



**U.S. Department of Transportation  
Federal Transit Administration**

**Alternative Transportation in the Parks and Public Lands Program  
Project Proposal for Fiscal Year 2008 Funds – Planning Project**

BASIC PROJECT INFORMATION			
Project Name (Please provide a 1-2 sentence description of the project): <b>Alternative Transportation Planning for Public Access and Use in the Valles Caldera National Preserve, New Mexico: Strategic Planning of a Low Volume Motorized Transportation System.</b>			
Proposed Funding Recipient: <b>Valles Caldera Trust</b>			
Public land unit(s) involved: <b>Valles Caldera National Preserve (a unit of the US National Forest System).</b>		Location of Project City: <b>Jemez Springs</b> County: <b>Sandoval</b> State: <b>New Mexico</b> Congressional District: <b>#3</b>	
Federal Land Management Agency managing the above unit(s): <input type="checkbox"/> Bureau of Land Management <input type="checkbox"/> Bureau of Reclamation <input type="checkbox"/> Fish and Wildlife Service <input checked="" type="checkbox"/> Forest Service ( <b>Valles Caldera Trust</b> ) