plans are in place.

The Preserve also holds tremendous cultural significance to several Native American Tribes. For example, the Pueblo of Jemez has a strong cultural association with the Preserve as Redondo Peak anchors the Pueblo in the location of the present day reservation. The cultural relationship to the Preserve which the Pueblos and other Native American groups reserve is valuable in achieving the goal of self-sufficiency in part because Tribal partners can help ensure that the cultural resources of the Preserve are protected. This year, van tours are being led by Tribal elders from the Pueblo of Jemez, who share stories of their traditional culture.

¹² Anschuetz, Kurt F., and Thomas Merlan, 2007, *More than a Scenic Mountain Landscape: The Valles Caldera National Preserve Land Use History*, US Forest Service, Rocky Mountain Research Station, General Technical Report, RMRS-GTR-196, September.

Tribal elders also presented their perspective on the Preserve to the Board and expressed an interest in building lasting partnerships with the Preserve including collaboration on economic opportunities such as timber management, campground management, and also through potential employment of Tribal members on the Preserve.¹³

2.5 Current Programs

The Preserve currently operates a number of successful programs, which are described in greater detail in an impressive collection of reference documents available on the Preserve website, as well as in the *State of the Preserve*. These programs fall into at least four types of potential income-generating categories including the range management and cattle grazing, recreation, education and research, and sustainable resource use.

2.5.1 Lodging and Hospitality

Current lodging options on the Preserve include a few cabins and the main lodge that the public can rent on a nightly basis. However, these options are not widely publicized or marketed, as the public access plan has yet to be finalized.

Current lodging options near the Valles Caldera Preserve are also very limited. Guests wishing to stay nearby overnight must do so in either Jemez Springs or Los Alamos. The nearest lodging options are in Los Alamos (18 miles) where there are two bed and breakfasts, ten hotels or inns, and two property management companies renting places.¹⁴ Jemez Springs is approximately 22 miles away and offers guests a total of 46 lodging units in a variety of bed and breakfasts, guest houses, lodges, and inns.¹⁵ Beyond these two options visitors to the Preserve may also stay in Santa Fe, or Albuquerque. Both options are approximately a two and a half hour drive from the Preserve.¹⁶

¹³ A delegation from the Pueblo of Jemez presented their recommendations to the Board of Trustees on June 11, 2008. A follow up interview with Anthony Armijo and Vince Toya on July 8th confirmed the interest of the Tribe in ongoing collaboration with the Preserve.

¹⁴ Los Alamos, New Mexico web-site, Lodging, accessed May 14, 2008 online at visit.losalamos.com/lodging/.

¹⁵ Jemez Springs, New Mexico web-site, Lodging, accessed May 14, 2008 online at www.jemezsprings.org/lodging.html.

¹⁶ Driving directions to the Preserve, accessed May 21, 2008 online at http://www.vallescaldera.gov/about/maps/maps_driving.aspx.

2.5.2 Education and Research

Education and research are key Preserve activities that simultaneously address multiple objectives from the *Act*. In order to use resources in a sustainable way and practice the adaptive management of Preserve resources, scientists research, inventory, and monitor the ecology of the Preserve. Public involvement is encouraged through educational programs targeting K-12 school children, university students, and citizen groups. The geologic history, the flora and fauna, and other natural knowledge generated through research are then used in educating the public as well as generating interest and revenue in the Preserve. Grant-related research has grown steadily on the Preserve, with 2007 showing 28 different research projects that occurred on the Preserve totaling over \$1.8 million. Although this research grant money does not go to the Preserve, the results of the research may be used by the Trust to inform management goals and practices.¹⁷ As yet, no provision is available to count this type of “in-kind” benefit to the Preserve as income.

2.5.3 Current Livestock Grazing Program

Historically, the Preserve was used for cattle grazing. According to the *State of the Preserve*, there are 118 miles of fences, 136 stock tanks, eight corrals, and numerous cattle guards and bypass gates.¹⁸ In accordance with the Act, the Trust has operated the Preserve as a working ranch since 2002. Cattle have grazed the grassland valleys and immediately adjacent uplands. Different mechanisms were explored over the years to be able to meet the objective of being a working ranch and still operate as a public entity.

During most years, the Trust lost money on the grazing program because the costs of operating the program outweighed the revenues that were generated. From 2002 through 2005, local ranchers used the Preserve offered drought relief to local and regional ranchers. In 2006, the grazing program was canceled due to droughts. In 2007 and 2008, the Trust sought proposals from livestock operators who wished to operate on the Preserve for 120 days, and between 500 and 2000 animal units. Proposals were evaluated based on the livestock management plan (25 percent), the economic return to the trust (30 percent), a resource protection strategy (20 percent), experience of the proposers (15 percent), and benefit to local communities (10 percent). This approach has been successful and led to a positive return on grazing. The approach also demonstrates the commitment of the Trust toward balancing the multiple goals of the *Act*. With careful and innovative management, revenues should increase in the future.

¹⁷ *State of the Preserve*, page 101.

¹⁸ *Ibid*, page v.

2.5.4 Hunting

Hunting revenue has been the largest single source of revenue generation for the Preserve in each year of operation to date. Currently, hunting opportunities on the Preserve exist for both elk and turkey. Elk hunting on the Preserve is considered some of the best in New Mexico with a success rate of approximately 80 percent.¹⁹ The elk hunting season begins in early August and ends in late November. In 2007, the elk hunting season was separated into 13 different hunting classifications or periods. In addition, there are three turkey hunting seasons during the spring. The New Mexico State lottery is used for elk hunter selection on the Preserve. Residents are awarded 78 percent of available permits and 12 percent of permits are made available for non-residents using guides. Non-residents who apply without a guide receive ten percent of available licenses.

Elk Hunting

The first public elk hunt occurred on the Preserve in 2002. In 2002 and 2003, five elk tags per year were either sold directly to the public or auctioned for between \$10,000 and \$17,500 each. However, this method of hunter selection was found to be inconsistent with the law and was changed in 2003 according to the direction of the New Mexico Attorney General.²⁰ Currently, lottery chances for the mature bull or either sex hunt cost \$25 per chance, while the lottery chance for antlerless hunts is \$15 per chance. Hunters are permitted to apply up to 20 times for each particular harvest classification or period and they can apply for all of the 13 separate classifications or periods if so desired.²¹ In 2005, 4,500 hunters turned in nearly 13,000 applications for the chance to receive one of the 278 elk tags available that year. By 2006, the number of hunters participating in the lottery increased to approximately 4,800 hunters and by 2007, the number of applicants decreased slightly to 4,749. Lottery gross revenues have increased by 14 percent over the 2005-2007 period. Lottery gross revenue per permit issued averaged \$1,030 in 2005 and increased to \$1,150 in 2006 and \$1,440 by 2007.

Turkey Hunting

The Preserve is home to approximately 400 Merriam turkeys. The first turkey hunt on the preserve occurred in 2007, in which there were 16 permits issued for the area. Two of the permits were donated to the National Wild Turkey Federation. Eight permits were sold for

¹⁹ *State of the Preserve.*

²⁰ *Ibid.*

²¹ Valles Caldera National Preserve, "Elk Hunting," accessed online at 2005.http://www.vallescaldera.gov/comevisit/elk/elk_howtoapply.aspx.

\$1,800 each as a deluxe package at a hunting lodge and the remaining six were distributed through a lottery system. The 2007 hunts generated \$20,280 in gross revenue.²² In 2008 the number of turkey hunts was increased to 20 permits.

2.5.5 Fishing

The *Land Use History of the Valles Caldera National Preserve*²³ reports that in the past due to the absence of opportunities for large and reliable harvests using nets in big watercourses, the Pueblos' consumption of fish was limited to the proceeds of small, and often opportunistic, catches. The document does note a story by a Santa Clara elder about how a number of men would periodically fish the marshes and streams for trout and take them to Santa Fe via horseback where they would sell them.

More recent history of fishing programs include the implementation of renting out fishing "beats" to recreational visitors who want to fish with artificial flies only. These beats are designed to offer public access to the fishing streams on the Preserve, but in a limited quantity in order to provide a unique fishing experience. On the East Fork there are six and a half miles of East Fork of the Jemez and the lower Jaramillo Creek available for up to ten anglers per day to fish. The San Antonio program just came on line in 2008 and offers four fishing reaches with a limited number of slots.²⁴

2.5.6 Public Programs

The preserve offers diverse recreation activities during all four seasons. The summer months are the busiest with hiking, fishing, mountain biking, wildlife viewing, and guided van tours, that cover a number of scientific and cultural topics. Spring and fall bring turkey and elk hunting programs, and in the winter sleigh rides and cross country skiing are available. Hunting and fishing programs have generated the most income for the Preserve so far, but the other programs are collectively critical to attracting visitors to the Preserve in the future. Local recreationists would like to have greater access to the Preserve and have been advocating for the rapid increase in activities offered. At present, most of the recreational activities require a reservation in advance, but there are some hikes that people driving past the Preserve are free to enjoy spontaneously. Visitors may also participate in many activities without a reservation if the activity is not full. In addition to these on-going programs,

²² *State of the Preserve.*

²³ Anshuetz, Kurt and Thomas Merlan, *Land Use History of the Valles Caldera National Preserve*, USDA Forest Service RMRS-GTR-196, 2007, pg. 59.

²⁴ Fishing program information obtained online at www.vallescaldera.gov/comevisit/fish

special events bring visitors for equestrian programs, marathons, moonlight skiing, stargazing, and special other activities.

2.5.7 Commercial Film and Photography

The former land owner, James Patrick Dunigan, diversified his ranch land operations in the 1960's and 1970's to include leases for Hollywood filming.²⁵ These films included *Shoot Out*, and *Peter Lundy and the Medicine Hat Stallion*. In the early 1980's *The Gambler (TV)* was partially filmed at the Preserve. In the 1990's one film and two TV shows were filmed on the Preserve, including; *Troublemakers*, *Buffalo Girls (TV)*, and *Last Stand at Saber River (TV)*. In 2003 *The Missing* with Tommy Lee Jones was filmed on location in the Preserve and recently (2007) the movie *Seraphim Falls* was filmed on the Preserve.²⁶ Some of the sets used for this filming are still in existence today. There are still movie sets on the Preserve, including a cabin and an exterior "town" set near the Valle Grande.

Commercial photography events have also been held at the Preserve, such as the current offering for a photography workshop. Participants will be given the opportunity to photograph some of the most scenic places on the Preserve, and staff will be on hand at all times to provide information about natural history, climate, and other relevant issues. Food and lodging for two nights is provided for a cost of \$440 per individual or \$800 per couple.²⁷

Commercial film and photography revenues have been sporadic over the past four years. Revenues ranged from a low of \$5,000 in 2005 to a high of \$45,095 in 2006 (likely associated with *Seraphim Falls* filming lease.)²⁸

2.5.8 Timber

Despite the history of logging and mineral exploration, the sustainable resource use at present is limited to hunting and grazing programs. Logging is not feasible at this time as forest restoration work is a prerequisite. Mineral resources, such as geothermal, natural gas, and other mining potential are not presently available for exploration. Congress has withdrawn the Preserve from mineral entry and development so it would be impossible to develop the

²⁵ Anshuetz, Kurt and Thomas Merlan, *Land Use History of the Valles Caldera National Preserve*, USDA Forest Service RMRS-GTR-196, 2007, pg. 164.

²⁶ List of films shot in Valles Caldera, accessed online at http://en.wikipedia.org/wiki/Valles_Caldera.

²⁷ Photography Workshop details, accessed online at <http://www.vallescaldera.gov/comevisit/special/>.

²⁸ Valles Caldera Trust, 2007, State of the Preserve, 2002-2007, pg. 30.

geothermal resources without further congressional action. Use of gravel borrow pits and other natural materials is possible.

2.5.9 Merchandise

The sale of merchandise related to the Preserve (i.e. hats, sweatshirts, tee-shirts, maps, books, etc.) has increased as the product line has expanded. The Preserve logo and T-shirt designs are attractive and popular. The Trust now operates two small gift shops; one is a 288 square foot portable structure at the Valle Grande staging area and the other is located in the office in Jemez Springs.²⁹ These facilities are in part staffed by volunteer labor.

In 2007, merchandising accounted for \$42,513 of total revenue. Given the number of visitors to the Preserve, this results in per visitor expenditures of \$3.43. Mark ups on current sales of merchandise (selling price over procurement cost) range from 90 percent on hats to more than 700 percent on maps.³⁰ Plans are currently underway to sell merchandise on-line through the Valles Caldera web-site (www.vallescaldera.gov).

2.5.10 Donations

In addition to the staff, the Preserve is supported by many volunteers who assist in carrying out the operations of the Preserve. Recently, a non-profit organization called the “Los Amigos de Valles Caldera” was created to serve as a support organization for the Trust and to aid in fundraising and other types of assistance. Established in 2005, the organization has almost 130 members today. The organization has been successful in writing and securing an EPA grant to conduct watershed restoration activities on the Preserve.³¹ Over a three year period, the grant totals \$150,000. The labor donated by the membership of the organization accounts for another \$50,000, for a total of \$200,000.

In partnership with the Trust, Los Amigos de Valles Caldera produces a quarterly newsletter about new developments on the Preserve, and in doing so supports the marketing plan described later in this document. Members also assist in staffing the visitor center information center and gift shop, currently located in Jemez Springs.

Los Amigos de Valles Caldera has a critical role to play in the self-sufficiency process for the Preserve. The group will be instrumental in developing an aggressive capital fund campaign

²⁹ *State of the Preserve*, pg. 89.

³⁰ Profit margins for top five sellers of Valles Caldera Merchandise, obtained from Trust Staff on July 9, 2008.

³¹ Personal communication with Larry Icerman, Los Amigos de Valles Caldera Preserve, August 25, 2008.

associated with facility development. The group has already begun and is also prepared to continue to participate in on-going fund raising activities that will help the Trust become and remain self-sufficient into the future. A very recent development is the establishment of an “Obsidian Guild” donor level that involves estate donations and annuities.

2.6 Current Budget and Operations

The annual operations of the Preserve have cost between \$3.7 and \$6.4 million over the past three years, averaging approximately \$4.8 million. Table 3 below shows the budget categories and associated budgeted amounts for the past three years.

Table 3
Recent Budget Levels

Category	FY 06	FY 07	FY 08	Average	Percent
Administration	\$1,880,454	\$1,158,452	\$1,146,119	\$1,395,008	29%
Service & Education	\$58,373	\$42,279	\$33,562	\$44,738	1%
Rentals & Concessions	\$32,826	\$99,333	\$75,698	\$69,286	1%
Fishing	\$65,053	\$131,229	\$120,181	\$105,487	2%
Hunting	\$64,205	\$133,216	\$168,377	\$121,933	3%
Research, Inventory and Monitoring (RIM)	\$639,872	\$678,265	\$673,450	\$663,862	14%
Infrastructure	\$1,238,887	\$433,078	\$483,882	\$718,615	15%
Planning	\$689,450	\$175,168	\$599,529	\$488,049	10%
Preserve Management	\$1,506,378	\$393,217	\$401,814	\$767,136	16%
Summer Recreation	\$153,973	\$294,553	\$482,030	\$310,185	6%
Winter Recreation	\$87,206	\$107,367	\$70,053	\$88,209	2%
Special Uses		\$67,687	\$82,667	\$75,177	2%
Special Events	\$24,642	\$19,737	\$12,500	\$18,960	0%
Total	\$6,441,320	\$3,733,581	\$4,349,862	\$4,841,588	

Source: All budget information was obtained from Debbie Boggess, Administrative Officer for the Valles Caldera Trust. Work plan budgets were provided for FY 08, but FY 06 and FY 07 information is in different formats. Thus, information presented in the above table may not be a perfect comparison across the three years.

A large portion of these costs are administrative in nature and include human resources, accounting, reception, grants and agreements, information technology, and grounds maintenance for the headquarters. In total, administrative costs have averaged just under \$1.4 million per year or roughly 29 percent of total costs. Other budget line items that have

accounted for more than ten percent of the annual costs include Preserve management (16 percent), infrastructure (15 percent), RIM (Research, Inventory, and Monitoring) (14 percent), and planning (10 percent). Preserve management includes the cost of operations and maintenance on the Preserve such as watershed and habitat improvements, wildlife and fish management, fire management, and fleet costs associated with maintenance activities. On average, Preserve management costs have been just over \$760,000 per year. Infrastructure is a budget line item that includes maintenance of the facilities on the Preserve, as well as road and fence maintenance. The three year average for this line item is \$718,000. RIM includes costs for research, inventory and monitoring of natural and cultural resources on the Preserve as well as community educational services. These costs have averaged just under \$664,000 per year. Planning costs include public use and access planning as well as other planning activities for meeting the goals of the Preserve. Planning costs have averaged \$488,000 over the last three years.

The remaining 16 percent of average budget expenses go primarily toward program operations. Personnel costs are included with each of the budget line items presented above according to the time required for the specific tasks. Currently the Trust employs a total of 45 employees including full time, part time, and intermittent staff. These 45 employees have an aggregate salary of just over \$1.67 million, or roughly 32 percent of average operational costs. When considering the total cost of employment the total personnel cost is closer to \$2.26 million, which represents 47 percent of the average total budget.³²

2.7 Summary of Current Preserve Status

Through interviews with staff members, current and past board members, representatives from the public users and the local business community, and through background research key strengths, weaknesses, opportunities, and threats relevant to the achievement of financial self-sufficiency on the Preserve have been identified. Strengths and weaknesses identify features that are internal to structure of the Trust and the resources of the Preserve, while opportunities and threats are external.

- Strengths: Natural beauty, history, geology, devoted staff, committed public, proactive Board, 501(c)(3) organization, and willing local partners including Los Alamos business community, and Indian Tribes and Pueblos.
- Weaknesses: Slow start, lack of continuity in leadership in early years, lack of infrastructure, weak accounting history, 2015 self-sufficiency deadline,

³² Total costs include a 35 percent factor representing benefit and other employment costs for federal employees.

environmental and other legal limitations, tension between public, and private sector management styles.

- Opportunities: Retiring baby boomer population, expanding human population centers in central and northern New Mexico, increasing student populations in all demographic categories, trends in ecotourism including wildlife tent camps, renewed political interest in infrastructure development, excitement surrounding the creation of a “new” model of public land management.
- Threats: Economic trends, fuel prices, competition for government funds, uncertain support in Congress, limited labor availability, and potential environmental degradation through improperly planned development and growth.

The following chapter outlines the activities that may be developed on the Preserve to help achieve the goal of self-sufficiency without detracting from the goals of ecological preservation, public and multiple uses, and use of the Preserve as a working ranch and without unreasonably diminishing “the long-term scenic and natural values of the area, or the multiple use and sustained yield capability of the land.”³³

³³ *The Act*, Section 108(d)(6).

3.0 Enterprise Feasibility Assessment

The scope of work for this project called for an analysis of eleven different business enterprise activities including lodging and hospitality, education and research, domestic livestock grazing, hunting, fishing, public programs, commercial film and photography, timber, merchandise, donations, and “other.” The “other” category represents any additional ideas such as green burial and ecological service markets. The ENTRIX team performed a screening analysis for these various enterprises to determine the opportunities for expanding each of these enterprises on the Preserve. For each enterprise category, the resources on the Preserve were evaluated, market conditions were reviewed both for competition and the potential size of the regional market, and legal constraints were evaluated - especially with consideration of how consistent the project would be with the goals of the Preserve. Stakeholder and community values were also taken into consideration at this stage in the process.

Although each business enterprise activity below was analyzed, some areas received greater research emphasis than others. Research priorities for the analyses below were developed based on several criteria. First, priority was given to enterprise activities that had the potential to significantly affect financial self-sufficiency. For example, lodging and hospitality have a great potential impact on self-sufficiency for the Preserve, and have received a great deal of attention. So has timber production, or more accurately forest management activities which have the potential to produce financial gain through long-run cost-savings. Second, the amount of information currently available on a particular topic was taken into consideration. For example, public programming is described at length in other documents such as the *Master Plan for Interpretation*, *Public Meeting Summary*, and the *State of the Preserve*. Although these programs are of critical importance, the details of how each and every recreation program may expand is not the focus of this report. Finally, enterprise activities that are proposed, and therefore somewhat new to the Preserve have received more research attention than programs that are currently in operation.

For each of these items, and as well for some additional possible programs and activities, a feasibility screening was first conducted. This feasibility analysis produced an preliminary

assessment of the maximum revenue generating potential of the activity, given the constraints of markets, and the legal reading of the *Act*. Details of the screening activity are provided in Appendix A, Explanation of Screening Methodology.

3.1 Lodging and Hospitality

Lodging and hospitality is the one area that perhaps is the most influential in terms of planning for financial self-sufficiency. Several of the earlier planning and guidance documents for the Preserve have identified the need for a visitors' center,³⁴ improved overnight lodging,³⁵ and an education and research center.³⁶ The Preserve has both strengths and weaknesses relative to its competitors. Strengths include the geologic, historic, and cultural aspects of the Preserve, which are attractive to a broad spectrum of visitors. Further, the Preserve will offer abundant recreational opportunities to visitors.

Weaknesses include a lack of infrastructure currently in place, possible political and social resistance to developments on the Preserve, and federal employees of the Preserve who are generally not trained in hospitality management. These weaknesses may be mitigated with alternative or green development strategies and by hiring concessionaires for operation of the lodges. Each of these and some additional potential developments in the area of lodging and hospitality are reviewed below.

3.1.1 Lodges – High and Medium End

The following points highlight trends in the lodging industry (and in lodging development) that convey the market outlook for the type of lodging development that will be offered on the Preserve.

³⁴ *The Act*, Section 109(a)(9)

³⁵ Mary Orton Company LLC, 2007, "Valles Caldera Trust – Public Access and Use Public Meetings, July 31 – August 16, 2007, Public Meetings Summary – Combined Report." Hereafter referenced as *Public Meeting Summary*.

³⁶ AldrichPears Associates, June 2005, *Valles Caldera Trust Master Plan for Interpretation*, Document prepared by Rourke McDermott and reviewed and edited by Dennis Trujillo on 11/29/05. Hereafter referenced as *Master Plan for Interpretation*, and AldrichPears Associates, June 2005, *Valles Caldera Trust Master Plan for Interpretation: Recommendations for Site Development, Facilities and Public Input*.

- The lodging industry set a record with more than 5,000 hotels in the pipeline during the third quarter of 2007. However, there were cancellations and postponements in 2008 as construction financing became more expensive.³⁷
- According to an Ernst & Young survey, there was a clear shift toward development projects and away from acquisitions in the lodging industry. The trend is expected to continue through 2010, due to lodging executives who remain optimistic on the short term and long term outlooks for lodging in the U.S.³⁸
- There was a steady growth in revenue per available room from 2003 to 2006 of 7.9 percent. This suggests that the positive swing of the lodging industry cycle has been occurring since 2003, or five years. Historically, hospitality cycles generally last six to nine years, suggesting continued but smaller growth in 2008. Another indication of slowing growth in the lodging industry is that most publicly traded domestic lodging companies provided lower estimates this year than compared with the most recent prior years.
- The room demand growth nationally is strongly correlated to Gross Domestic Product (GDP). Real GDP is projected to slow to a rate of 2.6 percent for 2008, compared to 3.6 percent for 2006. However, the drop in the dollar could have a beneficial affect on lodging demand, as it is more affordable for foreign tourists to visit attractions in the U.S.
- Domestically, there is evidence mounting that a recent trend of “staycations” is emerging, where more people are staying closer to their homes due to higher gasoline prices.³⁹ If this trend continues, lower-priced lodging may be the most profitable option for the Preserve, and accommodate a higher percentage of people in the future. The increased demand, as a result of lower lodging prices, may outweigh the decreased per-unit prices, hinting at the fact that national parks/preserves lodging demand may be highly price-elastic.

³⁷ Ford, Patrick, “US Construction Pipeline Sets Another Record,” accessed online August 20, 2008 at <http://www.htrends.com/trends-detail-sid-29920.html>.

³⁸ Ernst & Young US 2008 Lodging Report, EYG No. DF0036, page 10, accessed online August 15, 2008 at www.ey.com.

³⁹ Wells, Melanie, “Taste: The Joy of the Staycation,” May 23, 2008, *The Wall Street Journal*, and Mirabella, Loraine, “No Place Like Home for Vacation in 2008,” June 15, 2008, *The Baltimore Sun*.

- As described earlier, enhancing the guest experience through the amenities offered will be a key to lodge success.⁴⁰ The unique complementarities of the proposed hotel and the ability to experience the grandeur of the Preserve provide exactly that type of engagement that visitors now seek.
- Luxury hotels experienced the fastest growth of any hotel industry segment in 2006, growing by 10.5 percent. This was caused by an 8.7 percent increase in Average Daily Revenue (ADR).⁴¹ The growth in this segment is largely fueled by aging baby boomers with high disposable income, as well as affluent young professionals. Both of these groups are less price sensitive in the accommodations market and are more interested in comfort than price.
- With the increased focus on the environment and climate change during the last few years, real estate and hotel developers and guests alike are focusing on environmentally friendly (green) hotels. Strong economics have resulted in a number of major hotel companies either developing green hotels or retrofitting existing properties to become part of the green movement.⁴²

Given the favorable climate for development of lodging on the Preserve, some successful nearby lodging facilities located on working ranches were reviewed. These nearby successes provide models of lodging that feature remote landscapes providing access to natural and cultural amenities. Both luxury and mid-range lodges have been successful.

Vermejo

Vermejo is located in northeastern New Mexico in Colfax County, 155 miles from the Preserve. It was created in 1841 as part of the two million acre Maxwell Land grant. It offers fishing in trout-stocked lakes, elk hunting, and other recreational opportunities in addition to high quality guest lodging. The current owner, Ted Turner, acquired it in 1996. Fishing prices range from \$450 per day to the complete luxury package of \$5,700 per day (two day minimum).⁴³ Hunting prices range from

⁴⁰ Scoviak, Mary, "Mixed signals show the cycle starting to turn down, but there is still money to be made from customizing the guest experience and mastering new tools for yield generation," 2007, *HOTELS Magazine*, Web page: <http://www.hotelsmag.com/article/CA6485418.html>, Accessed: June 26, 2008.

⁴¹ "Hotels and Accommodations – US – September 2007: Market Size and Trends," 2007, Mintel Market Report.

⁴² Ernst & Young US 2008 Lodging Report, EYG No. DF0036, page 12, accessed online August 15, 2008 at www.ey.com.

⁴³ <http://www.vermejo.com/fishrates.htm>.

\$2,500 for a turkey hunt to \$13,500 for larger game hunts (including a guide and several night stay).⁴⁴

The Lodge and Ranch at Chama Land & Cattle Company

The Ranch is located on the north central part of New Mexico in Rio Arriba County, and is 92 miles from the Preserve. Chama Landing offers several outdoor recreational opportunities including fly fishing and hunting for turkey, antelope, mule deer, elk, and bison. In addition, the park offers horseback rides, corporate retreats, sporting clay, and rare wildlife observation opportunities.⁴⁵ Costs for fishing range from \$385 per day to a complete package of \$2,250 per day. Hunting prices range from \$2,750 for a turkey hunt to \$14,000 for large game hunts (including a guide and several night stay).

The Encantado

The Encantado is located ten miles north of Santa Fe in Tesuque, New Mexico, approximately 55 miles east of the Preserve. The Encatado offers luxurious spa amenities including massage and eastern medicine treatments, fitness center, yoga and pilates classes, dining on organic and local produce from award winning chefs, heated pool and hot tub, art gallery, and shuttles to downtown Santa Fe. The ranch markets itself as having direct access to the Santa Fe National Forest and close access to many outdoor activities such as golf, river rafting, skiing, fly fishing, horseback riding, and climbing.⁴⁶ Costs range from \$250 per night in the off season to \$975 in the high season.

Ojo Caliente Mineral Springs and Resort Spa

The Resort Spa is located 49 miles north of Santa Fe and approximately 70 miles from the Preserve. The Resort offers yoga classes and personal yoga consultation, luxury spa treatments, and mud baths. There are several trails for hiking or mountain biking, although bikes are not provided. The property comprises 1,100 acres and is adjoined to the Carson National Forest. Costs for lodging vary from \$109 per night to \$449 per night. Mineral pool rates range from \$12 per day to \$720 per day for a private pool.

⁴⁴ Ibid.

⁴⁵ <http://www.lodgeatchama.com/ratesReservations.html>.

⁴⁶ <http://www.encantadoresort.com/overview/amenities.aspx>.

The feasibility of lodging was determined to be positive, and was further analyzed for financial feasibility. Both luxury, and less expensive, but nice and “rustic” styled lodging were recommended during the public access and use public meetings held in 2007 suggesting this is also consistent with stakeholder preferences.⁴⁷ The maximum level of development for the lodging of this type is determined to be a 100 room mid level lodge with an additional 20 room luxury lodge. It is anticipated that future demand may exceed this capacity. However, stakeholders repeatedly comment that the pristine environment and solitude is a priority for the Preserve, and by limiting the lodging facilities, the natural integrity of the Preserve will be conserved.

Potential legal constraints surround the construction of lodges on the Preserve. These include the fact that such similar lodges on public lands are often leased for a long period to firms that can then share the risk of construction costs with the Trust (or public agency operating a facility). However, for the Preserve, leases are not allowed to be longer than ten years,⁴⁸ thus limiting the willingness for a partner to invest. Consequently, an arrangement needs to be developed so that either the Preserve run the lodging facilities, or some other arrangement be developed so that hospitality companies would be enticed into leasing the facility on a shorter term basis.

3.1.2 Overnight Camping

One of the development options considered for Valles Caldera is the development of a campground on-site. This option is attractive due to its low cost of implementation and operation. On the other hand, revenues generated with running a campground are usually much lower, compared to some of the other options considered, such as the development of a hotel.

The Preserve could offer many opportunities for camping and will appeal to a broad cross-section of the public. Both tent and Recreational Vehicle (RV) camping could be offered. Some recent statistics about the prevalence of camping demonstrates a healthy market for this activity

- Tent camping is the fifth most popular recreation activity of the U.S. population age six and older, according to the 2006 Sporting Goods Manufacturers Association (SGMA). It estimates that 38.6 million Americans camped in tents in 2006.⁴⁹

⁴⁷ *Public Meeting Summary.*

⁴⁸ *The Act*, Section 108(c)(2).

⁴⁹ Sports in America: The Big Picture, Press Release for Sporting Goods Manufacturers Association (SGMA), accessed August 21, 2008 at <http://www.sgma.com/displayindustryarticle.cfm?articlenbr=30313>.

- The Outdoor Recreation in America 2003 report published by the Recreation Roundtable notes that 18 percent of Americans camped in tents in campgrounds in the previous 12 months, nine percent backpacked, seven percent camped in the wilderness, and eight percent were involved in RV camping.⁵⁰

Camping vacationers tend to be married with children at home. The average age of campers who go camping is 37 and their median household income is \$43,000. People who go camping also tend to enjoy hiking, biking and canoeing. Fifty-nine percent of campers said they traveled with their spouses on their most recent outdoor vacation and nearly half traveled with their children.⁵¹

Recreational Vehicles (RVs)

An RV Park could be developed in conjunction with a campground. This would allow Valles Caldera to capture some of the customers that currently stay in other nearby RV Parks, while simultaneously increasing the general attractiveness of Valles Caldera to visitors, increasing visitation numbers. Because an RV Park is a complement to a campground, developing both on Valles Caldera should have a higher magnitude effect on increasing visitation, than the sum of individual development effects from the said RV Park and campground.

A University of Michigan Survey Research Center study prepared for the Recreation Vehicle Industry Association (RVIA) found that one of every ten vehicle-owning households in the U.S. owns an RV. The study also shows that people are traveling more, but shorter distances, which helps the RV business that is predicted to keep growing. With the 8.6 million current RV-owning households and the expectation that this will rise to 10.4 million in 2010,⁵² RV-owners are a large potential market segment for the Preserve.

The nearest competition to the Preserve for tent and RV campers is the Santa Fe National Forest. According to the Santa Fe National Forest website,⁵³ the campsites that allow RVs charge \$8 to \$10 per vehicle and have between 10 and 60 units,

⁵⁰ Roper ASW, "Outdoor Recreation in America 2003: Recreation's Benefits to Society Challenged by Trends," Prepared for The Recreation Roundtable, accessed August 21, 2008 online at http://www.funoutdoors.com/files/ROPER%20REPORT%202004_0.pdf.

⁵¹ Travel Industry Association (TIA), "A to Z travel facts, accessed August 21, 2008 online at http://www.tia.org/pressmedia/domestic_a_to_z.html.

⁵² Travel Industry Association (TIA), "A to Z travel facts, accessed August 21, 2008 online at http://www.tia.org/pressmedia/domestic_a_to_z.html.

⁵³ www.fs.fed.us/r3/sfe/.

which include picnic tables, fire pits/grills, toilets (usually outhouses), and most offer drinking water. Many of the tent camp sites do not collect a fee for use.

The major camping-related strengths of the Preserve include access to organized recreation such as educational tours, fishing, and summer programs. The primary weakness of the Preserve is the lack of infrastructure currently in place.

The maximum level of development considered for overnight camping was a combination of 60 tent units and 50 RV units. It is likely that future demand may exceed this supply level, but due to the seasonal nature of camping and other substitute camping areas nearby a conservative estimate for maximum development level was adopted.

The only legislative constraint concerning the campground development option is the ability of the Trust to enter into debt. The *Act* does not specifically mention the ability of the Trust to lend from the Federal Financing Bank, but this would likely be the least costly alternative for financing such a development. Further information concerning financing costs is included in section 7.1.2.

3.1.3 Wildlife Tent Camps (Luxury Camping)

Luxury camping or “glamping (for glamorous camping)” is a relatively new dimension in camping. It typically includes African safari-style camps without any connection to game expeditions. They offer a luxurious type of recreation that includes beds and other comforts rarely available in traditional camping settings. The Preserve is an ideal location for this activity given its scenery, abundance of wildlife, and relative seclusion.

“Luxury Camping” has become increasingly popular to wealthy adventure travelers who want eco-friendly and luxurious vacations. This growing demographic segment includes both baby boomers and executives.⁵⁴ A reasonable demographic sector for targeting by the Preserve will be households with incomes of at least \$150,000 per year.

Luxury camping is still a fairly new concept in the U.S. However, domestic and international competition is increasing from some of the major luxury brands, including Four Seasons, Oberoi and Taj. All are introducing luxury tented camps in some of the world’s most pristine environments.

One of the best known luxury camping accommodations is the Costanoa Lodge & Camp in Pescadero, California, developed with the help of Joie de Vivre founder Chip Conley. It is

⁵⁴ Strauss, Karyn, Camping in Comfort, *HOTELS Magazine*, July 1, 2006, accessed August 21, 2008 online at <http://www.hotelsmag.com/article/CA6484935.html>.

located an hour south of San Francisco on a picturesque property overlooking a stretch of rugged bluffs and beachfront and is near four state parks. The property features tent bungalows, cabins, a traditional lodge, and campsites that offer varied experiences and pricing points. According to Sally Kopf, director of sales and marketing, “I think today’s customer is more discriminating about where they are going. They have less time and want more luxury.”⁵⁵ Rates for luxury tent camping at Costanoa range from \$130 to \$150 per night during the peak season.

Another resort that has recently capitalized on the surge in luxury camping is the Paws Up Ranch in Western Montana. Paws Up opened its 37,000-acre resort in 2005. Occupancy levels in 2007 were up by more than 40 percent over 2006 levels, causing Paws Up to increase the number of luxury tents from six to twelve.

The main luxury camping-related strengths of the Preserve are the pristine environment, access to outdoor activities, wildlife viewing opportunities, and a reasonable driving distance from the major population centers of Santa Fe and Albuquerque. These features, together with many public programs on the Preserve, will distinguish the luxury camping that will be available at Valles Caldera.

The main luxury camping-related weaknesses of the Preserve are the lack of infrastructure for luxury camping and the lack of hospitality experience among the current staff. These weaknesses could be mitigated through some combination of the following; hiring seasoned concessionaires to conduct employee training, and combining the infrastructure development of other facilities with the luxury camping operations.

The maximum level of wildlife tent camps that are practical on the Preserve include 12 units. However, due to the scalable nature of the enterprise if additional units are demanded the numbers of units could be easily expanded. There are no known legislative constraints for operating a wildlife tent camp.

3.1.4 Cabin Rentals

Rentals of existing facilities have occurred on a limited basis in the past on the Preserve. It is anticipated that significant upgrades to the cabins would be required before a viable cabin rental program could be implemented. One option consider for expanding this program is to perform the deferred maintenance on the existing facilities, and upgrade the furniture, fixtures and equipment to make them suitable for rental. Interior decoration that would correspond to the local culture and wildlife theme would be an ideal choice. The existing lodge is already

⁵⁵ Strauss, Karyn, Camping in Comfort, *HOTELS Magazine*, July 1, 2006, accessed August 21, 2008 online at <http://www.hotelsmag.com/article/CA6484935.html>.

in decent shape for renting out, and is well suited for renting to moderately sized parties visiting the Preserve.

The recent recession in the United States has cast doubt on the potential success of vacation home rentals. In order to analyze the impact that the recession has had on this industry Zonder surveyed professional property management companies (PMCs) in May of 2008 to determine the impact on inventory, bookings and revenues. Surprisingly, the survey results show that the vacation rental industry has not been negatively affected by fluctuations in the economy and vacation rentals appear to remain strong with 100 percent of property management companies surveyed. Survey results showed that:

- 100 percent reported that bookings remained steady and revenue was comparable or better than last year
- 40 percent have seen an increase in bookings
- No PMCs reported a decline in inventory, and 60 percent have seen steady inventory growth
- 50 percent reported that owners are relying on management companies to increase occupancy rates

In response to these survey results, Zonder CEO, Bob Barnes commented, “We’re seeing a sharp increase in people choosing a vacation rental *within driving distance* rather than paying for airfare and staying in a hotel. Vacation homes have always been a great value, but especially during tough economic times. In addition to saving on lodging costs, travelers get the benefit of having increased privacy, common family / living / dining areas, and the ability to save by eating meals at home.”⁵⁶

Based on the recreational opportunities available, the convenience of renting a home, and options for family dining that a vacation home provides, it is likely that the target market for vacation home rentals on the Preserve will include two main segments. First, families wanting to vacation at the Preserve will likely be interested in renting a vacation home for long weekends and/or week long vacations. Second, larger groups (6 or more people) traveling and vacationing together will be another segment of the market to target. Also, with transportation costs increasing, the demand for vacation homes within driving distance of the Preserve will be a key consideration.

The maximum level of rentals considered in this analysis includes eight cabins and one lodge. This level assumes several cabins are available for use by grazing contractors or as the Trust

⁵⁶ “Vacation Rental Industry Remains Strong During Slow Economy According to New Zonder Study,” Business Wire, May 21, 2008, accessed online at <http://www.allbusiness.com/real-estate/commercial-residential-property/10524410-1.html>.

deems necessary. There are no legislative constraints known for renting existing cabins. However, if the Trust were to lease land to develop cabins, the legislative constraints concerning lease limits would apply, see *Valles Caldera National Preserve and Trust*, Public Law 106–248—July 25, 2000, Section 108(c)(2).

3.2 Education and Research

The Preserve offers a unique location for an education and research center. Universities and independent professionals involved in ecological research often need specialized sites to conduct field and laboratory work. Grant or private donations frequently will pay for such services. Consideration of the successes of other similar operations are useful both in terms of understanding the magnitude of this market, as well as the potential competition.

There are two primary U.S. education and research centers focused on ecological issues. The United State’s Long Term Ecological Research Network (LTER) was formed by the National Science Foundation (NSF) in 1980 to support research on long-term ecological phenomena. The LTER Network is a collaborative effort involving more than 1,800 scientists and students investigating ecological processes over long temporal and broad spatial scales. The Network promotes synthesis and comparative research across sites and ecosystems and among other related national and international research programs.⁵⁷ The LTER Network has grown from five sites and an annual budget of \$1.2 million in 1980 to a network comprising 24 sites, an LTER Network Office, and an annual direct budget of \$17.8 million in 2002. In addition 1,100 scientists and students generate approximately \$44 million in LTER related research.

A second primary ecological research organization is the Association of Ecosystem Research Centers (AERC). It organizes U.S. research programs, universities, and private, state, and federal laboratories which conduct research, provide training, or analyze policy at the ecosystem level. The goal of AERC is to promote the optimal use of limited scientific resources in the search for solutions to complex, large scale environmental problems. AERC is a member organization of the American Institute of Biological Sciences (AIBS).⁵⁸

⁵⁷ The US Long Term Ecological Research Network web-site, <http://www.lternet.edu/>, accessed August 21, 2008.

⁵⁸ Association of Ecosystem Research Centers (AERC), homepage, <http://www.ecosystemresearch.org/index.htm>, accessed online August 21, 2008.

Personal communications with other biological research center directors identified some of following characteristics as necessary conditions for a successful public land/private university partnership fundraising effort for infrastructure development:⁵⁹

1. A compelling, rare, unique, or otherwise significant ecosystem and a strong scientific rationale for the work;
2. Strong support from the research community in the form of research faculty involvement;
3. Strong, pre-existing social and economic ties to the potential partner university, e.g. cross over appointments on Boards of Directors, shared administrative and governance responsibilities;
4. Complementarities with existing university projects or mandates, and/or the ability to offer something to the partner university that it does not already have in terms of either a site or a type of facility;
5. Ability to guarantee that revenue generation pressures will not override or adversely affect scientific efforts (e.g., pressure to generate income from timber sales will not result in the cutting of a research stand);
6. Demonstration of strong external donor support (having a large “challenge grant” in hand or other funds in the form of endowed chairs or scholarships to leverage university funds); and
7. Ability to guarantee exclusivity.

The primary center-related strengths of the Preserve relate directly to the expertise of Dr. Bob Parmenter and Dr. Anastasia Steffen. Dr. Parmenter has broad experience in establishing and managing an education and research center, and he has overseen the adaptive management approach currently in place on the Preserve. Dr. Steffen is a renowned expert in cultural resources and obsidian. Their expertise and other dedicated staff of the Preserve, together with the pristine environment and ecological and geological assets of the Preserve, provide the Trust with a distinct competitive advantage over other start up education and research centers.

The primary center-related weaknesses of the Preserve are the current lack, and the high cost of developing, the needed infrastructure for such a complex. Fortunately, some of these costs may be offset by donations from private individuals, schools, and businesses.

The maximum level of development for an education and research center is difficult to determine due to the uncertain future research interests on the Preserve. In this analysis, the

⁵⁹ Personal Communications with Dr. Brian Kloeppe- President, Organization of Biological Field Stations www.obfs.org; Dr. Lindsay Boring- Executive Director- Joseph W. Jones Ecological Research Center, Ichauwy, GA www.jonesctr.org; and Dr. Ian Billick-Executive Director- Rocky Mountain Biological Laboratory, Crested Butte, CO www.rmbll.org .

maximum level of development was estimated to include a research laboratory, offices, conference rooms, and a dormitory building for students and teachers to stay overnight.

The only legislative constraint facing the development of an education and research center is found in Section 110 of the *Act*, public law 106-248. Specifically, in section 110 it states, “The Valles Caldera Trust shall terminate at the end of the twentieth full fiscal year following acquisition of the Baca ranch under section 104(a).” However, the Board may recommend that the Trust be extended. Still, the fact that the Trust could terminate in the twentieth year may present a challenge when seeking private donors and universities to participate in a capital campaign to fund the development of an education and research center.

3.3 Livestock Grazing

The current grazing program is largely successful and there is potential for this program to continue to grow and expand especially in conjunction with the education and research programs. Prior to 2006, the program struggled with expensive program costs that outweighed revenue generation. The program is an essential part of Preserve operations especially because the *Act* specifies that the Preserve will operate as a working ranch, while still protecting the natural, scenic, cultural, and other values of the Preserve. The results of the screening suggest that in the future, modifications may be useful in the program and may improve revenue and/or help the Trust achieve some of the other goals of the *Act*. Improvements in the program may also result in improved revenue.

The only legislative constraint of grazing is that this is a required activity according to the *Act*. According to the *Act*, the program will provide for “operation of the Preserve as a working ranch, consistent with paragraphs (2) through (4):

- (2) the protection and preservation of the scientific, scenic, geologic, watershed, fish, wildlife, historic, cultural and recreational values of the Preserve;
- (3) multiple use and sustained yield of renewable resources within the Preserve;
- (4) public use of and access to the Preserve for recreation;

3.4 Hunting

An indication of future hunting activity within the preserve may be provided by examining hunting data from the past. Table 4 below provides the number of elk permits that are made available between 2005 and 2007 for mature bull and either sex hunting permits by residency.

As provided, the number of permit applications purchased by residents is much higher than that of nonresidents. On average the number of non-resident applications is 274 applications per permit higher than that of residents.

Table 4
Mature Bull and Either Sex
Hunting Permits and Revenue by Residency

Year	Permits		Applications per Permit		Gross Revenue per Permit	
	<i>Resident</i>	<i>Non-resident</i>	<i>Resident</i>	<i>Non-resident</i>	<i>Resident</i>	<i>Non-resident</i>
2005	57	16	76	374	\$1,907	\$9,352
2006	49	14	105	419	\$2,633	\$10,473
2007	60	17	101	311	\$2,537	\$7,772

Resident applications per permit increased 38 percent from 76 to 105 between 2005 and 2006, and remained relatively constant between 2006 and 2007. Non-resident permit sales dropped by 100 applications per permit between 2006 and 2007, though remain significantly higher in terms of the number of applications per permit.

These data suggest that the number of non-resident application sales outweigh resident application sales by a considerable margin. On a per permit basis residents paid between \$1,900 and \$2,500 for a mature bull or either sex hunting permit, while non-residents paid between \$7,800 and \$10,500 per permit over the 2005-2007 period. In terms of maximizing the revenue from a limited resource more could be done if the constraint on the allocation of permits between residents and nonresidents were not in place. A strong case could be made for shifting some existing resident permits to non-residents considering that on average non-residents paid \$6,800 more for the chance to hunt within the preserve over this time frame. However, given that the existing composition of resident to non-resident permit sales is mandated by law it appears that policy changes would need to take place in order to increase revenue without increasing harvest levels.

The current hunting lottery system is well-suited to the goals of the Preserve because it provides equal access to the recreational resources at a low cost, and yet still allows has the potential to generate significant revenues for the Preserve especially through non-resident sales. However, this same system could be optimized to continue providing significant revenues and meet the goals of public access if the split between resident and non-resident permit were adjusted.

Another way to generate greater revenue from the hunting resource, while still allocating permits according to a sustainable yield, and still providing public access is to set aside a few permits specially for the purpose of enhancing revenue generation for the Trust. This idea is

consistent with the spirit of a government corporation in that it promotes an ideal blend of public and private approaches to hunting. For the purpose of modeling in this report, it is assumed that 15 of these “enhancement permits” for mature bull, or either sex elk are set aside for auctioning or otherwise generating revenues for the Trust.

Management of hunting resources is limited by the stocks available on the Preserve. Therefore, the opportunities to expand this activity are limited in terms of the number of experiences the Preserve can provide. The revenue generated from these experiences may be able to increase. The current management approach has been to monitor the revenues generated when changes in the program, and adapt accordingly. This approach is recommended to continue.

The legislative constraints facing the hunting program are described in the *Act*. In the *Act* it states that the purposes of the Preserve are to “protect and preserve the scientific, scenic, geologic, watershed, fish, *wildlife*, historic, cultural, and recreational values of the Preserve, and to provide for multiple use and sustained yield of renewable resources within the Preserve, consistent with this title,” (Section 105(b)). Further, the act states that, “Nothing in this title shall be construed as affecting the responsibilities of the State of New Mexico with respect to fish and wildlife, including the regulation of hunting, fishing, and trapping within the Preserve,” (Section 105(f)).

3.5 Fishing

Opportunities to expand the fishing program include expanding large stock watering areas or creating a dam or other obstruction on the river to create large flat water fishing areas.⁶⁰ These fishing areas would allow recreational flat water fishing which could be characterized by the use of non motorized boats. This new fishing option could potentially allow diversity for the public access use of fishing and possibly attract a new type of consumer to the Preserve. In addition, potential ‘spin off’ opportunities such as renting non motorized water vehicles such as canoes, pontoon boats, and float tubes could become a potentially profitable business venture, possibly operated by a concessionaire.

The maximum size of a flat water fishery on the Preserve is a hydrologic engineering function of the stream flow, geologic characteristics of the soil such as water holding capacity, and analysis of potential flat water areas in the stream channels. A moderate level development option for flat water fishing would involve a less severe disturbance of the stream channel and the creation of slower moving water with large bows and pools. The least

⁶⁰ *Public Meeting Summary*, pg. 18.

impact development for flat water fishing would be to expand stock watering areas and stock with trout.

The financial resource requirements for the flat water fishery option are extremely high, due to the environmental compliance costs associated with alteration of stream beds. It is anticipated that developing a flat water fishery on the Preserve would cost well over \$1 million in compliance costs alone.⁶¹ In addition to compliance costs, the cost for engineering and actual alteration (earth moving, and rehabilitation of stream bed) would add to the total costs.

Expanding current fishing areas beyond the current reaches of the East Fork of the Jemez and San Antonio rivers is also a possibility. However, this expansion would only be warranted if it was determined that demand exceeded the current capacity and the potential conflicts of expanding the fishing program with other activities such as grazing, hunting, hiking, and educational/biological research could be mitigated.

The legislative constraints facing a fishing program are described in the *Act*. In the *Act* it states that the purposes of the Preserve are to “protect and preserve the scientific, scenic, geologic, watershed, fish, wildlife, historic, cultural, and recreational values of the Preserve, and to provide for multiple use and sustained yield of renewable resources within the Preserve, consistent with this title,” (Section 105(b)). Further, the act states that, “Nothing in this title shall be construed as affecting the responsibilities of the State of New Mexico with respect to fish and wildlife, including the regulation of hunting, fishing, and trapping within the Preserve,” (Section 105(f)).

3.6 Public Programs

Public programs on the Preserve encompass the majority of activities enjoyed by Preserve visitors. The on-going expansion and development of programs such as hiking, biking, wildlife viewing, educational tours, backpacking, skiing and other activities and special events is what is called for in the *Master Plan for Interpretation* and local stakeholders have been looking forward to increased access to the Preserve for recreational purposes.⁶² Building upon the existing public programs will be essential to a plan that leads to financial self-sufficiency. Many of the current public programs have ample opportunities for expansion. The timing and specific types of program expansions will need to be determined

⁶¹ Cost estimated a rough estimate of environmental compliance based on other minor alteration of stream beds for other ENTRIX mitigation projects.

⁶² *Public Meeting Summary*.

through a detailed planning process for public use and access that has already begun. The ideas for expansion presented below are meant to identify potential opportunities as examples of the diverse and inclusive approach to public programming that has existed on the Preserve over the past eight years, and that should continue to grow and be developed.

3.6.1 Hiking and Biking

Expanding hiking trails so that looping trails may occur and so that hikers may enjoy views without destroying the views of other hikers are found in the *Master Plan for Interpretation*⁶³ and also in the *Framework*.⁶⁴ Increased facilities such as bathrooms and staging areas are also described in these plans. These expanded hiking opportunities are considered for the maximum level of development, and could be achieved with minimal financial requirements. No legislative constraints exist for expansion of hiking and biking trails.

3.6.2 Equestrian

The scenic beauty and location of the Preserve can offer a number of opportunities for horseback riding. Five options for an equestrian program have been explored. These include Day-Use Trail Rides, Overnight Horse Camps (both a basic and luxury option), Short Guided Trail Rides, Overnight/Packing Adventures, and the option of developing a Working/Dude Ranch. Working/dude ranches generally have required activities working the ranch, while the guest ranches offer the opportunity for activities or nothing at all. The information collected for this evaluation is based on research from other ranches New Mexico, and interviews with proprietors and equestrian participants on the Preserve.

In addition to people who bring their own horses to ride on the various trails through the Preserve, horses should be available to others to use through rental and/or lessons. Local outfitters/concessionaires are likely to be interested in providing various services, from horse rental/guided trail rides to lessons for beginner riders. Because of the special location and conditions of the Valles Caldera Preserve, there are several local outfitters that may be interested in becoming a concessionaire to the Preserve.⁶⁵

⁶³ *Master Plan for Interpretation*, pg. 13.

⁶⁴ Valles Caldera Trust, 2003, *Valles Caldera National Preserve: Framework and Strategic Guidance for Comprehensive Management*, Valles Caldera Trust, Jemez Springs, NM, pp.110-112. Hereafter referenced as *The Framework*.

⁶⁵ McSweeney, Alice, Los Pinos Ranch. Personal communication, July 8, 2008, and <http://www.lospinosranch.com/contact.html>, accessed July 7, 2008.

Horseback riding is already considered a feasible and manageable activity at the Preserve as it currently exists for those who bring their own horses.⁶⁶ However, in settings such as the Preserve, other visitors may be coming from long distances, or may not own their own horses and would like the opportunity to rent horses.⁶⁷ The Preserve is a great place to see from the back of a horse. Concessionaires could provide services that would accommodate riders from beginners (e.g. lessons, short trail-rides), through intermediate (e.g. day-long trail rides or overnight/packing adventures) to more advanced (possibly cattle ranching lessons in conjunction with the cattle grazing operations).

There are currently a variety of trails open to the public at the Preserve. There is a permit for fee (\$20) required.⁶⁸ Volunteer riders are also available to help one to learn more about the Preserve, and have a safe and enjoyable ride.⁶⁹ Further, there is ample room on the Preserve to develop new trails for both types of visitor-riders, and it is suggested that there be trails developed separately for the visitor-riders using rental horses.⁷⁰ Although having an equestrian concessionaire on the Preserve may not generate a lot of revenue for the Trust explicitly, horseback riding is a large draw to the Preserve⁷¹ and has the opportunity to bring riders in that will then they will use other services (campgrounds, stores, etc.) that will help support the goal of financial self sufficiency.

Another option that could be provided by concessionaires is the development of a horse camp campground, either basic or more luxurious. Horse camps have been successful in other parks and forests. Adding a campground with basic amenities near or within the existing horse trail system would allow users to extend their stay and explore more of the trails, which are more numerous than can be ridden at any one time under the current day-use system. Extending stays to overnight could increase the distance a user would travel, and thus increase the size of the market area. Adding the basic amenities of a campground can be achieved with minimal investment, addition of infrastructure, and labor requirements. In terms of capital investment, restrooms would need to be added, and picnic tables and fire pits would need to be built for each site, as well as several corrals (possibly one for each site), and stock water development at a minimum. Other additions could include a group picnic area

⁶⁶ Young, Carolyn Hall, Email to Dennis Trujillo re: VCNP horse program, forwarded by James Biggs, June 27, 2008.

⁶⁷ Beisel, Brian, Land Between the Lakes. Personal communication, July 3, 2008.

⁶⁸ <http://www.vallescaldera.gov/comevisit/horse/>, accessed July 1, 2008.

⁶⁹ Young, Carolyn Hall, Email to Dennis Trujillo re: VCNP horse program, forwarded by James Biggs, June 27, 2008.

⁷⁰ Beisel, Brian, Land Between the Lakes. Personal communication, July 3, 2008.

⁷¹ Young, Carolyn Hall, Email to Dennis Trujillo re: VCNP horse program, forwarded by James Biggs, June 27, 2008.

(including stove and covered area), some recreational areas (e.g. horseshoe pit), lounging areas, mounting assist areas, and possibly add to the day-use area.⁷² The existing infrastructure is a start for this type of program but expansion of trails and the creation of a campground would be necessary.

A luxury horse camp option is the maximum level of development considered in this analysis and would include such amenities as a camp store, restaurant, farrier, hot showers, playgrounds, activity areas, stalls or barns in selected areas, and electric, water, and sewer hookups for most or many of the campsites, which could accommodate large truck/trailer combinations.⁷³ Adding the luxury amenities of a campground would require greater investment, addition of infrastructure, and labor requirements than the basic horse camp model. However, as mentioned previously, this is an option that could be accommodated by a concessionaire, and there may be several locals interested in such ventures. There are no legislative constraints known for operating an expanded equestrian program on the Preserve

3.6.3 Van Tours

The rich geologic, cultural and wildlife assets of the Preserve provide ample opportunity for tour activities to various locations on the Preserve. Geologic van tours explain the geologic activity that formed the valleys, hot springs, cerros, and mountains on the Preserve. Tours are offered to view obsidian deposits, and other geologic interests. Cultural tours highlight the abundant history of the various Pueblos lifestyle and culture on and near the Preserve. Cultural tours could be offered to archeologically interesting sites displaying the evidence of the Pueblo Indian lifestyle when they inhabited the Preserve. Similarly, historical tours could be offered sharing the story of the more recent Baca Ranch. Wildlife tours are another option and could be offered for sharing the rich wildlife resources of the Preserve. Tours could be taken to show and inform clients of the elk, deer, coyote, and other wildlife on the Preserve.

It is estimated that a maximum number of 20 tours could be offered in one day during the peak season. More than 20 tours would require more than two tours leaving per hour during the normal operating schedule which could cause conflict and confusion in the staging area. There are no legislative constraints identified for van tours.

⁷² <http://www.fs.fed.us/gpnf/recreation/campgrounds/sites/kalama-horse-camp.shtml>, accessed July 7, 2008.

⁷³ <http://www.lbl.org/HORSTrails.html>, accessed July 1, 2008, and <http://www.lbl.org/CAMPWranglers.html>, accessed July 14, 2008.

3.6.5 Special Events

Special events that can occupy the majority of the Preserve for two or three days at a time should be encouraged. Such events can expose new visitors to the Preserve, and guarantee full occupancy for a finite or defined period of time. Furthermore, this is a unique ability that the Trust can offer although many other public lands can not offer this kind of experience. Therefore, the Preserve has a competitive advantage in special event planning.

A maximum number of (large) special events that could occur on the Preserve is no more than one per month, or 12 per year. This level of special events is not anticipated to be reached in the near future. There are no known legislative constraints with expansion of a special events program.

3.7 Commercial Film and Photography

The Valles Caldera Reserve has many attributes the film and photography industry is looking for when they scout locations. With some infrastructure growth, the reserve will be able to encourage filming projects on the Reserve. The Southwest is home to almost 4,400 film projects, a fifth of which were filmed in New Mexico. These NM filming projects include TV series, documentaries, TV episodes, and movies filmed in 174 New Mexico locations.⁷⁴ Nearby Las Vegas, New Mexico is home to many of these films. The success of the Las Vegas film industry will serve as an outline for Valles Caldera.

Film producers scout a potential filming location to determine if it has the necessary backdrops for the project. Additionally, a film producer determines the practicality of the site for the cast and crew when they scout a location. This includes the availability and abundance of parking and overnight lodging. Any noise from traffic, airports, and any other noisy enterprise must be avoided for filming. Space to provide food services and rest rooms to accommodate the cast and crew must be available. The presence of cell phone service or close by public phones is necessary at a filming location. The availability of local personnel such as police officers and local stores for tasks such as photocopying are also scouted. Finally, any permits, permission, and/or fees are determined to establish the ease and cost of using a site.⁷⁵

⁷⁴ <http://www.imdb.com/List?locations=new%20mexico&&substrings=on>.

⁷⁵ <http://www.dummies.com/WileyCDA/DummiesArticle/Picking-Locations-for-Your-Film.id-2162.html>.

Las Vegas, New Mexico has been home to many feature films starting with silent westerns to recent hits including 'No Country for Old Men' and 'Wild Hogs'.⁷⁶ The success of the filming industry in Las Vegas can be attributed to the diverse looks the city can take on including a college town, Old West, Mexico, or Midwest.⁷⁷ At least 67 films, TV episodes, and TV series have been filmed within Las Vegas, New Mexico.⁷⁸ In 2008, three major motion pictures are filmed in Las Vegas including 'Beer for my Horses', 'Not Forgotten', and 'Brothers'.⁷⁹

Local businesses in Las Vegas, New Mexico have put together a promotional DVD detailing recent films, local sponsors, and local contacts and sent it to film and television companies in Los Angeles and New York.⁸⁰ A complete list of the movies located in Las Vegas, NM is hosted on the site www.lasvegasnmfilm.com along with local sponsors' contact information and press.

The state of New Mexico has an office dedicated to encouraging the film industry to film in New Mexico. The New Mexico Film Office will help a film company receive all financial incentives available under New Mexico's film financial incentive programs. The office will do a comprehensive script location breakdown, provide scouts with location assistance including itineraries and same day photos, and provides maps and directories for production to help specify filming locations. The office will act as an agency or community liaison for the film company and provide permitting guidance. Lastly, the office is available for ongoing requests and problems to ensure the filming process is an easy one.⁸¹

To encourage filming within the state, New Mexico provides incentives for filmmakers to film within the state. The incentives include⁸² a 25 percent tax rebate, a film incentive loan up to \$15 million per project, no state sales tax, and a 50 percent reimbursement of wages for New Mexico residents trained on the set in advanced below-the-line positions.

⁷⁶ 'Las Vegas, New Mexico Film Legacy Hits Hollywood, accessed at <http://www.nmfilm.com/article.php?id=1355&title=Las+Vegas%2C+New+Mexico+Film+Legacy+Hits+Hollywood>

⁷⁷ Santa Fe New Mexican, February 17, 2008 as quoted on <http://www.lasvegasnmfilm.com>.

⁷⁸ International Movie Database accessed at <http://us.imdb.com/LocationTree?New+Mexico,+USA>.

⁷⁹ <http://www.lasvegasnmfilm.com>.

⁸⁰ 'Las Vegas, New Mexico Film Legacy Hits Hollywood, accessed at <http://www.nmfilm.com/article.php?id=1355&title=Las+Vegas%2C+New+Mexico+Film+Legacy+Hits+Hollywood>.

⁸¹ Filming in New Mexico, accessed at <http://www.nmfilm.com/filming/>.

⁸² Filming in New Mexico, accessed at <http://www.nmfilm.com/filming/incentives/>.

Cities and counties in New Mexico have film offices to encourage local filmmaking. The Albuquerque Film Office offers assistance to filmmakers in the same manner the state office provides assistance to filmmakers. Additionally, the office provides a list of filming locations near Albuquerque that include contact information, specific filming location information, and permitting issues/assistance. Albuquerque Studios in Albuquerque has recently opened sound stages, production offices, mill space, and back lot space.⁸³ The studio will provide production support and studio services for film companies.⁸⁴

Valles Caldera has the potential to be a successful filming location with some marketing and infrastructure expansion. The proposed lodging on Valles Caldera will take care of the necessary infrastructure expansion for the film and photography industry. The maximum level of development for a commercial film and photography enterprise would include the creation of a ‘film commission’ that could serve major film studios by producing a list of locations for specific types of filming and help take care of paperwork.⁸⁵ Furthermore, Valles Caldera could become a ‘filming location near Albuquerque’ on the Albuquerque filming office list. This will allow them to attract the film industry with less marketing effort. There are no known legislative constraints to film and photography enterprise activities. The commercial film and photography industry is a viable business venture the Valles Caldera Reserve to pursue with the above infrastructure and marketing expansion.

3.8 Timber (Forest Management)

Self-sufficiency for the Trust can occur either as a result of increased revenues or decreased costs. In the forest management arena, the target is to offset, as much as possible, the costs of restoring forest health, reducing the risk of catastrophic fire and protecting watershed function. Thinning is critical to restoring historical stand composition and structure that could sustain commercial harvesting in the future.

Restoration of forests on the Preserve requires lowering the basal area of densely stocked Ponderosa pine and mixed conifer stands on drier slopes, regenerating decadent aspen stands while protecting remaining old growth forest. Balmat and Kupfer (2004) advise thinning small diameter trees to reduce fuel loads and improve the ecological and aesthetic value of the Preserve’s forests. In particular, thinning small diameter Ponderosa pine is critical to the development of old growth forest conditions that might sustain commercial logging over the

⁸³ City of Albuquerque Film Office, accessed at <http://www.cabq.gov/film/index.html>.

⁸⁴ Albuquerque Studios, accessed at <http://www.abqstudios.com>.

⁸⁵ Romat, William, 1996, Videomaker, accessed at <http://www.videomaker.com/article/923/>

long term. Based upon stand exams, it is estimated that 30,000 acres of pole-sized trees in greater than 50 percent closed canopy forest are currently in need of thinning.⁸⁶ The cost of previous thinning projects on the Preserve ranged from \$700 to 1,200 per acre. Thinning estimates cited by several local contractors range from \$200 to \$2,000 per acre, depending upon the prescription, stand density, slope, site accessibility and whether the operation is conducted mechanically or by hand. Recent rises in fuel prices have brought the “average” cost of thinning with tree removal closer to \$1,200 per acre.⁸⁷

The Preserve faces a situation shared by land managers throughout New Mexico: how to offset the cost of restorative thinning through the sale of small (< 12”) diameter trees which have limited commercial value. A number of products, ranging from vigas and latillas, posts and poles, fuel (firewood, chips and pellets), horse bedding and mulch, can be derived from pole-sized trees and thinning residues in the Preserve’s second growth forests. Hauling distance to processing facilities is a critical factor affecting economic feasibility of small-wood harvesting and utilization, especially with low-value materials (Han et al. 2004). Thus, most products from small diameter wood must be processed within a 50-mile radius of the harvesting site so that transportation costs do not exceed the product value. It is also important to minimize handling and labor costs throughout the felling-removal-processing continuum. Therefore, it may make most sense economically for the Preserve to sell gatewood (raw unprocessed wood) from the landing site to local thinning contractors that have the ability to process it.⁸⁸ While processing facilities within a 50-mile radius of the Preserve are limited, a number of opportunities exist for reducing thinning costs through collaborative partnerships with local businesses and creative utilization of multiple resources coming off the thinning sites. No legislative constraints are known for entering into agreements with thinning contractors.

3.8.1 Local Operations and Product Markets

The Pueblo of Jemez and the Barela Timber Management Company

As a result of the Walatowa Woodlands Initiative, the Jemez Pueblo has a considerable investment in equipment capable of processing a variety of forest products ranging from saw logs and vigas to firewood. Workers at the Pueblo are trained in a number of wood

⁸⁶ Marie Rodriguez, Natural Resource Coordinator, Valles Caldera Trust.

⁸⁷ Ron Ortega, Forester, New Mexico Forest and Watershed Institute, personal communication on August 25, 2008.

⁸⁸ Naomi Engelman, Director, New Mexico Forest Industry Association, personal communication on August 26, 2008.

processing skills, including furniture making and woodcarving. The original objective of the Walatowa Initiative was to make the Jemez Pueblo forestry initiative self-sufficient, although to date this has not been possible without large subsidies. Recently, the Jemez Pueblo contracted the Barela Timber Management Company (BTMC) to manage the Pueblo's forests, using Jemez Pueblo forestry crews, and to maintain their wood-processing yard in an attempt to make the Walatowa Initiative profitable. Previously, Jemez Pueblo crews were hired by the Preserve to conduct forest thinning south of Highway 4. Now, BTMC is interested in expanding these operations in Preserve forests by obtaining long term contracts with the Preserve. This would increase Pueblo employment in both the forest and the wood-processing yard by guaranteeing the supply of wood for processing and sale.

While BTMC cannot commit to an “average” thinning price, they are willing to examine “representative” stands to provide an estimate of how the cost of thinning could be reduced by procurement of pole- and mid-size (12-18” diameter) material from the thinned site.⁸⁹ BTMC practices “total utilization” (when site appropriate), generating multiple products from small diameter wood, including fuel chips from timber residues (Box 10). In addition, BTMC offers “house log packages” of construction materials (D-logs, flooring, rafters, beams, rough timber) that could be used by the Preserve to build future facilities (cabins, lodges, research station) from wood harvested on site and processed locally.⁹⁰ The advantages of contracting with BTMC include the Pueblo's close proximity to the Preserve and their capacity to utilize all sizes of material. Moreover, by contracting BTMC and Jemez crews to conduct thinning and wood processing, Preserve operations contribute to community development and capacity building in the local wood products industry, which is all consistent with the goals of the *Act*. Furthermore, purchasing construction materials and furniture processed locally from Preserve wood at a negotiated price could be both economically favorable and environmentally responsible.

TC Company in Hernandez/Española

Terry Conley operates a sawmill in Arroyo Seco that cuts custom beams and timber for sale in Española. From 1993-2001, Mr. Conley ran a post and pole business on the Baca ranch that used 5 to 12” diameter logs from pre-commercial thinning operations. Since that time, Mr. Conley has had thinning contracts with the Preserve to reduce hazardous fuels. With good knowledge of Preserve forests from his previous work, Mr. Conley estimates that he can mechanically thin and masticate densely stocked (>1,200 stems per acre) forests on 30 percent slopes for \$500 to \$1,200 per acre, depending on the site and density of the trees. On some sites, thinning with a mechanical saw, followed by windrowing and winter burning

⁸⁹ Gale Hopper, Forester, Barela Timber Management Company, personal communication on August 26, 2008.

⁹⁰ Ralph Barela, Owner, Barela Timber Management Company, personal communication on August 25 and 26, 2008.

could cost as little as \$300 per acre (excluding the cost of burning). Under a US Forest Service Forest Stewardship Program, Mr. Conley purchases 9 to 12” diameter pine poles for \$50 to \$100 a 25-ton load from the thinning operation to use in his post and pole business. He prefers to purchase poles >9” diameter or larger specialty logs (Ponderosa pine, Douglass-fir, white fir) because it costs him \$350 to transport a 25-ton load 55 miles. He also purchases sawlogs >12” diameter for \$100 to \$700 per load, depending upon the species. The TC Company crew has the capacity to mechanically thin and masticate approximately 2,000 to 3,500 acres of unimproved stands per year, however with post and pole removal, his capacity is closer to 1,000 acres per year⁹¹

Western Wood Products, Raton, New Mexico

Located in Raton, New Mexico since 2004, Western Wood Products (WWP) is an innovative producer of fences and a wide variety of round wood (post, rails, poles), sawn timber, and bark and chip products that are sold throughout the U.S. The company also produces specialty items, such as vigas, beams and furniture-grade material for woodworkers. The plant contracts for logging to procure poles from 4-12 inches in diameter and from 6-16 feet long. Owner Ray Levengood believes that negotiating contracts with large private land owners in Northern New Mexico to secure a stable long term supply of materials is critical to the company’s success. WWP is able to operate profitably using forest resources from as far away as 1000 miles.⁹² This is accomplished by purchasing pole material that is debarked (to reduce weight), sorted, bundled and loaded for transport on the logging site. Use of one-way freight on flatbed trucks further reduces transport costs. According to Mr. Levengood, at \$2.80 for a 3.5” diameter x 8’ length debarked pole, a semi load holding up to 1,300 poles would be worth \$2,800 to \$3,100, after subtracting freight costs of approximately \$500.00 (one-way) or \$800.00 (two-way). The bark remaining on the logging site can be sold as mulch. Currently, Mr. Levengood is seeking to increase his supply by four semi-loads per day. To help an operation purchase a portable debarking system (\$25,000) and front-end loader, Mr. Levengood will contract to purchase two semi-loads of mixed material (sorted by size) per day, or between 300 to 400 loads per year.⁹³

3.8.2 Fuel

With the rising price of fossil fuels, biomass fuel markets are becoming increasingly important and widespread. Currently, the price of firewood ranges from \$80 to \$200/cord,

⁹¹ Terry Connelly, Owner, TC Company, personal communication on August 26, 2008.

⁹² Ray Levengood, Owner, Western Wood Products, personal communication on August 25 and 27, 2008.

⁹³ Ibid.

depending upon the species.⁹⁴ Firewood could be produced for sale to campers on the Preserve, or areas of trees felled during thinning operations could be opened up to the public for

Box 1: Energy Generation Using Biomass

The Santa Fe Community College recently installed a Chiptec ® biomass gasification furnace system that provides 3.4 million BTUs of energy to heat the 500,000 ft² campus. The unit burns 1,000 to 1,200 lbs of wood chips per hour, delivered to the campus by Barela Timber Management Company for \$40 per ton. SFCC spent \$1.3 million to engineer and install the entire heating system, although biomass gasification furnaces can be purchased for \$500,000. With an estimated savings of \$100,000 annually in heating costs (compared to natural gas), the biomass system will pay for itself in 15 years. The campus is considering adding a hot water chiller that would cool the campus using biomass. SFCC facilities manager Frank Joy says that the biomass gasification system operates extremely efficiently, requiring little maintenance, as long as clean wood chips are used.

Source: Frank Joy, Santa Fe Community College Facilities Manager, personal communication on August 25 and 27, 2008. Contact information: fjoy@sfcc.edu, telephone: 505-428-1225

firewood collection, as practiced by the National Forests. Wood biomass burning energy systems offer an opportunity to use very large volumes of small diameter low value material and residues from thinning activities. Prices for wood chips and 40 percent humidity wood pellets range from \$30 to \$40 per ton. This year, the Santa Fe Community College began heating the campus using a biomass gasification system (Box 1). Los Alamos National Laboratory (LANL) is currently studying the feasibility of installing a biomass gasification system to provide heat for the research park.⁹⁵ Critical to LANL's decision to adopt the biomass gasification technology will be data demonstrating that forests in the region can supply sufficient resource over the next decades to support this.⁹⁶ In addition, the Jemez Pueblo is exploring the possibility of a Cogeneration Ethanol heating and power plant that would burn woody biomass residues.⁹⁷ Finally, the use of biomass chips from Preserve forest thinning residues to heat one or more of the proposed new facilities offers yet another opportunity for more sustainable and environmentally responsible management of the Preserve.

⁹⁴ Engelman, personal communication, August 26, 2008.

⁹⁵ Michael Ebinger, EES2, Los Alamos National Laboratory, Personal communication on August 15, 2008.

⁹⁶ Rob Davis, Owner, FEC, Espanola, NM, personal communication on August 25, 2008.

⁹⁷ Ralph Barela, Owner, Barela Timber Management Company, personal communication on August 25 and 26, 2008

3.8.3 Funding Sources for Forest Restoration

The Forest Landscape Restoration Act of 2008, sponsored by New Mexico Senators Bingaman and Domenici (among others) is aimed at restoring forest health, preventing severe fires and boosting rural economies. Under the legislation, landscapes of 50,000 acres or greater will be selected to receive funding for restoration treatments for up to ten years. Site selection will be based upon demonstrated ecological need, the existence of multi-stakeholder collaborative planning, sound science, private investment and other key criteria that focus on identifying those landscapes with the greatest likelihood of success. Key to selection will be demonstrating that forest restoration is linked to bringing economic benefits to local communities (McCarthy 2008).

US Forest Service Woody Biomass Utilization (WBU) Grants

The WBU grant program is intended to help improve forest restoration activities by creating markets for small-diameter material and low-valued trees removed from forest restoration activities, such as reducing hazardous fuels, handling insect and diseased conditions, or treating forestlands impacted by catastrophic weather events. The funds are targeted to help communities, entrepreneurs, and others turn residues from forest restoration activities into marketable forest products and/or energy products. The goals of this program include encouraging the generation of renewable energy from woody biomass, removing economic and market barriers to using small-diameter trees and woody biomass and building industry infrastructure around national forest lands where no or limited industry infrastructure exists.

3.9 Merchandise

Several elements of merchandise sales were reviewed. Merchandise sales are currently occurring on the Preserve, and at a gift shop in the Preserve headquarters in Jemez Springs. This type of merchandise sales were considered for expansion along with visitor expansion, and through expansion of the visitor facilities at a visitor center. On-line merchandise sales should also continue to be developed as is currently planned. To facilitate the sale of merchandise, the possibility of using a fulfillment house was reviewed. Finally, an art gallery is another way to potentially expand the merchandise programming, while also fostering relationships between the Trust and local small artisan businesses.

The maximum level of development for merchandise enterprise activities on the Preserve involves the following: construction of a facility that would house a gift shop, interpretive center, and cafeteria; contracting with a fulfillment house for online sales of merchandise; and housing an art gallery in or near the visitor center and / or lodge(s). There are no known legislative constraints for the activity of selling merchandise at a visitor center gift shop.

3.9.1 Visitor Center and Gift Shop

Several wildlife foundations, National Parks, and Forest Service regions have large visitor centers with gift shops. Many offer an interpretive center as an educational display for visitors and provide visitors with the story of who they are and what their purpose is. The Preserve's story is rich in cultural, natural, and geological stories that fit well with the model of a visitor center and gift shop. As well, this idea is part of the current *Master Plan for Interpretation*, and is also mentioned in the *Act*.

One opportunity to develop and expand current merchandise sales is to build an adequately sized visitor center and gift shop area. Options for enterprise activities to consider with this visitor center include; selling merchandise with the Preserve logo, selling food items through a cafeteria or deli, selling hiking / camping / outdoor supplies, selling permits for entrance (conservation fee), selling other permits associated with activities on the Preserve, and including an interpretive center in the building.

The Rocky Mountain Elk Foundation gift shop in Missoula, Montana is one example of a visitor center with a gift shop. The main headquarters of the foundation include an 11,800 square-foot visitor center and gift shop that offers clothing, souvenirs, jewelry, and miscellaneous merchandise. In 2007, the gift shop experienced sales of \$415,000 and recorded 50,329 visitors, or an average of \$8.25 per visitor.⁹⁸ Based on an analysis of the Preserve current merchandise sales⁹⁹ and an average markup of 25 percent on food items, and 50 percent on non-food items, merchandise sales are anticipated to be a significant source of revenues for the Trust.

3.9.2 Fulfillment House

A fulfillment house is a company that provides storage and logistical services to businesses, or producers, and is another option consider for merchandise sales. The primary services that fulfillment houses offer are the storage of products, receiving and processing orders, packaging, and shipment to the consumer. These services are especially attractive to a producer that seeks to outsource these aspects of business.

There are advantages and disadvantages to fulfillment houses. The advantages of outsourcing these services to a fulfillment house include relatively unlimited storage, low shipping cost and low materials cost. Fulfillment houses serve multiple producers utilizing the same

⁹⁸ Personal Communication with the Gift Store Clerk, Rocky Mountain Elk Foundation Visitor Center, September 2008.

⁹⁹ Spreadsheet titled Inventory Price List.xlsx, provided to ENTRIX on August 26, 2008.

facilities and staff, which allows for costs such as shipping and packaging to be consolidated.¹⁰⁰ Another advantage these companies offer is a low start-up cost to new businesses versus purchasing a warehouse and hiring staff. The disadvantages include no direct oversight of the shipping and logistical process, lack of quality control and quality assurance, and higher shipping and materials costs for smaller volume companies. The total cost of fulfillment services are proportionate to the volume of products being handled.¹⁰¹ In other words, the smaller the business, the higher the relative cost.

Assuming that most merchandise will be sold directly to consumers passing through the gift shop at the proposed visitor center, a fulfillment house does not represent the most cost effective method for storage and logistical services. Services such as order processing, packaging, and shipment become obsolete as the teller can execute the transaction over-the-counter. Furthermore, it is anticipated that the proposed visitor center would offer adequate storage for gift shop products and additional storage would not be required. If the Preserve were to offer a web-based gift shop, a fulfillment house would still be unnecessary as the majority of potential clientele are visitors to the Preserve looking to take home a souvenir.

3.9.3 Art Gallery

It is not uncommon for parks in the National Park Service to have art galleries that present local art and culture. Such examples include the Fine Art Gallery at the Mojave National Preserve¹⁰² and the Volcano Art Center and Gallery at the Hawaii Volcanoes National Park¹⁰³. Each of these art galleries present local paintings and other artifacts from local artists, which are sold to the public. At the Volcano Art Center and Gallery the art to be presented is chosen by the Manager with the help of staff¹⁰⁴. The art is usually presented for a period of ten weeks, where it is open to the public for looking and buying¹⁰⁵.

An art gallery could be an interesting venture because they have little or no costs associated in running them¹⁰⁶, they will generate some revenue, and it will encourage visitors as well as display local culture. When a display of art is purchased from the gallery, a percentage of the

¹⁰⁰ Personal communication with Continental Fulfillment Group based in Scottsdale, Arizona on July 9, 2008.

¹⁰¹ Personal communication with JKL Logistics based in Phoenix, Arizona on July 9, 2008.

¹⁰² <http://www.nps.gov/moja/planyourvisit/kelso-art-exhibition.htm>

¹⁰³ <http://www.volcanoartcenter.org/>

¹⁰⁴ Personal Communication with Fia Mettise, Volcano Art Center and Gallery, July 11, 2008.

¹⁰⁵ Personal Communication with Julia, WNTA Manager, Mojave Art Gallery, July, 11, 2008.

¹⁰⁶ Personal Communication with Fia Mettise, Volcano Art Center and Gallery, July 11, 2008.

fee goes to the gallery and a percentage goes to the artist. In the Mojave art gallery, this was 60 percent for the gallery and 40 percent of the artist¹⁰⁷. The artist allows his/her art to be shown for free with the intention of it being sold, so the profit margin will always be positive. One art show (which lasts around ten weeks, as stated above) generated \$5,000 of revenue for the Mojave Art Gallery¹⁰⁸. If there are about five of these in a year, it can generate about \$25,000 per year for the Preserve. While this is not a significant revenue generator, it comes at no extra cost or effort, and has other indirect benefits. Firstly, it can increase visitors to the Preserve who are interested in local art and culture. Secondly, the art gallery fits into the theme of the Preserve, which is to display the rich and thriving local culture.

3.10 Donations

The Preserve has at its disposal two instruments through which it can generate tax deductible income streams: the 501 (c)(1) Corporation “Valles Caldera National Trust/Preserve” and the 501 (c)(3) “Los Amigos de Valles Caldera.” Both programs offer tax exempt earnings to contributors, though the two entities will appeal to different types of contributors for different reasons.

Because the 501(c)(3) structure is much more flexible as it is not actually a governmental organization, it provides a useful mechanism to the Preserve for annual fundraising and income generation. Income generation activities are as varied as those available to the for-profit sector. Some of the most common activities are memberships, special appeals, major donors, special events, and mission based sales. The table below summarizes the primary strengths and weaknesses of some of these strategies, and estimates the potential benefits to the Preserve from each. On average, the aggregate of membership dues, special appeals, major donors, special events, and sales could generate a net value of \$525,000 (see Table 5).

Due to the charitable nature of donations, there is no limit to the maximum donation potential for the operations of the Trust. In this analysis, a large capital campaign will be needed to support the funding of certain facilities. It is estimated that this campaign will produce between \$18 and \$22 million over approximately three years. There are no legislative constraints for a capital campaign or donations for operating expenses.

¹⁰⁷ Personal Communication with Julia, WNTA Manager, Mojave Art Gallery, July, 11, 2008.

¹⁰⁸ Ibid.

**Table 5
Fundraising Potential Comparison**

	Base Requirements	Strengths	Weaknesses	Duration to Maturation	Costs	Potential Gross Revenue
Membership Dues¹	<ul style="list-style-type: none"> •Appropriate software •Accurate database 	<ul style="list-style-type: none"> •Builds organizational clout •Source for volunteers •Basis for major donor campaign 	<ul style="list-style-type: none"> •High start up costs (database purchase/set up) •Time consuming to maintain •Low return relative to investment 	<ul style="list-style-type: none"> •3-5 years to build 	<ul style="list-style-type: none"> •Software \$500-\$5000 •List Purchase/Rental \$.31-\$1.57 per name/use •Postage and Print Material \$.88-\$5.00 per piece 	<ul style="list-style-type: none"> •Low - \$32,000 •High- \$189,667 •Average - \$99,623 •(60% response rate avg. dues of \$65.00)
Year End and Special Appeals^{1,2}	<ul style="list-style-type: none"> •Accurate membership database •Compelling situation/issue 	<ul style="list-style-type: none"> •Good for raising funds quickly •Relatively low cost •High response rate 	<ul style="list-style-type: none"> •Danger of donor fatigue 	<ul style="list-style-type: none"> •Immediate 	<ul style="list-style-type: none"> •Postage and print material \$.65-\$5.00 per piece 	<ul style="list-style-type: none"> •Low- \$16,050 •High- \$63,222 •Average – \$38,000 •(10% response rate; avg. gift of \$65.00)
Major Donor¹	<ul style="list-style-type: none"> •Mature membership/donor base •Accurate profile/research 	<ul style="list-style-type: none"> •High returns on effort •Low cost •Basis for capital campaign 	<ul style="list-style-type: none"> •High personal cost (direct ask) •Requires training for staff and board 	<ul style="list-style-type: none"> •3-5 years to build, grows with database 	<ul style="list-style-type: none"> •Minimal- 2%- 5% for lunches/entertainment/travel 	<ul style="list-style-type: none"> •Low- \$10,700 •High- \$158,056 Average - \$75,087
Special Events	<ul style="list-style-type: none"> •Venue •Occasion (annual dinner, awards banquet etc) •Activity (movie premier, guest speaker, book tour) 	<ul style="list-style-type: none"> •Builds Relationships •Generates PR for organization •Spotlights accomplishments •Honors supporters 	<ul style="list-style-type: none"> •Extensive preparation •High overhead •Limited life Cycle 	<ul style="list-style-type: none"> •6- 12 months to plan and host 	<ul style="list-style-type: none"> •Varies- goal is to secure “in kind” and other donations to cover costs 	<ul style="list-style-type: none"> •Low- \$16,050 •High- \$50,578 •Average - \$30,560
Grants	<ul style="list-style-type: none"> •Grants research 	<ul style="list-style-type: none"> •Strategically aligned with programs 	<ul style="list-style-type: none"> •Limited to grantor interests 	<ul style="list-style-type: none"> •6 months -24 months 	<ul style="list-style-type: none"> •Grant writer •overhead 	<ul style="list-style-type: none"> •Low- \$25,000 •High- \$500,000 •Average - \$140,000
Endowments and Planned Giving	<ul style="list-style-type: none"> •Mature donor base 	<ul style="list-style-type: none"> •Perpetual income source •High returns 	<ul style="list-style-type: none"> •Requires commitment over long run 	<ul style="list-style-type: none"> •3 – 5 years •Continued effort essential 	<ul style="list-style-type: none"> •Development officer •Meals and travel •overheard 	<ul style="list-style-type: none"> •Low- \$10,700 •High- \$158,056 •Average - \$75,087
Mission Based Sales	<ul style="list-style-type: none"> •Products that align with organizational mission (nature hikes, trail rides, archeological/cultural trips etc.) 	<ul style="list-style-type: none"> •Increases Awareness of Organization •Rewards Major Donors • 	<ul style="list-style-type: none"> •Requires extensive program staff participation •Insurance/Liability coverage can be costly 	<ul style="list-style-type: none"> •Seasonal •Commensurate with demand for activity 	<ul style="list-style-type: none"> •Variable, if guides and lecturers donate time/equipment it can be minimal 	<ul style="list-style-type: none"> •Low- \$40,000 •Year 5- \$1,000,000 •Average - \$100,000
Grand Total						<ul style="list-style-type: none"> •Low - \$350,000 •High - \$760,000 •Average - \$525,000

3.11 Other

Two additional revenue generating options were considered. These are green burial – an environmentally friendly style of providing end-of-life care, and payments for ecological services.

3.11.1 Green Burial

Traditional burial involves using a formaldehyde solution to embalm the body, placing the body in a metal casket, and lowering the casket into a concrete vault. Green burial uses dry ice or refrigeration to preserve the body¹⁰⁹, encloses the body in a biodegradable casket or simply a shroud, and does not use a vault.

While more environmentally friendly types of burial have long been practiced by various religious groups, no mainstream green cemeteries existed in the United States until 1998. The first, Forever Fernwood (Mill Valley, California), is a 32-acre green burial cemetery and land preservation site. In addition to Forever Fernwood, there are currently at least nine existing green burial cemeteries in the United States. Most of these are located in the eastern United States, but green burial cemeteries are also located in Mills Valley, California; Santa Fe, New Mexico; and San Jacinto County, Texas.¹¹⁰ Memorial Ecosystems' Ramsey Creek Preserve (Westminster, South Carolina) consists of 33-acres, and currently holds 60 graves with another 50 prepurchased.¹¹¹ Near Santa Fe, New Mexico, a green burial site is located on the 13,000-acre Galisteo Basin Preserve, approximately a two hour drive from Valles Caldera Preserve.

There are at least three new green cemeteries currently being planned in the United States. The nearest proposed cemetery to the Preserve would be located in Denver, Colorado. By 2013, there are projected to be around 200 cemeteries that provide some form of green burial services.¹¹² Green funeral services are projected to generate between \$2.4 billion and \$3.4 billion in revenue annually between 2010 and 2015, with additional revenue generated from

¹⁰⁹ Federal law does not require embalming (<http://www.funeralplan.com/funeralplan/consumer/ftcprior.html>).

¹¹⁰ <http://naturalburial.coop/USA/>

¹¹¹ <http://www.naturalburial.coop/2005/09/09/green-burials-offer-unique-less-costly-goodbyes/>

¹¹² http://blog.cleveland.com/metro/2008/01/a_green_deathas_environmentall.html

the sale of caskets and burial plots.¹¹³ While the supply of green cemeteries is expected to increase, there are no aggregated national statistics on demand for green burial.¹¹⁴ However, an AARP telephone survey of more than 1,000 individuals aged 50 years and older reported that one-fifth of respondents indicated they would be “very interested or interested in a burial that is more environmentally friendly than a traditional burial with embalming.”¹¹⁵

The panoramic views and tranquility of the Preserve make it a desirable location for a loved one’s final resting place. Visitors to the Preserve may be moved by their experience and be inclined to consider purchasing a pre-need plot. To assess the feasibility of a green burial program for the Valles Caldera Preserve, startup, operating, and maintenance costs for a green cemetery were researched. Additionally, the potential for a similar venture on the Preserve was discussed with Joe Sehee, Executive Director of the Green Burial Council. Entry costs for green cemeteries can include the cost to purchase land, however, assuming there is land available for green burial on the Preserve, the Trust would not need capital to purchase additional land. The appropriate equipment and machinery for the cemetery could include casket lowering equipment, a cemetery tent, chairs, and a grave digging machine. The construction of a chapel on the Preserve would enable the Trust to offer funeral services on-site; alternatively, an existing building on the Preserve could be utilized for this purpose. Other capital costs could include stone markers, native plants for the grave site, and biodegradable receptacles for cremains or bodies. Malcore Funeral Homes and Crematory in Green Bay, Wisconsin purchases green caskets from Northern Casket Co. of Lindsay, Ontario, Canada and sells them for between \$400 and \$500 each.¹¹⁶ Labor costs could include a few employees for the opening and closing of the grave site, the planting of native plants around the grave site, and for assisting customers. The mean annual wage for funeral directors is \$57,660 (\$27.72 per hour).¹¹⁷ The mean annual wage for all employees in death care services is \$33,900 (\$16.30 per hour).¹¹⁸

The Preserve could choose to provide minimal green burial services, or it could provide a range of services that include funeral services, selling caskets and urns, and opening and closing graves. The more extensive range of services would be best achieved by allowing a

¹¹³ Phelps, Nathan, June 24, 2008, “Green caskets, burials a growing business,” Green Bay Press-Gazette, <http://www.greenburialcouncil.org/articles/greencaskets-gbpgazette.pdf>.

¹¹⁴ Personal communication, Joe Sehee, July 3, 2008, Executive Director, Green Burial Council.

¹¹⁵ AARP, November 2007, “2007 Funeral and Burial Planners Survey,” prepared by Lona Choi-Allum.

¹¹⁶ Phelps, Nathan, June 24, 2008, “Green caskets, burials a growing business,” Green Bay Press-Gazette, <http://www.greenburialcouncil.org/articles/greencaskets-gbpgazette.pdf>.

¹¹⁷ <http://www.bls.gov/oes/current/oes119061.htm>.

¹¹⁸ http://www.bls.gov/oes/current/naics4_812200.htm#b00-0000

concessionaire with the necessary capital and labor to provide these services to customers while paying a percentage of the fees to the Preserve.

Sustainable burial grounds have a density of between 100 to 300 whole bodies per acre.¹¹⁹ Assuming a cemetery of moderate density, if the green cemetery encompassed 30 acres on the Preserve, it would have the potential to house 6,000 bodies (200 bodies per acre).¹²⁰ A typical fee charged for green burial is approximately \$4,000 per body.¹²¹ If 2,000 of these plots were sold by 2015, gross revenue would total \$8 million.¹²² If the Trust received a lump sum of \$8 million and invested this sum into the Special Fund at five percent interest, the \$400,000 annual yield would be sufficient to cover the potential \$200,000 in annual operating costs.

A green cemetery would be expected to cause little environmental impact and would result in the planting of native plant species to landscape the cemetery and adorn grave sites. The use of small stone markers and native plants instead of large tombstones reduces materials usage and restores native habitat. Among green burial's environmental benefits relative to conventional burial, green burial eliminates the embalming process, which contains formaldehyde. Formaldehyde can cause a health risk to workers and can threaten water and soil quality.¹²³ Additionally, as long as a large number of bodies are not buried close to a body of water, green cemeteries should pose no threat to water quality.¹²⁴ The lower density of bodies buried in a green cemetery (100 to 300 in a green cemetery versus 1000 whole-body burials per acre in a traditional cemetery) would result in less alteration of soil in the cemetery. Finally, green cemeteries reduce carbon emissions relative to traditional cemeteries. Traditional cemeteries use up to half a ton of steel and almost a ton of concrete per acre. By switching to biodegradable coffins, even a conventional ten acre cemetery could have a Carbon Emission Reduction value of 15000.¹²⁵

The strengths of the Preserve related to green burial include a large amount of available land for development of a green cemetery and scenic views that make the burial site attractive to potential buyers. According to Mr. Sehee, the most successful green cemeteries are expected

¹¹⁹ http://www.treehugger.com/files/2006/08/the_last_act_gr.php.

¹²⁰ Ibid.

¹²¹ http://blog.cleveland.com/metro/2008/01/a_green_deathas_environmentall.html

¹²² Personal communication, Joe Sehee, July 11, 2008, Executive Director, Green Burial Council. Mr. Sehee has indicated that selling 2,000 plots by 2015 is a realistic goal.

¹²³ http://blog.cleveland.com/metro/2008/01/a_green_deathas_environmentall.html

¹²⁴ <http://www.memorialecosystems.com/FAQs/tabid/55/Default.aspx>

¹²⁵ http://www.treehugger.com/files/2006/08/the_last_act_gr.php

to be those that have “destination potential;” that is, those locations that people feel a strong emotional connection with. The panoramic views and tranquility of the Preserve make it a desirable location for a loved one’s final resting place. Visitors to the Preserve may be moved by their experience and be inclined to consider purchasing a pre-need plot. Furthermore, people are excited about believing that their choice in a cemetery will help conserve a natural area, and that the resting place will be safe from development. The Preserve is a national icon, and the purchase of a green burial plot would help preserve the natural resources of the park. Graveside services on the Preserve may be an opportunity to partner with local communities through guest use of lodging and other support facilities.

The weakness of the Preserve for developing a green cemetery is the lack of experience in operating a green cemetery among the current staff. There are also legal concerns and a number of unanswered questions, including how to dig graves during the wintertime, and whether people would be discouraged at the idea of risking a funeral during the winter months. These weaknesses could in part be mitigated by hiring a concessionaire and by engaging in cooperative advertising efforts with the Commonwealth Conservancy green cemetery. Mr. Sehee provides consulting services for the Commonwealth Conservancy and for “land trusts, park service agencies, and private landowners interested in developing burial grounds as a strategy for protecting natural areas.”¹²⁶

The maximum level of development for a green burial program is limited only by the size of land dedicated for such an activity and demand. In this analysis, the maximum level of development was estimated to be 30 acres. This should be sufficient to satisfy demand for at least ten years. The legislative constraints for a green burial program include consultation with Tribes and Pueblos, as outlined in *The Act*:

(5) Consultation with Tribes and Pueblos- The Trust is authorized and directed to cooperate and consult with Indian Tribes and Pueblos on management policies and practices for the Preserve which may affect them. The Trust is authorized to allow the use of lands within the Preserve for religious and cultural use by Native Americans and, in so doing, may set aside places and times of exclusive use consistent with the American Indian Religious Freedom Act (42 U.S.C 1996) and other applicable statutes.

The other legislative constraint for the green burial program is the challenge of selling a permanent resting place, or green burial plot, with the termination clause that is in the *Act*. Section 110 of the *Act*, specifically states, “The Valles Caldera Trust shall terminate at the end of the twentieth full fiscal year following acquisition of the Baca ranch under section 104(a).” However, the Board may recommend that the Trust be extended. Still, the fact that the Trust could terminate in the twentieth year may present a challenge when selling green

¹²⁶ Green Burial Council, “Staff and Board,” <http://www.greenburialcouncil.org/board.htm>.

burial plots. However, because termination implies that the land would become part of the U.S. Forest Service (in this worst case scenario) this might not be a deterrent.

3.11.2 Ecological Services

One way to reduce the costs of maintaining the ecological function of a watershed is to pass the cost along to users of the system. An example of this is shown in Box 2 below. This concept has the possibility of being a source of income in the future, but at the present time, markets for environmental functions such as watershed protection are not developed sufficiently to be considered as a certain source of income.

Box 2: User Fees to Protect Watershed Health

Following massive soil erosion caused by the Hayman (2002) and Buffalo Creek (1996) fires in Colorado, Denver Water was forced to undertake a costly program to remove sediment from mountain reservoirs and unclog pipes. Projected to cost \$31 million, the Utility estimates it has already spent more money clearing sediment that flowed into reservoirs after fires than would have been required to treat the areas before the fires. Concerned that another major wildfire could erupt in stands of dry, beetle-killed trees, Denver Water has approached legislators with the idea of imposing a "watershed maintenance fee" to help clean up forests to reduce the risk of future fires. The fees would help offset the cost to remove beetle-killed trees, create fire breaks and thin 20 to 30 percent of forest identified as critical to watershed health.

Source: Denver Post, 2008, Thinking Ahead on the Effects of Fire, Editorial posted April 11, 2008, http://www.denverpost.com/opinion/ci_8883332.

3.12 Working Vision

Based on the results of the feasibility screening activity described above, a working vision for the Preserve was developed to serve as a foundation from which future demand and expenditures could be estimated. This vision was developed through discussions with staff and stakeholders, and from a review of background planning documents including the *Public Meeting Summary*, which compiled results of public meetings held in 2007. Elements of the vision are: The vision focuses on the activities and features of the Preserve that require further conceptual development so that financial feasibility can be more fully explored. The vision was not developed to define the final balance of enterprise activities that would make up a successful model, but rather to identify those feasible elements that a) should be

considered in the creation of the final model, and b) require some definition in order to explore financial feasibility. The elements of the working vision are,

- **Visitors Center:** This will be a permanent structure located along Highway 4 near the existing entrance to the Preserve. The center will provide information about Preserve operations and facilities to passersby, parking and potentially a staging area for van tours and other activities on the Preserve, and a restaurant and gift shop.
- **Mid-level Lodging:** A mid-level lodge could be developed somewhere on the Preserve. This lodge would provide approximately 100 rooms, and will be built in a style that is consistent with the existing structures and spirit of the Preserve.
- **High-end Lodge:** This facility would include several rooms and a central area that has a lounge, dining room, and kitchen. There would be 20 rooms in this lodge and it would remain open during hunting season. It could also be rented out for wedding parties, funerals, corporate retreats, and other special events.
- **Education and Research Center:** This facility could house and support researchers on the Preserve, reflecting the model of the research station at Sevilleta National Wildlife Refuge in central New Mexico. The facilities will include dormitories, a kitchen, labs, a conference center, and administrative offices for the science staff.
- **Roads and Deferred Maintenance:** It is estimated that about 40 miles of existing roads on the Preserve require upgrading. In addition, the existing structures on the Preserve require about \$1.2 million in maintenance that has been deferred because of insufficient funding. It is assumed that both major tasks are completed to permit increased traffic on roads and the rental of structures to the public.
- **Campgrounds:** Campgrounds will be developed on the Preserve. Between 60 and 110 camping units will be developed on the Preserve. RV and tent sites are modeled for each alternative.
- **Administrative Buildings and Employee Dorms:** Administrative office space including a conference room will be developed adjoining either the visitor center or the education and research center. Employee dorms and eating facilities may also be needed if the Preserve is to manage the facilities.
- **Expansion of Existing Programs:** Programs currently underway, including grazing, hunting and fishing, van tours, and many other recreational programs will continue. Some of these programs are limited by physical constraints, but may grow as more of the Preserve area becomes available for use. Other programs, such as educational tours, merchandise sales, wildlife viewing, hiking, equestrian programs, lodging rentals, and fundraising, may grow and expand significantly, using existing interim programs as models or pilot programs. It is assumed that growth in the programs will stem from greatly improved marketing and hiring of additional marketing staff.
- **New Programs:** Other programs, such as green burial services may also fit into the overall strategy. Assessments of the green burial service favor development of this activity. Green burial is an environmentally-friendly option to burying the deceased that uses biodegradable caskets. The Preserve could use part of the land as a green cemetery.

- Timber: It is not expected that thinning operations will not be financially self sufficient, but contracting these activities to local operators and selling the gatewood will reduce a portion of the costs. Also, thinning is an essential function to protect the natural resources of the Preserve.
- Donations: The Los Amigo de Valles Caldera has potential for collecting donations for the Trust to offset some operating expenses. Also, a capital campaign is expected to bring in private donations and contributions from Universities that could fund facility and infrastructure development on the Preserve.

4.0 Potential Facility Development

The primary objective of this report is to explain the potential of future revenue generating possibilities for key development considerations on the Preserve. In addition to the expansion of the existing programs, the new ventures considered in this analysis include the possible development of the following facilities on the Preserve:

- Visitor center and administrative headquarters
- Mid-level lodge
- Luxury lodge
- Education and research center
- Improvements to existing cabins
- Campground

This chapter describes the facility development concepts that emerged from the research. Following the presentation of facility concepts is a section devoted to the importance of green building, and how that can help attract the sustainable tourism market. The last section addresses the primary operating factors associated with developing each of these facilities: land, labor, management, and capital. A particular focus is placed on the analysis of whether it is best to use concessionaires to operate the facility, or for the Trust to operate the facility.

4.1 Facility Concepts

Each of the proposed facilities will need to be consistent with the themes described in the *Master Plan for Interpretation* and with the needs of target markets. With this in mind, the brief descriptions below identify a facility concept, and where possible an example of a facility elsewhere that successfully operates in a similar manner.

4.1.1 Visitor Center and Headquarters

With expanded recreational facilities and aggressive marketing, it is anticipated that the number of both day-use and overnight visitors will increase. The visitor center should be adequately sized and include the necessary services to provide the needed information and services to Preserve visitors. This could be accomplished with a visitor center that has an interpretive center and museum, a gift shop, and a cafeteria. Box 3 describes a visitor center located in Montana.

Box 3: USFS Lolo Pass Visitor Center, Montana/Idaho Border

The Lolo Pass visitor center is located at the top of Lolo pass on the border of Montana and Idaho along highway 12. The center is approximately 5,000 square feet with an additional 700 square-foot outdoor seating area that acts as a covered picnic area in the summer and a warming hut in the winter. Inside the center is a small gift shop, fireplace and seating area, television room where visitors can preview educational films before buying them, and a small interpretive center. The restrooms are only accessed on the outside because it doubles as a rest stop for visitors along highway 12. The center receives funding from both state departments of transportation to maintain the restrooms. It is opened seven days a week during peak travel times (end of May through October). In the winter the center acts as a staging area for snowmobilers and cross country skiers, and is opened four days a week to accommodate these recreationists. In the spring and fall the center is only opened on the weekends.

Source: Personal Communication with Katie Knotec, manager of Lolo Visitor Center, US Forest Service, August 11, 2008.

The location of the facility is critical both in terms of accessibility by visitors and for attracting potential future visitors. For discussion purposes in this analysis, the facility will be located in the south-east portion of the Preserve, at the base of South Mountain, within one half-mile of existing electrical and fiber optic telephone lines. Assuming the location is along a currently well-maintained road, the visitor center will not need a new access road.

The headquarters building will be a separate unit from the visitor center and will take the place of the current unit that is currently being rented in Jemez Springs. The headquarters will house all of the personnel for the Preserve, with the exception of Dr. Parmenter and his staff, who will have workspace in the Education and Research Center. The headquarters is expected to be 6,000 square feet that will include office space and conference room areas.

4.1.2 Mid-Level Lodge

A mid-level lodge is considered in Alternative 1 only. The lodge envisioned in this analysis blends in with the landscape surrounding it and offers tourists a simple lodging experience

that is highlighted by activities in which the entire family can participate. A fireplace or common sitting area will welcome visitors on the main floor and serve as a meeting place in the evenings. Televisions will not be included in every room to provide further incentive and time for other activities provided on the Preserve. This model is similar to the lodges of the National Parks such as those in Yellowstone and Yosemite National Parks. Box 4 describes such a lodge in Glacier National Park.

Box 4: Lake McDonald Lodge, Glacier National Park

Located on the shores of scenic Lake McDonald on the west side of Glacier National Park, the Lake McDonald lodge offers visitors a choice of room types including; lodge, motel, and cabin style accommodations. This lodge is on the Going-to-the-Sun Road, one of the most scenic drives in the northwestern United States. There are 100 rooms total at the lodge, which is within walking distance of the beach and fishing area. Also included in the lodge are a gift shop and restaurant. The interior decorations are highlighted by a massive fireplace in the lobby, which acts as a meeting spot for visitors in the summer evenings. A restaurant is also located in the lodge. Throughout the summer season visitors are provided amazing views of the Rocky Mountains, wildflowers, wildlife and the pristine beauty of Glacier National Park. The lodge is closed during the winter months.

Source: Lake McDonald Lodge Highlights, accessed online at http://www.nationalparkreservations.com/glacier_lakemcdonald.htm, July 4, 2008.

4.1.3 Luxury Lodge

A luxury resort is an expensive option, but one that creates a possibility for attracting visitors and making the Preserve a choice destination for vacationers all over the U.S. With about 20 rooms, this lodge could be used for weddings, corporate retreats, and other events or rented as individual suites. In Yosemite National Park the Ahwahnee Lodge (see Box 5), though much larger than the one proposed here, has been highly successful and maintains high occupancy and advanced bookings.

Box 5: Ahwahnee Lodge, Yosemite National Park

Ahwahnee has a total of 123 guest rooms and four parlor rooms, which are the “top-of-the-line” in park accommodations. Rooms feature comfortable furnishings including upholstered chairs, televisions, refrigerators, bathrobes, hair dryers, and bath amenities. Each room is accented with original Native American designs and is ideal for those guests who desire more service. The Ahwahnee provides concierge service, bell service, valet parking, turn-down service, room service, daily in-room ice service, and afternoon tea served in the Great Lounge. The Ahwahnee Dining Room, Great Lounge and Solarium are just steps away from the guest’s door. The hotel houses a unique gift shop, The Ahwahnee Lounge, swimming pool, and a vast lawn. Evening activities also include enlightening interpretive slide presentations. Also, a historic tour of the public areas takes place every Monday, Wednesday, and Friday.

Source: Yosemite Ahwahnee Info & History, provided as a public service by the Yosemite News Research Staff, accessed online at www.webportal.com/ahwahnee/ahwahnee_info.html.

4.1.4 Existing Cabin Rentals

Renovation of the existing cabins can generate revenue through an expansion of the current rental program. Once renovated, some of these structures will have a fully equipped kitchen, giving visitors the option of preparing their own food. Based on location and accessibility, some cabins will have private bathroom(s), and the utilities provided will include running water, wastewater, electricity, gas hook-ups, and telephone. During the renovation, it will be important to preserve the historic significance of the structure. A rustic decor will reflect the local history, culture, and surroundings with a combination of Native American decor (such as art and rugs), log furniture, and handicrafts from New Mexico. Because part of the lodging experience is to engross the visitor in the magnificent history of the Preserve, the history of each structure could be presented in the respective cabin/lodge through photographs, framed articles, and artifacts from the era in which it was built.

The deferred maintenance cost for the nine structures is estimated at \$498,758. This amount only covers the cost of maintaining the structural integrity of the buildings and the measures required to meet the general safety codes. The additional cost to update these structures for public rentals will be \$302,757.

Box 6: Pahaska Cabins, Yellowstone National Park, Wyoming

Just east of Yellowstone at the foot of the majestic Cody Peak is Buffalo Bill's spectacular historic Lodge Pahaska Tepee. Each of the rooms located in the cabins have modern heating systems with quiet circulating hot water heat. There are no televisions in the rooms, but phones are provided in each cabin. Rates during the off season, which is from May 5th to May 20th and October 1 to October 30th, are from \$67 for a standard room in a cabin to \$895 in the Family Reunion Lodge that has seven bedrooms. The "shoulder season" rates, applicable from May 21st to June 4th and August 27th to September 30th, range from \$77 per night for a standard room to \$995 per night for the Lodge. The peak season rates run from June 5th to August 26th and are \$110 for a standard room to \$1,095 for the lodge.

Source: Pahaska Tepee website, accessed August 11, 2008, online at <http://www.pahaska.com/index.html>.

4.1.5 Education and Research Center

The proposed education and research center on the Preserve would provide a central place for researchers from universities to conduct their research, for school age children to participate in educational camps, and for Preserve visitors, volunteers, and interested organizations to learn about the history, science, and ecology of the Preserve. Development of this type of center also benefits the preserve through potentially supporting scientists that currently are employed by the Trust. Box 7 describes a similar facility in southern New Mexico.

Box 7: Sevilleta Research Station, New Mexico

The Sevilleta Long Term Ecological Research (LTER) site is located at the Sevilleta National Wildlife Refuge (NWR) in Socorro County, New Mexico. The Sevilleta NWR comprises 100,000 acres of grassland, desert, and woodland bordered by two mountain ranges and the Rio Grande Valley in between. Elevations range from 1,350 m at the Rio Grande to 2,797 m at Ladron Peak in the northwestern portion of the refuge. Topography, geology, soils, and hydrology, interacting with major air mass dynamics, provide a spatial and temporal template that makes the region a transition zone between several biomes. The region contains communities that both represent and intersect Great Plains Grassland, Great Basin Shrub-steppe, Chihuahuan Desert, Interior Chaparral, and Montane Coniferous Forest.

*Source: Greenland, David et al., 2008, *Climate Variability and Ecosystem Response at Long-Term Ecological Research Sites*, Oxford Press, pg. 287.*

4.1.6 Campgrounds

Tent and RV camping facilities will provide a low cost alternative to lodging for visitors of the Preserve. Camping units could be developed with minimal costs on the southwest portion of the Preserve, in the Banco Bonito area.

Box 8: Jemez Falls Campgrounds, New Mexico

The Jemez Falls Campground is a primitive campground in Jemez, New Mexico open during the summer season as part of the Santa Fe National Forest. It includes 52 units, each with fire grills and picnic tables, vaulted toilets, and accommodations for RVs up to 40 feet in length. Recreational uses for the campground includes fishing, picnicking, hiking, and camping. The cost per vehicle is \$10 per night. The campground has an occupancy rate of about 90 percent on the weekends and 40 percent on weekdays.

Source: Personal Communication with Derek Padilla, manager of Jemez Falls Campground, Santa Fe National Forest, July 8, 2008.

4.1.7 Wildlife Tent Camps

Elegant, semi-permanent tent camping is a new trend in outdoor recreation which can be successful on the Preserve. Visitors can purchase packages that include guides who will prepare and serve all meals, wash dishes, and monitor campfires. Wildlife tents can offer campers temperature-controlled, canvas tents and a soft bed surrounded by fine furniture. At present only a small number of these opportunities exist in North America. The Preserve is an ideal location for wildlife tent camping given its scenery, abundance of wildlife, and relative seclusion. Box 9 describes one such facility.

Box 9: Paws Up Ranch, Western Montana

Paws Up opened its 37,000-acre resort in 2005. Occupancy levels in its luxury tents were up by more than 40 percent over the prior year's level, causing Paws Up to increase the number of luxury tents from six to twelve in 2007. The tents are 300 square-feet. Each tent has a restroom facility located nearby, which includes a large shower, granite countertops, heated slate floors, and high-end toiletries. Prices for the Paws Up tents range from \$595 to \$670 a night for double occupancy. Most visitors at Paws Up fly from California, New York, and Florida.

Source: The Resort at Paws Up, "Compare all of our accommodations," <http://www.pawsup.com/resort/compare.php> (accessed July 8, 2008).

4.2 Green Building and Sustainable Tourism

More and more travelers are seeking “responsible” recreation and vacation experiences that support sustainable development of local communities while protecting the cultures and environments visited. Travel agencies now offer the opportunity to offset carbon emissions and list destinations that are “eco-friendly.” “Sustainable tourism” has emerged in response to concerns about the environmental, socio-cultural, and economic impacts of traditional travel and tourism. Nonprofit research institutions, such as the Center on Ecotourism and Sustainable Development, design, monitor, evaluate, and improve sustainable tourism practices. Sustainable tourism is especially popular among European travelers, with scores of travel enterprises (including campgrounds) now certified as “sustainable” by a number of organizations. Destinations certified as sustainable boast “eco-lodges” constructed of locally harvested materials and powered by renewable energy, concessions and catering that recycle and reduce waste, and a commitment to financial support for conservation and local communities. National Geographic publishes a scorecard that assigns a “stewardship” index rating to North American National Parks ranges from “On Top” to “Rock Bottom” based on criteria such as environmental/ecological quality, social/cultural integrity and the nature of tourism development.¹²⁷

The Trust has a unique opportunity to develop, from the ground up, new facilities and programs that distinguish it from other parks by offering a 21st century recreation experience that is of high quality, while being environmentally and socially responsible. Investments in “sustainable tourism” on the Preserve might include recycling water and rainwater harvesting, renting bicycles with designated trail access, renewable energy generated on site (wood biomass, solar, wind), building materials harvested or purchased locally, meal catering with reusable service and minimal waste and green parking lot design. Seven percent of building costs were added to initial building development cost estimates to allow for green architecture. Highlighting the eco-friendly features of the Preserve will serve its educational mission and marketing interests, while setting the Preserve apart from other recreational experiences as a destination that promotes environmental stewardship, respect for native cultures and more sustainable community development.

4.3 Primary Operating Factors for Facilities

The specific location, design, and operating plan for each of these facilities will be determined at a later stage in the planning process. However, the potential location,

¹²⁷ http://www.nationalgeographic.com/travel/sustainable/info_and_resources.html#Destination_Scorecards

availability of labor, management strategy, and working capital constraints for the facilities are outlined below in order to develop realistic financial estimates for potential revenue generation.

4.3.1 Locations and Infrastructure

Infrastructure costs associated with each proposed facility cover the development of a water system for the facility (i.e. drilling a well and installing pump and storage tank, where needed), connecting utilities, and creation of parking lots, and access roads. The location accounts for a large portion of these costs, so it was necessary to make general location assumptions in order to estimate representative costs for development. Relative constraints and costs of development in various locations are described below.

- Southeast Corner: Low constraints and costs. Three phase underground power on south side of SR4. Assume buried line to facility(ies). Good access to SR4. Good water potential based on US Forest Service (USFS) campground well.
- Banco Bonito: Low constraints and costs. Would require boring under SR4 to provide three phase power and assume buried line to facility(ies) and/or throughout campground. Good access to SR4. Good water potential based on USFS campground well.
- Redondo Meadows and Canyon: Low to moderate constraints and costs. Three phase power available from overhead line all the way to the Union Building. Assume buried line to facilities. Relatively low cultural resources constraints.
- Behind South Mountain: Low to moderate constraints and costs. Single phase power available from overhead line. Assume buried line to facilities.
- Ranch Headquarters: Moderate constraints and costs. Single phase power available on site. Historic District constraints.
- Movie Set: High constraints and costs. Power would require approximately three miles of buried single phase cable with stream crossings and other environmental constraints. Water storage tank would have to be placed at separate, relatively distant location. Viewshed impact constraints.
- Rabbit Mountain: Moderate to high constraints and costs. Providing power would require easement from private land owner and NM Highway Department and cable would have to be buried to facilities(ies). Good access from SR4. North facing slopes. Cultural resources constraints.

4.3.2 Labor Availability

The labor required for operating the Preserve enterprises will likely be drawn from Los Alamos and Sandoval Counties. In 2006, the unemployment rate in Los Alamos County was 2.5 percent and per capita income was \$54,134.¹²⁸ That year, Sandoval County figures were more representative of state averages, with an unemployment rate of 4.4 percent and a per capita income of \$27,146. The state averages for 2006 were a 4.2 percent unemployment rate and \$27,889 per capita income.¹²⁹

Given the low unemployment and relatively dispersed population in the area, provision of housing for seasonal workers will likely be necessary under Alternative 1. Several options are considered for such a facility. First, a dormitory could be built somewhere on the Preserve to house seasonal employees. The size of a building for accommodating 100 employees would be approximately 28,000 square-feet, which would cost an estimated \$5.4 million.¹³⁰ Second, the Preserve might partner with a firm outside the Preserve (likely in Jemez Springs or Los Alamos) for low-cost housing for seasonal employees. For either option, it is assumed that seasonal employees will pay their portion of the housing expenses. Finally, partnering with nearby Pueblos and developing a bussing system for employees offers a way for unemployed tribal members to find work that may have traditional and cultural significance. As well, this can build upon areas of expertise, since many local Native American organizations are already involved in natural-resource based, and hospitality industries.

Other potential sources of seasonal employees are high schools and universities in the southwest. However, these employees will likely have to return to their school commitments in early fall (September), during the peak open season for the Preserve. An alternative source is college aged students in Europe. The school systems there are on different schedules than the schools in the United States and generally do not start until later in the fall.¹³¹

The full time positions included in the tables above will require specific skills for the effective performance of the duties required. These positions include manager, supervisor, coordinator, marketing director, and marketing staff. The use of concessionaires for the mid level lodge, high end lodge, restaurant, and green burial services will lessen the need for the Preserve to recruit and retain staff that are skilled in lodging and hospitality industry, and green burial industry.

¹²⁸ Fedstats, accessed online August 11, 2008 at <http://www.fedstats.gov/qf/states/35/35028.html>.

¹²⁹ Ibid.

¹³⁰ Cost estimate includes building costs, infrastructure costs, and compliance costs.

¹³¹ Personal Communication with Joe Fassler, Glacier Park Incorporated, June 17, 2008.

4.3.3 Management Options

There are several management options to consider for developing and operating a lodge on the Preserve. One is for the Trust to employ its own hospitality team to operate the lodge and restaurant. A second option is for the Trust to build the facility and hire a concessionaire to operate the facility. A third option is for the Trust to attempt amending the *Act* to allow long term leases (40 years) and enter a partnership with a concessionaire to build and operate a facility. There are certain risks and returns associated with each management alternative. Table 6 summarizes these alternatives.

**Table 6
Pros and Cons of Lodging Development Options**

Options	Threats and Risks	Opportunities and Returns
Develop Hospitality Team	<ul style="list-style-type: none"> • High capital costs • Large effort planning and operating • Seasonality issues (working capital) 	<ul style="list-style-type: none"> • Highest profit margin potential • Control of all lodge operations
Concessionaire Operates	<ul style="list-style-type: none"> • High capital costs • Finding appropriate concessionaire • Income may not greatly exceed financing costs 	<ul style="list-style-type: none"> • Decent profit margin potential • Less work to find hospitality staff
Concessionaire Builds and Operates	<ul style="list-style-type: none"> • Finding appropriate concessionaire • Low profit potential 	<ul style="list-style-type: none"> • Least amount of planning and operating costs and effort • Less risk

Concessionaire agreements may assist the Trust in accomplishing its goals while reducing financial risk. Concessionaire or franchise fees vary according to the investments made by each party, the market for the service being offered, and details of the contract. Two simple guidelines were implemented when modeling the concessionaire fees that could be collected by the Trust, including:

1. A reasonable opportunity for net profit in relation to capital invested was expected.
2. Appropriate visitor services could be provided to the public at reasonable rates.

Modeling Concessionaire Fees for Lodging Developments

A brief financial analysis was completed to assess the viability of concessionaire agreements for the mid-level lodge and the high-end lodge. Annual financing costs are \$878,000 annually for developing the mid-level lodge and \$788,000 annually for the high-end lodge.¹³² If the Trust were to invest in these developments, it is assumed that a reasonable rate of return would be expected, somewhere between eight and twenty percent.

It is expected that a concessionaire would be willing to supply lodge operation services for a negotiated percent of sales collected given the high investment required from the Trust. In this analysis, the negotiated percent of sales to the Trust is shown to range from ten to forty percent. The ultimate percentage used will be affected by the concessionaire's perception of the market situation and details of the contract such as who will be responsible for repairs and maintenance of the facility. The remainder of this section shows the analytical results of concessionaire agreements for lodging operations on the Preserve.

Mid-Level Lodge

Table 7 shows the annual sales that would need to be collected by the concessionaire operating the mid-level lodge for the Trust to meet various assumed rates of return. The minimum to reach any of the objectives is \$2.37 million dollars, assuming the Trust gets forty percent of sales and requires an eight percent return on investment. If the Trust gets only ten percent of sales and is expecting a twenty percent return on investment, annual sales from the mid-level lodge would need to be more than \$10.5 million.

Table 7
Mid-Level Lodge Concessionaire Sale Collections
Associated with Rate of Return Objectives

Percent of Sales to the Trust	Rate of Return Objective				
	8%	10%	12%	15%	20%
10%	\$9,486,300	\$9,662,000	\$9,837,700	\$10,101,200	\$10,540,400
15%	\$6,324,200	\$6,441,300	\$6,558,500	\$6,734,100	\$7,026,900
20%	\$4,743,200	\$4,831,000	\$4,918,800	\$5,050,600	\$5,270,200
25%	\$3,794,500	\$3,864,800	\$3,935,100	\$4,040,500	\$4,216,100
30%	\$3,162,100	\$3,220,700	\$3,279,200	\$3,367,100	\$3,513,500
35%	\$2,710,400	\$2,760,600	\$2,810,800	\$2,886,100	\$3,011,500
40%	\$2,371,600	\$2,415,500	\$2,459,400	\$2,525,300	\$2,635,100

¹³² Based on the assumption that a loan can be secured from the Federal Financing Bank (FFB) at a 4.5 percent interest rate, and 30 year maturity.

In addition to visitor numbers, room rates and occupancy rates are also critical. Table 8 shows the annual sale collections that could be expected with varying spending and occupancy rates. The top jagged line shows the point at which the minimum rate of return objective could be met with the best case scenario concessionaire contract. It represents the point at which the Trust would begin to meet the eight percent return on investment. It has been estimated that total operating costs for a 100-room mid-level lodge and restaurant open for 210 days would be approximately \$2.1 million.¹³³ Assuming the Trust receives 20 percent of all lodging sales, the concessionaire would start making a profit when sales reached over \$2.635 million.¹³⁴ This level of sales is represented by the lower jagged line in Table 8.

As shown, meeting the minimum rate of return objective would require average nightly spending of \$170 to \$240, including both food and lodging, depending on occupancy rates. To offer lodging to guests at reasonable rates (below \$300 spending for lodging and food per night), and obtain a reasonable return on the Trust's investment (above eight percent), the Trust will need to negotiate a contract with the concessionaire for at least 20 to 25 percent of the sales collected.¹³⁵

The average occupancy rate for hotels in New Mexico is 60 percent, and average room rates for comparable facilities are generally \$150 and above.¹³⁶ Furthermore, concessionaire agreements for National Park lodges are not drastically different than those considered here.¹³⁷ Therefore, it seems reasonable to assume that a concessionaire should be willing to operate the mid-level lodge, although several factors will likely be important:

- Method of financing for building the lodge
- Minimum rate of return accepted
- Concessionaire's perception of the lodging market at the Preserve
- Negotiated terms of the concessionaire contract
- Occupancy rate for the lodge

¹³³ Assuming the Trust operates the lodge, operating costs may be reduced for a concessionaire due to potentially lower wages, and discounts on supplies.

¹³⁴ \$2.625 million = \$2.1 million / 80 percent

¹³⁵ \$300 spending per night and 70 percent occupancy result in \$4.4 million (Table 8) which is roughly equivalent to the sales associated with the Trust collecting 20 to 25 percent of total sales from the mid-level lodge (Table 8)

¹³⁶ Room rates for National Park Lodges and mid scale hotels in the Albuquerque area.

¹³⁷ Personal Communication with Joe Fassler, Glacier Park Incorporated, June 17, 2008

Table 8
Mid-Level Lodge Expected Annual Sale Collections

Average Nightly Spending ^a	Annual Occupancy Rate ^b				
	50%	55%	60%	65%	70%
\$150	\$1,575,000	\$1,732,500	\$1,890,000	\$2,047,500	\$2,205,000
\$160	\$1,680,000	\$1,848,000	\$2,016,000	\$2,184,000	\$2,352,000
\$170	\$1,785,000	\$1,963,500	\$2,142,000	\$2,320,500	\$2,499,000
\$180	\$1,890,000	\$2,079,000	\$2,268,000	\$2,457,000	\$2,646,000
\$190	\$1,995,000	\$2,194,500	\$2,394,000	\$2,593,500	\$2,793,000
\$200	\$2,100,000	\$2,310,000	\$2,520,000	\$2,730,000	\$2,940,000
\$210	\$2,205,000	\$2,425,500	\$2,646,000	\$2,866,500	\$3,087,000
\$220	\$2,310,000	\$2,541,000	\$2,772,000	\$3,003,000	\$3,234,000
\$230	\$2,415,000	\$2,656,500	\$2,898,000	\$3,139,500	\$3,381,000
\$240	\$2,520,000	\$2,772,000	\$3,024,000	\$3,276,000	\$3,528,000
\$250	\$2,625,000	\$2,887,500	\$3,150,000	\$3,412,500	\$3,675,000
\$260	\$2,730,000	\$3,003,000	\$3,276,000	\$3,549,000	\$3,822,000
\$270	\$2,835,000	\$3,118,500	\$3,402,000	\$3,685,500	\$3,969,000
\$280	\$2,940,000	\$3,234,000	\$3,528,000	\$3,822,000	\$4,116,000
\$290	\$3,045,000	\$3,349,500	\$3,654,000	\$3,958,500	\$4,263,000
\$300	\$3,150,000	\$3,465,000	\$3,780,000	\$4,095,000	\$4,410,000

a – Average nightly spending includes nightly room rate and money spent on food at the lodge restaurant.

b – Annual occupancy rate is assumed to be for a 210 day season, thus a 100 room lodge would have a maximum of 21,000 room nights available.

High-End Lodge

A similar analysis was completed for the high-end lodge. Table 9 shows the amount of annual sales that would need to be collected by the concessionaire operating the high-end lodge under different contract scenarios and various rates of return objectives for the Trust.

Table 9
High-End Lodge Concessionaire Sale Collections
Associated with Rate of Return Objectives

Percent of Sales to the Trust	Rate of Return Objectives				
	8%	10%	12%	15%	20%
10%	\$8,508,300	\$8,665,900	\$8,823,400	\$9,059,800	\$9,453,700
15%	\$5,672,200	\$5,777,200	\$5,882,300	\$6,039,800	\$6,302,400
20%	\$4,254,200	\$4,332,900	\$4,411,700	\$4,529,900	\$4,726,800
25%	\$3,403,300	\$3,466,300	\$3,529,400	\$3,623,900	\$3,781,500
30%	\$2,836,100	\$2,888,600	\$2,941,100	\$3,019,900	\$3,151,200
35%	\$2,430,900	\$2,476,000	\$2,521,000	\$2,588,500	\$2,701,000
40%	\$2,127,100	\$2,166,500	\$2,205,900	\$2,264,900	\$2,363,400
45%	\$1,890,700	\$1,925,700	\$1,960,800	\$2,013,300	\$2,100,800
50%	\$1,701,700	\$1,733,200	\$1,764,700	\$1,812,000	\$1,890,700

The table includes a wider range for percent of sales to the Trust to reflect the higher required investment per room. Under the best case scenario for concessionaire agreement, the lodge would need to have annual sales in excess of \$1.89 million to meet the minimum rate of return objective. Table 10 shows the annual sale collections that could be expected with varying spending and occupancy rates.

The tables reveal several important points. First, if the Trust is to achieve the minimum rate of return objectives, it will need to negotiate a contract with a concessionaire for at least 50 percent of gross sales. Under this scenario, the top jagged line represents the point at which concessionaires would begin to cover their operating costs.¹³⁸ The second jagged line represents the point at which the Trust begins to achieve the rate of return objectives. Based on these findings, the room rate at the high-end lodge will need to be somewhere between \$550 and \$730 per night to cover expenses for the concessionaire and achieve the rate of return objectives for the Trust.¹³⁹

¹³⁸ Operating costs for a high-end lodge without a restaurant are estimated at \$760,000.

¹³⁹ Assuming annual occupancy rates are between 55 and 70 percent.

Table 10
High-End Lodge Expected Annual Sale Collections

Average Nightly Spending	Annual Occupancy Rate				
	50%	55%	60%	65%	70%
\$490	\$1,029,000	\$1,131,900	\$1,234,800	\$1,337,700	\$1,440,600
\$500	\$1,050,000	\$1,155,000	\$1,260,000	\$1,365,000	\$1,470,000
\$510	\$1,071,000	\$1,178,100	\$1,285,200	\$1,392,300	\$1,499,400
\$520	\$1,092,000	\$1,201,200	\$1,310,400	\$1,419,600	\$1,528,800
\$530	\$1,113,000	\$1,224,300	\$1,335,600	\$1,446,900	\$1,558,200
\$540	\$1,134,000	\$1,247,400	\$1,360,800	\$1,474,200	\$1,587,600
\$550	\$1,155,000	\$1,270,500	\$1,386,000	\$1,501,500	\$1,617,000
\$560	\$1,176,000	\$1,293,600	\$1,411,200	\$1,528,800	\$1,646,400
\$570	\$1,197,000	\$1,316,700	\$1,436,400	\$1,556,100	\$1,675,800
\$580	\$1,218,000	\$1,339,800	\$1,461,600	\$1,583,400	\$1,705,200
\$590	\$1,239,000	\$1,362,900	\$1,486,800	\$1,610,700	\$1,734,600
\$600	\$1,260,000	\$1,386,000	\$1,512,000	\$1,638,000	\$1,764,000
\$610	\$1,281,000	\$1,409,100	\$1,537,200	\$1,665,300	\$1,793,400
\$620	\$1,302,000	\$1,432,200	\$1,562,400	\$1,692,600	\$1,822,800
\$630	\$1,323,000	\$1,455,300	\$1,587,600	\$1,719,900	\$1,852,200
\$640	\$1,344,000	\$1,478,400	\$1,612,800	\$1,747,200	\$1,881,600
\$650	\$1,365,000	\$1,501,500	\$1,638,000	\$1,774,500	\$1,911,000
\$660	\$1,386,000	\$1,524,600	\$1,663,200	\$1,801,800	\$1,940,400
\$670	\$1,407,000	\$1,547,700	\$1,688,400	\$1,829,100	\$1,969,800
\$680	\$1,428,000	\$1,570,800	\$1,713,600	\$1,856,400	\$1,999,200
\$690	\$1,449,000	\$1,593,900	\$1,738,800	\$1,883,700	\$2,028,600
\$700	\$1,470,000	\$1,617,000	\$1,764,000	\$1,911,000	\$2,058,000
\$710	\$1,491,000	\$1,640,100	\$1,789,200	\$1,938,300	\$2,087,400
\$720	\$1,512,000	\$1,663,200	\$1,814,400	\$1,965,600	\$2,116,800
\$730	\$1,533,000	\$1,686,300	\$1,839,600	\$1,992,900	\$2,146,200
\$740	\$1,554,000	\$1,709,400	\$1,864,800	\$2,020,200	\$2,175,600
\$750	\$1,575,000	\$1,732,500	\$1,890,000	\$2,047,500	\$2,205,000

a - Annual occupancy rate is assumed to be for a 210 day season, thus a 20 room lodge would have a maximum of 4,200 room nights available.

4.3.4 Working Capital

Working capital refers to the amount of day-to-day operating liquidity available to a business. It reflects the relationship between a firm's short-term assets and its short term liabilities. Generating adequate working capital is a particular challenge for seasonal businesses such as those proposed for the Preserve. Revenues fluctuate by day, week, and throughout the year. Given that a high proportion of costs are fixed, such changes in sales volumes may have large impacts on profitability. Seasonal hospitality establishments often operate at a net loss at the beginning of the calendar year and frequently through May or June before making a profit.

The total net profit by the end of the season may then be significantly reduced by low occupancies at the end of the calendar year.¹⁴⁰

One method of mitigating the working capital challenge struggle for the seasonal and weekly operations of the lodges and restaurants proposed is to reduce rates during the shoulder seasons (late spring and late fall) to give extra incentive for staying or dining. In addition, during the off season (winter), most operations could close almost completely or completely. This approach is used by many lodges in National Parks across the U.S.¹⁴¹

¹⁴⁰ Kotas, Richard, Management Accounting for Hospitality and Tourism, Third Edition, Thompson Publishing, page 30.

¹⁴¹ Personal Communication with Joe Fassler, Glacier Park Incorporated, June 17,2008.

5.0 Business Model for the Valles Caldera National Preserve

In general, a business plan is a written document that describes in detail all the operating, managerial, and financial characteristics of a company or business enterprise, whether existing or proposed. It explains the structure of the business, its short- and long-run strategies and goals, and the markets in which it does or will compete. It incorporates elements which are admittedly difficult to verbalize (e.g. pro forma statements), but which are essential in order to communicate goals, operating criteria, and risks and rewards. A business plan requires absolute clarity and candor about what the business is to be, whom it is to serve, competitors, and short-run and long-run plans for growth and success.

This analysis for the Preserve departs somewhat from a traditional plan in that it is a plan with multiple options. While the above attributes of a business plan are provided, decisions remain for the Trust with respect to determining the ultimate course for the Preserve. By analyzing two alternatives, this report covers a range of feasible business plans, and the final specifications will yet be defined through the appropriate NEPA and other decision making processes. To this end, this study provides a direction and outlines a path for the future. It is particularly useful in helping managers to incorporate competitive conditions and promotional opportunities into ongoing operational practices. The plan helps to focus activities on those most germane to the business and, in the process, gives the manager greater control over marketing, operations, and finances. This chapter provides a general model for proposed revenue enhancement on the Preserve.

5.1 Business Model – Principles of Success

The growing population in the southern intermountain west¹⁴² provides a key external incentive to develop the Preserve’s visitor and recreational services as soon as possible. At the same time, the education and research that occurs on the Preserve will not only generate revenue on its own through lodging and other fees, but will help attract people to the Preserve. The popularity of ecotourism and increasing environmental awareness at all levels will also enhance the attractiveness of the recreational and educational programs offered at the Preserve. If facilities are also designed in a holistic, sustainable fashion using the newest technologies for sustainable energy consumption, then that too will go a long way toward interesting local, out-of-state, and foreign tourists in the Preserve.

To accomplish the goal of financial self-sufficiency by 2015, the Trust will need to follow a development path that responds quickly to the changing interests of the target markets for the Preserve. The path proposed in this plan will also require a commitment to marketing, facility development, and fund-raising for success.

Using the government corporation structure in innovative ways will be instrumental in continuing to attract people to the Preserve. Dennis Trujillo, the Preserve Manager, already markets with the tag-line, “A Private Land Experience on Public Land.” The slogan evokes the idea of peace, privacy, and tranquility – all of which can be sold at the Preserve without losing the public access that is needed especially in the local communities. These “private land experiences” can be achieved through careful spatial and temporal zoning of activities so that visitors who are looking for privacy in a pristine natural environment (and who are willing to pay for it) can be assured they will get that experience. A good example of this kind of programming is offered on the Fort Apache Indian Reservation. Because the Reservation is on land governed by a sovereign nation (the White Mountain Apache Tribe, or WMAT), the WMAT is also free to construct unique programs that operate differently from public land. For example, the Tribe offers a “Rent-a-Lake” program, which allows corporations and large groups to rent an entire lake with associated cabins and facilities, and enjoy the area while also enjoying some exclusivity and privacy for group activities.

Restricted vehicle access is another feature that complements the peace and tranquility that many people desire. To facilitate opportunities for visitors to see more of the Preserve, mountain bike rentals and horseback riding should be available. Scheduling a few days when private vehicles are allowed on the Preserve may be yet another way to encourage

¹⁴² Five “Megapolitan” areas in the intermountain region were recently analyzed as a new emerging American ‘heartland’ as they grow in population and define new models of urban life. Northern New Mexico was one of the five regions analyzed. See *Mountain Megs: America’s Newest Metropolitan Places and a Federal Partnership to Help them Prosper*, The Brookings Institute, 2008.

participation from people with diverse interests. All of this will require a team of committed staff members who can market and schedule a large number of activities. Finally, the fact that the Trust is striving to develop a new model of public land management with the objective of becoming financially self-sufficient is a selling point in itself that can be exploited.

5.2 Customer/Stakeholder Interests

One of the first mandates in the *Act* states that the Preserve will operate as a working ranch. The argument has been made that modern working ranches do exactly what is proposed for the Preserve: they graze cattle, encourage wildlife for hunting; often offer recreational opportunities; and sometimes sponsor research on the ranch. The proposed business of the Preserve will follow this model of a working ranch.

5.2.1 Customer Input

One source of information on potential customer or stakeholder interests is provided by the *Public Meeting Summary*. The following points compiled from that document provide a synopsis of meeting responses related to the eleven enterprise activities.

Lodging and Hospitality

- There exists a significant level of demand for the provision of facilities to accommodate overnight stays.
- Concessionaires could be used to manage the facilities.
- Lodging could also be provided in synergy with local communities.
- Luxury lodging is opposed by some that believe it is not in keeping with the rustic nature of the Preserve, but it is encouraged by others. A significant amount of new infrastructure would be required to accommodate high-end lodging and hospitality services.

Education & Research

- Some educational activities could charge fees, but educational programs should remain free or affordable to the underprivileged.
- Dormitory housing would be necessary to enable children that live a distance from the Preserve to participate.

- Other infrastructure needs include trails, classrooms equipped with internet, parking, and restrooms.
- Education could emphasize fire prevention, ranching, and leaving no trace on the environment when exploring the outdoors.
- Research fees and government funding could provide a source of revenue.

Domestic Livestock Grazing

- Care must be taken to ensure that overgrazing and damage to riparian areas is insignificant.
- Dude ranching would compliment livestock grazing and could generate internships, education programs, and clinics.
- Infrastructure (fences, corrals, roads, loading stations, water stations, and housing) would need to be maintained.

Hunting

- Hunting can help manage the large elk herd.
- Hunting would need to be kept separate from other activities, but some lodging facilities can be used by both hunters and other users.
- If there is a way to modify or be exempt from the New Mexico permitting system restrictions on the Preserve, more out-of-state hunters could participate.

Fishing

- Fishing is compatible with most other activities, but may conflict with livestock that use streams.
- This activity can accommodate a high volume of people without creating a significant impact on the landscape.
- A lottery could be created and fees could be charged on a daily or seasonal basis.
- Stock ponds could be converted to flat-water fisheries.

Public Programs

- Hiking, horseback riding, camping, mountain biking, and cross-country skiing are public programs that are in demand.

- Trails for hiking, horseback riding, and biking may need to be separate for safety reasons. Trails would also need to be separate from areas that livestock frequent.
- For all these activities, trailhead parking, bathrooms, and signage would be necessary.
- Additionally, law enforcement and emergency responders may be necessary on occasion.
- Sporting companies could serve as a source of revenue for the Preserve by sponsoring mountain biking and cross-country skiing events.

Commercial Film and Photography

- Photography workshops could be held at the Preserve.
- The Preserve would serve as an ideal location for movies to be filmed.

Timber

- Timber management plays an important role in sustained yield of the Preserve's resources and in fire prevention.
- Christmas tree harvesting could be offered and old-fashioned horse logging would be an educational opportunity.

Merchandise

- Merchandise should be in keeping with rustic aura of the Preserve.
- Products that could be sold include: souvenirs, bug spray, camping equipment, food, natural products, and ski rental.
- An email list could be kept that would advertise to previous visitors, and a web site could be established to sell items online.
- Concessionaires could manage the gift shop and internet site in return for a percentage of the profit.

Donations

- The Trust should seek and accept donations for wildlife protection.
- A generous donor could provide the funding for the visitor center.

Other

- Green burial and the scattering of ashes could provide a significant source of income.
- Orienteering has been tried but has reduced income for the Preserve.

5.2.2 Build on Strengths

The services the Trust should provide begin with the services the Trust is providing now. The successful interim programs should be thought of as prototypes, keeping in mind that a variety of programs only serves to increase overall demand. For example, even if hikes do not make a lot of money for the Preserve, the existence of hiking is one of the most important draws. The Preserve currently offers a range of on-going outdoor activities such as wildlife viewing via van tours, cultural resource tours, and cross-country skiing. Periodically offered programs including equestrian activities, biking, and bird-watching activities that are often created in cooperation with volunteers and special-interest groups. Although there has been a high level of interest, most of these activities have not been fully developed and the potential for growth has not been fully explored. In many cases the local user groups have demonstrated significant interest in maintaining and improving these programs.

The ENTRIX team informally interviewed local representatives from different Preserve user groups to understand their needs and opinions related to future development of popular Preserve areas.. Table 11 lists these some representative activities and possible ways to expand the programs. Although formal economic analyses were not performed on most of these activities, the Preserve staff should endeavor to set program prices so that they cover program costs wherever possible. Programs that might not pay entirely for themselves should still be evaluated by staff when there is a high level of interest from the public. It is critical to have this diversity of activities, which will encourage all visitors to return to the Preserve to experience new and different attractions on a year-round basis.

Table 11
User Suggestions for Expansion and Improvements
in Recreational Activities on the Valles Caldera National Preserve.

Activity/Enterprise	Suggestions for Expansions and Improvements
Hiking/Backpacking	Expand trail system to include backcountry campsites. Can also provide guided tours combining activities listed on this sheet.
Nordic skiing	Provide organized Nordic events. Allow for back-up to skiing if snow is limited. For example, hiking to yurts for overnight use.
Running	Provide multiple trail races including regional marathon.
Mountain biking	Identify specific trails where biking is allowed and have one or more race type events each year. Either the Trust or a concessionaire should provide bicycles for rent so that visitors do not have to bring their own.
Horseback riding	Expand programs with horses for rent and potentially expand to dude ranch activities to tie in with grazing/ranching program.
Archery	Initiate 3-D target tournaments. This has been previously implemented with success.
Wildlife viewing	Provide combination package deals that include cultural resource/wildlife tour. The cultural resource tour could include Bandelier. Expand wildlife viewing tours to include strategically placed blinds, specialty tours such as during the rutting season, tours with subject matter experts (biologists), birding trips, etc. Combine tours with after-hours star-gazing or other session/workshop. Can include a complete package with catered or barbeque type meal between tours and lodging (or without lodging). Information should include the biology of the animals being observed, current and past studies, and management objectives of the Preserve. Information packets can be prepared by Preserve staff, contract and other researchers, etc.
Bird-watching and nature walks	Expand on current program to include a larger number of guided tours through collaboration with the Audubon Society and other groups.
Livestock program	Introduce “dude ranch” opportunities for public participation and include lodging and meals. Public can either bring their horses or use vendors. Provide outreach/education workshops on ranching techniques (i.e., herding) to general public or other ranchers interested in learning different approaches to cattle operations. Develop a Preserve natural grass-fed beef product through contract with livestock operations, and sell with Preserve label.

5.2.3 New Ideas

At present the Preserve has little marketing and few facilities. When the Preserve is developed, a multi-layered strategy should consider appealing to several types of visitors. Some are visitors that will stay for a few days and spend a respectable amount of money given the opportunity. Another target group may be wealthy patrons who might like to make

a donation to the Preserve in its quest to find a new land management model and might perhaps sponsor a particular investment project. Another will certainly be travelers who drive from Santa Fe and visit Bandelier, NM for an hour or two in the morning and will visit at the Preserve for an hour or two before going home.

Building on the potential to work with partners, and to create ways to enjoy the Preserve, bus tours can be developed in the Jemez Mountains, and possibly by touring the Preserve for half a day and Bandelier for the other half day. One population particularly worth targeting is the current tourist and seasonal visitor population that already visit Santa Fe. With Santa Fe just two hours from the Preserve, a tour could visit the Preserve and have lunch (in the hotel, or perhaps cafeteria,) then tour Bandelier in the afternoon. By partnering with a resort such as the newly opened Buffalo Thunder Casino at the Pojaque Pueblo, tourists could pair their outdoor activities with a pleasant evening meal in relative comfort on the way back to Santa Fe. Similar packages could be offered from Albuquerque, with the dinner stop on the return trip at one of the Pueblos en route. Similarly these Pueblos can serve as staging areas where visitors can park their cars, and not have to worry about transportation beyond these staging points if bus tours and shuttles were to be made available.

Following along these lines, the Los Alamos Chamber of Commerce and Visitors Center has been promoting the ‘Jemez Adventure,’ which involves visitors driving a three–four hour loop (with no stops) that follows Highway 4 around from Los Alamos/White Rock, to Jemez Springs and around through Cuba, Abiquiu, and Espanola. This tour highlights the many natural and cultural features of the area and showcases the Preserve. As these promotional schemes are developed, the Trust and Preserve staff will need to be involved, and work with the other providers and potential partners to put together different themes that will attract the visitation and revenues needed to benefit the local communities while working toward the self-sufficiency goal of the Preserve.

5.3 Expected Visitation on the Preserve

Increased future visitation is critical to the success of the Preserve in terms of generating visitor-related revenue, increasing public access, and benefiting local community businesses. Varied approaches have been used to estimate potential demand based on multiple sources of visitor data and other types of information. Discussions with Preserve staff and other recreation experts suggest the estimates developed are within the carrying capacity of the Preserve given infrastructure and facilities are developed and maintained, and access to sensitive areas is controlled and managed for resource protection. The following analysis describes the approach used to develop visitation expectations for the Preserve.

5.3.1 Regional Tourism and Expenditures

New Mexico's vast natural beauty and cultural history attracts millions of visitors every year. Almost 19 million person-trips were made in New Mexico for leisure in 2005 approximately half of which were overnight trips.¹⁴³ Overnight trip takers are particularly likely to peruse Preserve-related activities. For example, over three million overnight visitors in New Mexico pursue nature and cultural activities.¹⁴⁴ New Mexico's parks and forests attract outdoor enthusiasts from across the US and abroad.

Nearby, and in fact abutting the Preserve on three sides, the Santa Fe National Forest which spans 1.5 million acres. The forest received an estimated 1.5 million visits in 2004.¹⁴⁵ Almost fourteen percent of visitors said that Santa Fe National Forest was not the primary destination on their trip. This accounts for over 215 thousand visitors to the forest in 2004. About one quarter of visitors (365 thousand) stayed overnight within 50 miles of the forest with an average number of nights in the area at 3.8 (1.4 million overnight stays).¹⁴⁶

Bandelier National Monument is another regional attraction offering an array of hiking and camping options for visitors. Located just off of Highway 4, the monument is less than 20 miles from Valles Caldera. Bandelier attracts an average annual visitation of over 250 thousand people.¹⁴⁷ With 32,000 acres, the park is about one third the size of Valles Caldera.¹⁴⁸

Also near to Valles Caldera is Fenton Lake State Park. The park received over 120 thousand visitors on its 70 acres containing hiking trails and a fishing lake.¹⁴⁹ Almost half of visitors

¹⁴³ CRC & Associates and Southwest Planning and Marketing, 2006, "2005 TIA's Travelscope/DIRECTIONS by DKS&A: Visitation Estimates for New Mexico", prepared for the New Mexico Tourism Department (NMTD), Santa Fe, New Mexico.

¹⁴⁴ CRC & Associates and Southwest Planning and Marketing, 2006, "2005 TIA's Travelscope/DIRECTIONS by DKS&A: Visitation Estimates for New Mexico", prepared for the New Mexico Tourism Department (NMTD), Santa Fe, New Mexico.

¹⁴⁵ US Forest Service accessed at <http://www.fs.fed.us/r3/sfe/>

¹⁴⁶ Kocis, Susan, Donald English, Stanley Zarnoch, Ross Arnold, Larry Warren, and Catherine Ruka, 2004. National Visitor Use Monitoring Results, Santa Fe National Forest, accessed at http://www.fs.fed.us/recreation/programs/nvum/reports/year4/R3_F10_santafe_final.htm#_Toc75069767

¹⁴⁷ National Park Service, U.S. Department of the Interior, 2003-2007, accessed at <http://www.nature.nps.gov/stats/state.cfm?st=nm>

¹⁴⁸ The Outdoor Activity Guide accessed at <http://www.outdoor.com/places/parks-and-monuments/bandelier-national-monument/>

¹⁴⁹ Fenton Lake State Park accessed at http://www.emnrd.state.nm.us/prd/documents/Fenton_001.pdf

stay the night either camping or in recreational vehicles (RVs). The park is maintained by a park ranger, two park managers, and four other staff.¹⁵⁰

Total visitor spending in New Mexico in 2006 was approximately \$5 billion.¹⁵¹ Visitors to the state spent an average of \$408 per trip in 2005, compared to \$353 for all US travelers (2005 dollars). As expected, spending by out-of-state travelers and overnight travelers exceeded this average, and total spending for both types of visitors was approximately \$675 per trip. However, 2007 survey performed at visitor information centers throughout New Mexico found that travel parties to Santa Fe spend one to two more nights in New Mexico and had higher trip expenditures on average than visitors to other areas.¹⁵² Average travel party spending was \$913 for surveyed visitors in Santa Fe, compared to \$423 for all New Mexico visitors surveyed (2007 dollars). Additionally, Santa Fe overnight visitors spent an average of \$83 per person per night on lodging versus a statewide average of \$63.

5.3.2 Potential Visitation Demand at Valles Caldera

Visitation demand at the Preserve is projected using four methods¹⁵³ assuming that a full complement of programs and hospitality options is developed at the Preserve. Estimates are based on current visitation demand in New Mexico, Santa Fe, and outdoor recreation locations throughout the state and the inter-mountain region. In each method, current population and travel trends suggest the potential magnitude of demand is between 250,000 and 400,000 visits per year under the most favorable of conditions.

5.3.3 Overnight Lodging Demand at Valles Caldera

Based on a review of trends in overnight lodging and camping, it is estimated that 25 percent of Preserve overall demand could be overnight visitors. Assuming a total potential of 250,000 visitors per year, the number of overnight visitors would be about 62,500 visitors annually.

¹⁵⁰ Fenton Lake State Park accessed at <http://www.emnrd.state.nm.us/PRD/ParkTours.htm>

¹⁵¹ Travel Industry Association, 2007, "Travel Economic Impact Model," NMTD.

¹⁵² CRC & Associates and Southwest Planning and Marketing, 2008, "Intercept Survey October-December 2007: Results at the Visitor Information Centers," NMTD.

¹⁵³ Details of the four estimation procedures are provided in Appendix B.

5.3.4 Visitation Strategy

The demand for visitors on the Preserve represents a reasonable range (250,000-400,000) of potential visitors. However this many visitors to the Preserve is not necessarily consistent with the goals of the Preserve or ideal in terms of revenue generation. Instead, a visitation strategy designed to target both higher revenue generating over night visitors and frequent repeat visits from those who live near the area or who are partial to the Preserve can be developed. This two-fold strategy will assist the Trust in potentially achieving both public access and self sufficiency goals. The strategy may employ differential pricing strategies to reduce overall visitation through higher prices for some activities, while providing annual passes for frequent visitors.¹⁵⁴

By employing these types of strategies, the Preserve is expected to realize 120,000 visitors per year by the Year 2020. This baseline visitation estimate may be increased or decreased for purposes of a final plan, but is used to explore feasibility in the remainder of this document. The level of visitation is expected to be concentrated over a 200 day period, with the greatest concentration of visitors within the 200 days between April and October. The greatest concentration within that period is anticipated to occur in the months of June through August. For discussion purposes, suppose that of the 120,000 annual visits, 90 percent occur between April and October. This suggests a daily average during these months of 540 visitors, and a daily average of 73 visitors during the winter months. During the busy months, if 70 percent of those visitors were to visit during the 100 day summer period, this would suggest average visits per day of around 765 in the summer, with an averages of 364 visitors during the spring and fall months.

Another way to think about the feasibility of expanded visitation is to consider what these visitors might be doing, and how long they might stay. On a typical peak day using the 120,000 annual visits as a baseline, about 250 people might be expected to stop by as they pass through the area as part of the Jemez Trail Scenic Byway tour, or other casual tourists.¹⁵⁵ A typical visit for this group might be to spend some time at the visitor center, take a short hike or visit a scenic overlook of the Valle Grande and return to the highway within an hour or so. Many might also be interested in taking a van tour or hay ride. Another group of approximately 250 might also take a van tour, and could be expected to be at the

¹⁵⁴ Little, Berrens and Champ (2004) suggest that pricing policies can be used in “aiding the dispersion of visitors across time and the landscape (e.g. through peak-load pricing and differential site or trail-pricing. In this way pricing can be actively used to protect resource quality and visitation experiences.” Pg. 50, FN 139. Also annual passes were recommended as a desirable strategy during the public access public meetings held in 2007. See the Public Meeting Summary by The Mary Orton Company for details.

¹⁵⁵ *The Master Plan for Interpretation* suggests that without attracting additional visitors to the Preserve, these casual drivers that stop to visit could account for up to 90,000 visitors per year, assuming that 15 percent of existing casual tourist traffic stops (pg. 19).

Preserve as part of a scheduled visit. These people could be part of package trips that involve a visit to Bandelier for half of the day or other local attractions. It is likely this group would stay for between two to four hours. Another 150 people could be typically participating in a planned hike, bike, equestrian, fishing trip, or other event. This group would be more likely to spend between four and eight hours on the Preserve. Another 125 visitors are expected to be overnight visitors staying on the Preserve in the campgrounds, wildlife tent camps, or in the rental cabins. Under Alternative 1, if a mid-level lodge and a high-end lodge were developed, then another 125 of either the casual tourists or the package tour visitors would be expected to also stay overnight.

Ultimately, the 120,000 visitors by 2020 is a figure that has been used for the business modeling purposes. However, the results of the analysis suggest that under the current assumptions, the Trust will become financially feasible at the point when visitation achieves 100,000 visitors. Additional information on visitor estimates for the Preserve, and on visitors to New Mexico, see Appendix C.

5.4 Marketing Plan

A marketing plan is integral to and must accompany a business plan. For the Preserve, marketing efforts that have been on-going include brochures, a website, and local word-of-mouth. These efforts will need to continue along with the development of signage and other interpretive elements described in the *Master Plan for Interpretation*. For each key proposed enterprise below, this marketing plan includes a discussion of consumer groups or segments which would be served, and marketing approaches. The goal is to provide the Trust with direction on effective utilization of limited marketing resources.

5.4.1 Lodging

Development plans for the Preserve consider both mid-level and high-level lodges. A mid-level lodge would be targeted to middle class families throughout the US and, potentially, internationally as well. This segment generally seeks travel experiences at low or moderate cost. The high-end lodge would target the wealthy outdoor enthusiast who is more concerned about comfort than price. If conference space is included, then these might also target the business community, think tanks, and others interested in a retreat atmosphere for meetings.

These market segments are quite different in their leisure and recreation philosophies, but both would have ample opportunities for such at the Preserve. Very few locations in the Southwest U.S. offer the cultural, wildlife, geologic, and recreational resources that would be available at the Preserve. Some of the other locations are briefly described below.

Reflecting the strengths and weaknesses discussed, several approaches are recommended for marketing the Preserve lodges. Some of these are relatively low-cost and offer potentially high returns.

- Redesign the web site to include e-mail sign up, e-mail inquiry form, and special deals on lodging.
- Develop joint advertisements and promotions with nearby parks, municipalities, and other interested parties. Possible partners might include:
 - Bandelier National Park
 - Santa Fe National Forest
 - City of Los Alamos
 - City of Jemez Springs
 - City of Santa Fe
 - Numerous nearby Pueblos
 - Other lodges or hotels in the area
- Community open house for the ribbon cutting (opening ceremony)
- Offer “stay and play” packages for recreational opportunities on the Preserve.

5.4.2 Camping

A successful marketing strategy for a campground must reaffirm the value of the camping experience to the potential visitor. An effective marketing message should include the many amenities associated with the camping experience on the Preserve. The historic and geologic features of the Preserve will also appeal to the emotional engagement with the campground for many of the tourists.

5.4.3 Wildlife Tent Camps

The approaches to marketing luxury camping will differ from those used for other recreational opportunities on the Preserve. An advertising program should be directed at publications and other media which target upper-income households. Some of the marketing activities for wilderness tent camping will likely be complementary with those for the high-end lodge proposed for the Preserve.

5.4.4 Education and Research Center

At least three market segments could be served by the education and research center on the Preserve. First are researchers from private industry or universities performing ecological, geologic, or cultural research on high mountain prairies. Second would be students from elementary through high school through workshops and camps. Topics could include ecology, cultural resources, geology, and others. Many of these workshops and camps could occur during the summer. Third, the center could serve the general public in hosting lecturers and workshops on issues of social significance. It could charge fees for lecturers or workshops on such topics as climate change, range management, and other issues of interest to the communities served.

Marketing lab space in the center will require collegial networking among scientists, and has already begun with several research universities having already expressed an interest in establishing long term relationships with the Trust. Promoting camps and public workshops could be accomplished through distribution of flyers at local schools, advertisements on local radio stations, and announcements with contact and sign up information on the web-site.

5.4.5 Green Burial

Green burial ensures that the burial site remains as natural as possible in all respects. This environmentally sustainable alternative to traditional burial has been growing rapidly since the late 1990's. In a recent AARP survey, 20 percent of people over the age of 50 indicated they are interested in green burial techniques.¹⁵⁶

Green burial plots and services can be sold as pre-need to any individuals seeking a simpler, less expensive, and more environmentally sound burial option than traditional approaches. Green Burial Council's Executive Director, Joe Sehee, recommends a regional marketing approach that would include New Mexico and the states of Arizona, Utah, and Colorado. Of the ten green cemeteries within the U.S., only one is located within the southwest. The Commonwealth Conservancy operates a green burial cemetery located on the 13,000-acre Galisteo Basin Preserve near Santa Fe, New Mexico.

Marketing efforts should highlight the scenic beauty of the Preserve and assure potential buyers that the green cemetery would be protected indefinitely from future development. Advertisements should also link purchase of a burial plot with the conservation efforts of the Preserve. Memorial gifting and fundraising efforts should be leveraged to supplement the revenue received from the opening and closing of graves.

¹⁵⁶ AARP, November 2007, "2007 Funeral and Burial Planners Survey," prepared by Lona Choi-Allum.

5.5 Two Alternatives

Two alternatives were developed at a meeting with the Board in July 2008. The two alternatives provide a range of feasible development possibilities on the Preserve, including development of facilities, as well as development of programs.

5.5.1 Alternative Facility Development

Alternative 1 is a “high” or maximum development scenario, with the focus on revenue generation from lodging options. Alternative 2 is a “low” development scenario with the focus on revenue generation from green burial services, a visitor center, cabin rentals, campgrounds, and an education and research center. Table 12 summarizes the two development scenarios considered in this analysis.

Table 12
Development Alternatives Considered

Alternative 1	Alternative 2
Expansion of Existing Programs	Expansion of Existing Programs
Visitor Center (15,200 sq. ft.)	Visitor Center (7,600 sq. ft.)
Education Center (32,500 sq. ft.)	Education Center (32,500 sq. ft.)
Mid-Level Lodge (100 units)	-
Luxury Hunting Lodge (20 units)	-
Camping (110 units)	Camping (60 units)
Wildlife Tent Camps (12 units)	Wildlife Tent Camps (12 units)
Cabin Rentals (9 existing units)	Cabin Rentals (9 existing units)
Green Burial Service	Green Burial Service
Headquarters	Headquarters

5.5.2 Alternative Public Programs

The programs that are currently operating on the Preserve will continue to attract visitors to the site and will still provide the foundation for on-going revenue generation. These activities are,

- Education and research
- Livestock grazing
- Hunting

- Fishing
- Public programs (including hiking, and interpretive tours, as well as special events)
- Commercial film and photography
- Timber
- Merchandise
- Green Burial Service

Both Alternative 1 and Alternative 2 include the expansion and improvement of these programs as defined below and as defined in the maximum use scenario in Chapter 3. In each case the alternative to the program as recommended is defined as no expansion (for expanded programs) and no program for non-existent programs.

The results of the feasibility analysis served to guide the business planning process. The analysis suggested that the education and research program was successful, but could become a source of significant income and of reduced costs if infrastructure were in place to facilitate the growth of this program.

The domestic livestock program, which has struggled, has now evolved into a source of income. The results of the feasibility analysis in the past suggest that modifications may be useful in the program and may improve revenue and/or help the Trust achieve some of the other goals of the *Act*. Improvements in the program may also result in improved revenue, although the potential to increase revenue significantly beyond the current amount is not exceptional.

The hunting program has flourished on the Preserve and will continue to generate significant revenues. However, this program is limited by the faunal resource available on the Preserve, and is not expected to continue to increase as visitation grows. Increased interest in hunting on the Preserve is expected to translate into additional revenue, although the program is currently near capacity.

Fishing on the San Antonio is currently near capacity. The addition of the east Fork fishing program is expected to improve revenues. A flat water fishery was explored, but is not recommended due to anticipated cost of environmental compliance for altering waterways.

Public programs will need to continue to expand in proportion with expected increases in visitation. In particular, special events can be expanded to complement increased infrastructure creation and renovation. Revenue from these programs will come in the form of fees for the specific activity, as well as the spin-off revenue from lodging and merchandise.

Commercial film and photography is expected to continue on the Preserve although it is an uncertain source of funding until more infrastructure is developed. The scenery is attractive to production crews, but the lack of services available for film crews currently limits the expansion of this activity. Photography will remain an important activity for the public.

Thinning operations for the Preserve forest resources were explored in section 3.8. Several alternatives were reviewed including; contracting with a local thinning operator, and selling the wood as fuel. Ultimately, the financial model included costs and returns for working with a local thinning operator to thin the forest resources on the Preserve. Additional information concerning other funding sources is also explored in section 3.8.

Merchandise sales will continue to grow with the expected increased visitation at the Preserve. Much of the increase will be in the form of purchases made at the visitor center, and at lodging facilities (Alternative 1).

The potential to increase revenue through donations has a high potential to facilitate the Trust in attaining self-sufficiency. Much of this increase is expected to occur on an annual basis through the non-profit group, Los Amigos de Valles Caldera.

Finally, green burial service was analyzed in both Alternative 1 and Alternative 2 at varying rates of development. Alternative 1 included an analysis of developing 30 acres, or 6,000 plots. Alternative 2 involved an analysis of 15 acres, or the potential for 3,000 plots.

6.0 Management and Governance

One task in the process of developing this report involved assessing the suitability of current and potential future alternatives for Preserve management. Based on information gathered through informational interviews with stakeholders, feedback from the Board of Trustees and staff, and independent information collected, the ENTRIX team considered critical management issues in terms of how these might impact the success of the plan developed for the Preserve. This chapter begins with an assessment of the existing management structure in terms of how well-suited the structure is to the proposed business model. Another section describes the anticipated staffing needs required with new revenue enhancement opportunities. A final section covers potentially conflicting and compatible relationships. Recommendations are developed for how the potentially conflicting activities may be balanced by Preserve managers.

6.1 Management Structure Review

The management of the Valles Caldera Trust (Trust) is governed by a board of Trustees (Board) who provide guidance to an Executive Director for the Preserve, who in turn leads the staff in bringing about the actions requested by the Board. For any venture to be successful, the management structure must provide a streamlined, efficient way for direction to become actions on the Preserve.

After conducting numerous interviews with Board members, former Board members, staff, and interested members of the public, the ENTRIX team identified several challenges that the Trust has faced since its inception. Some of these are due no doubt to the difficulties inherent in developing a “new” strategy for public land management with little instruction nor examples to go by. Others may stem from the task of interpreting and defining how the Trust

will operate within the flexible government corporation structure.¹⁵⁷ Management difficulties include turnover of staff and Board members and associated changes in management philosophy.

During discussions and interviews conducted for this report, several positive management and governance themes emerged. First, the stakeholders – Board members, staff, volunteers and members of the public are committed and passionate about the future success of the Preserve. Second, many of the initial management challenges have already been addressed through the first six years of Trust operations and cooperative solutions have been developed.

It is the conclusion of the analysis that the fundamental management structure currently in operation at the Preserve is satisfactory to achieve the goals of financial self-sufficiency. Although the brief eight year history of Preserve operations has not been without struggle as Preserve staff, the Trust, and interested stakeholders work toward an operational philosophy that meets the criteria established in the *Act*, the fruits of this relatively brief history appear to be an evolving common understanding of how the roles of the Trust, Executive Director, staff, and other stakeholders can work together to bring about the appropriate management for this unique organization.

It is also clear that at this juncture, that stakeholders are concerned that the lack of progress toward self-sufficiency may mean that the Preserve could face termination by 2020 and become part of the US Forest Service or some other federal agency. The commitment to preventing such a development is a tremendous asset to the organization, and in fact, may be fostering a greater spirit of cooperation among managerial stakeholders.

However, the government corporation is a difficult arrangement, precisely because it is flexible and subject to interpretation. With that in mind, it is no surprise the Trust has struggled between its role as a private landowner and a federal organization. And it is no surprise that the governance of the organization has been evolving as the organization grows and moves toward satisfaction of the several goals of the *Act*. The conclusion about government corporations from a 1998 report from the Congressional Research Service reads,

There is little managerial oversight at present of government corporations as an institutional category by either the President or Congress. What oversight there is tends to be corporation specific. In the case of Congress, corporations are assigned to committees of subject-matter jurisdiction. An argument has been made that corporations properly require both subject matter and management oversight and that the Government Corporation

¹⁵⁷ For a discussion of the flexibility challenge presented by government corporation structure, see Congressional Research Service, “CRS Report for Congress, November 24, 1998, “Federal Government Corporations: An Overview.”

Control Act should be reconstituted to establish in law the characteristics of various types of corporate bodies.

*In the absence of a general incorporation law with specific definitions of types of corporate agencies and instrumentalities, a major appeal of the government corporation option will remain the flexibility afforded by its ambiguity in law. In recent practice, each corporation is created *sui generis* and is governed by whatever laws the designer-advocates are able to persuade lawmakers to accept.¹⁵⁸*

Keeping these points in mind, the *Act* provides corporation specific guidance, but was designed with flexibility in mind since it has built-in provisions for its own modification once every five years. Hence the process of understanding how the legislated management structure of the Valles Caldera National Preserve can be successful has been challenging for the Board, staff, and stakeholders, though much progress has been made over the past six years. It is natural to assume that were another management structure to be adopted, it would likewise involve a lengthy learning process before the new structure was fully functional. For this reason, it is not recommended that the Trust ‘change horses in the middle of the stream’ by considering a different management structure at this stage. Furthermore, no obvious alternative has been proposed. Instead, all information suggests that further strengthening and refinement of the existing structure will bring about resolution to some of the outstanding issues.

While the congressional mandates that formed and currently govern the Preserve (and entities like it) are, by design ambiguous and flexible in and of themselves, there exist two realms of management and performance theory and practice that are NOT ambiguous- those that inform the operation and management of “for profit” corporations and those that inform the “not-for-profit” sector. The strength of the Preserve (and the terms of the *Act* that created it) is that the Trustees are free to draw from, and implement the best practices from both of these realms of operation. Recent developments and actions taken by the Trustees suggest that the Trust is moving forward in a predictable and appropriate fashion. The commissioning of a strategic revenue enhancement opportunity study is a prime example of the application of “for profit” business/management principles and practices. It suggests that the Trustees have a firm understanding and grasp of the “private sector” component of Preserve operations. The Board now needs to turn their attention to developing governance and oversight documents and procedures to facilitate the interaction between the “for profit” activities of the Preserve and the “not-for-profit” roles and responsibilities of a Board of Trustees.

Any current struggle in understanding the best managerial approach for the Trust is not at all extraordinary or unusual when evaluated using basic principles of life cycles of

¹⁵⁸ Congressional Research Service, Report for Congress, November 24, 1998, *Federal Government Corporations: An Overview*.

organizational growth and development. In the early stages of the life cycle of an organization (particularly in the case of not-for-profits) it is not unusual for founders to be heavily involved in the day to day activities and decision making for the organization. By the same token, if an organization is to move to the next level of operational sophistication and complexity the founders must step back from daily activity and begin to think and act on a more macro level. To their credit, the Trustees of the Preserve have already begun to move in this direction. However, more work remains to formalize and codify this shift of function. Having a clearly defined and well articulated sense of Board of Trustee roles and responsibilities will be critical to the success of the fundraising task that the Trustees have set for themselves. Documents that define roles, responsibilities and procedures for the Board of Trustees will also aid in the recruiting and retention of new Board members who will be able to support the fundraising obligations that the Trustees are assuming. In the realm of Nonprofit Management literature, there are ample examples and compilations of “best practices” that the Trustees can utilize for this process.

Towards meeting that goal, the following recommendations are offered:

- 1) Adopt a management schematic for the functional elements of the Trust;
- 2) Develop job descriptions for the key leaders and managers of those elements (where these do not already exist);
- 3) Develop a Board Manual that includes: a brief history of the Preserve; a statement of Trustee roles and responsibilities- including obligations related to fundraising; an organizational chart that identifies not only the operating components of the elements of the Preserve, but also the flow of obligations and responsibilities between them;
- 4) Provide annual training for all board members that includes a review of the Board Manual, a session on “working with the Federal Government”, a session on Not-for-Profit Governance and concludes with board members signing a “board contract” that spells out their commitments and obligations for the term of their service.
- 5) Work with Los Amigos de Valles Caldera to develop a clear definition of fundraising priorities for the Preserve, and the roles and responsibilities and the relationship between Los Amigos fundraising efforts and those of the Trustees and the Preserve. Because of the magnitude of the fundraising task, the variety of tools and techniques recommended and the overlap in the donor pool careful coordination and regular, open, complete communication between the various fundraising entities and activities will be critical to their success. It is recommended that the modification made to the *Act* that allows only one staff member to be eligible to accept donations be reviewed with this fundraising goal in mind.

6.2 Staffing Requirements

This section discusses the current staffing level of the Trust, as well as the anticipated additional staff requirements for the ventures considered that would potentially be operated by the Preserve. Finally, staffing requirements of concessionaire operated ventures are identified and described.

Existing Staff

As mentioned in section 2.3.2 the Trust employs forty six people with an annual payroll of over \$1.67 million and annual employment expenses of \$2.26 million. Twenty two of the personnel are full time staff, with the remainder being part time staff. Table 13 displays the current staffing levels by position.

**Table 13
Existing Staffing Level**

Title	Number of Employees
Executive Director	1
Preserve Manager	1
Preserve Scientist	1
GIS / Maps	2
Natural Resource Coordination	2
Custodial / Maintenance	3
Archaeological Technician / Crew	6
Science Technicians	6
HR / Administration / IT	7
Recreation Assistants	16

In order to meet the labor requirements of the ventures and programs analyzed in this report the Trust will need to add to the current staffing level. The section below exhibits the anticipated labor requirements of the ventures anticipated to be operated and managed by the Trust, which is followed by labor requirement estimates of those ventures anticipated to be managed by concessionaires.

Labor Requirements of Trust Managed Ventures

In addition to the 46 employees that currently work at the Preserve, the business enterprises at the Preserve will require varying levels of additional labor by season and alternative. For Alternative 1, the addition of the visitor center, education and research center, lodges, wildlife tent camps, and camping facilities will likely require an additional twelve full-time staff, and up to 41 seasonal part-time staff (see Table 14). The full time staff requirement is modeled to include one manager to operate the combination of the visitor center and campground, splitting time between enterprises. Similarly, one manager is modeled for operating the cabin / lodge rentals and wildlife tent camping. Each manager will work with one supervisor who is also full time.

Three full time staff are modeled for comprising the marketing / communications department. The responsibilities of the Communications Director are anticipated to include coordination of activities, assisting the Preserve Manager, assisting the Administrative Officer, marketing, and maintaining the web-site. The Communications Director is modeled as having two full time staff, one of which is anticipated to assist the Director in the marketing and activity coordination responsibilities described above, while the other will be responsible for assisting the Administrative Officer with the additional procurement contracts with concessionaires (lodging, green burial, etc.) as well as activity coordination.

Five full time staff are modeled for operating the Education and Research Center, in addition to the existing staff scientist (Bob Parmenter) and cultural resource coordinator (Anastasia Steffen). The additional staff members are modeled to include one full time maintenance person, and two full time kitchen staff and janitor employees. It is assumed that the kitchen facilities in the center will allow guests to be self sufficient in the kitchen, meaning food will be set out for certain meals for those who pay for the food service and no cook or wait staff will be available (similar to a continental breakfast service at a hotel). Therefore, the duties of the janitor and kitchen staff will be interchangeable. Furthermore, one coordinator will be responsible for coordination of education and research activities, guest room rentals, conference room rentals, and bench usage. Finally, one additional technician will be hired to assist in the operations of the Education and Research Center.

Seasonal part time staff are modeled for several ventures that are anticipated to be operated by the Preserve. Volunteers are anticipated to play a key role in operation of the visitor center and campground activities. Volunteers are not paid for working at the visitor center, but volunteers for the campground (camphosts) are given living space at the campground as well as a stipend of \$2,000 per season.

Additional recreation assistants are modeled as part time staff and are anticipated to vary with future visitation estimates. In years one through three it is estimated that two additional recreation assistants will be required, years four through six will require an additional four assistants, years seven through eight will require an additional six assistants and years nine

and ten will require an additional eight assistants. Of course, not all of the additional staff will be required immediately; the labor requirements of the ventures are modeled to coincide with the implementation of the specific venture. The responsibilities of recreation assistants will be to guide tours of the Preserve (roughly 35 percent of their time), implement summer programs (roughly 25 percent of their time), implement the hunting program (roughly 15 percent of their time), assist with the implementation of the fishing programs (roughly ten percent of their time), assist with setting up and coordinating special events (roughly ten percent of their time), and assist with implementation of winter program activities like sleigh rides (roughly five percent of their time).

Table 14
Additional Staffing Requirements - Alternative 1

	Number	FTE	Annual Salary	Total Costs of Employment
Visitor Center				
manager	0.5	0.5	\$101,221	\$68,324
front desk / supervisor	0.5	0.5	\$69,074	\$46,625
asst. front desk	2	1.1	\$20,000	\$29,589
seasonal help	4	2.2	\$15,000	\$44,384
volunteers	6	3.3	\$0	\$0
sub total	13	7.6		\$188,922
Education and Research Center				
maintenance	1	1.0	\$37,902	\$51,168
kitchen staff / janitor	2	2.0	\$23,200	\$62,649
coordinator	1	1.0	\$37,037	\$50,000
technician	1	1.0	\$44,444	\$60,000
sub total	5	5		\$223,817
Campground				
manager	0.5	0.5	\$101,221	\$68,324
supervisor	0.5	0.5	\$69,074	\$46,625
camphosts	6	3.3	\$2,000	\$8,877
sub total	7	4.3	0	\$123,826
Cabin / Lodge Rentals				
manager	0.5	0.5	\$101,221	\$68,324
supervisor	0.5	0.5	\$69,074	\$46,625
maintenance / cleaning	3	1.6	\$15,000	\$33,288
sub total	4	2.6		\$148,237

	Number	FTE	Annual Salary	Total Costs of Employment
Wildlife Tent Camps				
manager	0.5	0.5	\$101,221	\$68,324
supervisor	0.5	0.5	\$69,074	\$46,625
seasonal staff	12	6.6	\$30,000	\$266,301
sub total	13	7.6		\$381,250
Recreation Assistants				
assistants years 1-3	2	1.1	\$20,000	\$29,589
assistants years 4-6	4	2.2	\$20,000	\$59,178
assistants years 7-8	6	3.3	\$20,000	\$88,767
assistants years 9-10	8	4.4	\$20,000	\$118,356
Marketing/Communications Department				
director	1	1.0	\$69,074	\$93,250
staff	1	1.0	\$29,719	\$40,121
staff	1	1.0	\$29,719	\$40,121
sub total	3	3.0		\$173,492

Alternative 2 will require eleven additional full-time staff and up to 33 seasonal-staff. Table 15 below shows the additional labor requirements under Alternative 2 for future business enterprises that are assumed to be operated by the Preserve in the financial model. The smaller size of the visitor center and campground in Alternative 2 is the primary reason for the reduced level of labor requirements associated with those ventures. All other additional labor requirements for future ventures are modeled identical to Alternative 1 above.

**Table 15
Additional Staffing Requirements - Alternative 2**

	Number	FTE	Annual Salary	Total Costs of Employment
Visitor Center				
manager	0.3	0.3	\$68,324	\$24,833
front desk / inventory	0.3	0.3	\$46,625	\$16,946
asst. front desk	1	0.6	\$29,589	\$23,571
seasonal help	2	1.2	\$44,384	\$70,714
volunteers	3	1.8	\$0	\$0
sub total	7	4.1		\$136,065

	Number	FTE	Annual Salary	Total Costs of Employment
Education and Research Center				
maintenance	1	1.0	\$37,902	\$51,168
kitchen staff / janitor	2	2.0	\$23,200	\$62,649
coordinator	1	1.0	\$37,037	\$50,000
technician	1	1.0	\$44,444	\$60,000
sub total	5	5		\$223,817
Campground				
manager	0.3	0.3	\$101,221	\$39,042
supervisor	0.3	0.3	\$69,074	\$26,643
camphosts	3.4	1.9	\$2,000	\$5,072
sub total	4	2.5		\$70,758
Cabin / Lodge Rentals				
manager	0.5	0.5	\$101,221	\$68,324
supervisor	0.5	0.5	\$69,074	\$46,625
maintenance / cleaning	3	1.6	\$15,000	\$33,288
sub total	4	2.6		\$148,237
Wildlife Tent Camps				
manager	0.5	0.5	\$101,221	\$68,324
supervisor	0.5	0.5	\$69,074	\$46,625
seasonal staff	12	6.6	\$30,000	\$266,301
sub total	13	7.6		\$381,250
Recreational Assistants				
assistants years 1-3	2	1.1	\$20,000	\$29,589
assistants years 4-6	4	2.2	\$20,000	\$59,178
assistants years 7-8	6	3.3	\$20,000	\$88,767
assistants years 9-10	8	4.4	\$20,000	\$118,356
Marketing/Communications Department				
director	1	1.0	\$69,074	\$93,250
staff	1	1.0	\$29,719	\$40,121
staff	1	1.0	\$29,719	\$40,121
sub total	3	3.0		\$173,492

Anticipated Labor Requirements of Future Concessionaires

As mentioned above, it is anticipated that in Alternative 1 the mid level lodge, restaurant, high end lodge, and green burial services will be operated by concessionaires. Similarly, in Alternative 2, just the green burial services will be performed by concessionaires. Based on this assumption, no additional staff (beyond the procurement assistance from the communications department) was included as a labor requirement for the Trust to undertake in the section above. The staffing requirements of these ventures will be the sole responsibility of the chosen concessionaire. In this analysis, staffing levels were estimated for these concessionaire operated ventures. A total of ten full time people will be required for concessionaire operated ventures, as well as an additional 83 part time staff in Alternative 1. Only four full time staff (green burial services) would be hired through concessionaires in Alternative 2. Table 16 provides a breakdown of these estimates.

**Table 16
Additional Staffing Requirements of Concessionaires**

	Number	FTE	Annual Salary	Total Costs of Employment
Mid Level Lodge / Restaurant				
manager	1	1.0	\$101,221	\$136,648
supervisor	2	2.0	\$69,074	\$186,500
front desk	10	5.5	\$20,000	\$147,945
restaurant supervisor	1	0.5	\$69,074	\$51,096
head chef	1	0.5	\$69,074	\$51,096
food and beverage staff	35	19.2	\$15,000	\$388,356
housekeeping	10	5.5	\$15,000	\$110,959
maintenance	4	2.2	\$15,000	\$44,384
administrative	4	2.2	\$20,000	\$59,178
security	2	1.1	\$18,000	\$26,630
sub total	70	39.7		\$1,202,792
Luxury Lodge				
manager	1	1.0	\$101,221	\$136,648
supervisors	2	2.0	\$69,074	\$186,500
front desk	6	3.3	\$20,000	\$88,767
housekeeping	5	2.7	\$15,000	\$55,479
maintenance	2	1.1	\$15,000	\$22,192
administrative	2	1.1	\$20,000	\$29,589
security	1	0.5	\$18,000	\$13,315

	Number	FTE	Annual Salary	Total Costs of Employment
sub total	19	11.8		\$532,491
Green Burial Services				
director	1	1.0	\$42,711	\$57,660
assistants	3	3.0	\$25,111	\$101,700
sub total	4	4.0		\$159,360

Sources: Staffing requirements for the lodges and restaurants were estimated from staff levels at the Copper River Princess Lodge in Alaska (operated May through September), accessed online at www.coolworks.com/profile/princess-tours/copper-river-princess-wilderness-lodge.

Staffing levels for the Green Burial service were estimated from personal communication with Joe Sehee, executive director of the Green Burial Council.

Annual salaries for employees in death care services was obtained from Bureau of Labor Statistics, Occupational Employment Statistics, May 2007 National Industry Specific Occupational Employment and Wage Estimate, accessed online at http://www.bls.gov/oes/current/naics4_812200.htm#b00-0000.

6.3 Balancing Multiple Goals

Like the Trust, other federal bodies must also balance competing legislative constraints. The National Park Service (NPS), for example, must balance the conservation of natural and historic resources with public use of these resources. The NPS Organic Act [16 U.S.C. §§ 1-18(j)] defined the purpose of the NPS as follows:

*To conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.*¹⁵⁹

In response, NPS has had to determine the appropriate level of public use within each National Park. The NPS public access decisions have at times been met with criticism and, in some cases, litigation [see *Southern Utah Wilderness Alliance v. Dabney*, 7 F. Supp.2d 1205, 1211 (D. Utah 1998), *revised and remanded*, 222 F. 3d 819(10th Circuit 2000)]. Disputes have arisen regarding issues that range from the appropriate level of snowmobile and off-road vehicle use to the proper location of buildings and associated utility lines.

Denis Galvin, former Deputy Director of the NPS, testified before the Senate Subcommittee on National Parks on the conflicts between daily management and long-term preservation of the National Parks. He emphasized that programs for public access must comply with the NPS Organic Act by leaving National Park resources unimpaired for future generations.

¹⁵⁹ United States Code, *Title 16, §1*.

Managers within NPS have the discretion to determine what constitutes impairment, but their decisions are guided by NPS *Management Policies*. Mr. Galvin explained that the guidelines laid out in the *Management Policies* must remain clear and consistent in order to ensure that the preservation mandate is met.

Recreational use of the National Parks can comply with the preservation mandate if the types, amounts, location, and timing of uses are carefully planned. For example, snowmobile use in Yellowstone National Park would not be as likely to impair park resources if it were done in a way that did not impact trumpeting swans and wintering bison. Not all recreation programs comply with the mandate; therefore, incompatible recreational activities could instead take place on other public lands or in gateway communities.¹⁶⁰

For the Preserve, a general approach to balancing the objectives of the *Act* involves much of what is already occurring on the Preserve. This includes: 1) operation of a working ranch; 2) protection of the natural and cultural resources; and 3) providing recreation. Two remaining goals need to be included: self-sufficiency and public access. These are closely related, and their inclusion as Preserve objectives must not be at the expense of the first three goals.

Management of the Preserve must also balance the desires of different constituencies while attempting to achieve recognition, acceptance, and valuation of the inherent living land use traditions that contribute to the Preserve being much more than just a scenic landscape.¹⁶¹ Some of these groups are the area Indian Tribes and Pueblos; Los Amigos de Valles Caldera, a non-profit fundraising organization created to support the Preserve 501(c)(3); recreation enthusiasts; and local cattle ranchers. For more information about how a government corporation balances competing goals see Appendix D, which presents a case study of The Presidio Trust.

6.3.1 Complementary and Conflicting Elements

The Trust can capitalize on the fact that activities build on each other and are interconnected. School children grow up and wish to return to recreate; researchers stay for a few extra days to relax; green burial means lodgings and facility use for funerals; hunters plan their next corporate retreat at the lodge; volunteers commit portions of their estate to the foundation. These all happen because visitors enjoy their first experience, and want to come back.

¹⁶⁰ Congressional Testimony, Denis Galvin, Deputy Director, National Park Service (Retired) on behalf of National Parks Conservation Association before the Senate Subcommittee on National Parks, November 1, 2005.

¹⁶¹ Anshuetz, Kurt and Thomas Merlan, 2007, *More Than a Scenic Mountain Landscape: Valles Caldera National Preserve Land Use History*, United States Department of Agriculture, Forest Service, Rocky Mountain Research Station, General Technical Report RMRS-GTR-196, pg 166, September.

Indeed, the potential for complementarities between visitor/user activities will be essential to the success of the Preserve.

At the same time, conflicts between users could spoil the reputation of the Preserve as quickly as a good reputation may be built based on complementary activities. The following analysis of relationships between activities highlights the potential for complementarities between activities, and also identifies where activities may conflict.

Lodging and Hospitality

Lodging and hospitality is potentially complementary with most of the other activities that will generate revenue on the Preserve. Visitors who spend the night may need to be separated physically from livestock grazing activities, as both of these events are carried out during the summer months. Similarly, camping would need to be separated from forest management activities, and filming and photography might potentially conflict with overnight lodging and hospitality. However this area is financially compatible with research, hunting, fishing, public programs, merchandise sales, donations, and green burials. That is, each of the latter program areas will generate more revenue for the Trust when paired with lodging and hospitality.

Education and Research

The education and research programs also demonstrate a high degree of potential complementarity with other activities. Researchers can enjoy the lodging and hospitality, study livestock grazing and forest management, purchase merchandise, and are essential in building the scientific case to support donations. Researchers can even study the effects of green burial – which is a somewhat new approach to end of life care. Research and educational activities potentially need to be carefully zoned both spatially and temporally from each other, and as well may need to be suspended temporarily during hunting season (as is already done). Aquatic research might also conflict with fishing activities, and there is a potential for both public programs and forest management to be complementary to research and education (e.g. guided tours). Spatial zoning may also be needed so that public programs do not interrupt research activities.

Livestock Grazing

As a working ranch, livestock grazing is a featured activity for the Preserve. There are many potentially complementary activities with livestock grazing including film and photography, public programs (that could provide visitors with an up-close ranching experience) and merchandise sales. The merchandise sales complementarity encompasses the idea that grazing research could end up with patented products that might bear the Valles Caldera

name. For example, high-altitude feeds might be studied with the herds using the Preserve. If a successful product were developed, then the brand could become the ‘Valles Caldera High Altitude Cattle Feed’ and the Trust could gain royalty payments for use of the name. In this case there is a triple complementarity between research, merchandise, and livestock grazing. Grazing also has the potential to conflict with some activities, and these include lodging, research activities, hunting, fishing, and public programs. Film and photography might also need to occur in the same area as the grazing, or possible in a different time and place.

Hunting and Fishing

Hunting is an activity that in many cases will need to have careful spatial and temporal zoning. Fortunately, current hunting occurs during the spring and fall when there are fewer visitors to the Preserve. Further, the activities are carefully zoned in a spatial sense from each other already. Fishing follows a similar pattern, with strict spatial zoning currently in place so that the activities do not conflict with public programs, or film and photography.

Public Programs

Public programs refer to the activities of visitors to the Preserve outside of lodging and hospitality, fishing, hunting, education and research, and photography. All other activities, such as hiking, biking, equestrian events, running, wildlife viewing, archery, skiing, and sleigh rides fall into this category, and potentially involve larger numbers of the public than many of the other programs. At present, these programs are operated mostly through on-line reservations, and so access to the Preserve may be controlled. This approach will need to be continued as the other programs develop, and the public programs will need to be scheduled and planned so that they do not conflict with hunting, forestry, research, grazing, etc. However, the public programs not only bring revenue to the Trust for the specific activity, but will be the attractions that interest visitors to come to the Preserve in the first place. These programs are therefore complementary to nearly all other enterprises, with the exception of perhaps forestry and hunting.

Commercial Film and Photography

Commercial film and photography activities will require spatial and temporal zoning so that the activities do not interfere with other public programs and forestry management activities. Due to the abundance of mountain meadows, beautiful landscapes, and other photographic views the spatial and temporal zoning requirement is not anticipated to be a large limiting factor for this program. Also, this activity could be complementary with several other programs considered.

Forest Management

Forest management activity will require spatial and temporal zoning so that the activity does not interfere with Preserve visitors. The activity is potentially complementary with education and research.

Merchandise and Donations

Merchandise sales, and donations do not conflict with any of the other activities, and are complementary to most activities. That is, the message of financially supporting the Valles Caldera should be a unifying theme among employees and stakeholders in the success of the Trust. All visitors, researchers, and contractors on the Preserve should be given the opportunity to purchase merchandise in support of the Trust, and to learn about ways to donate money or in-kind services through volunteering.

Green Burial

Unlike traditional cemeteries, a green cemetery need not conflict with many operations on the Preserve, and it is potentially complementary to lodging, research, public programs, and donations. Some spatial zoning will be required so that public programs do not interfere with the cemetery, and that lodging and hospitality does not occur too near to the cemetery, which should be located in a relatively solitary location.

6.3.2 Proposal for Balancing Potential Conflicts

The scheduling and planning for activities – which now occurs in a familial ad-hoc way – will need to be the focus of attention for Preserve managers and the Board. Master planning should be employed on an annual basis, but the schedule should also remain flexible so that the Preserve is free to respond quickly to changing preferences of visitors to the Preserve and changing climatic and environmental factors. For example, one of the unique opportunities afforded to the Trust, but not to other public lands is to lease or rent out significant portions of the Preserve land and facilities for festivals or other special events. With this in mind, coordination, communication, and flexibility will be essential to successful scheduling.

In accordance with the *Master Plan for Interpretation*,¹⁶² potential conflicts can be managed through several types of zoning. Both spatial zoning (separating potentially conflicting by

¹⁶² AldrichPears Associates, June 2005, *Valles Caldera Trust Master Plan for Interpretation*, Document prepared by Rourke McDermott and reviewed and edited by Dennis Trujillo on 11/29/05, pg. 29 – 30.

keeping the activities in different geographic areas) and temporal zoning (separating activities by having them occur in different months, seasons, or days) will need to occur.

As discussed in the *Master Plan for Interpretation*, an effective zoning strategy includes four main characteristics. First, access points need to be specified (i.e. no entry, limited entry, guided entry only, or full entry). Second, capacity in each zone should be determined based on conflicts present (i.e. low, medium or high density allowed). Third, zones should be assigned scheduled use times (i.e. overnight, day use only, other). Finally, activities should be rotated throughout the zones occasionally (i.e. biannually, or annually). This last characteristic is borrowed from the ranching ethic and is suggested in order to minimize impact in any given area and provide repeat users with different experiences through the same activity.¹⁶³

The following table summarizes the potentially conflicting and compatible relationships, and those which would benefit from spatial (S), temporal (T), or both kinds of zoning to reduce conflicts (see Table 17). To the extent possible the assessment of potentially conflicting impacts are presented in terms of a causative action and a recipient action. The column programs can be considered the causative action, while the row programs can be considered the recipient. For example, the fishing program (Column 5) has no impact on the livestock grazing program (Row 3), but livestock grazing (Column 3) may cause a spatial (S) and temporal (T) conflict with the fishing program (Row 5).

¹⁶³ AldrichPears Associates, June 2005, *Valles Caldera Trust Master Plan for Interpretation*, Document prepared by Rourke McDermott and reviewed and edited by Dennis Trujillo on 11/29/05, pg. 29 – 30.

Table 17
Complementary and Conflicting Relationships between Valles Caldera Enterprise Activities

	Lodging	Research	Livestock Grazing	Hunting	Fishing	Public Programs	Film/ Photography	Forestry	Merchandise	Donations	Green Burial
Lodging	■	■	S	■	■	■	■	S	■	■	S
Research	■	S,T	S,T	T	S	S	■	S	■	■	■
Livestock Grazing	S	S,T	■	S	■	S	■	■	■	■	■
Hunting	■	■	S	■	■	■	■	■	■	■	■
Fishing	■	■	S,T	T	■	T,S	■	■	■	■	■
Public Programs	■	S	S	T,S	T,S	■	S,T	S	■	■	S
Film/ Photography	S,T	■	S,T	S,T	■	S,T	■	S	■	■	■
Forestry	S	S	■	T	■	S,T	■	■	■	■	■
Merchandise	■	■	■	■	■	■	■	■	■	■	■
Donations	■	■	■	■	■	■	■	■	■	■	■
Green Burial	S	S	■	■	■	S	■	■	■	■	■

Where **S** signifies a need for spatial zoning, **T** signifies temporal zoning, ■ is potentially complementary, □ is no conflict, and ■ is N/A

6.4 Expected Effects of Business

The primary goal of this study is for the Preserve to become self-sufficient by the year 2015. This is interpreted to mean that the Preserve would at that point no longer require governmental appropriations for on-going operations and maintenance, but would instead generate sufficient revenue through the suite of revenue-generating activities. The proposed plan offers at least two ways to obtain that goal. However, there are some other expected benefits of the proposed plan for the Preserve. These are outlined below.

6.4.1 Local Communities and Employment

The economic impacts on communities of new businesses will include direct, indirect, and induced impacts. Direct effects arise from the expenditures which visitors make at the Preserve. Indirect effects include the purchases from other businesses of supplies and materials for operations on the Preserve. Induced effects relate to household spending associated with employment for operations on the Preserve. Over the course of the proposed 10-year plan, the area surrounding the Preserve, including the local communities of Los Alamos, Jemez Springs, and La Cueva will benefit economically in this variety of ways. The increased public access envisioned in the plan will complement community development goals of Los Alamos, which is working to create a community with greater access to recreational activities, and greater diversity in the regional economic structure.

6.4.2 Relationship to Goals of the Preserve

The ventures mentioned above contribute to achieving the economic, social, and other goals laid out in the *Act* in a variety of ways. In Alternative 1 the focus of ventures to achieve financial self-sufficiency are in the hospitality and service sector. However, it is the programs, activities, and events that will draw people to the Preserve and create demand for such services. In Alternative 2 the revenue generation focus is not primarily on the hospitality and service sector, but rather a broad array of ventures that are in line with the spirit of the Preserve.

The lodges, campgrounds, wildlife tent camps, and cabin rentals will contribute to public access of the Preserve by allowing overnight stays on the Preserve. These facilities will also increase access to hiking trails, wildlife tours, and other programs on the Preserve because of the close proximity of overnight accommodations to these activities.

Another significant revenue generating activity that would be new to the Preserve and is considered in both alternatives is green burial services. This venture was found to be a viable

alternative for the Preserve in that it would likely provide a significant source of revenue, while minimizing the impact on the land. The conservation goals of the Preserve align very well with the market demand for green burial services.

An education and research center is considered in both alternatives. From a financial standpoint, the center would act as a cost savings for the Preserve, while at the same time protecting and preserving the scientific, geologic, watershed, historic, and cultural values of the Preserve. Furthermore, the center would aid in operating the Preserve consistent with the multiple use and sustained yield of renewable resources within the Preserve. Finally, the education and research center will also expand public use on the Preserve.

A new visitor center is also recommended under each alternative. The visitor center will help the Preserve maintain the environmental integrity of the natural resources through collection of conservation fees from visitors. The conservation fees will assist in funding operation and maintenance of the Preserve. Furthermore, the visitor center will also expand public use and access to the Preserve for recreation, as it will be a location where visitors can learn about and sign up for recreation programs, activities, and events.

The existing programs of cattle grazing, hunting and fishing are also supported in both alternatives. These programs are more developed than others on the Preserve and will aid in achieving the goal of operation of the Preserve as a working ranch consistent with the multiple use and sustained yield of renewable resources.

Thinning forest resources is considered in both Alternatives and is anticipated to aid in achieving the goal of maintaining natural resources on the Preserve. Several options for the thinning program are discussed in section 3.8.

Commercial film and photography was considered in this analysis but not included in the financial model. This enterprise activity was found to be suitable for the Preserve, but the level and consistency of future financial returns from such activities are uncertain. An actively managed film and photography program could become a successful marketing tool for the Trust.

Donations generated from the Los Amigos de Valles Caldera group will be an important component for maintenance and conservation activities on the Preserve. Also, a successful capital campaign for facility development on the Preserve will be an important step for the Trust to achieve financial self sufficiency.

6.5 Barriers to Implementation

The potential barriers faced by the Trust in implementing the above described ventures are several, including; financial, community support, spatial and temporal zoning, compliance,

staff expertise, and others. The main financial barrier will be gaining access to the required capital in order to develop the facilities associated with each venture. Another financial barrier will be maintaining an adequate level of working capital to cover the expenses of the venture during the off-season or winter months.

Community support is vital to all of these ventures in one form or another. Some ventures will rely upon volunteers to do part of the required work, while others are heavily dependant upon fundraising objectives to meet the required development or operating costs. Furthermore, the support from the local community will lead to greater opportunities in marketing through word of mouth. Without the support of the surrounding community it will be difficult to achieve the goals of the Preserve.

Spatial and temporal challenges are another barrier to implementation. An example of this would be if a wildlife viewing tour is scheduled at the same time and place as an elk hunt. The potential for conflict is numerous on the Preserve, but with proper planning of events and activities it is possible to overcome this barrier. Furthermore, with close to 90,000 acres to utilize there are many options available for locations of events and activities.

Another potential barrier to implementation arises due to the responsibility of the Trust to abide by environmental and cultural resource compliance. The current Preserve staff is very knowledgeable regarding the sensitive environmental and cultural resources of the Preserve. In this analysis, ten percent of the development costs are attributed to environmental compliance and another ten percent are attributed to cultural resource compliance.

Staff expertise and knowledge in operating the specific ventures considered in this analysis could be a barrier to implementation. One way of mitigating this is to operate ventures through concessionaire agreements. By implementing this strategy the Preserve reduces risk, and gains the expertise of the concessionaire without having to put them on the payroll. The ventures where this would be most applicable include the mid-scale and high-end lodges. However, concessionaires could also be used for certain recreation-based programs if needed. Another mitigating action is to properly train the staff in the specific managerial and operating tasks needed to for successful operation of the venture in question.

Political barriers are also an important consideration for the Preserve. However, this study does not speculate as to any political barriers that might exist in the future.

7.0 Financial Plan

This chapter includes three sections pertaining to the current and projected financial status of the Trust. Section 7.1 covers future financial resource requirements associated with facility development for the two alternatives analyzed in this report. Section 7.2 explains the assumption used for modeling future cash flows, identifies future financial resource requirements for operating the existing and future ventures and presents all of the information in the chapter in pro-forma financial projections for ten years under each alternative. Section 7.3 briefly analyzes the results of the pro-forma financial statements.

7.1 Financial Resource Requirements for Facility Development

This section details future budgets for the two alternative business strategies analyzed. First, the capital facility development costs are discussed, followed by funding options available to the Trust.

7.1.1 Facility Development Costs

Facility development costs include building, infrastructure, and compliance costs for the proposed developments on the Preserve. The projected facility costs for Alternative 1 are estimated at \$53 million (see Table 18); while those associated with Alternative 2 are \$21.4 million (see Table 19).¹⁶⁴

¹⁶⁴ Unless stated otherwise, all costs are reported in 2007 dollars.

Table 18
Alternative 1 Facility Cost Estimates

Facility	Building	Infrastructure	Compliance	Total
Visitor Center	\$4,090,000	\$665,000	\$951,000	\$5,705,000
Headquarters	\$706,000	\$235,000	\$188,000	\$1,130,000
Public Parking Lots	\$0	\$400,000	\$80,000	\$480,000
Road Upgrade	\$0	\$2,000,000	\$400,000	\$2,400,000
Deferred Maintenance	\$713,209	\$0	\$0	\$713,209
Education and Research Center	\$7,259,000	\$957,000	\$1,643,000	\$9,859,000
Mid Scale Lodge with Restaurant	\$10,893,000	\$1,030,000	\$2,385,000	\$14,308,000
Luxury Hunting Lodge	\$9,974,000	\$720,000	\$2,139,000	\$12,832,000
Existing Cabins	\$824,000	\$350,000	\$0	\$1,174,000
Wildlife Camp Tents	\$736,000	\$0	\$147,000	\$883,000
Campgrounds	\$2,081,000	\$906,000	\$597,000	\$3,584,000
Alternative 1 Total	\$37,276,209	\$7,263,000	\$8,530,000	\$53,068,209

Table 19
Alternative 2 Facility Cost Estimates

Facility	Building	Infrastructure	Compliance	Total
Visitor Center	\$1,540,000	\$665,000	\$308,000	\$2,513,000
Headquarters	\$706,000	\$235,000	\$188,000	\$1,130,000
Public Parking Lots	\$0	\$400,000	\$80,000	\$480,000
Road Upgrade	\$0	\$2,000,000	\$400,000	\$2,400,000
Deferred Maintenance	\$713,209	\$0	\$0	\$713,209
Education and Research Center	\$7,259,000	\$957,000	\$1,643,000	\$9,859,000
Existing Cabins	\$824,000	\$350,000	\$0	\$1,174,000
Wildlife Camp Tents	\$736,000	\$0	\$147,000	\$883,000
Campgrounds	\$1,143,000	\$751,000	\$379,000	\$2,273,000
Alternative 2 Total	\$12,921,209	\$5,358,000	\$3,145,000	\$21,425,209

Building costs include costs of planning, designing, site-clearing, preparatory work, vertical building, incorporating “green” elements into the building, and FF&E (furniture, fixtures, and equipment). Site-clearing and preparation costs are estimated at \$32,000 per acre. Vertical building costs are estimated to range from \$90 per square-foot to over \$200 per square-foot, depending on the building use. Planning and design costs are estimated at eight percent of preparation and vertical building costs. The incorporation of “green” elements into the building adds seven percent to preparation and vertical building costs. The FF&E costs vary

by building and intended use, but range from a few thousand dollars per unit for a student dormitory to more than \$600,000 per unit for a luxury lodge.

Infrastructure costs include those associated with water systems, power connections, parking lots, and roadways. The cost for water systems will vary based on the water requirements of the facility. For this analysis, it is assumed that each facility would require a system capable of providing 10,000 gallons per day at peak usage. Each system includes two wells and pumps, as well as a 25,000- to 30,000-gallon storage tank. The cost range for water systems in this analysis is from \$225,000 to \$350,000. The cost for power connections are calculated at a rate of \$15 per foot for single phase and \$36 per foot for three phase power. In this analysis it was assumed that power connections for new development will be underground. Capital costs of underground power lines are typically on the order of two to three times those for aboveground networks.¹⁶⁵ Paved parking lots are modeled at a cost of \$310,000 per 100 paved spaces and \$50,000 per 50 gravel spaces. Roads are modeled at a cost of \$200,000 per mile.

Compliance costs include the costs for conforming to cultural resource and NEPA regulations. It is assumed that compliance costs total 20 percent of all development costs where applicable. For more information on the estimation of compliance costs, see Appendix B.

Visitor Center and Headquarters

Building costs for the visitor center include estimates for an interpretive center, gift shop, and cafeteria under each of the two alternatives. The total cost of developing the visitor center is estimated at \$5.7 million for Alternative 1 and \$2.5 million for Alternative 2. The Preserve headquarters building is assumed to be of the same size under both alternatives at a total cost of about \$1.8 million. However, the combined cost for the Preserve headquarters building and critical Preserve updates, such as upgrading twenty-five miles of Preserve roads, development of public parking lots, and deferred maintenance of buildings, is expected to be \$4.0 million. These estimates are based on the following assumptions:

- Total building costs of approximately \$270 per square-foot. This estimate includes:
 - Vertical structures construction cost of \$212 per square-foot for the interpretive center/museum and \$90 per square-foot for the gift shop, cafeteria, and Preserve headquarters.

¹⁶⁵ Economic Implications of Buried Electric Utilities, Marbek Resource Consultants, accessed online at <http://www.halifax.ca/climate/documents/EconomicImplicationsofBuriedElectricUtilities.pdf>.

- Cost of \$32,000 per acre for site-clearing and preparing a buildable lot; includes tilling, scrubbing, sodding, laying pipes, and related activities.¹⁶⁶
- Costs for project preparation, such as pre-planning, pre-development, engineering, designing, permitting, civil site-designing, and surveying are estimated at eight percent of total costs.¹⁶⁷ These costs will be incurred prior to the actual construction of the facility.
- Costs for incorporating green elements in the project are estimated at seven percent of total construction and land-preparation costs. Generally, construction costs increase by four to seven percent if green elements are incorporated in the design of buildings.¹⁶⁸ Because protection of the natural landscape is part of the mandate of the Preserve, the higher figure of seven percent is assumed to allow for the maximum level of environmentally friendly design elements.
- The FF&E expenses are estimated at \$236,600 for the visitor center under Alternative 1 and \$119,000 for Alternative 2. Similar expenses for the Preserve headquarters building are estimated at \$27,300.¹⁶⁹
- Other development costs include:
 - A cost of \$15 per foot for approximately 2,000 feet of buried line that will be required for power connections for both the visitor center and Preserve headquarters.¹⁷⁰
 - No costs for road development to the visitor center, but \$50,000 for an access road to be built for the Preserve headquarters.¹⁷¹
 - Compliance expenses are estimated at ten percent of total development costs for NEPA and ten percent for cultural resources.

¹⁶⁶ Personal communication with Adnan Rehman, President and Chief Executive Officer, Terra Construction Group, Inc., St. Petersburg, Florida, July 7, 2008.

¹⁶⁷ Ibid.

¹⁶⁸ Morris, Peter and Davis Langdon, "What does Green Really Cost?" *PREA Quarterly*, summer 2007, pp. 55-60.

¹⁶⁹ Sahlins, Elaine, "Hotel Development Cost Survey 2007, 2007," HVS San Francisco, Web Page: <http://www.hvs.com/Library/Articles/>, accessed May 22, 2008.

¹⁷⁰ Based primarily on personal communication with Jim Wiseman, Jemez Electric Cooperative, Jemez Springs, NM, August 6, 2008.

¹⁷¹ Construction of paved roads cost about \$150,000 to \$250,000 per mile, gravel roads are assumed to be one fourth of that cost. Personal communication with Adnan Rehman, President and Chief Executive Officer, Terra Construction Group, Inc., St. Petersburg, Florida, July 7, 2008.

Preserve Updates

Preserve updates are included in both Alternative 1 and Alternative 2. These updates involve \$400,000 to develop public parking lots and staging areas as requested in the fiscal year 2009 budget. Upgrades to existing roads are included at an estimated cost of \$2 million. Both of these updates will require NEPA and cultural resource compliance which is anticipated to add another 20 percent total (10 percent for NEPA, and ten percent for cultural resource). Deferred maintenance on buildings is also included in both alternatives at an anticipated cost of \$713,209 which does not include compliance costs, as this is not anticipated for updating existing buildings.

Education and Research Center

The sizes and costs for the education and research center are the same under both alternatives. The 32,500 square-foot facility is expected to cost almost \$10 million, and includes the following:

- Cost of \$436,400 for planning and design, which is eight percent of the land preparation and vertical building costs.¹⁷²
- Seven percent of land preparation and vertical building costs for incorporating green elements in the design and construction of the building, representing \$382,000.
- Five acres of site-clearing and preparation costs totaling \$160,000, or \$32,000 per acre.
- An average vertical building cost of \$163 per square-foot, \$212 per square-foot for the research laboratory, \$90 per square-foot for the conference space and office, and \$150 per square-foot for the dormitory portion of the building. Total vertical building costs are estimated at \$5.3 million.
- The FF&E costs of approximately \$986,000.¹⁷³
- Power connection costs of \$72,000, which represent \$36 per foot for three phase power, and an assumed 2,000 feet of buried line.
- Parking space for 200 vehicles, with 100 spaces each of paved and gravel. The total cost is estimated at \$410,000.
- About \$200,000 for a one-mile paved access road to the education and research center.

¹⁷² Personal communication with Adnan Rehman, President and Chief Executive Officer, Terra Construction Group, Inc., St. Petersburg, Florida, July 7, 2008.

¹⁷³ Sahlins, Elaine, "Hotel Development Cost Survey 2007, 2007, "HVS San Francisco, Web Page: <http://www.hvs.com/Library/Articles/>, accessed May 22, 2008.

Mid-Level Lodge

The cost of building a mid-level hotel with food and beverage capabilities is estimated at approximately \$118,000 per room.¹⁷⁴ A breakdown of these costs is presented Table 20.

Table 20
Mid-Level Hotel (with Food and Beverage) Building Costs

	Per Room
Building and Site Improvements	\$84,700
Soft Costs	\$15,000
Furniture, Fixtures, and Equipment	\$14,100
Pre-Operating and Working Capital	\$4,200
Total	\$118,000

Source: Sahlins, Elaine, "Hotel Development Cost Survey 2007" HVS San Francisco, Accessed online at <http://www.hvs.com/Library/Articles/>, May 22, 2008.

Based on these figures, a 100-room lodge will cost approximately \$11.8 million. Additionally, infrastructure costs will total over \$1.0 million for the mid-level lodge, including:

- Water system cost of \$275,000;
- Buried power line (one mile of three phase line) cost of \$190,080;
- Paved parking surfaces (150) cost of \$465,000; and
- One half mile of paved access road cost of \$100,000.

Luxury Hunting Lodge

The cost to build a luxury hotel is approximately \$594,800 per room.¹⁷⁵ A breakdown of these costs is provided in Table 21.

¹⁷⁴ Sahlins, Elaine, "Hotel Development Cost Survey 2007, 2007, "HVS San Francisco, Web Page: <http://www.hvs.com/Library/Articles/>, accessed May 22, 2008.

¹⁷⁵ Ibid.

Table 21
Luxury Hotel / Resort Building Costs

	Per Room
Building and Site Improvements	\$386,900
Soft Costs	\$123,200
Furniture, Fixtures, and Equipment	\$61,300
Pre-Operating and Working Capital	\$23,400
Total	\$594,800

Source: Sahlins, Elaine, "Hotel Development Cost Survey 2007" HVS San Francisco, Accessed online at <http://www.hvs.com/Library/Articles/>, May 22, 2008.

The size of the luxury hunting lodge analyzed in Alternative 1 is twenty rooms. The total building cost for the lodge is estimated at \$11.9 million. Additional infrastructure costs are estimated to be \$720,000, including:

- Water system cost of \$275,000;
- Buried power line (one mile of three phase line) cost of \$190,080;
- Fifty space parking lot cost of \$155,000; and
- One half mile of paved road cost of \$100,000.

Existing Cabins

The deferred maintenance cost for the nine existing structures is estimated at \$486,791, which includes only the cost of maintaining the structural integrity of the buildings and the measures required to meet the general safety codes. Additional costs to upgrade these structures for public rentals are estimated at approximately \$9,100 per room, or a total of \$302,757. Collectively, the total cost of renovating and updating these nine structures is estimated at \$789,548. An additional cost of \$35,000 is included to incorporate “green” elements into the remodel of the facilities. Total building costs of remodeling the existing cabins are, therefore, estimated at \$824,000. The only infrastructure cost included in this analysis is an updated water system, estimated at \$350,000, and which is expected to serve all nine cabins.

Wildlife Tent Camps

The cost per unit for the wildlife tent camps is expected to be \$61,300, equivalent to the reported FF&E costs per unit in a 2007 lodging survey.¹⁷⁶ The total development costs for the 12 wildlife tent camps and compliance-related activities are estimated at \$882,720.

Campground

The main building cost for an improved campground includes the development of the bath house and water system for the campers. It is anticipated that the bath house will cost over \$1.2 million for the 110-unit scenario in Alternative 1, and over \$700,000 for the 60-unit scenario in Alternative 2. Well-drilling and the water system are expected to cost \$275,000 under both alternatives. Land-clearing and preparation costs are anticipated to be \$4,000 per camping unit. The inclusion of costs for planning, incorporating green elements, and designing increases the total building cost of the campground to \$2.0 million and \$1.1 million for alternatives 1 and 2, respectively.

Infrastructure costs associated with the campground include the parking areas for each unit, one half mile of three phase buried power lines, and one mile of paved access road to the campground. Total infrastructure costs for the campground are estimated at \$542,000 and \$324,000 for Alternatives 1 and 2, respectively.

Compliance costs for the campground facilities will be approximately \$600,000 under Alternative 1 and \$380,000 for Alternative 2. Total building costs of the campground are \$3.6 million and \$2.3 million for Alternatives 1 and 2, respectively.

7.1.2 Funding

The Preserve has historically relied on government appropriations to fund operations. One of the goals in the *Act* is that the Preserve be financially self-sufficient by 2015. With just under half of the current budget being used for staff salaries and the other half for operation and maintenance, there is little money left for developing new buildings and starting new programs. Hence, in order to implement any major development or programs, such as those considered in this analysis, the Preserve will need access to significant amounts of capital. Beyond government appropriations, several types of debt-financing may be available to the Preserve, as a government corporation, for these needs. Two of these alternatives are discussed below.

¹⁷⁶ Sahlins, Elaine, "Hotel Development Cost Survey 2007" HVS San Francisco, Accessed online at <http://www.hvs.com/Library/Articles/>, May 22, 2008.

Loan through Federal Financing Bank

In this analysis, it is assumed that the Trust has the authority (as a government corporation) to borrow through the Federal Financing Bank (FFB). The FFB is a government corporation created by Congress under the general supervision of the Secretary of the Treasury.¹⁷⁷ It was established to centralize and reduce the cost of federal borrowing. Through Section 6(a) of the FFB Act, “The Bank is authorized to make commitments to purchase and sell, and to purchase and sell on terms and conditions determined by the Bank, any obligation which is issued, sold, or guaranteed by a Federal agency.”¹⁷⁸

According to the Government Corporation Control Act (GCCA), a government corporation can borrow at a rate higher than that available to the Treasury, although lower than the rate available to comparable private borrowers. The FFB indicates that the lowest rate on a loan for a government corporation is one-eighth percent over the Treasury bond rate or, using the 30-year rate above, approximately 4.5 percent.¹⁷⁹ In this analysis, it is assumed that loans for development costs can be issued to the Trust for 4.5 percent interest and 30 year maturity.

The standard process for borrowing from the FFB first requires special appropriations for the amount of the loan. Subsequently, the Trust can complete the borrowing process with the FFB and be issued the capital that can be used for the intended purpose. The Trust will then be expected to make principal and interest payments on the loan under the agreed upon conditions.¹⁸⁰

Loan from a Commercial Bank

The Trust may also borrow from a private bank. Normally, a loan through a private bank requires collateral backing for approval, which would not be feasible for a government corporation with its land held by the federal government. However, the Business and Industry Guaranteed Loan Program (B&I Program) through the United States Department of Agriculture (USDA) supports certain loans that provide employment, improve economic or environmental conditions, and meet other criteria for rural areas. Under the B&I Program, the USDA charges a two percent origination fee to back the loan. This may be the most costly form of debt, as private loan rates for commercial projects are currently six percent or

¹⁷⁷ A determination of the eligibility of the Preserve to borrow from the FFB will require legal guidance.

¹⁷⁸ Federal Financing Bank Act, Section 6a, 12 U.S.C. 2285 (a) and For purposes of the FFB Act, the term “Federal Agency” means an executive department, an independent Federal establishment, or a corporation or other entity established by the Congress which is owned in whole or in part by the United States.

¹⁷⁹ Personal Communication with Gary Burner, CFO, Federal Financing Bank (FFB), July 7, 2008.

¹⁸⁰ Personal Communication with Mike Rothman, CFO, Presidio Trust, August 27, 2008.

higher, and have shorter maturities than other options.¹⁸¹ Table 22 compares the various forms of financing which may be available to the Preserve for an assumed loan of \$1.0 million.

Table 22
Debt Financing Alternatives for \$1.0 million

	Interest	Maturity	Annual Payment
Loan through FBB	4.5%	30	\$61,392
Loan from Bank	10.0%	30	\$106,079

Appropriations

According to the *Act*, “the Trust shall prepare an annual budget with the goal of achieving a financially self-sustaining operation within fifteen full fiscal years after the date of acquisition.” The annual budget requests for appropriations should be based on the financial need “to support the administration, operation, and maintenance of the Preserve.” In addition, the demonstration of a program to achieve financial self-sufficiency may be critical in obtaining future appropriations to assist in developing additional programs and infrastructure on the Preserve.

The United States Congress may show support in one of two ways. The first would involve funding the Trust with a lump sum amount to pay for certain developments. In this analysis, it is assumed that the Congress will pay for development of the visitor center and Preserve headquarters for a total of \$10.7 million under Alternative 1 and \$7.5 million for Alternative 2.

The second method of Congressional funding is through annual appropriations to cover the operation costs at the Preserve. Current appropriation levels have been \$3.5 million or more, but it is expected that these will be reduced and eventually eliminated in the future. In this analysis, it is assumed that appropriations will amount to \$3.5 million for the first year only. From that point on, it is assumed that appropriation levels for operating costs will decrease by \$500,000 annually through Year 5 at which time appropriations are assumed to cease entirely (see Table 23).

181 Business and Industry Guaranteed Loans (B&I), accessed August 27, 2008 online at http://www.rurdev.usda.gov/rbs/busp/b&i_gar.htm.

Table 23
Annual Appropriation Levels

Alternative 1		Alternative 2	
Annual Appropriations		Annual Appropriations	
Year 1	\$2,500,000	Year 1	\$2,500,000
Year 2	\$2,500,000	Year 2	\$2,500,000
Year 3	\$2,000,000	Year 3	\$2,000,000
Year 4	\$1,500,000	Year 4	\$1,500,000
Year 5	\$1,000,000	Year 5	\$1,000,000
Year 6	\$0	Year 6	\$0
Year 7	\$0	Year 7	\$0
Year 8	\$0	Year 8	\$0
Year 9	\$0	Year 9	\$0
Year 10	\$0	Year 10	\$0

Annual Fundraising

Tax deductible donations and fundraising events are another option for funding certain developments. This funding option is discussed further in section 3.10 above.

Working Capital for Infrastructure Improvement

This study of revenue enhancement presents two alternative blends of enterprise activities for the Preserve. While both will allow the Trust to meet the 2015 self-sufficiency goal, these are based on the assumption that between \$17.6 million (Alternative 2) and \$22.3 million (Alternative 1) can be raised and/or pledged between 2009 and 2015 for infrastructure creation. These funds will come from a mix of private sector donations (via a capital campaign), university/Trust partnerships and collaborative arrangements, and congressional funding. The Trust currently receives a congressional appropriation of approximately \$3.5 million annually, which is used for operating expenses. This appropriation is expected to continue, but decline, until 2015 when it is completely phased out. It is expected that these declines in appropriations will be met by increases in income and activity associated with the new infrastructure.

While this is not an unrealistic goal for the Trust and the members of Los Amigos de Valles Caldera to undertake, it will require thorough pre-planning and careful coordination as several of the proposed income streams have the potential to overlap, tapping similar income pools for funds. Appendix E provides more details of alternative strategies that can be used to develop the required funding.

7.2 Financial Resource Requirements and Pro-Forma Projections

The pro-forma financial statements below are similar in form to historical financial statements for the Preserve, but relate to expected future conditions rather than past performance. Assumptions and results are shown below.

7.2.1 Visitation Assumption

The Year 2011 is modeled as Year 1 in this analysis, which leaves Trust approximately two years to obtain finances, permits, and finalize plans for development. The primary assumption required for modeling future revenues and expenses is expected visitation. As discussed previously, visitation to the Preserve is projected to reach 120,000 per year. Both the level and growth rate in visitation are critical to the feasibility of the ventures being analyzed. For this analysis, it is assumed that visitation increases at a steady rate of just below 25 percent annually until reaching 120,000. The maximum visitation level is achieved in Year 8 under these assumptions. Actual visitation could grow faster or slower than this schedule, and will depend in part on the availability of overnight lodging on the Preserve. However, with improved infrastructure, marketing, and continued program development, visitation could actually increase much faster, in which case this schedule may be considered conservative.

Table 24
Visitation Schedule Modeled

Year	Alternative 1
Year 1	29,475
Year 2	36,588
Year 3	45,416
Year 4	56,376
Year 5	69,980
Year 6	86,867
Year 7	107,828
Year 8	120,000
Year 9	120,000
Year 10	120,000

Most visitations will occur during the peak travel season, which is from the end of May through September. In this projections model, it is assumed that all enterprises will be open for at least 200 days during the year, and that preparation and closing activities will extend

personnel and operating costs to 210 days per year for most enterprises. The exception to this rule is the Preserve headquarters and the winter recreation programs, which will be open year round.

7.2.2 Revenue Projections

Revenues for the enterprises considered are projected using a variety of methods. For new enterprises, such as the visitor center, green burial, campsites, and the lodges, demand and revenue projections are estimated using comparable analysis. Revenue projection explanations for each of the eleven enterprise types are discussed below.

Lodging and Hospitality

Lodging demand figures are estimated using modified statistics from the NPS (lodging stays at National Park Lodges), the U.S. Forest Service (campsite occupancy rates in Santa Fe National Forest), and other comparables as described in Section 3.12 and 4.1. Rates for lodging options are estimated based on the modeled profitability as described in Section 4.2.3, and comparable rates at lodges such as Lake McDonald Lodge, Ahwahnee Lodge, Pahaska Cabins, and Paws Up Ranch

The luxury lodge was modeled as a 20 room lodge, open for 210 days out of the year. Due to the small size it was assumed that the average occupancy rate of 75 percent could be achieved immediately and sustained through the period of the analysis, which results in 3,150 room night sales annually. The average rate for the luxury lodge was modeled at \$580, resulting in annual sales of \$1.705 million dollars annually. The concessionaire payment to the Trust was assumed to be 50 percent, resulting in annual revenue to the Trust of \$852,600.

The mid level lodge was modeled to include 100 rooms, and one restaurant, open for 210 days out of the year. As described in section 5.3.3 and Appendix C lodging demand for the mid level lodge was modeled as a function of the visitation projections. National Parks like Glacier and Yosemite report that average occupancy of their lodges was roughly equivalent to 12 percent of visitation at the park. However, this is a very conservative figure given the fact that the lodges are often filled to capacity during the summer months and visitors are forced to stay in nearby towns. In this analysis, we modeled the visitation demand for the mid level lodge to be equivalent to 25 percent of visitation. However, in the revenue projections the total sales for lodging was constrained so that it could not exceed 75 percent occupancy. This resulted in annual demand projections for the mid level lodge as follows.

Table 25
Annual Room Demand (nights)
Mid Level Lodge

Year	Demand
Year 1	7,369
Year 2	9,147
Year 3	11,354
Year 4	14,094
Year 5	15,750
Year 6	15,750
Year 7	15,750
Year 8	15,750
Year 9	15,750
Year 10	15,750

The mid level lodge is modeled as being built in Year 2, which means revenue streams from operations will not be realized until Year 3. The average room rate of \$150 per night was modeled for sale generation estimates. Furthermore, the concessionaire was assumed to operate the restaurant in the lodge. The restaurant was assumed to be open 210 days a year as well, and is modeled to serve patrons at a rate of three times the number of rooms at an average spending of \$25 per patron. Finally, it was assumed that the concessionaire would pay the Trust 30 percent of gross sales from the restaurant and lodge sales. Given these assumptions, the revenue projections from the mid level lodge range from \$766,400 in Year 3 to \$1.06 million in Year 10. Mid level and luxury lodge revenues are only applicable to Alternative 1.

Tent and RV campground sites were modeled as open from April 1 to September 30 each year. Similar to the mid level lodge demand estimates, it was assumed that campground site demand is likely to be 15 percent of visitation. This is a conservative estimate given the reported demand from National Park areas as 12 percent of visitation. Tent sites were modeled at a rate of \$15 per night, whereas RV sites were assumed to be sold at \$40 per night. Given these assumptions and the size of the campground facilities described for each alternative in section 5.5.1, revenues range from \$159,800 in Year 2 to \$504,500 in Year 10 for Alternative 1. Alternative 2 revenues are modeled at a rate of \$164,600 in Year 2 to \$283.5 in Year 10.

Revenues from cabin and lodge rentals were modeled at 75 percent occupancy during the weekends, and 45 percent occupancy during the weekday over the 210 day period. The average cabin rate of \$500 per night and lodge rate of \$1,500 per night was used to calculate revenue streams of \$405,000 annually for both Alternative 1 and Alternative 2.

Wildlife tent camp revenues were modeled assuming an average occupancy of 85 percent on the weekends, and 50 percent on weekdays. The number of units for each alternative is described in section 5.5 and an average rate of \$450 per night to model annual revenues of \$680,400 for both Alternative 1 and Alternative 2.

Education and Research

The education and research center revenue projections are generated from previous work by Bob Parmenter, Preserve Scientist. Dr. Parmenter has modeled and successfully operated the Sevilleta Research Station in New Mexico, and has good understanding and knowledge of the research market. Annual revenues were modeled using the following assumptions; 9,750 annual bench users paying \$10 each, 52 conference / office rentals at \$50 each, 11,700 dormitory users at \$25 per day, and 15 percent markup on food expenses. Given these assumptions total revenues were estimated at \$507,600 per year for Years 4 through 10.

Livestock Grazing

Revenues from livestock grazing operations were assumed to amount to \$50,000 annually, similar to revenues received in 2008. As discussed in Chapter 3, range quality and other variables will play a significant role in future revenues from grazing opportunities.

Hunting

It is assumed that the hunting program is near capacity at 1,800 participants annually, generating approximately \$351,000, or \$195 per visitor. Additional revenues from the sale of fifteen elk permits were modeled at a rate of \$16,000 per tag, or a total of \$240,000 additional revenues. As mentioned in Chapter 3, these new revenues will depend on the ability of the Preserve to sell additional elk permits.

Fishing

The recent expansion of the fishing programs will likely expand the capacity of the fishing program to approximately 3,600 participants annually. It is estimated that an average of \$37 is collected from each visitor for a total revenue projection of \$133,200 annually for Alternative 1 and Alternative 2.

Public Programs

The recreation programs are modeled on a per visitor basis. Currently, summer and winter recreation programs generate approximately \$12 per visitor. It is assumed that with increased

access, this would easily rise to \$15 per visitor. It is also assumed that ten percent of visitors will pay for a guided tour of the Preserve (either wildlife, historical, or geological) at a fee of \$20 per visitor.

Commercial Film and Photography

The commercial film and photography industry does hold potential for establishing a viable business enterprise on the Preserve, with the appropriate marketing and infrastructure improvements mentioned in section 3.7. However, at this point it is uncertain if revenues from these operations would help achieve financial self sufficiency. Therefore, revenue projections have not been included in the financial model. Therefore, the revenue projections modeled are likely an underestimate and conservative evaluation of the real potential that exists.

Timber

Revenues from thinning operations are modeled to include the sale of gatewood (raw unprocessed wood) from the landing site to local thinning contractors, as described in section 3.8. It is estimated that gatewood sales will involve 240 loads per year, at a price of \$2,800 per load, or \$672,000 annually.

Merchandise

The Rocky Mountain Elk Foundation gift shop in Missoula, Montana is part of an 11,800 square-foot visitor center, and offers clothing, souvenirs, jewelry, and miscellaneous merchandise. In 2007, the gift shop experienced sales of \$415,000 and recorded 50,329 visitors, or an average of \$8.25 per visitor.¹⁸² The assumption for the new visitor center at the Preserve is \$8.00 per visitor. Food and supply sales for the visitor center are estimated employing a similar method from examples of the Lolo Forest Visitor Center, the Lewis and Clark National Historic Interpretive Center, and the existing visitor center on the Preserve. It is assumed that each visitor purchases an average of \$4.00 in food and drink from the cafeteria, \$2.50 in supplies, and \$5.00 in conservation fees pay for the expanded access and management of natural resources on the Preserve. Total revenues for the new visitor center range from \$713,500 in Year 2 to \$2.34 million in Year 10.

¹⁸² Personal Communication with the Gift Store Clerk, Rocky Mountain Elk Foundation Visitor Center, September 2008.

Donations

Fundraising efforts from the activities and dues from the Los Amigos de Valles Caldera, a 501(c)(3) are expected to yield \$525,000 annually, as described in section 3.10. Other donations from universities and private individuals are modeled for facility development, and are identified in the “major assumptions” table in section 7.2.2 below.

Other – Green Burial

The revenues from green burial are estimated with the assistance of Joe Sehee, Executive Director of the Green Burial Council. Through discussions with Mr. Sehee regarding the national marketing potential of a green cemetery on the Preserve, it is estimated that 300 plots can be sold annually at \$4,000 per plot. The Preserve is an ideal location for consumers seeking to invest in conservation by purchasing green burial plots. A total of \$1.2 million annually in gross revenues is modeled for the green burial enterprise.

Total revenues modeled from the above mentioned ventures range from \$3.18 million in Year 1 to 410.85 million in Year 10 for Alternative 1. Total revenues in Alternative 2 range from \$3.18 million in Year 1 to \$8.7 million in Year 10.

7.2.3 Operating and Maintenance Costs

As with projected revenues, operating costs for new enterprises are generally modeled in this analysis using assumptions derived from comparable enterprises. For example, the operating costs associated with the visitor center on the Preserve are modeled from visitor center information gathered from both the Rocky Mountain Elk Foundation Visitor Center, as well as the Lolo Forest Visitor Center.

Maintenance activities for facilities on the Preserve are important because of the extreme heat and cold fluctuations throughout the year in the area. Facilities and infrastructure will need to be maintained on a regular basis in order to maximize the useful life of the property. For example, frost heave is an important consideration for paving access roads to certain facilities. When soil expands and contracts underneath pavement, the surface of the road may become distorted. Depending on the cost and likely damage associated with such events, it may be more economical to build gravel roads rather than paved ones leading to some of the facilities. If concessionaires are utilized to operate the lodges, maintenance responsibilities will likely be negotiated as part of the concessionaire fee.

General operation and maintenance activities associated with existing facilities, roads, range and fences on the Preserve are estimated to cost \$850,000 for the first three years. This is anticipated to cover fence maintenance, watershed and habitat monitoring, wildlife and fish

management, road maintenance, weed control, fleet costs, Forest Service law enforcement, and the volunteer program. In Year 4 the operation and maintenance costs drop to \$460,000 due to the implementation of the Education and Research Center. With the opening of this new facility and program, approximately \$390,000 in costs associated with administration and implementation of inventory and monitoring projects for natural and cultural resources on the Preserve are transferred to the Education and Research Center's operating expenses.

In addition to the above mentioned general operation and maintenance costs, it is assumed that close to \$3.6 million in Preserve updates is financed through an FFB loan, amounting to annual payments of just over \$220,500 (see section 7.1.1). Operating and maintenance costs associated with the eleven types of enterprises are discussed below.

Lodging and Hospitality

The operating costs of the lodges and other lodging enterprises are modeled from cost figures from various sources including Lake McDonald Lodge, Ahwahnee Lodge, Pahaska Cabins, and Paws Up Ranch. In this analysis it is assumed that the concessionaire would operate the mid level and high end lodges. Therefore, no operating costs appear on the pro forma projections. However, loan payments in the amount of \$878,400 (mid level lodge) and \$787,800 (high end lodge) will be the responsibility of the Trust, and are included in the annual loan payment row of the pro forma income statement. As described in section 6.2, additional staff will be required to handle the procurement process for the green burial contract with the concessionaire.

Tent and RV campgrounds are modeled as operated by the Trust. Therefore, operation and maintenance costs of \$15,000 annually, as well as the staffing requirements of \$123,800 (discussed in section 6.2) are included, for a total of \$138,800 annually for Alternative 1. Similarly, \$15,000 is included as operating and maintenance costs, and \$70,760 in staffing requirements for a total of \$85,800 in expenses for Alternative 2.

Expenses associated with cabin and lodge rentals are modeled to include \$19,000 for maintenance and cleaning annually. An additional \$148,240 is included for additional personnel to implement the cabin and lodge rental program. Total expenses for this program are modeled as \$167,200 for both Alternative 1 and Alternative 2.

Wildlife tent camps are modeled to include maintenance and cleaning expenses of \$25,000 annually for the program. Additional personnel, as identified in section 6.2, will require \$381,250, for total program expenses of \$406,300 annually.

Education and Research

Beyond the operating and maintenance costs being transferred (mentioned above), another \$147,000 in operating expenses are modeled for food service, utilities, and materials and supplies for the Education and Research Center. In addition to the operation and maintenance costs being transferred it is anticipated that existing personnel (Bob Paramenter, and Ana Steffen) expenses will be transferred under the new center. The total of these existing personnel expenses is \$301,292. Additional staff identified in section 6.2 are also modeled, adding another \$223,800 to operating costs. The total operating costs of the Education and Research Center are \$1.26 million annually. The revenues modeled above do not cover the costs of the facility; however, cost savings can be realized because the biological and cultural resource disciplines on the Preserve will be producing some revenue that will offset a portion of their costs.

Livestock Grazing

In past budgets, implementing special use programs such as grazing, photo and film were at a cost of \$16,500 per year.¹⁸³ However, this is the administrative costs associated with the programs, and does not reflect the fencing and other preserve maintenance costs associated with cattle grazing. The local grazing group option could potentially reduce some of these administrative costs.

Two part time (full time during the summer season) people have been hired to maintain and repair fences on the Preserve. It is estimated that the cost for hiring these workers is \$21,000 during the summer season.¹⁸⁴ Machinery, equipment and input costs for the grazing operation are anticipated to be close to \$5 per head (ie gasoline for ATV, fencing materials), or \$10,000.¹⁸⁵ The costs for both the machinery and equipment and part time workers are included in the Preserve management cost of \$460,000 annually within the financial model.

Hunting

It is anticipated that the hunting program costs will be \$115,000 annually, which is similar to past operating costs for this program (excluding labor). This cost is included in the “other

¹⁸³ Budget allocations for the Valles Caldera National Preserve, 2005-2008, provided by Debbie Boggott, July 2008.

¹⁸⁴ \$21,000 = 200 days x 8 hours x \$13 per hour (rounded to the nearest 000)

¹⁸⁵ Rimbey, Neil and Robert Smathers and Wilson Gray, Cow-Calf, Summer on Federal Range Winter on Federal and Private Range, 2006 Idaho Livestock Costs and Returns Estimate, accessed online at www.ag.uidaho.edu/aers. Half of annual costs reported due to Preserve grazing in summer season only.

programs” row of the pro forma net income statement. Labor costs are included as “Preserve personnel” costs in the net income pro forma statements, and include additional recreation assistants as identified in section 6.2. Implementation of the hunting program is anticipated to take up approximately 15 percent of the additional recreation staff time, or the equivalent of 1.2 people and .6 FTE.

Fishing

The existing programs (E. Fork and San Antonio) are anticipated to cost approximately \$100,000 in operations, which excludes personnel costs. This cost is included in the “other programs” row of the pro forma net income statement. Operating costs include items like; fleet rentals, gasoline, maintenance of staging area, fishing beats, and lightning shack. Labor requirements specific to the current and future fishing programs are anticipated to be ten percent of total recreation labor requirements, or approximately \$62,900 for current operations and close to \$12,000 additional staff in the future.

Public Programs

Summer recreation program budgets are estimated at \$10 per visitor (total visitors not just summer), winter recreation programs are \$2 per visitor (total visitors), and special event budgets are modeled at \$1 per visitor (total visitors). These cost factors are very similar to cost information (excluding labor) for programs reported in historical financial documents for Trust.

Commercial Film and Photography

As noted above in the revenue projection section, the commercial film and photography enterprise was not modeled in the financial projections due to the uncertainty of revenue streams. It is anticipated that costs for a commercial film and photography enterprise would include infrastructure development and marketing. No costs for commercial film and photography were projected for the financial model.

Timber

Operating costs for thinning are described in section 3.8, and include \$1,200 per acre on 1,000 acres of land. Thinning costs are estimated based on conversations with thinning contracts. It is expected that thinning on the Preserve will occur as a result of a contract between the Trust and a thinning contractor. Total thinning costs are modeled at \$1.2 million annually, which is roughly double the revenue projections for these activities, but is an important function of maintaining and protecting the natural resource assets on the Preserve.

Merchandise

In the first year of the financial model the visitor center is anticipated to be under construction and not operating, so operating expenses of \$55,000 represent the cost of merchandise sales of the existing visitor center. Maintenance and cleaning costs (excluding labor costs) associated with the new visitor center are modeled as \$15,000 per year for Alternative 1 and \$7,500 for Alternative 2. Other operating expenses for the proposed visitor centers in Alternatives 1 and 2 vary with the merchandise, food, and non-food products purchased. In Alternative 1, the operating expenses of the visitor center range from \$426,000 in Year 2 to \$895,100 in Years 8 through 10. The operating expenses of the visitor center in Alternative 2 are estimated to range from \$300,000 in Year 2 to \$769,200 in Years 8 through 10.

Donations

No operating costs are associated with the donation potential from Los Amigos de Valles Caldera, as they are a separate entity. A capital campaign for donations associated with financing facility development is further described in Appendix E.

Other – Green Burial

As with revenue estimations, the operating costs of the green burial venture is modeled on assumptions derived from personal communications with Joe Sehee. It is anticipated that approximately 20 percent of sales would go towards the concessionaire fee which would include marketing and operations of the green burial cemetery.¹⁸⁶ The remaining sales from green burial services will contribute to the general management of natural resource and conservation activities. As described in section 6.2, additional staff will be required to handle the procurement process for the green burial contract with the concessionaire.

7.2.4 Administrative and Marketing Costs

The demands placed on Preserve administration will increase in the future as new programs are implemented. In addition, marketing the enterprises will require larger budget allocations. It is recommended that a marketing and communication staff be recruited and trained for existing and future programs and ventures. This staff will be responsible for advertising public programs, implementing marketing strategies, and assisting with coordination of activities and events on the Preserve. It is expected that the annual personnel

¹⁸⁶ Personal Communication with Joe Sehee, Executive Director, Green Burial Council, July 11, 2008.

cost of one marketing/communication director and two additional marketing and administrative staff will be \$174,000, as described in section 6.2 above. In addition, the Preserve marketing and advertising budget is expected to increase from approximately \$30,000 to \$60,000 annually. Additional marketing budget is modeled for the cost of the green burial cemetery. It is assumed that a portion of the concessionaire fee (20 percent of green burial sales) will be contributed to operating costs and marketing expenses of the program.

7.2.5 Sensitivity Analysis

Some assumptions have less impact on projected revenues and costs than others. For example, the rental rate per day for the conference room in the education and research center is projected at \$50 per day. Even if this were doubled to \$100 per day, net revenues would change by only \$3,000 per year because it is also assumed that only one room is rented per day. On the other hand, the assumption about how the Preserve development is funded has major implications for costs. For Alternative 1, if Congress pays for the education and research center, the Trust will not be responsible for annual payments of \$350,000.

Because of the sensitivity of financial performance to building and development costs, different funding assumptions are considered for each alternative. First “Funding Mechanism A” assumes that Congress pays for the development of the visitor center, Preserve headquarters, and upgrades requested in the 2009 budget.¹⁸⁷ Donations pay for the development of the education and research center, and the Trust is responsible for any remaining developments. Second “Funding Mechanism B” assumes Congress pays for the visitor center and Preserve headquarters, but that donations cover the costs for not only the education and research center but also the renovation of existing cabins and development costs for the campground. The cost savings effects of funding “Funding Mechanism B” compared to funding “Funding Mechanism A” are:

- Reduction of \$0.6 million in down payment costs
- Approximately \$2.0 million increase in net retained earnings by Year 6

An abbreviated list of the major assumptions used to develop the pro-forma financial statements is provided below (see Table 26). All future references to the alternatives in this section are for Funding Mechanism A, as described in the paragraph above.

¹⁸⁷ These upgrades include 25 miles of Preserve roads, development of public parking lots, and any deferred maintenance of buildings not included with the cabin rentals. The costs for upgrades to the water system, remaining deferred maintenance, and cost for visitor center that are requested in the FY 09 budget are included elsewhere in the facility development cost assumptions.

Table 26
Major Assumptions

	Alternative 1	Alternative 2
Visitors Center		
Year built	1	1
Development paid by	Congress	Congress
Additional personnel	13	7
Total spending per visitor	\$19.50	\$19.50
Headquarters		
Year built	1	1
Development paid by	Congress	Congress
Other Preserve Updates		
Year built	1	1
Development paid by	Trust	Trust
Education and Research Center		
Year built	3	3
Development paid by	Donations	Donations
Additional personnel	5	5
Camping		
Year built	1	1
Development paid by	Donations	Donations
Units	110	60
Rate per tent	\$20	\$20
Rate per RV	\$40	\$40
Additional personnel	7	4
Wildlife Tent Camps		
Year built	3	2
Development paid by	Donations	Donations
Units	12	12
Average rate	\$450	\$450
Existing Cabin Rentals		
Year built	1	1
Development paid by	Donations	Donations
Additional personnel	4	4
Room rate	\$500	\$500
Mid-Level Lodge		
Year built	2	n/a
Development paid by	Trust	n/a
Operated by	Concessionaire	n/a
Room rate	\$150	n/a
Percent of sales collected	30%	n/a
Additional personnel	0	n/a
High-End Lodge		
Year built	5	n/a

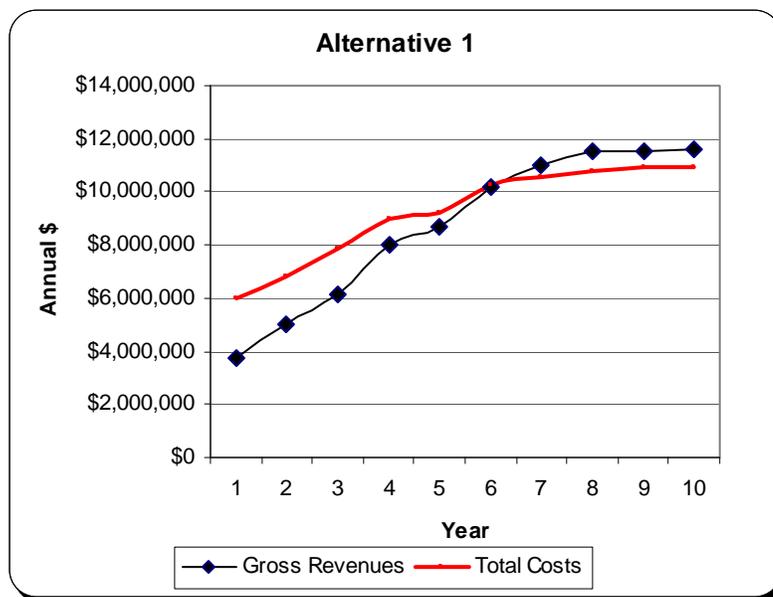
	Alternative 1	Alternative 2
Development paid by	Trust	n/a
Operated by	Concessionaire	n/a
Room rate	\$580	n/a
Percent of sales collected	%50	n/a
Additional personnel	0	n/a
Hunting Program		
Hunting visitors	1,800	1,800
Revenue per visitor	\$195	\$195
Additional tags	15	15
Revenue per tag	\$16,000	\$16,000
Fishing Program		
Annual San Antonio Visits	1,800	1,800
Annual E. Fork Visits	1,800	1,800
Revenue per visitor	\$37	\$37
Cattle Grazing		
Revenues	\$50,000	\$50,000
Green Burial		
Acres	30	15
Sales per Year	300	300
\$ per Plot	\$4,000	\$4,000
Operating & Marketing Cost	20 % of sales	20% of sales
Financial Assumptions		
Interest rate	4.5%	4.5%
Maturity (years)	30	30
Annual loan payments	\$1,666,170	\$0
Other Sources of Financing		
Annual Fundraising	\$525,000	\$525,000
Annual Appropriations for Operations		
Year 1	\$2,500,000	\$2,500,000
Year 2	\$2,500,000	\$2,500,000
Year 3	\$2,000,000	\$2,000,000
Year 4	\$1,500,000	\$1,500,000
Year 5	\$1,000,000	\$1,000,000
Years 6-10	\$0	\$0
Other Preserve Operations		
Marketing costs	\$233,492	\$233,492
Administrative costs	\$532,000	\$532,000
Preserve O & M	\$460,000	\$460,000
Existing personnel	\$2.01 mil.	\$2.01 mil.
Annual thinning costs	\$1.2 mil.	\$1.2 mil.
Annual thinning revenues	\$672,000	\$672,000

7.2.3 Results

Alternative 1

Under Alternative 1, the Preserve's operating income is projected to cover operating expenses by Year 6, which represents the Year 2016. However, no federal assistance would be required beyond Year 5 or 2015. Figure 2 shows the trends in both revenues and costs by year.

Figure 2
Projected Annual Revenues and Costs



Gross revenues include those from programs and ventures on the Preserve, as well as fundraising efforts and interest income from the revenues account. Capital requirements will be quite large during the first six years. For this analysis, it is assumed that special appropriations will be granted, and loans from the FFB will cover the capital needs for those facilities that will require financing. Total costs include all operating costs of the Preserve, as well as financing costs for any development loans from the FFB. Projected costs exceed revenues for the first five years, during which time it is expected that annual appropriations from Congress will more than cover the difference.¹⁸⁸

¹⁸⁸ Appropriation levels assumed in this analysis are described in Section 7.2.

Table 27 displays the projected condensed operating statements for the Preserve, and shows how retained earnings are expected to accumulate from Year 1 to Year 10. The table also shows the amount of capital required to develop the facilities considered in Alternative 1. The Capital Needs (Financed) row shows the total capital requirements for all facilities that are planned to be developed with FFB loans. The Capital Needs (Donated) row displays the total capital requirements of all facilities that are assumed to be developed with either appropriation from Congress or university donations.

Table 27
Alternative 1
Condensed Operating Statement for Valles Caldera National Preserve (\$1,000s)

Revenues / Expenses	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Sales/Funds/Fees Collected	\$3,183	\$4,488	\$5,601	\$7,404	\$8,050	\$9,566	\$10,389	\$10,847	\$10,847	\$10,847
Operating Expenses	(\$1,665)	(\$2,412)	(\$2,548)	(\$3,990)	(\$4,200)	(\$4,461)	(\$4,784)	(\$4,972)	(\$4,972)	(\$4,972)
Personnel Expenses	(\$2,516)	(\$2,516)	(\$2,546)	(\$2,244)	(\$2,244)	(\$2,274)	(\$2,274)	(\$2,303)	(\$2,303)	(\$2,303)
General and Admin. Costs	(\$1,817)	(\$1,767)	(\$1,767)	(\$1,767)	(\$1,767)	(\$1,767)	(\$1,767)	(\$1,767)	(\$1,767)	(\$1,767)
Income from Operations	(\$2,816)	(\$2,207)	(\$1,260)	(\$597)	(\$161)	\$1,065	\$1,564	\$1,805	\$1,805	\$1,805
Annual Fundraising	\$525	\$525	\$525	\$525	\$525	\$525	\$525	\$525	\$525	\$525
Loan Payments	\$0	(\$221)	(\$1,099)	(\$1,099)	(\$1,099)	(\$1,887)	(\$1,887)	(\$1,887)	(\$1,887)	(\$1,887)
Interest Income	\$0	\$11	\$41	\$51	\$70	\$87	\$77	\$90	\$117	\$145
Appropriations	\$2,500	\$2,500	\$2,000	\$1,500	\$1,000	\$0	\$0	\$0	\$0	\$0
Annual Net Profit	\$209	\$608	\$207	\$380	\$335	(\$210)	\$279	\$534	\$561	\$589
Total Retained Earnings	\$209	\$817	\$1,025	\$1,405	\$1,740	\$1,529	\$1,808	\$2,342	\$2,903	\$3,492
Capital Needs (Financed)	\$3,593	\$14,308	\$0	\$0	\$12,833	\$0	\$0	\$0	\$0	\$0
Capital Needs (Donated)	\$11,593	\$0	\$10,742	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Results by Enterprise

Under Alternative 1, the largest projected sources of revenue over the first ten years are the visitor center, green burial, other programs, and lodges. Table 28 shows the estimated percentages of revenues by enterprise.

Table 28
Percent of Revenue from Annual Operations
for Years 1–10, by Enterprise

Enterprise	Percent
Green Burial	16
Visitor Center	15
Other Programs	12
Mid-Level Lodge	10
Hunting	8
Fundraising	7
Wildlife Tent Camps	6
Existing Cabin Rental	5
Education and Research Center	5
High-End Lodge	5
Interest Income	4
Campground	3
Fishing	2
Cattle Grazing	1
Total	100%

Table 29 shows the pro-forma income statement for the Preserve by year and enterprise. The operating revenues start to turn positive in Year six of the analysis, while the fundraising and other revenues contribute to a positive stream of net income throughout the time period.

Table 29
Alternative 1
Pro-Forma Income Statement for Valles Caldera National Preserve (\$1,000s)

Revenues	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Visitor Center	\$82.5	\$713.5	\$885.6	\$1,099.3	\$1,364.6	\$1,693.9	\$2,102.7	\$2,340.0	\$2,340.0	\$2,340.0
Mid-Level Lodge	\$0.0	\$0.0	\$766.4	\$951.3	\$1,063.1	\$1,063.1	\$1,063.1	\$1,063.1	\$1,063.1	\$1,063.1
High-End Lodge	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$852.6	\$852.6	\$852.6	\$852.6	\$852.6
Education/Research Center	\$0.0	\$0.0	\$0.0	\$507.6	\$507.6	\$507.6	\$507.6	\$507.6	\$507.6	\$507.6
Campground	\$0.0	\$159.8	\$198.4	\$246.3	\$305.7	\$379.4	\$471.0	\$504.5	\$504.5	\$504.5
Existing Cabin Rentals	\$0.0	\$405.0	\$405.0	\$405.0	\$405.0	\$405.0	\$405.0	\$405.0	\$405.0	\$405.0
Wildlife Tent Camping	\$0.0	\$0.0	\$0.0	\$680.4	\$680.4	\$680.4	\$680.4	\$680.4	\$680.4	\$680.4
Hunting	\$591.0	\$591.0	\$591.0	\$591.0	\$591.0	\$591.0	\$591.0	\$591.0	\$591.0	\$591.0
Fishing	\$133.2	\$133.2	\$133.2	\$133.2	\$133.2	\$133.2	\$133.2	\$133.2	\$133.2	\$133.2
Cattle Grazing	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0
Green Burial	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0
Thinning	\$672.0	\$672.0	\$672.0	\$672.0	\$672.0	\$672.0	\$672.0	\$672.0	\$672.0	\$672.0
Other Programs	\$453.9	\$563.4	\$699.4	\$868.2	\$1,077.7	\$1,337.7	\$1,660.6	\$1,848.0	\$1,848.0	\$1,848.0
Total Revenues	\$3,182.6	\$4,487.9	\$5,601.0	\$7,404.3	\$8,050.3	\$9,566.0	\$10,389.1	\$10,847.4	\$10,847.4	\$10,847.4
Operating Expenses										
Visitor Center	\$55.0	\$426.0	\$475.6	\$537.3	\$613.8	\$708.8	\$826.7	\$895.1	\$895.1	\$895.1
* Mid-Level Lodge	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
* High-End Lodge	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Education and Research Center	\$0.0	\$0.0	\$0.0	\$1,256.9	\$1,256.9	\$1,256.9	\$1,256.9	\$1,256.9	\$1,256.9	\$1,256.9
Campground	\$0.0	\$138.8	\$138.8	\$138.8	\$138.8	\$138.8	\$138.8	\$138.8	\$138.8	\$138.8
Existing Cabin Rentals	\$0.0	\$167.2	\$167.2	\$167.2	\$167.2	\$167.2	\$167.2	\$167.2	\$167.2	\$167.2
Wildlife Camp Tents	\$0.0	\$0.0	\$0.0	\$406.3	\$406.3	\$406.3	\$406.3	\$406.3	\$406.3	\$406.3
* Green Burial	\$240.0	\$240.0	\$240.0	\$240.0	\$240.0	\$240.0	\$240.0	\$240.0	\$240.0	\$240.0

Table 29 continued
Alternative 1
Pro-Forma Income Statement for Valles Caldera National Preserve (\$1,000s)

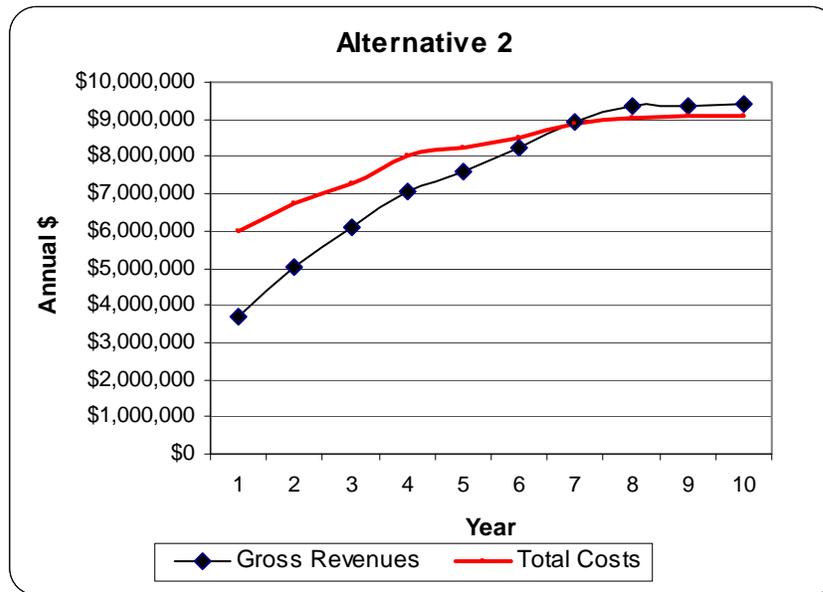
Operating Expenses										
Other Programs	\$520.4	\$590.1	\$676.6	\$784.0	\$917.3	\$1,082.8	\$1,288.2	\$1,407.5	\$1,407.5	\$1,407.5
Marketing	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0
Preserve Personnel	\$2,515.9	\$2,515.9	\$2,545.5	\$2,244.2	\$2,244.2	\$2,273.8	\$2,273.8	\$2,303.3	\$2,303.3	\$2,303.3
Thinning	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0
Administration	\$532.0	\$482.0	\$482.0	\$482.0	\$482.0	\$482.0	\$482.0	\$482.0	\$482.0	\$482.0
General Planning	\$25.0	\$25.0	\$25.0	\$25.0	\$25.0	\$25.0	\$25.0	\$25.0	\$25.0	\$25.0
Operation and Maintenance	\$850.0	\$850.0	\$850.0	\$460.0	\$460.0	\$460.0	\$460.0	\$460.0	\$460.0	\$460.0
Total Operating Expenses	\$5,998.2	\$6,694.9	\$6,860.7	\$8,001.6	\$8,211.4	\$8,501.5	\$8,824.8	\$9,042.2	\$9,042.2	\$9,042.2
Income from Operations	(\$2,815.6)	(\$2,207.0)	(\$1,259.7)	(\$597.3)	(\$161.1)	\$1,064.5	\$1,564.3	\$1,805.3	\$1,805.3	\$1,805.3
Other Income (Expense)										
Interest Income	\$0.0	\$10.5	\$40.9	\$51.2	\$70.2	\$87.0	\$76.5	\$90.4	\$117.1	\$145.1
Fundraising	\$525.0	\$525.0	\$525.0	\$525.0	\$525.0	\$525.0	\$525.0	\$525.0	\$525.0	\$525.0
Appropriations	\$2,500.0	\$2,500.0	\$2,000.0	\$1,500.0	\$1,000.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Annual Loan Payments	\$0.0	(\$220.6)	(\$1,099.0)	(\$1,099.0)	(\$1,099.0)	(\$1,886.8)	(\$1,886.8)	(\$1,886.8)	(\$1,886.8)	(\$1,886.8)
Total Other Income (Expense)	\$3,025.0	\$2,814.9	\$1,468.4	\$980.3	\$501.0	(\$1,268.3)	(\$1,277.0)	(\$1,261.1)	(\$1,232.4)	(\$1,202.3)
Net Profit (Loss)	\$209.4	\$607.9	\$207.2	\$380.0	\$335.1	(\$210.3)	\$279.0	\$533.9	\$560.6	\$588.7

*Operated by concessionaire

Alternative 2

Under Alternative 2, the Preserve is projected to cover operating expenses with operating revenues in Year 7 (2017), and will not need further federal assistance beyond Year 5 (2015). Costs do not rise as quickly as in Alternative 1, but neither do revenues. Figure 3 shows projected revenues and costs over the ten years.

Figure 3
Annual Revenues and Costs



In Year 6, projected costs exceed gross revenues slightly, but retained earnings from prior years are likely to be more than sufficient to cover this shortage. Table 30 displays the condensed operating statement, including retained earnings, for Alternative 2. It also shows the amount of capital required to develop the facilities considered. The Capital Needs (Financed) row shows the total capital requirements for all facilities that are planned to be developed with FFB loans. The Capital Needs (Donated) row displays the total capital requirements of all facilities that are assumed to be developed with either an appropriation from Congress or university donations.

Table 30
Alternative 2
Condensed Operating Statement for Valles Caldera National Preserve (\$1,000s)

Revenues / Expenses	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Sales / Funds / Fees Collected	\$3,183	\$4,493	\$5,521	\$6,460	\$6,965	\$7,554	\$8,286	\$8,711	\$8,711	\$8,711
Operating Expenses	(\$1,665)	(\$2,233)	(\$2,776)	(\$3,811)	(\$4,021)	(\$4,282)	(\$4,605)	(\$4,793)	(\$4,793)	(\$4,793)
Personnel Expenses	(\$2,516)	(\$2,516)	(\$2,546)	(\$2,244)	(\$2,244)	(\$2,274)	(\$2,274)	(\$2,303)	(\$2,303)	(\$2,303)
General and Admin. Costs	(\$1,817)	(\$1,753)	(\$1,753)	(\$1,753)	(\$1,753)	(\$1,753)	(\$1,753)	(\$1,753)	(\$1,753)	(\$1,753)
Income from Operations	(\$2,816)	(\$2,009)	(\$1,553)	(\$1,348)	(\$1,053)	(\$754)	(\$346)	(\$139)	(\$139)	(\$139)
Annual Fundraising	\$525	\$525	\$525	\$525	\$525	\$525	\$525	\$525	\$525	\$525
Loan Payments (Principal and Int.)	\$0	(\$221)	(\$221)	(\$221)	(\$221)	(\$221)	(\$221)	(\$221)	(\$221)	(\$221)
Interest Income	\$0	\$11	\$51	\$91	\$118	\$137	\$121	\$125	\$140	\$155
Appropriations	\$2,500	\$2,500	\$2,000	\$1,500	\$1,000	\$0	\$0	\$0	\$0	\$0
Annual Net Profit	\$209	\$806	\$802	\$547	\$369	(\$313)	\$80	\$291	\$306	\$321
Total Retained Earnings	\$209	\$1,015	\$1,817	\$2,364	\$2,734	\$2,420	\$2,500	\$2,791	\$3,096	\$3,417
Capital Needs (Financed)	\$3,593	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Needs (Donated)	\$7,089	\$883	\$9,668	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Results by Enterprise

The largest sources of revenues for Alternative 2 are the visitor center, green burial, other programs, and hunting. Table 31 shows the estimated percentages of revenues by enterprise.

Table 31
Percent of Revenues from Annual Operations
for Years 1–10, by Enterprise

Enterprise	Percent
Green Burial	20
Visitor Center	19
Other Programs	15
Hunting	10
Wildlife Tent Camps	9
Fundraising	8
Existing Cabin Rental	6
Education and Research Center	6
Campground	3
Fishing	2
Interest Income	1
Cattle Grazing	1
Total	100%

Table 32 displays the pro-forma income statement for the Preserve based on model results for projected revenues and expenses by year and enterprise. The net income from operations projected for Alternative 2 are negative in all years, however, the fundraising and other incomes carry the operation and result in positive net income streams for the Preserve.

Table 32
Alternative 2
Pro Forma Net Income Statement for Valles Caldera National Preserve (\$1,000s)

Revenues	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Visitor Center	\$82.5	\$713.5	\$885.6	\$1,099.3	\$1,364.6	\$1,693.9	\$2,102.7	\$2,340.0	\$2,340.0	\$2,340.0
Education/Research Center	\$0.0	\$0.0	\$0.0	\$507.6	\$507.6	\$507.6	\$507.6	\$507.6	\$507.6	\$507.6
Campground	\$0.0	\$164.6	\$204.4	\$253.7	\$283.5	\$283.5	\$283.5	\$283.5	\$283.5	\$283.5
Existing Cabin Rentals	\$0.0	\$405.0	\$405.0	\$405.0	\$405.0	\$405.0	\$405.0	\$405.0	\$405.0	\$405.0
Wildlife Camp Tents	\$0.0	\$0.0	\$680.4	\$680.4	\$680.4	\$680.4	\$680.4	\$680.4	\$680.4	\$680.4
Hunting	\$591.0	\$591.0	\$591.0	\$591.0	\$591.0	\$591.0	\$591.0	\$591.0	\$591.0	\$591.0
Fishing	\$133.2	\$133.2	\$133.2	\$133.2	\$133.2	\$133.2	\$133.2	\$133.2	\$133.2	\$133.2
Cattle Grazing	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0
Green Burial	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0
Thinning	\$672.0	\$672.0	\$672.0	\$672.0	\$672.0	\$672.0	\$672.0	\$672.0	\$672.0	\$672.0
Other Programs	\$453.9	\$563.4	\$699.4	\$868.2	\$1,077.7	\$1,337.7	\$1,660.6	\$1,848.0	\$1,848.0	\$1,848.0
Total Revenues	\$3,182.6	\$4,492.8	\$5,521.0	\$6,460.4	\$6,965.0	\$7,554.3	\$8,285.9	\$8,710.7	\$8,710.7	\$8,710.7
Operating Expenses										
Visitor Center	\$55.0	\$300.0	\$349.7	\$411.3	\$487.9	\$582.9	\$700.8	\$769.2	\$769.2	\$769.2
Education and Research Center	\$0.0	\$0.0	\$0.0	\$1,256.9	\$1,256.9	\$1,256.9	\$1,256.9	\$1,256.9	\$1,256.9	\$1,256.9
Campground	\$0.0	\$85.8	\$85.8	\$85.8	\$85.8	\$85.8	\$85.8	\$85.8	\$85.8	\$85.8
Existing Cabin Rentals	\$0.0	\$167.2	\$167.2	\$167.2	\$167.2	\$167.2	\$167.2	\$167.2	\$167.2	\$167.2
Wildlife Camp Tents	\$0.0	\$0.0	\$406.3	\$406.3	\$406.3	\$406.3	\$406.3	\$406.3	\$406.3	\$406.3
* Green Burial	\$240.0	\$240.0	\$240.0	\$240.0	\$240.0	\$240.0	\$240.0	\$240.0	\$240.0	\$240.0
Other Programs	\$520.4	\$590.1	\$676.6	\$784.0	\$917.3	\$1,082.8	\$1,288.2	\$1,407.5	\$1,407.5	\$1,407.5
Marketing	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0	\$60.0
Preserve Personnel	\$2,515.9	\$2,515.9	\$2,545.5	\$2,244.2	\$2,244.2	\$2,273.8	\$2,273.8	\$2,303.3	\$2,303.3	\$2,303.3

Table 32 continued
Alternative 2
Pro Forma Net Income Statement for Valles Caldera National Preserve (\$1,000s)

Operating Expenses	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Thinning	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0	\$1,200.0
Administration	\$532.0	\$468.0	\$468.0	\$468.0	\$468.0	\$468.0	\$468.0	\$468.0	\$468.0	\$468.0
General Planning	\$25.0	\$25.0	\$25.0	\$25.0	\$25.0	\$25.0	\$25.0	\$25.0	\$25.0	\$25.0
Operation and Maintenance	\$850.0	\$850.0	\$850.0	\$460.0	\$460.0	\$460.0	\$460.0	\$460.0	\$460.0	\$460.0
Total Operating Expenses	\$5,998.2	\$6,502.0	\$7,074.0	\$7,808.6	\$8,018.4	\$8,308.5	\$8,631.8	\$8,849.2	\$8,849.2	\$8,849.2
Income from Operations	(\$2,815.6)	(\$2,009.2)	(\$1,553.0)	(\$1,348.2)	(\$1,053.4)	(\$754.2)	(\$345.9)	(\$138.5)	(\$138.5)	(\$138.5)
Other Income (Expense)										
Interest Income	\$0.0	\$10.5	\$50.8	\$90.9	\$118.2	\$136.7	\$121.0	\$125.0	\$139.5	\$154.8
Fundraising	\$525.0	\$525.0	\$525.0	\$525.0	\$525.0	\$525.0	\$525.0	\$525.0	\$525.0	\$525.0
Appropriations	\$2,500.0	\$2,500.0	\$2,000.0	\$1,500.0	\$1,000.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Annual Loan Payments	\$0.0	(\$220.6)	(\$220.6)	(\$220.6)	(\$220.6)	(\$220.6)	(\$220.6)	(\$220.6)	(\$220.6)	(\$220.6)
Total Other Income (Expense)	\$3,025.0	\$2,814.9	\$2,355.2	\$1,895.3	\$1,422.6	\$441.1	\$425.4	\$429.4	\$444.0	\$459.2
Net Profit (Loss)	\$209.4	\$805.7	\$802.2	\$547.1	\$369.2	(\$313.1)	\$79.5	\$290.9	\$305.5	\$320.8

*Operated by concessionaire

7.3 Risk and Return

The diversification of investments is an important concept in finance management. In order to achieve financial self-sufficiency, the aim of the Preserve is to maximize returns, while at the same time minimize risk. This section provides information concerning the risk and return of the results from the two alternatives presented above.

In the above section, projected results of future projects were presented showing the potential for financial returns under a host of assumptions. A key feature of this project appraisal for the Trust is its orientation toward the future. The assumptions presented in this analysis are the product of detailed research into future financial returns, costs, and impacts of the ventures. While the in depth research behind each assumption increases the certainty of future events, it does not eliminate it entirely.

The risk that the Trust faces in making the investments into the portfolio of ventures considered in this analysis is that the actual return will not be the same as the expected return. While the actual return may be higher, the risk is that the actual returns will be lower than anticipated. A prudent group of investment managers like the Board will want to avoid too much risk, and feel confident that the future returns from their investment will be as expected.

The risks of the investments considered in this analysis may be considered high by some standards, while at the same time, low by others. The decision makers for the Trust must find their collective risk tolerance for the investments associated with the ventures analyzed in this study. It is highly likely that the ultimate investment decisions made by the Board will be different than either scenario presented in this document. In light of this, a financial model was created to show how future costs and returns change as assumptions are modified. The financial model is explained further in Section 7.1.

7.3.1 Growth Prospects

The investment in steadily growing markets is an important consideration. Many of the ventures considered in this analysis are designed to satisfy public demand for outdoor recreational pursuits and other wilderness activities. The market analysis above includes detailed information on the current demand for the various ventures considered.

7.3.2 Spreading Risk

Individual investments cannot be viewed simply by their risk and return. The relationship between the return from one investment and that from other investments is just as important.

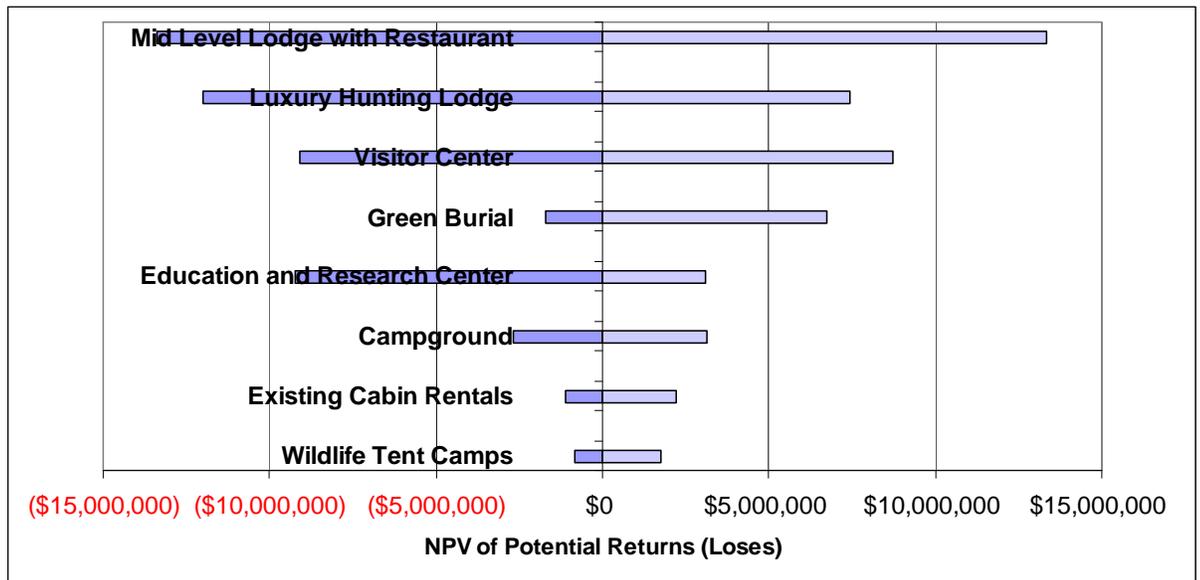
An example from an individual investor viewpoint would be buying stock in one company making umbrellas, while at the same time investing in another company making ice-cream. The weather will affect the two companies differently. Therefore, the risk will be reduced through diversification.

The Preserve already has a diverse portfolio of investments through the various hunting, fishing, and outdoor recreation programs. Further diversification would be achieved through investments in one or all of the ventures considered in this analysis.

7.3.3 Security

The level of security that investors need to feel confident in the ability of their investment to gain the desired return will weigh heavily on their investment decision. The ventures considered in this analysis all carry some level of risk. A risk tornado graph was created to show the magnitude of risk as compared to potential return of the various ventures. The risk tornado shows the spectrum of potential risks and returns for the ventures considered. All of the low-end estimates (shown on the left half of the graph) were generated based on worst case scenarios, while the high-end estimate (shown on the right side of the graph) is based on the best case scenario.

**Figure 4
Risk Tornado**



8.0 Moving Forward

The preceding report for the Valles Caldera Trust suggests that if capital is made available for infrastructure improvement and creation; and if federal support continues in a declining fashion for the next six years until 2015, the Trust will be able to meet the goal of self-sufficiency by Year 2015. That is, the Preserve will be able to cover all operating and finance costs for annual activities at that point. Furthermore, if implementation of these recommendations is successful, the Trust will be able to begin building upon its retained earnings and develop a revenue fund, which can be used for additional developments, ongoing maintenance, and rainy-day needs. However, in order to realize the development of facilities and implementation of new programs described in this document the Trust will need to finalize the plan in accordance with its regulatory framework. Once, this has been done, progress toward financial self-sufficiency should be monitored carefully.

In Section 8.1, a description is provided for how the Trust can monitor progress toward meeting the recommended targets. For achieving financial self-sufficiency within the short time-frame allotted, a monitoring plan should be established and followed diligently. Section 8.2 briefly describes how the Preserve may move forward using the financial model. The user-friendly spreadsheet interface can be a useful tool for tailoring alternative priorities as determined by the Trust.

8.1 Monitoring Plan

Once an optimal plan has been completed and accepted, the infrastructure investment and program development processes will require ongoing financial monitoring in the same way that the ecologic system on the Preserve is monitored through the science program. That is, progress along the expected path to, and beyond self-sufficiency will need to be checked in a formal manner so that adaptations can respond to the changing needs of the public and realities of business operations. To accomplish this, the Administrative Officer should inform the Executive Director and Board on an annual basis regarding which of the planned

financial goals have been achieved, which have been delayed, and which have been exceeded. On at least an annual basis, these items should be reviewed, and the financial model adjusted so that the goal of self-sufficiency may be achieved at the same pace as intended in the enabling legislation of the Preserve. Due to the many areas of uncertainty in this and any other model used for projecting future conditions, the estimates in this plan are designed to be the best possible estimates given available information. Hence these are neither conservative nor optimistic estimates. Some of the most important features to monitor on an annual basis are briefly described below.

Furthermore, according to Section 110 of the Act, *“If after the fourteenth full fiscal years from the date of acquisition of the Baca ranch under section 104(a), the Board believes the Trust has met the goals and objectives of the comprehensive management program under section 108(d), but has not become financially self-sustaining, the Board may submit to the Committees of Congress, a recommendation for authorization of appropriations beyond that provided under this title.”* (from Section 110, “Termination of the Trust”). In order for the Board to recommend authorization of appropriation beyond 2015 there will need to be justification for such appropriations. A successful monitoring program will possibly provide this justification, if needed.

8.1.1 Pace of Development

Most critical to revenue generation is Preserve visitation, and/or participation in Preserve activities. Keeping tabs on both the numbers of visitors to the Preserve and how much each visitor is charged, can provide valuable information about revenue-generating potential. Informal information may also be collected, such as comments made to Preserve employees as to whether charges are discouragingly high, or pleasantly low in the eyes of visitors will be important to monitor. This monitoring should be incorporated into daily or weekly tasks for all employees in charge of activities. Tallies should be aggregated, and the information can be posted to the Preserve website as a way to both monitor and promote the Preserve at the same time.

The pace of increase over time is as important as the number of visitors. Once marketing of programs has begun in a concerted fashion, it is possible that interest in the Preserve will increase more rapidly than projected. Conversely, it is also possible that demand may not increase as fast as expected. For example, delays in construction of the visitor center, and/or the failure to provide readily-available food on the Preserve could have a profound dampening effect on visitation despite marketing efforts. If such a pattern begins to emerge, the Trust may want to consider conducting a visitor satisfaction survey so that alternative plans can be made to meet the needs of visitors prior to the development of the planned infrastructure. It may be useful to continue the status of ‘interim programs’ until such a time as the planned infrastructure is in place. Of the highest priority will be to maintain the momentum of increasing visitation.

8.1.2 On-going Monitoring

When the infrastructure for the Preserve has been developed, and assuming the recommendations have been successfully carried out, the ecological principle of Adaptive Management must be continued. Adaptive Management is an important characteristic of the Preserve because it provides for data collection, inventorying, and monitoring of natural resources on the Preserve. This data can be used in several applications, including reducing impact of activities on the natural resources, optimizing the use of natural resources on the Preserve, compliance requirements, and expanding scientific knowledge.

Adaptive Management must also be coupled with several other important steps that together, will ensure that the Preserve is developed in accordance with the accepted plan of action. One important step in the monitoring process is the creation of short-, medium-, and long-term financial performance plans. These plans need to be developed for each of the units to be monitored and their horizons should be set for three, five, and fifteen years for the short-, medium-, and long-term plans, respectively. At the date of maturity of each of these plans, a formal evaluation is advised to assess the performance of each business unit separately, as well as the Preserve as a whole. At this point, the next financial plan needs to be adjusted, in order to take into account the changing structure of the economic and business conditions. Moreover, it is advisable that outside independent assessors/auditors are hired for this task to ensure the unbiased data gathering and analysis.

Also, the Preserve needs to develop good working relationships with local businesses in Jemez Springs, as well as the Los Alamos Chamber of Commerce. This would create numerous opportunities to not only receive feedback regarding the local perceptions of the Preserve's operations, but to also partner in promoting the area as a larger attraction. This unified marketing strategy may prove to be comparatively inexpensive and effective, since local businesses may be able to increase the Preserve's visitation and the Preserve may increase the number of customers for these businesses. Feedback from these partners should be part of the monitoring process.

Finally, a strategy should be developed to better understand the customer base, and in particular the geographic origins of the visitors. Since the dynamics of the economy and demographics do change, these data will change with it, and promotional strategies need to respond.

Because many of the ventures in the plan have differing business models, monitoring them will require different approaches and techniques. Strategies for each are described below.

Lodging and Hospitality

Some of the most important data in lodging and hospitality are occupancy rates. Throughout the year, these rates vary and keeping track of their changes provides a good measure of the health of a business venture. Occupancy rates for all units within this category need to be analyzed, in order to determine their trends, both annual and seasonal. This would allow for monitoring the intra-year operating performance, as well as for analyzing how the business units follow their projected operations in the final pro-forma financial statements.

In addition to occupancy rates, it is also important to determine the sensitivity of demand for lodging and hospitality to price changes. This information could be attained through the comparison of the increase in demand for the different lodging options, as different sales and promotions are undertaken, effectively reducing the price of lodging at the Preserve. Analyzing this data should reveal the optimal path to charging for lodging at the Preserve, whether it be higher, lower, or similar prices as before.

Another focus item for the monitoring program is keeping track of market developments among similar businesses in the area. Generally, the regional tendencies within a business category are similar among the neighboring businesses, so that the observed market developments in similar businesses nearby (hotels, motels, resorts, et cetera) could be assumed to apply to Preserve business ventures.

The overall performance of each business venture within this category should also be tracked. This includes not only its occupancy rates, but also its operating and total costs, revenues, and net returns. This performance needs to be checked against the previously defined goals, both within the three-, five-, and fifteen-year goals, and within the annual operations. The setting of these goals is an important part of staying on-track with the Preserve development.

Uses of funds by each business unit/venture also need close inspection. With different ventures requiring differing funding annually, it is of utmost importance to differentiate between the uses of funds by venture, since otherwise, it would be extremely difficult to pinpoint any operational changes, both positive and negative, that occur within a particular venture.

Education and Research

A monitoring program for the education and research center would serve the purpose of recording the number of bench users, conference room rentals, and teachers / students using the dormitory and kitchen facilities. Occupancy and use rates for all types of facilities with the education and research center need to be analyzed, in order to determine trends, both annual and seasonal. This will allow for monitoring the intra-year operating performance, as

well as analyzing how the use rates of the facilities follow their projected operations in the final pro-forma financial statements.

Domestic Livestock Grazing

A monitoring program already exists for the environmental effects of grazing on the Preserve. It is anticipated that as knowledge of the range expands, the monitoring program will become more efficient and effective. Other monitoring should include a record and analysis of revenue generation from grazing leases.

Hunting

The adaptive management for the grazing program also applies to the quality and quantity of forage for wildlife. Therefore, additional biological monitoring of wildlife is likely unnecessary. However, financial monitoring of hunting revenues and participants will be necessary to monitor the difference in value between in state and out of state permits for game animals. This information is important to consider when developing and implementing a marketing program.

Fishing

The fishing programs are strictly controlled so as to avoid destruction of natural resources. For example, visitors are driven in by recreational assistants to minimize driving. Only single barbless hooks are allowed, waders are not allowed, and nets can only be used if loaned from the Preserve to minimize impact on fish. Also, the number of anglers is regulated in order to minimize impacts as well. These restrictions do not significantly alter fishing techniques on the streams but are important to protect the fish population from over harvest, Whirling Disease, and other negative impacts. A monitoring program could potentially be designed to evaluate the health of the fish population, possibly in connection with the biological aspects of the education and research center. Financial monitoring should include participation numbers and revenue collection. This information is important when developing and implementing a marketing program for the fishing programs.

Public Programs

An important indicator for public programs is customer satisfaction. The data on customer satisfaction should be gathered through surveys given out to Preserve visitors, mainly public program participants.

Commercial Film and Photography

A monitoring program for the commercial film and photography activities could involve biological, archeological, and financial issues. Biological and archeological monitoring would be necessary if large film sets were constructed on the Preserve. Financial monitoring would need to include a record of the number of users, as well as revenue generation. These financial indicators would help identify trends and future needs for expansion of commercial film and photography activities on the Preserve.

Timber

A monitoring program for the timber will need to record the acres of forest thinned, cost of thinning, and revenues received from the sale of thinned materials. Locations of thinned material, using geographic positioning and geographical information systems will also be useful to documenting the progress of the thinning program.

Merchandise

Detailed financial records of sales of merchandise and food products should be kept for the visitor center gift shops. These records will be useful in preparing future inventory levels, and reporting on financial progress, among other things.

Donations

Donation levels specific to fundraising activities need to be documented for purposes of tax exemptions from donors.

Other

Green burial service monitoring should occur by recording burial plot usage, dates used, as well as the activity funded through the sale of green burial plots (ie wildlife management, habitat improvement, etc.). This is important because people buying the plots will want to know that their contributions paid for conservation activities on the Preserve.

8.2 Recommended Indicators

There are several important success indicators that will facilitate the monitoring process and foster good communication of that progress. Performance indicators will allow the Trust and Board to assess progress in implementing the programs and facilities analyzed in this report.

First, all business activities need to compare actual financial statements with those estimated in the final pro forma financial statements, in order to ensure that these units are on-track to full development and financial self-sufficiency. Each year this indicator will let the Preserve know which areas of its total development require adjustments, as well as what these adjustments need to be.

Another important indicator is annual expenditures by tourists on the Preserve. Knowing both the total and per visitor expenditures, as well as the demographic trends within the target market will make it possible to adjust operating projections for the future periods.

Closely tied with the previous indicator, the rates of change in participation in each of the visitor activity on the Preserve are also important. Keeping track of this data makes it possible to spot changes in demand for certain activities, signaling for either changes in promotional strategies, or operational strategies, as well as the supply of the activities offered.

Fourth, an economic impact study needs to be done to determine how the local economies are affected by the developments on the Preserve. This study will pinpoint positive, as well as negative effects of the Preserve's operations, allowing it to expand the former and to mitigate the latter. In addition, the study will highlight the areas for potential partnerships that the Preserve may enter into within the local community, helping both sides develop.

Finally, the Executive Director, Trust Board, and Preserve science staff will need to develop a set of ecological indicators that will provide key information about how and if visitor use impacts sensitive ecological processes.

Lodging and Hospitality

One of the most important indicators in this category is occupancy rates at each of the business units. These indicators directly lead to profitability and changes and trends should be analyzed monthly to identify any trend change or reversal, signaling the need for adjustment in the operating or marketing strategy of the venture affected. Alternatively, these indicators may also be used to reassure the Preserve that the plan strategy is effective, as expected.

Education and Research

Usage rates and revenue collection from the education and research center will be an important financial performance indicator. Expected revenue and usage rates for the education and research center are identified in section 7.2.2. It will be important to track progress in achieving these performance indicators to justify the cost of operating the education and research facility.

Domestic Livestock Grazing

Performance indicators for range quality of the Preserve include such things as measured Animal Units, which the Preserve scientist and staff measure and report on monthly. Other performance indicators should include revenue generation from lease agreements and any program costs.

Hunting

As mentioned in section 7.1.1 the annual revenue generation anticipated from the hunting programs is \$591,000. This includes \$351,000 from the existing program through 1,800 visitors and another \$240,000 from the sale of enhancement permits. The \$351,000 should be an adequate performance indicator for the hunting program, as uncertainty surrounds the enhancement permit sales.

Fishing

Performance indicators for the biological monitoring program would include number of fish (through electro shocking) and average size (girth, length, etc.). Tracking the biological status of the fishing rivers will be important to maintaining the fish habitat on the Preserve. Other important performance indicators for the business venture include number of visitors, revenue generation, and applications. It is anticipated that approximately 3,600 total visitors will participate in the fishing program annually. It is further estimated that 1,800 will use the East Fork program and the same amount will participate in the San Antonio program. These participation rates are anticipated to occur within the first year of analysis and are expected to represent the capacity of the programs.

Public Programs

The data collected from surveys will not only lets the Trust know their customers perception of its services, but it may also pinpoint any weaknesses in its operations. Furthermore, this data needs to be compared with similar data from other preserves and national parks to determine how the Preserve is perceived, compared to other similar organizations and their operations. Here, it is important to stay in touch with other attractions along the Jemez Mountain Trail, as these may be considered as part of a single larger attraction.

Commercial Film and Photography

Biological and archeological factors associated with monitoring commercial film and photography sites will be site specific. If intensive use of the site is anticipated the staff may

need to perform additional inventory of such resources. However, if only minimal use is anticipated it is likely that little monitoring will be required.

Timber

The thinning program is expected to cover 1,200 acres per year. This amount of thinning is necessary to ensure the health of forest resources on the Preserve. Revenue projections are anticipated to cover roughly half of the costs of thinning. Both the acreage and total cost of the thinning program are suitable performance indicators.

Merchandise

Merchandise sales are anticipated to be close to \$8 per visitor, as described in section 7. While sales per visitor are an important performance indicator, a more valuable indicator is net revenue from the merchandise sales. Progress of net revenue should follow that outlined in the pro-forma net income statements identified above.

Donations

As described in section 7.2.2, donations from Los Amigos de Valles Caldera are anticipated to be \$525,000 annually. This is an important indicator as these donations will be needed for maintenance and operation of the Preserve. Progress in achieving this level of donations should be tracked closely. Also, other donations from Universities and private individuals are critical for facility development. A capital campaign should be started immediately with the goal of obtaining funds in the amounts reported in section 7.1.1 and the assumptions table in section 7.2.2.

Other

Green burial service is considered in both alternatives, and it is anticipated that 300 plots will be sold annually. This does not imply that people will utilize these plots, but they will gain access to them when the time is needed. This level of sales should be an appropriate performance indicator for the green burial service.

8.3 Using the Financial Model

Although two alternatives were analyzed in this report, the financial model developed to analyze the revenue-generating potential of the Preserve can be scaled to analyze a much wider variety of potential options. In order for the Trust to be able to explore these options,

instructions are provided in Appendix F. These instructions are designed for use with the spreadsheet model titled, “Valles Caldera Financial Model.xls.” As described in Chapter 7, it will be important for the Trust to explore its own levels of risk and return expectations in order to determine the optimal portfolio of investment for the Preserve. Even if the Trust were to accept Alternative 1 or Alternative 2 exactly as described in this report, the financial model is suitable for conducting an evaluation of alternatives as will be required during the NEPA process(es) that may follow a plan for economic development. On an annual basis, however estimating in the model will need to be updated to current-year dollar equivalents.

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Personal communication with Dr. Ian Billick-Executive Director- Rocky Mountain Biological Laboratory, Crested Butte, CO www.rmbll.org .

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Personal communication with Ralph Barela, Owner, Barela Timber Management Company, on August 25 and 26, 2008.

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Personal communication with Ron Ortega, Forester, New Mexico Forest and Watershed Institute, on August 25, 2008.

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Appendix A – Explanation of Screening Methodology

The initial scope of work for this project called for an analysis of eleven different enterprise activities including lodging and hospitality, education and research, domestic livestock grazing, hunting, fishing, public programs, commercial film and photography, timber, merchandise, donations and other. ENTRIX originally performed a reconnaissance level screening analysis for these various enterprises to determine the overall suitability of developing these enterprises on the Preserve. The ENTRIX screening tool (EST) takes a “first cut” look at the issues involved with introducing selected businesses onto a region. In this project it was used to assess the viability of proposed businesses on the Valles Caldera National Preserve (Preserve). The EST approach gathers, summarizes and places into simple metrics the information about key indicators of economic success. Ultimately this information was used to develop a reconnaissance level feasibility assessment of the alternative business opportunities.

The EST process places the business venture proposals on a level playing field by applying a uniform approach to the preliminary feasibility analysis. The approach developed for screening includes a combination of quantitative and qualitative methodologies. The objective of industry screening and targeting is to identify businesses or industries with profit potential and long-term sustainability.

A series of criteria are used in the screening, and these criteria are divided into four topic areas, “Physical Requirements,” “Situational Analysis,” “Community,” and “Profit Potential.” The Physical Requirements section includes a comprehensive list of the resource and input needs of the proposed venture. The Situational Analysis is focused on the market, regulatory, and legal situations that would be faced by the venture. The Community section addresses how well suited each enterprise is to the community over the long run. Finally, the Profit Potential section details the projected profit margin and net revenues that could be expected from each venture.

For each criterion, information from published sources and personal communications with people knowledgeable about the topic was used to determine whether the proposed activity would have a *favorable* (+), *unfavorable* (-), or *mixed rating* (+/-). The results of this screening analysis are presented below.

**Table A-1
Screening Results of Enterprises**

	Lodging						
	High End	Mid Level	WildlifeTent Camp	Cabins	Yurt	RV	Camping
Resources							
Land	+	+	+	+	+	+	+
Labor	+/-	+/-	+/-	+/-	+	+	+
Capital	-	-	+/-	-	+	+	+
Infrastructure	+/-	+/-	+	+/-	+	+	+
Inputs	+	+	+/-	+/-	+	+	+
Market Analysis	+	+	+	+	+	+	+
NEPA Compliance	+/-	+/-	+/-	+/-	+/-	+/-	+/-
Legal Issues	+/-	+/-	+	+/-	+	+	+
Financing Options	+/-	+/-	+/-	+/-	+	+	+
Public Access	-	+	-	+/-	+	+	+
Community Engagement	+	+	+	+	+	+	+
Environmental Impact	-	-	+/-	+/-	+/-	-	+/-
Profit Margins	+	+	+	+	+	+	+
Net Revenue	+	+	+	+	+/-	+/-	+/-
Overall Suitability	+/-	+	+	+/-	+/-	+/-	+

**Table A-1
Screening Results of Enterprises (Cont.)**

	Fish and Game					
	Other Public Programs	Elk Hunt	Turkey Hunt	River Fishing	Flat Water Fishing	Education and Research
Resources						
Land		+	+	+	+	+
Labor		+	+	+	+	+
Capital	+	+	+	+	-	+
Infrastructure	+	+	+	+	+	+
Inputs	+	+	+	+	+	+
Market Analysis	+	+	+	+	+	+
NEPA Compliance	+/-	+/-	+/-	+/-	-	+
Legal Issues	+	+/-	+/-	+	+	+
Financing Options	+	+	+	+	+	+
Public Access	+	+	+	+	+	+
Community Engagement	+	+	+	+	+	+
Environmental Impact	+/-	+/-	+/-	+/-	-	+
Profit Margins	+	+	+	+	+/-	+/-
Net Revenue	+	+	+/-	+	+/-	+/-
Overall Suitability	+	+	+	+	-	+

**Table A-1
Screening Results of Enterprises (Cont.)**

	Working Ranch			Art		Visitor Center		
	Dude Ranch	Cattle Grazing	Grass Seed	Filming	Art Gallery	Merchandise	Food & Beverage	Supplies
Resources								
Land	+	+	+	+	+	+	+	+
Labor	+	+	+	+	+	+	+	+
Capital	+	+	+	+	+	+	+	+
Infrastructure	+	+	+	+/-	+	+	+	+
Inputs	+	+	+	+	+	+	+	+
Market Analysis	+	+	-	+	+	+	+	+
NEPA Compliance	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-
Legal Issues	+	+	+	+	+	+	+	+
Financing Options	+	+	+	+	+	+	+	+
Public Access	-	-	-	-	+	+	+	+
Community Engagement	+	+/-	+/-	+	+	+	+	+
Environmental Impact	+/-	+/-	-	+	+	+/-	-	+/-
Profit Margins	+	+/-	+	+	+/-	+	+	+
Net Revenue	+/-	-	+	+/-	+/-	+	+	+
Overall Suitability	+/-	+/-	-	+/-	+/-	+	+	+

**Table A-1
Screening Results of Enterprises (Cont.)**

	Equestrian		
	Trail Permits	Guided Trips	Horse Camp
Resources			
Land	+	+	+
Labor	+	+	+
Capital	+	+	+
Infrastructure	+	+/-	+/-
Inputs	+	+	+
Market Analysis	+	+	+
NEPA Compliance	+/-	+/-	+/-
Legal Issues	+	+	+
Financing Options	+	+	+
Public Access	+	+	+
Community Engagement	+/-	+/-	+/-
Environmental Impact	+/-	+/-	+/-
Profit Margins	+/-	+	+
Net Revenue	+/-	+/-	+/-
Overall Suitability	+/-	+/-	+/-

Further information and data for the enterprises with the most favorable ratings, and highest profitability potential was gathered to model future revenue expectations. The result of this research is the conceptual plan described in the main body of the report. For summation purposes, a set of conclusions has been synthesized for each enterprise, along with the strengths and weaknesses of the Preserve and staff as they relate to the specific enterprise activity. Additionally, the main sources used in the study and financial model estimates are also included in the summary table below.

**Table A-2
Summary of Enterprise Evaluations**

Enterprise Activity	Conclusion	Advantages	Disadvantages	Main Sources
Lodging and Hospitality	<p>A mid Level lodge with restaurant, operated by concessionaire, is likely to produce large revenue generation capability</p> <p>A small high end lodge is more risky, but if a concessionaire contract allows for profit, it could also become an area attraction and serve as a location for retreats, reunions, and other events.</p> <p>Other potential lodging and hospitality options that are suitable for consideration and offer a reasonable return on investment include wildlife tent camps, renting existing cabins and the Baca lodge, RV and tent campground spaces.</p>	Location, emotional engagement with amenities	Lack of infrastructure, and experienced staff	HVS Hotel Development Cost Survey, Ernst & Young 2008 Lodging Report, Joe Fassler (Glacier Park Inc.), Lake MacDonald Lodge Information, National Park Lodge occupancy rates, Curtis Williams (Shamrock Foods), Yosemite Ahwahnee Information, Paws Up Ranch Information, Derek Padilla (Jemez Falls Campground - Santa Fe National Forest)
Education and Research	This type of center will reduce operating costs by producing revenue from staff scientists' research, and expertise. This type of center is also key to accomplishing the <i>Act's</i> objectives.	Staff experience, knowledge, data collected, culturally significant areas, geological characteristics of Preserve	Lack of infrastructure	Dr. Bob Parmenter, US Long Term Ecological Research Network (LTER), Association of Ecosystem Research Centers (AERC)

Enterprise Activity	Conclusion	Advantages	Disadvantages	Main Sources
Domestic Livestock Grazing	<p>Grazing is not expected to be a large revenue source, but is a main objective of the Preserve according to the <i>Act</i>. One possibility to consider for future grazing leases is to team with a local grazing association which would be a volunteer run, non-profit entity. The grazing association would likely include local ranchers, and Tribal communities in the surrounding counties. The administrative tasks of the grazing operation could then be transferred from the Trust to the collective management of the grazing association. Grazing fees must offer the Trust a positive cash flow, while reasonable enough for ranchers to be able to feed their cattle.</p>	<p>Adaptive management will ensure protection of range quality and provide a main food source of both cattle and wildlife, local ranchers support of grazing association</p>	<p>Fencing repairs & maintenance, potential for stream disturbance from cattle</p>	<p>Gerald Chacon (NMSU Cooperative Extension Service), Rimbey and Smathers (Cow-Calf Cost and Returns)</p>
Hunting	<p>The hunting program is at or near capacity; no expansion is recommended or modeled. However, the sale of additional tags for private hunts would provide significant revenue generation. Also, a communications director is needed to help coordinate hunts.</p>	<p>Elk herd, wildlife, and wildlife habitat, conservation measures to protect natural resources, existing program</p>	<p>Marketing and communications support</p>	<p>Dennis Trujillo, White Mountain Apache elk tag sales, review of hunting on private lands in region, USFWS hunting and fishing data</p>
Fishing	<p>Fishing on the San Antonio is near capacity, it is expected that the E. Fork fishing program will open new opportunities for fishing and attract as many visitors. Flat water fishing was not considered further due to environmental compliance costs for altering waterways.</p>	<p>Fishing habitat and fish numbers, existing programs, conservation programs</p>	<p>Potential impacts from grazing, and marketing and communications support</p>	<p>Dennis Trujillo, information about fishing at Vermejo and White Mountain lakes</p>

Enterprise Activity	Conclusion	Advantages	Disadvantages	Main Sources
Public Programs	Collectively, the recreation programs at the Preserve are anticipated to bring in 12 to 20 percent of total revenues. These programs will be the key attraction for many people visiting and staying on the Preserve. It is recommended that recreational programs evolve with consumers' tastes and preferences.	Existing programs in place, ability to host special events, terrain and trails for outdoor recreation	Lack of infrastructure / staging areas	Interviews with Preserve staff, interviews with local recreation associations and enthusiasts, review of tourism activity data in New Mexico
Commercial Film and Photography	<p>The Preserve could establish a film commission that would compile a list of locations for filming and take care of necessary paperwork. This will save major film studios time, and also help market the film and photography services available on the Preserve.</p> <p>An art gallery presenting local art and culture in the visitor center or lodge would not be a large revenue generator for the Trust, but would be a low cost way of serving several indirect benefits. Namely, increasing visitation from people interested in local art and culture, and presenting the theme of the Preserve to the public through art.</p>	<p>Existing filming locations, scenic beauty of Preserve</p> <p>Abundance of local artists, local art interest, and a rich cultural history</p>	<p>Lack of nearby resources such as space for foodservice, photocopy store, and cell phone services for production companies</p> <p>Lack of infrastructure</p>	<p>International Movie Database, William Romat publication (videomaker.com), and various articles</p> <p>Fia Mettise (Volcano Art Center and Gallery), Julia (Mojave Art Gallery)</p>

Enterprise Activity	Conclusion	Advantages	Disadvantages	Main Sources
Timber	Thinning is critical to restoring historical stand composition and structure that could sustain commercial harvesting in the future. It would make the most sense economically to sell gateway wood from the landing site to local thinning contractors that have the ability to process it. The goal being to offset as much thinning cost as possible in order to restore forest health, reduce the risk of catastrophic fire and protect watershed function.	Existing logging road network, potential for local partnerships	Abundance of forest land to thin	Gale Hopper (Barela Timber Management Co), Ralph Barela (Barela Timber Management Co), Terry Connelly (TC Company), Ray Levengood (Western Wood Products)
Merchandise	Merchandise sales will be conducted at the visitor center. It is recommended that with the new visitor center facility, a new line of merchandise be introduced. It is anticipated that visitors will spend \$8 per person on merchandise, \$4 on food and drink, \$2.50 on other supplies, and \$5 conservation fee. These spending patterns were modeled after similar facility operations.	existing merchandise apparel, rich cultural and geological history, potential for many amenities to engage emotional interests of visitors	lack of infrastructure (center and parking)	Katie Knotec (Lolo visitor center), Rocky Mountain Elk Foundation Visitor Center (Missoula, MT), Curtis Williams (Shamrock Foods)
Donations	Donations to the expanded services and facilities at the Preserve could come in many forms, including; donations through the Amigos Group, capital campaign for facility development, University partnership, and Socially Responsible Investing (SRI).	Conservation and preservation goals, cultural significance, geologic interest, visibility of future buildings	Lack of development history, lack of clear vision for development in future	Kloepfel, Brian (Organization of Biological Field Stations), Lindsay Boring (Joseph W. Jones Ecological Research Center), Ian Billick (Rocky Mountain Biological Laboratory), Andy Robinson, Amy O'Connor (Integrated Development Consulting), Larry Icerman (Amigos de Valles Caldera Preserve), and various publications

Enterprise Activity	Conclusion	Advantages	Disadvantages	Main Sources
Other - Equestrian	<p>An expanded equestrian center would provide another amenity for visitors and cater to the large population of horse owners in the Southwest. The equestrian program could be expanded in several different ways, including; overnight/packing adventure service offered by a concessionaire, short guided trail rides with a riding stable, basic to luxury overnight horse camps, and expanded day use trail rides.</p>	<p>Terrain, existing trails, abundance of scenic landscape suitable for riding, existing reservation system</p>	<p>Lack of infrastructure</p>	<p>Information from Kalama Horse Camp (Gifford Pinchot National Forest), Wranglers Campground (Land Between the Lakes), Eagle Cap Wilderness Pack Station (Wallowa Lake)</p>
Other - Green Burial	<p>A small investment in green burial services and marketing could yield large revenue generation in the future. The panoramic views and tranquility of the Preserve make it a desirable location for a loved one's final resting place. The Preserve could choose to provide minimal green burial services, or it could provide a range of services that include performing funeral, selling caskets and urns, and opening and closing graves. The more extensive range of services would be best achieved by allowing a concessionaire with the necessary capital to provide these services to customers while paying a percentage of the fees to the Trust.</p>	<p>Location, setting, facility to house funeral gathering (Baca Lodge)</p>	<p>Potential conflict with other cultural significance of Preserve</p>	<p>Joe Sehee (Green Burial Council), and various publications, including; Phelps, Nathan (Green Caskets, Burials a Growing Business); AARP (2007 Funeral and Burial Planners Survey)</p>
Other - Grass Seed Harvesting	<p>The native grass seeds of the Preserve's range could be harvested with minimal impact to the range itself. However, the market for mixed native grass range at higher elevations does not warrant a commercial operation.</p>	<p>Access to native grass range</p>	<p>Lack of market for mixed high elevation native grasses</p>	<p>Curtis & Curtis Seed and Supply (Clovis, New Mexico), Information pertaining to the Native Seedster</p>

Appendix B - Compliance Costs

This section provides a summary of the regulatory framework that the Valles Caldera Trust (Trust) operates within and provides general compliance cost estimates for various proposed actions. All actions that are proposed to occur on the Valles Caldera National Preserve (Preserve) are subject for compliance with the National Environmental Policy Act of 1969 [42 U.S.C. §§ 4321-4347 et. seq.] (NEPA), although supplemental NEPA procedures have been issued for proposed actions on the Preserve (see below). This brief analysis also compares the applicability of the supplemental NEPA procedures against standard federal NEPA protocols (i.e. Forest Service, or Bureau of Land Management) and takes into consideration the areas where the Trust has been granted some regulatory flexibility.

B.1 Regulatory Environment

On July 17, 2003, the Trust adopted supplemental NEPA procedures for management, planning, and public use activities occurring within the established boundaries of the Preserve.¹⁸⁹ These supplemental procedures establish a unique system of NEPA compliance that seeks to foster a collaborative working relationship with local Tribal governments, public authorities, and the general public.

While the supplemental procedures establish specific environmental regulations, the fundamental NEPA approach of Categorical Exclusions (Cat-Xs), Environmental Assessments (EAs), and Environmental Impact Statements (EISs) remains pertinent. These comprehensive, multi-disciplinary documents serve as informative decision-making tools for the Responsible Official (Executive Director of the Trust), who has been delegated the authority to issue a Finding of No Significant Impact (FONSI) or request

¹⁸⁹ United States Federal Register, “Valles Caldera Trust: National Environmental Policy Act Procedures of the Valles Caldera Trust of the Valles Caldera National Preserve,” Vol. 68, No. 137, July 17, 2003.

additional analysis. Below are brief discussions on the applicability of each environmental document.

Categorical Exclusions

A Cat-Ex is essentially a bureaucratic measure that serves as NEPA compliance. These documents are usually in check-list format and demonstrate that there are no effects to resources and no precedents will be established by the proposed action. Proposals that typically merit a Cat-Ex are, for example, administrative functions, routine operations, seasonal recreational activities, and grounds maintenance. Little analysis is required under a Cat-Ex as the proposal is assumed to not create any adverse impacts.

The Responsible Official is delegated the authority to prepare a Cat-Ex. As established in the supplemental procedures, “In the absence of extraordinary circumstances, the Responsible Official may undertake the stewardship actions, provided that no more than 1,320 feet of road or trail construction is required to implement the stewardship action.”

Environmental Assessments

An EA serves as an investigatory document that determines if compilation of an EIS is necessary. A wide range of environmental disciplines must be considered in an EA, but the depth of analysis for each discipline can be based on best available information. These documents can be more qualitative in the analyses, as opposed to the detailed supporting technical information of an EIS. That said, conclusive findings or determinations can be stated in an EA, but conclusions must be accompanied by qualifying statements for ample justification.

A critical part of an EA can be public involvement. Public comment periods, where an EA is released for public review, are intended to assist in the development of reasonable project alternatives and, if necessary, refine the proposed action. A primary reason why the Trust adopted supplemental procedures is to encourage a dynamic environment where comments from local Tribal governments, public authorities, and the general public are considered.

Environmental Impact Statements

An EIS is the highest level of compliance and requires in-depth assessments of a variety of environmental disciplines, including: air quality, agricultural resources, biological resources, cultural resources, hazardous materials inventory, geology/seismology, land resources, public utilities and services, recreation and tourism, socioeconomic conditions, transportation networks, visual resources, and water resources. In addition to assessing the

direct effects of a proposed action, an EIS must take into consideration cumulative, indirect, and induced growth effects.

In general, an EIS is to be “prepared if the outcome of a proposed stewardship action is known or suspected to create a significant effect on the human environment or if it is otherwise desirable to prepare a statement.”¹⁹⁰ The term “significant effect” can be interpreted several ways, but in general a proposed action creates a significant effect when, for example, land use is permanently altered, or there are unavoidable effects to resources.

B.2 Compliance Cost Assessment

As the level of compliance increases, so does the compliance cost. Table 1 below presents the estimated compliance cost for each environmental document and offers examples of stewardship actions for each level of compliance. The costs presented below in Table 1 are based off recent personal communications with Preserve staff and their NEPA efforts. From these e-mails and conversations, it was gathered that a significant effort to compile an EA for a comprehensive rangeland management/grazing program began in 2005. The information collected for this EA represents a wide range of valuable statistics and technical data for environmental disciplines such as climate, soils, water conditions, geomorphology, and vegetation. This information is a significant part of the adaptive management approach emphasized by the staff, but is also directly applicable to future projects that may require assessment under NEPA. Having such a database that is being constantly updated can supply the core information for a NEPA document that characterizes the existing environment but also provides a starting point of assessing the potential effects of a proposal. Therefore, the management of this database for adaptive management purposes represents a direct cost savings for future NEPA compliance because the majority of site specific information is already available. The costs presented in Table 1 below take this notion into account.

A Cat-Ex does not require extensive analysis and can be compiled very quickly; therefore, these documents carry a relatively negligible compliance cost. The types of proposals that usually merit a Cat-Ex are administrative and operations focused projects. Please see Table 1 below for examples of these types of proposals.

The EA level of compliance is the most widely applied of the three levels. Depending on the nature of the proposal, an EA can be low cost or relatively high. For example, a proposal that aims to eradicate invasive species merits an EA, but this action would not change land use, consume resources, or have a detrimental effect on the environment.

¹⁹⁰ United States Federal Register, “Valles Caldera Trust: National Environmental Policy Act Procedures of the Valles Caldera Trust of the Valles Caldera National Preserve,” Vol. 68, No. 137, July 17, 2003.

However, a proposal that seeks to construct a facility also merits an EA, which would be significantly more costly than the aforementioned EA example.

An EIS is the most costly of the environmental documents because in-depth analysis is necessary to justify conclusions on the proposal’s potential effects on the human environment. However, an EIS is only necessary when substantial development or long-term programs are proposed. The programmatic proposals tend to be less costly than the development proposals. Development proposals create an unavoidable “footprint” on the environment, where land use is permanently altered. However, the development of mitigation measures seeks to yield a less than significant impact. As with EAs, public involvement is a critical part of the EIS process, where public comments contribute to the formation of reasonable alternatives.

Table B-1
Estimated Compliance Cost for Example Stewardship Actions

Environmental Document	Example Proposed Stewardship Action	Compliance Cost
Categorical Exclusion	Policy development, planning, and routine activities	
	Educational or recreational programs	Low (\$0 - \$2,000)
	Procurement of Federal equipment	
	Routine repair and maintenance	
Minor site development (i.e. facility renovation)		
Environmental Assessment	Roadway improvements	Mid-Low (\$2,000 - \$25,000)
	Habitat and Species management initiatives	
	(Interim) Livestock management program	
	(Interim) Recreational management program	Mid-High (\$25,000 - \$50,000)
	(Interim) Forest and Timber management program	
	"Green" Burial program	
Environmental Impact Statement	Implementing one or more long-term Stewardship Action: Management of Livestock Grazing; Transportation; Forest Management; or Management of Public Recreation.	High (\$50,000 - \$100,000)
	Development of an RV Park	
	Development of Cabins	
	Construction and Operation of a Visitor Center or lodge	
	Mass development on the Preserve, for example:	
	Construction of Housing Blocs	Substantial (\$100,000+)
	Construction of a man-made Lake or Reservoir	

The revenue enhancement opportunity study for the Valles Caldera National Preserve contains a large amount of analysis involving a wide variety of potential enterprise activities on the Preserve. It further shows how the activities could be implemented to gain financial self-sufficiency. It is anticipated that if any of the proposed facility or program expansions are considered under the above mentioned environmental documents, information from the report could be useful information for a portion of the documents.

Appendix C – Visitor Estimates

Data on general New Mexico visitor demand was primarily collected from the New Mexico Tourism Department, while data on New Mexico nature/outdoor recreation demand was collected from the US Fish and Wildlife Service, National Forest Service, New Mexico State Parks, and the National Park Service. As tourism and recreation demand is typically collected through surveys focusing on a variety of different populations, some of the data sources differ in their estimates of demand. Data from these studies indicates the number of people traveling in New Mexico, as well as their demographic and trip characteristics.

C.1 General New Mexico Tourism Demand

A 2006 study conducted for the New Mexico Tourism Department provides general information on the types and number of visitors to New Mexico in 2005 based on a national sample of 1,190 people who visited New Mexico in that year.¹⁹¹ The study estimated that there were approximately 24.9 million person-trips¹⁹² in New Mexico (12.2 million overnight person-trips and 12.7 day trip person-trips), of which 75 percent were for leisure. (A person-trip is one person traveling 50 miles (one way) or more away from home and/or overnight for any purpose, while a trip is one or more persons from the same household traveling together.) The number of person-trips can vastly outnumber the

¹⁹¹ CRC & Associates and Southwest Planning and Marketing, 2006, “2005 TIA’s Travelscope/DIRECTIONS by DKS&A: Visitation Estimates for New Mexico”, prepared for the New Mexico Tourism Department, Santa Fe, New Mexico, downloaded at:
http://www.newmexico.org/department/research/docs/NEW_MEXICO_VISITORS_IN_2005_external_FINAL.pdf.

¹⁹² A person-trip is one person traveling 50 miles (one way) or more away from home and/or overnight. A trip is one or more persons from the same household traveling together.*
http://www.tia.org/researchpubs/us_overview_volumes_trends.html.

number of individuals who travel in New Mexico, as each individual may take multiple person-trips. According to this study, New Mexicans took 54 percent of the total person-trips in New Mexico (71 percent of the day trips and 36 percent of the overnight trips), with the remainder primarily taken by visitors from neighboring states and California. In 2004 there were an estimated 261,000 international visitors to New Mexico, which is equivalent to approximately one percent of the person-trips taken in 2005.¹⁹³ Due to declines in the value of the dollar in international currency markets, the number of international visitors is expected to have increased substantially over the past two years.

Regarding trip activities, overnight and out-of-state visitors are more likely to pursue Caldera-related activities, such as nature/culture activities (11.7 percent and 7.6 percent), visiting national or state parks (7.5 percent and 9 percent), and hiking/biking (3.9 percent and 3.1 percent).¹⁹⁴ A survey of residents in targeted out-of-state visitor markets, found that people who had considered visiting New Mexico in the last five years were more likely to be interested in educating themselves, the outdoors, food, history and culture, and special events than those who have not.¹⁹⁵ Visitors staying overnight in 2005 are estimated to have stayed an average of 5.2 nights in New Mexico, with 57 percent staying in a hotel, 27 percent staying in a private home or condo, and seven percent camping or staying in an RV.¹⁹⁶

Total visitor spending in New Mexico in 2006 was approximately \$5 billion.¹⁹⁷ Visitors in New Mexico in 2005 spent an average of \$408 per trip, compared to \$353 for all US travelers (2005 dollars). As expected, out-of-state travelers and overnight travelers spent

¹⁹³ Chris Cordova and Bruce Poster, 2005, "International Mastercard Usage in New Mexico", New Mexico Department of Tourism, downloaded at:
http://www.newmexico.org/department/research/docs/MC_summary_w_OTTI+_narrative_8-18-05.pdf.

¹⁹⁴ CRC & Associates and Southwest Planning and Marketing, 2006, "2005 TIA's Travelscope/DIRECTIONS by DKS&A: Visitation Estimates for New Mexico", prepared for the New Mexico Tourism Department, Santa Fe, New Mexico, downloaded at:
http://www.newmexico.org/department/research/docs/NEW_MEXICO_VISITORS_IN_2005_external_FIN_AL.pdf.

¹⁹⁵ CRC & Associates, 2004, "New Markets Research: A Project to Identify Potential New Drive Markets to New Mexico", prepared for the New Mexico Tourism Department, Santa Fe, New Mexico, downloaded at:
http://www.newmexico.org/department/research/docs/New_Mkts_final5.5.051.pdf.

¹⁹⁶ CRC & Associates and Southwest Planning and Marketing, 2006, "2005 TIA's Travelscope/DIRECTIONS by DKS&A: Visitation Estimates for New Mexico", prepared for the New Mexico Tourism Department, Santa Fe, New Mexico, downloaded at:
http://www.newmexico.org/department/research/docs/NEW_MEXICO_VISITORS_IN_2005_external_FIN_AL.pdf.

¹⁹⁷ Travel Industry Association, 2007, "Travel Economic Impact Model", for the New Mexico Tourism Department, downloaded at:
http://www.newmexico.org/department/research/docs/Economic_Impact_FY2006.pdf

more than average per trip, with total trip spending in New Mexico for both types of visitors at approximately \$675 per trip. However, surveys in 2007 of visitors at visitor information centers throughout New Mexico found that travel parties to Santa Fe spend one to two more nights in New Mexico and had higher trip expenditures on average than visitors to other areas.¹⁹⁸ Average travel party spending was \$913 for surveyed visitors in Santa Fe compared to \$423 for all New Mexico visitors surveyed (2007 dollars). Additionally, on average Santa Fe overnight visitors spent more per person per night on lodging: \$83 per person versus \$63.

C.2 Potential Visitation Demand at Valles Caldera

Potential visitation demand at Valles Caldera is projected using four methods assuming that a full complement of programs and lodging and service options is developed at the Preserve. Estimates are based on current visitation demand in New Mexico, Santa Fe, and outdoor recreation locations throughout New Mexico and the inter-mountain region. In each method, visitation with current population and travel trends is estimated to range from 250,000 to 400,000 visits per year.

C.2.1 Method 1: *National Park Visitation in New Mexico*

There were 1.62 to 1.65 million visits to national parks and monuments in New Mexico in 2005, 2006, and 2007.¹⁹⁹ A NPS visit is an entry of any person, other than NPS and service personnel, onto NPS-administrated lands or waters. Currently Bandelier National Monument attracts 15 percent of these visits. Assuming that Valles Caldera could attract 20 percent of these visits (larger area, more varied attractions, more services offered), there would be approximately 325,000 visits annually to Valles Caldera.

- Method 1 Estimate: **325,000 visits**

¹⁹⁸ CRC & Associates and Southwest Planning and Marketing, 2008, "Intercept Survey October-December 2007: Results at the Visitor Information Centers", prepared for the New Mexico Tourism Department, Santa Fe, New Mexico, downloaded at: http://www.newmexico.org/departament/research/docs/VIC_Intercept_Report-4Q7-FINAL.pdf.

¹⁹⁹ National Park Service National Public Use Statistics Office, U.S. Department of the Interior, 2005-2007, "Statistical Abstract 2007", "Statistical Abstract 2006", "Statistical Abstract 2005", downloaded at: <http://www.nature.nps.gov/stats/>.

C.2.2 Method 2: Overnight Visitors plus Day Visitors

This approach begins with data for both day visits to New Mexico, and overnight visits to New Mexico, and then sums the two for a total.

Overnight New Mexico Visitors

It is estimated that there were approximately 12.2 million overnight person-trips in New Mexico in 2005.²⁰⁰ It is also estimated that 11.7 percent of these trips included nature/culture activities, 7.5 percent included a visit to a state or national park, and 10.6 percent included a visit to a historic site. Based on some overlap between these categories, it is assumed that 15 percent of overnight person-trips to New Mexico include an activity that is a primary attraction at Valles Caldera (wildlife, scenery, culture, history), resulting in a pool of approximately 1.8 million potential person-trips to Valles Caldera. Assuming that 10 to 15 percent of these trips were to go to Valles Caldera, the result would be 180,000 to 275,000 overnight visits annually.

Day Trips New Mexico Visitors

Based on the same New Mexico Tourism study used above, there approximately 12.7 million day person-trips in New Mexico in 2005. Of these day person-trips, 58.7 percent originated in Santa Fe or Albuquerque, 2.6 percent included nature/culture activities, 4.6 percent visited a state or national park, and 11.5 percent visited a historic site. Based on some overlap between the activity categories, it is assumed that five percent of day person-trips originating in Santa Fe or Albuquerque involve an activity similar to those available at Valles Caldera (wildlife, scenery, culture, history), resulting in a pool of approximately 632,000 day person-trips. Assuming ten percent of these include a visit to Valles Caldera, there would be 63,000 day trip visits to Valles Caldera.

Additional support for this level of local day trippers is based on the number of wildlife viewers living near the Preserve. According to the USFWS, approximately ten percent of New Mexico residents engage in wildlife viewing away from home.²⁰¹ Applying this proportion to the approximately 883,000 residents in Los Alamos, Santa Fe, Sandoval, and Bernadillo Counties, there are 83,000 wildlife viewers living within approximately 100 miles of Valles Caldera.

²⁰⁰ CRC & Associates and Southwest Planning and Marketing, 2006, “2005 TIA’s Travelscope/DIRECTIONS by DKS&A: Visitation Estimates for New Mexico”, prepared for the New Mexico Tourism Department, Santa Fe, New Mexico, downloaded at: http://www.newmexico.org/department/research/docs/NEW_MEXICO_VISITORS_IN_2005_external_FIN_AL.pdf.

²⁰¹ U.S. Fish and Wildlife Service, U.S. Department of the Interior, 2008, “National Survey of Fishing, hunting, and Wildlife-Associated Recreation: New Mexico”, downloaded at: http://library.fws.gov/nat_survey2006_nm.pdf.

- Method 2 Estimate: **240,000 to 340,000 visits**

C.2.3 Method 3: *Santa Fe National Forest Visitation*

There were 1.36 million visits to the Santa Fe National Forest in 2003.²⁰² A forest service visit is defined as the entry of one person upon a national forest site or area to participate in recreation activities for an unspecified period of time. Activities engaged in on these visits include: 63.2 percent viewing national features, 62.89 percent hiking, 51.27 percent viewing wildlife, and 10.54 visiting historic sites. Valles Caldera is approximately six percent of the size of the Santa Fe National Forest, but will offer more varied programs and services. Assuming that Valles Caldera could attract fifteen to twenty-five percent of Santa Fe National Forest visits, the result is 200,000 to 340,000 visits

- Method 3 Estimate: **200,000 to 340,000 visits**

C.2.4 Method 4: *Santa Fe Visitation*

According to the New Mexico Department of Tourism, there were approximately 3.7 million person-trips to Santa Fe in 2005, of which 2.1 million were day trips and 1.6 million were overnight.²⁰³ Assuming that 15 percent of overnight visitors, and five percent of day trip visitors (as assumed in method 2, see above discussion on general visitor characteristics) would visit the Caldera, the result is an estimate of approximately 346,000 visits.

- Method 4 Estimate: **350,000 visits**

C.3 Overnight Lodging Demand at Valles Caldera

Lodging demand at Valles Caldera is estimated based on lodging demand statistics at national forests and NPS administered locations.²⁰⁴ From 2000 to 2007, visitation data

²⁰² United State Forest Service, United States Department of Agriculture, 2004, "National Visitor Use Monitoring results: Santa Fe National Forest", downloaded at http://www.fs.fed.us/recreation/programs/nvum/reports/year4/R3_F10_santafe_final.htm.

²⁰³ CRC & Associates and Southwest Planning and Marketing, 2006, "Person Trips to Selected MSA's New Mexico", prepared for the New Mexico Tourism Department, Santa Fe, New Mexico, downloaded at: http://www.newmexico.org/department/research/docs/MSA_person_trips.pdf.

²⁰⁴ National Park Service National Public Use Statistics Office, U.S. Department of the Interior, 2005-2007, "NPS Camping Report 2000-2007", downloaded at: <http://www.nature.nps.gov/stats/>.

from all NPS locations indicates that for every 100 visits at national parks and monuments there were five people staying the night. The largest, most popular national parks such as Yosemite, Yellowstone, and the Grand Canyon attract approximately 50 nights stayed for every 100 visits, while smaller parks with fewer facilities attract very few visitors who stay overnight. In national forests from 2000 to 2004, 13 percent of visitors stayed overnight in the forest while another 26 percent stayed overnight outside of the national forest in the local area.²⁰⁵ Depending on whether they were local visitors, national forest visitors who stayed overnight in the forest averaged 2.1 to 2.4 nights stayed on the forest.

Based on this data, we assume a ratio of twenty percent nights stayed to visits demanded. Based on visitation demand of 325,000 annually, we estimate that there would be demand for approximately 65,000 nights stayed on the Preserve. We again turn to NPS data to estimate the types of lodging demand. Over the past ten years, overnight trips at NPS locations have comprised 55 percent RV and tent camping, 15 percent backcountry camping, and 30 percent lodging.

As discussed further in the main text of this document, the strategy of the Preserve will be to capture all of the estimated demand for overnight trips (65,000) while using various pricing and access mechanisms to limit the day visitors to a similar number, so that overall visitation might not exceed 120,000. Also, marketing efforts will be aimed at overnight guests who stay in Preserve lodges, and so relative to the National Parks, this plan will have higher ratios of lodging overnight visitors than the NPS data. One reason will be capacity, as there will more lodging available on the Preserve than campsites.

²⁰⁵ National Forest Service, U.S. Department of Agriculture, 2005, "Spending Profiles of national Forest visitors, NVUM Four Year Report".

Appendix D – The Presidio Trust

The Presidio of San Francisco is an example of another federally-owned land unit managed by a trust. Now part of the Golden Gate National Recreation Area, the Presidio was the oldest continuously operating military post in the nation until it was transferred by the U.S. Army to the National Park Service in 1994. In 1996, Congress passed the Presidio Trust Act, which gave jurisdiction of the 1,168-acre inland portion of the Presidio (known as “Area B”) to the Presidio Trust. The Presidio Trust was established by the Presidio Trust Act as a wholly-owned government corporation for the purposes of managing the Presidio in a way that “minimizes the cost to the United States Treasury and makes efficient use of private sector resources”.²⁰⁶

D.1 Management Activities

The Presidio Trust is managed by a seven-member Board of Directors. Members of the Board include the Secretary of the Interior (or the Secretary’s designee) and six individuals with expertise in fields that include city planning, finance, real estate development, and resource conservation. The members are appointed by the President of the United States and serve unpaid for four-year terms.

The Presidio Trust is required to attain financial self-sufficiency by 2013.²⁰⁷ If the Presidio Trust fails to meet this goal, the property will be transferred to the Administrator of the General Services Administration to be disposed of in accordance with the procedures outlined in the Defense Authorization Act of 1990 [104 Stat. 1809]. Beyond decreasing dependence

²⁰⁶ Section 101 (7) of The Presidio Trust Act (as amended through December 28, 2001), enacted as Title I of H.R. 4236, P.L. 104-333, 110 Stat. 4097, November 12, 1996.

²⁰⁷ Section 105 (b) of The Presidio Trust Act (as amended through December 28, 2001), enacted as Title I of H.R. 4236, P.L. 104-333, 110 Stat. 4097, November 12, 1996.

on federal funding, the management activities conducted by the Presidio Trust are also required to meet other goals outlined in the Presidio Trust Act. Management activities must ensure adequate public access to the Presidio, and include public interpretive services, visitor orientation, and educational programs.²⁰⁸ The Presidio's historic, natural, cultural, and recreational resources must be protected from harmful development and uses.²⁰⁹ Furthermore, the Presidio Trust Act requires the Presidio Trust to develop and execute a management plan for the land and facilities within the Presidio. All actions must comply with the National Environmental Policy Act (NEPA).

The Presidio Trust Management Plan (May 2002 PTMP) provides a policy framework for managing the Presidio.²¹⁰ The May 2002 PTMP restores natural areas, increases open space by reducing building space, minimizes automobile use, and supports ongoing public participation. Many of the policies are specific to the almost six million square-foot of building space that includes office use and 1,047 conventional housing units. Lease payments on the Presidio's building space provide a significant source of revenue. The Presidio Trust Strategic Plan (FY 2005-2009) estimated total lease revenue for fiscal year 2005 at \$41 million. A total of \$64 million was generated from all sources that year; building leases, therefore, account for the majority of revenue raised.²¹¹

The Strategic Plan anticipates the end of federal appropriations by 2013 and specifies financial goals for fiscal years 2005-2009 that include covering operating and financing costs without appropriations. It calls for generating \$57.1 million annually for operations (excluding appropriations). However, additional funding (\$110.5 million) must be raised to fund revenue-generating projects necessary for long-term financial self-sufficiency. While the majority of the available capital (85 percent) will be invested in projects that demonstrate a direct return on investment, the Presidio Trust must also invest in the park's natural resources in order to fully comply with the Presidio Trust Act. To this end, the remaining funds will be invested in landscaping, historic forest, and other natural resources.²¹²

²⁰⁸ Section 102 of The Presidio Trust Act (as amended through December 28, 2001), enacted as Title I of H.R. 4236, P.L. 104-333, 110 Stat. 4097, November 12, 1996.

²⁰⁹ Section 101 (5) of The Presidio Trust Act (as amended through December 28, 2001), enacted as Title I of H.R. 4236, P.L. 104-333, 110 Stat. 4097, November 12, 1996.

²¹⁰ The Presidio Trust, May 2002, "Presidio Trust Management Plan: Land Use Policies for Area B of the Presidio of San Francisco", <http://www.presidio.gov/Trust/Documents/ptmpsp.htm>.

²¹¹ The Presidio Trust, 2005, "Presidio Trust Strategic Plan FY 2005-2009", <http://www.presidio.gov/Trust/Documents/ptmpsp.htm>.

²¹² Ibid.

D.2 Current Issues

Two recent examples of issues for which the Presidio Trust has sought to strike a balance between competing mandates are discussed below. The first example is the vegetation management plan crafted by the Presidio Trust, which has been designed to ensure that both the natural and historic character of the vegetation within the Presidio will be preserved. The second example is an ongoing issue that involves a controversial plan to revitalize the Main Post.

D.2.1 Vegetation management²¹³

The vegetation of the Presidio is a mix of native habitat and non-native species planted by the U.S. Army when the Presidio was still an operating military post. The Presidio Trust Act mandates protection of both the natural and historic character of the Presidio (Presidio Trust Act, Section 101(5)); therefore, management of the vegetation involves determining the appropriate blend of native and historic, non-native species. The non-native Monterey cypress, Monterey pine, and eucalyptus planted by the U.S. Army served as boundaries between different areas of the fort, as windbreaks, and as general landscape features. However, these same species create shady canopies that restrict the full sunlight required by some native species within the Presidio, including some endangered plants protected under the Endangered Species Act (ESA).

To formulate a plan for managing the Presidio's vegetation, the Presidio Trust consulted with the U.S. Fish and Wildlife Service, California Native Plant Society, and the Audubon Society. The Audubon Society in particular expressed concern that California quail habitat on the Presidio had declined significantly due to the presence of non-native plant species. In response, the Presidio Trust began to restore quail habitat as part of its native plant restoration efforts.

Consultation with stakeholders also resulted in the creation of a map of vegetation zones delineated according to how each zone will be managed. Non-native, historic trees planted near buildings in a linear fashion will be replaced with the same species when they die. In other zones, the aging historic forest consists of a single canopy. A program to gradually replace aging trees with the same historic, non-native species would maintain the historic character of the forest, but would also result in a multiple-canopy forest more hospitable to bird species such as great horned owls. Test patches for native species will determine whether species that can survive in partial shade can be planted under the non-native canopy.

²¹³ Gies, Erica, January 14, 2005, "Presidio maintains its role as battle site; this time over nature," *Neighborhood Newswire* and Presidio Trust, *Vegetation Management Plan*.

The area in the Presidio dedicated for native plant species has been expanded to include the landfill used by the U.S. Army and cleaned up by the Presidio under the California Department of Toxic Substances Control. Native plant species have been added to the former landfill as part of environmental remediation of the site.

D.2.2 Proposals for the Main Post

The Presidio Trust is currently in the process of revitalizing the Main Post, which consists of more than 100 historic buildings in the heart of the park. As the site of the original Spanish garrison established in 1776 and the birthplace of San Francisco, any proposed alterations to the Main Post must protect the historical significance of the site.

The Presidio Trust received an offer from art collectors Doris and Donald Fisher to house their collection in a contemporary art museum at the Main Post. The proposed art museum would require construction of a new building, and would significantly alter the planning concept for the Main Post district as described in the May 2002 PTMP. The Final PTMP Environmental Impact Statement (EIS) prepared by the Presidio Trust discussed the environmental impacts of constructing a 100,000 square-foot museum and related buildings and demolishing other buildings at the Main Post. The Final PTMP EIS alternatives analyzed a variety of locations for the museum, but did not elaborate upon other cultural institutions that could be built in place of the art museum.

In August 2007, the Presidio Trust released a Request for Proposals (RFP) soliciting proposals to locate cultural institutions at the Main Post. The Draft Supplemental EIS (Draft SEIS) incorporated the proposals solicited by the RFP as project alternatives, and was open to public comment until August 1, 2008. The proposed action includes construction of the contemporary art museum, an orientation center, and a 125-room lodging facility.

The Presidio Trust has faced significant criticism for its proposal, including from the Presidio Historical Association (PHA), the NPS, and the National Trust for Historic Preservation (NTHP). In response to the August 2007 RFP, the PHA submitted a proposal for a 50,000 square-foot history center as an alternative to the Fisher museum. This proposal was incorporated as Alternative 3 in the Draft SEIS, but the history center is excluded from the Proposed Action. Instead, the Proposed Action calls for making the Main Post a “heritage site and a center for culture and history”²¹⁴ with a “museum without walls,” where visitors could listen to prerecorded historical messages using their cellular phones.²¹⁵ PHA opposes

²¹⁴ Presidio Trust, June 2008, *Presidio Trust Management Plan Main Post Update Draft Supplemental Environmental Impact Statement*.

²¹⁵ Presidio Historical Association, February 1, 2008, “Historical Association Reacts Cautiously to Presidio Trust’s Decision on Museums.”

the amount of new construction (265,000 square-feet) and the demolition (145,000 square-feet) of both historic and non-historic buildings that would be required under the Proposed Action. It has stated concern that the Presidio Trust is focusing on maximizing revenue while it has not adequately fulfilled its mandate under the Presidio Trust Act to provide public interpretive services (Presidio Trust Act, Section 102(b)) and to manage the park in a manner which “protects the Presidio from development and uses which would destroy the scenic beauty and historic and natural character of the area and cultural and recreational resources” (Presidio Trust Act, Section 101(5)).

The NPS provided comment for the National Historic Preservation Act Section 106 assessment of effects on the Main Post. It expressed concern that “the projects as proposed in the current undertaking are not consistent with the Secretary of the Interior’s Standards, nor are they in keeping with the Trust’s own planning guidelines and cultural landscape analysis for the Main Post,” and warned that the impacts to the Main Post from the Proposed Action “could lead to possible de-designation of the NHL [Presidio National Historic Landmark District].”²¹⁶ The NTHP, a concurring party to the Programmatic Agreement for the Presidio Trust Implementation Plan, submitted comment in support of the NPS conclusions.

Although the Presidio Trust has responded to criticism of the project by incorporating elements of an interpretive program into the Proposed Action, the project continues to face opposition. In an effort to educate the public and to garner support for the project, the Presidio Trust internet homepage features information about the project and includes the regulatory documents, frequently asked questions, and information about the Main Post walking tours. The walking tours are held bi-weekly and include a 90-minute guided tour that discusses the proposed project and explains the public involvement process.

D.3 Summary

Similar to the Trust, the Presidio Trust must balance competing legislative mandates, as explored in the case study above. While the Presidio Trust is required to attain financial self-sufficiency by 2013, it must do so in a way that achieves the other goals outlined in the Presidio Trust Act, such as ensuring adequate public access to the Presidio; including public interpretive services, visitor orientation, and educational programs; and protecting the Presidio’s historic, natural, cultural, and recreational resources from harmful development and use.

²¹⁶ O’Neill, Brian, General Superintendent, National Park Service, April 4, 2008, letter to Craig Middleton, Executive Director, Presidio Trust.

Recent issues showcase both successful attempts and ongoing difficulties with balancing the competing mandates of the Presidio Trust Act. By incorporating the recommendations of the various stakeholders during consultation and through the creation of specific management zones, the Presidio Trust developed a vegetation management plan that ensures that both the natural and historic character of the vegetation within the Presidio will be preserved.

In contrast, the Presidio Trust's plan to revitalize the Main Post remains a point of contention for the NPS and various interest groups. These stakeholders contend that the Proposed Action described in the Draft SEIS would threaten the Main Post's status as a National Historic Landmark District, and would not adequately fulfill the mandates under the Presidio Trust Act to provide public interpretive services and to protect the resources of the park from detrimental development. The Presidio Trust's attempts to address these criticisms appear to focus upon educating the public about the project, but have so far failed to allay the major concerns of the stakeholders.

Appendix E – Strategies for Financing Infrastructure Improvement and Creation

This appendix covers the potential strategies the Preserve may employ to attain capital for the development of infrastructure (on the Preserve) necessary for the Preserve to become economically ‘self-sufficient.’ In the financial model and list of assumptions used, there is the intention that approximately \$20 million is raised for the Preserve, and is funded directly through donations to the Preserve (\$17.0 million to \$22.4 million). To accomplish this, it is recommended that a capital campaign is launched by the Preserve. In addition to, or in conjunction with this campaign, Congress may contribute matching funds or perhaps contribute for the establishment of a visitors’ center and/or other infrastructure. Other capital raising strategies are briefly outlined below. If, however, the capital campaign is not expected to meet the required amounts, financing through an emerging investment vehicle, a “socially responsible venture fund,” is briefly explored as an option for large dollar fundraising to meet the infrastructure financial needs of the Preserve.

Capital campaigns are by definition time limited (usually two to three years maximum), project specific, and designed to fund specific projects that are usually infrastructure-related. Capital campaigns may utilize many of the same methods employed during the course of general not for profit fundraising (such as special events, major donor solicitations, and special appeals). For this reason, it is critical to coordinate capital campaign efforts with the ongoing fundraising activities of an organization. Because of their specialized nature and the large sums of funds typically involved, the vast majority of all capital campaign activities are developed and conducted in conjunction with an external consultant. The consultant will assist the organization with all phases of the campaign and the development of all material to be used as part of the effort. Two particular types of capital campaigns are explored for use by the Trust.

E.1 Preserve/University Partnerships for the Education Center

Construction of an education center is a focal point of the alternatives presented in the study plan. Once complete, the education center will allow for the development of projects and programs that will greatly enhance the visibility of the Preserve, and demonstrate the benefits that the community, the region, and the nation will derive from the activities of the Preserve, thereby enhancing the ability of the Preserve to generate funds to support its continued operation into the future. The plan estimates a \$10 million cost for this effort.

Because the Preserve has already established ongoing research partnerships and projects with a number of public and private research institutions, it is recommended that the Board and staff pursue a series of university/Preserve partnership arrangements. Such arrangements will be used to secure funds through a capital campaign for this element in the early stages of the implementation of the plan.

From the perspective of the Preserve, pursuit of this type of partnership arrangement is not uncommon, and is entirely consistent with the National Park Omnibus Act of 1998 (also known as the “Thomas Bill”), which specifically charges the National Park Service (NPS) to,

*“engage in partnerships with universities..... to establish cooperative units to conduct multidisciplinary research....and to utilize the highest quality information and science to inform management decisions”.*²¹⁷ ...

While not a National Park, the Preserve does share many of the land management and competitive use challenges faced by National Parks, and would stand to benefit from these types of arrangements in a similar fashion. Partnerships of this type may range from basic contractual agreements providing funds to agreements where there is joint staffing and joint planning and execution of a research agenda.²¹⁸

While there are literally hundreds of examples of partnerships between the Forest Service, the Department of Agriculture, the Fish and Wildlife Service, and numerous public and private institutions, conversations with the President of the Organization of Biological Field Stations (www.obfs.org) and Executive Directors of three member institutions revealed few instances where universities partnered with 501 C1 or C3 corporations and public or quasi public lands to finance infrastructure development.

²¹⁷ National Parks Omnibus Act of 1998, www.georgewright.org/title2text.pdf.

²¹⁸ Monroe Martha C. et. Al. “Building Successful Partnerships for Technology Transfer”, *Journal of Extension*, June 2007, Vol. 45 #3. Article # 3T0T6.

Far more common are partnership arrangements where universities provided matching funds for faculty and graduate student stipends and/or paid fees for room and board to existing field research stations. It is also not uncommon for universities to partner with field stations to submit grant proposals for supporting programmatic research activities. Funds from these types of partnerships and grant proposals can cover operating costs and overhead for facilities but seldom start up construction. One notable exception to this is the La Selva Biological Station in Costa Rica, operated by the Organization for Tropical Studies and a consortium of over 60 international universities (www.ots.ac.cr).

However, partnerships and collaborations on capital campaigns that result in the creation of infrastructure are not unheard of. Universities are attracted to these types of arrangements because they provide access to field sites and research opportunities that might not otherwise be available to students and faculty affiliates. Organizations like the Preserve benefit by being able to access not only the donor database resources of partner universities, but also the materials development, outreach, and public relations capabilities of university development staff.

To the extent that the conditions for a good research partnership are met, it is not unreasonable to assume the formation of a university/Preserve partnership to conduct a capital campaign for raising the necessary funds. Such a partnership would allow the Preserve to take advantage of university development resources to assist with donor lists, campaign materials development, and publicity in particular. A partnership of this nature may also enhance the ability of a campaign to leverage funds from private and family foundations (which do not typically fund capital campaigns). However, care will need to be taken to develop the two tracks of capital campaign in concert with one another so that efforts and donor pools do not conflict.

E.2 Capital Campaign for Remaining Structures

The lodges proposed in both scenarios are funded through loans, leaving the visitor center, the Preserve headquarters, wildlife tent camps, camping infrastructure, and existing cabin upgrades to be funded through alternate sources. Generation of funds for the construction and improvement of these structures lends nicely to a combined capital and major donor campaign. Organizations often hire a consultant specializing in capital campaigns to direct and manage large-scale efforts of this type. The consultant will not only assist the Board in prioritizing between the remaining infrastructure development needs, s/he will also be able to effectively allocate the various fundraising tools (special events, targeted mailings, etc.) and reward opportunities (naming rights, access priorities, etc.) across the projects. The relationships and skills of the Los Amigos 501 C3 can also be brought to bear during this phase of a capital campaign.

In a capital campaign, 40 to 60 percent of the fund goal is usually provided by six to eight donors with one gift covering 10 to 20 percent; two each contributing ten percent and three to five making up the remaining 10 to 20 percent. The balance is raised in smaller amounts from a larger pool of people.²¹⁹ Before engaging a consultant and undertaking a capital campaign of any size, it is advisable to sketch out a gift range chart and to identify potential givers at each level.

There are three phases to a capital campaign:

1. Research/Planning: six months to a year - includes development of case statement, gift range chart, analysis of donor database, board training, and prospect identification;
2. Quiet Phase: 8 –to 12 months - testing donor receptiveness, fine tuning of volunteer training and message, continues until successful solicitation of one-third to one-half of the total goal; and
3. Launch: public phase of campaign, involve press, honor quiet donors, display blueprints, architects renderings, testimonials of benefits of proposed improvements.

These phases may be extended or collapsed depending on the maturity, strength, and determination of the organization undertaking the effort. With the right consultant in place and the required planning and level of commitment from the Board and the Amigos’, this second campaign or second phase of a single campaign is not outside the realm of possibility for the Preserve.

Table E-1
Suggested Resources and Contacts

Contact	Company	Website	Telephone Number
Kim Klein	Klein and Roth Consulting	www.kleinandroth.com	(510) 893-8933
Andy Robinson		www.andyrobinsononline.com	(802)479-7365
Amy O’Connor	Integrated Development Consulting	www.integrated-development.biz	(801)533-8735
	TREC (Training Resources for the Environmental Community)	www.trec.org	(505)986-8400

²¹⁹ Kim Klein, “Planning a Capital Campaign for Grassroots Groups”, The Grassroots Fundraising Journal, Volume 20, No. 4. Copyright 2001, Chardon Press.

E.3 Socially Responsible Investment (SRI) Instruments

If the aforementioned capital campaigns do not raise the needed capital for infrastructure and development, another alternative for the Preserve is through Fund Development and through tapping into the recent phenomenon of socially responsible investment. “Fund development” involves raising money for a project not through donations but through the use of investor capital. Socially Responsible Investment (SRI) and “venture philanthropy” are but two fund development methods based on locating investors who want a return on their money but are willing to accept a somewhat lower rate of return as long as the project has a significant social and environmental benefit. The development of funds targeted specifically for infrastructure capital, education and research, historic conservation (e.g., buildings, landscapes, etc.), protection of unique habitat lands, and potential social enterprises associated with the Preserve are critical to attaining the goal of economic self-sufficiency.

With the rise of “dot com” and technology boom millionaires, philanthropy in the 21st century has taken on a new dimension. In addition to outright gifts and grants to projects of interest, today’s philanthropists are increasingly seeking opportunities to not only make direct donations to worthy causes and projects, they are increasingly looking for opportunities that also provide them with a return on their investment.

Venture capital and venture capitalists are well known historic sources of private equity funds for immature, high potential, growth companies. Investors typically assume a high risk, and expect a high return. Today’s “eco-entrepreneurs” or “eco-angels” seek both internal and external rates of return for their investments; measuring “external” rates of return as returns to a larger social good.

In recent years the number of conventional firms offering socially responsible investment instruments to their clients and the creation of firms solely dedicated to socially responsible instruments has grown markedly. The 2007 SRI Trends Report, reports that roughly 11% of all professionally managed assets in the U.S., about one out of every nine dollars, is invested in a socially responsible manner.

- SRI assets rose more than 324% from \$639-billion in 1995²²⁰ to \$2.71 trillion in 2007. During the same period, the broader universe of assets under professional management increased less than 260% from \$7-trillion to \$25.1-trillion.

²²⁰ 1995 the year of the first “Report on Socially Responsible Investing Trends in the United States,” Social Investment Forum, 2007.

- From 2005-2007 alone, SRI assets increased more than 18 percent while the broader universe of professionally managed assets increased less than three percent.²²¹

Funds of this type include, but are not limited to: Calvert Mutual Funds- Socially Responsible Investing- Social Venture Capital www.calvert.com ; “Eco Angels” at www.socialfunds.com ; Good Capital at www.goodcap.net, and the New Resource Bank, www.newresourcebank.com . As an example of the types of opportunities that this income stream might present, the below is from the home web page of Underdog Ventures.

“Underdog Ventures has developed a new model of customized community venture capital funds, combined with a model of customized philanthropy. Underdog Ventures partners with a group of investors committed to financial, community and environmental results. We create innovative and customized investments to meet the specific needs of each of our investors, each of whom has a dedicated fund that invests in areas that they choose.

Underdog Ventures acts as a managing partner for each of the funds, structuring, negotiating and managing the investments, while serving as an intermediary between investors and the invested companies. We provide value-added consulting, using the expertise of our in-house staff, advisory board members and investors; perform the due-diligence on companies in which we invest; maintain a strong on-the-ground presence in designated communities; create strategic relationships with non-profits; and provide exit opportunities for our investors consistent with their priorities.”
www.underdogventures.com **(no endorsement is made of the types of services provided in these examples)**

In order to create such an offering to fund the needs of the Preserve, the Board will need to work with an investment firm, like Underdog, to develop a unique investment offering or possibly present their plan to an existing fund in hopes of being included in the portfolio offering.

One caveat- when assessing the value of this approach to generating funds for the Preserve, the Board will need to keep one important factor in mind. Today’s eco-entrepreneurs share one characteristic with traditional venture capitalists: they invest in companies and projects that have a high degree of personal resonance and they expect to have a high degree of involvement in bringing their investment to fruition.

The *development* of funds targeted specifically for infrastructure capital, education and research, historic conservation (e.g., buildings, landscapes, etc.), protection of unique habitat lands, and potential social enterprises associated with the Preserve are critical to

²²¹ Social Investment Forum, “2007 Report on Socially Responsible Investing Trends in the United States.” Washington, D.C.

attaining the goal of economic self-sufficiency. The preceding section outlined tools and strategies for venturing into this creative and practical arena. The entire approach depends on linking entrepreneurial thinking and techniques to conservation and management of the VCNP.

Marketing initiatives are critical at the front end of the planning process. Such efforts should enable the Preserve to:

- Clearly identify its audience, and build a case that motivates and encourages investors to respond (aids in reaching established fund development and fundraising goals);
- Create a brand that will help the Preserve stand out from the crowd; and
- Ensure consistency across organizational goals to build continuity across fund development and fundraising efforts, and help achieve long-term sustainability.

Appendix F – User Manual for the Valles Caldera Financial Model

As mentioned in the main body of the text, it is likely that the decision makers for the Valles Caldera National Preserve will settle on an action plan that may be different from either of the two alternatives presented in this analysis. In order to assist in this decision making process a financial model was developed. The model allows users to adjust assumptions used for estimating revenues and costs, and automatically updates the pro forma financial statements accordingly. The following section provides a users manual for the financial model.

The financial model was created in Microsoft Excel and includes three visible worksheets. The user should always “enable macros” when prompted while opening the workbook. The first worksheet is named “Control Panel” and houses all of the assumptions used to generate revenue and cost estimates. The two other spreadsheets, “Condensed Op Statement,” and “Net Income Pro Forma” are results of the model or the pro forma financial projections.

The Control Panel spreadsheet has two graphs at the top that are fixed in place, and will not move even if the user scrolls down the page. These graphs show the annual gross revenues, as well as total costs of the Preserve. Revenues in the graph only include income from operations, and annual donations used for operations. The graph does not include donations for developments, or appropriations. Essentially, the graph shows at what point the Preserve becomes financially self sufficient.

Below the graph are the assumptions that drive the results of the model. In columns C and D are assumptions relating to the revenue estimates, while columns G and H include assumptions pertaining to cost estimates for Alternatives 1 and 2 respectively. Assumptions are grouped in rows according to the venture analyzed, for example, the visitor center assumptions for revenue and cost estimates are in cells B20:H25. The facility development costs for Alternatives 1 and 2 are included in columns I and J respectively.

Several assumptions are in gray boxes that are actually menus of choices for that specific assumption. For example, the year in which a facility is built and who will pay for development (development cost responsibility) are always provided as drop down menus. When the specific cell is selected an arrow appears on the lower right side of the cell that will give the user options for the specific assumption. Once the assumption is chosen, the graph and results will automatically update.

The condensed operating statement is a separate worksheet within the same workbook. The results in the condensed operating statement will automatically update, and all of the cells in this worksheet are protected so the user cannot change any part of the condensed operating statement. The bottom two lines of the condensed operating statement show the annual amount of capital required for developments under each of the alternatives.

The net income statement is also a separate worksheet within the workbook. The results in the net income statement will not automatically update as assumptions are changed, but can be updated by selecting the red box labeled “update.” While there are two boxes in the worksheet next to each alternative, the two boxes perform the same function of updating both alternatives. This worksheet is not protected so care should be taken by the user to not disrupt the display of results. All other worksheets that perform ‘behind the scenes’ calculations in this workbook are hidden but do serve an important function.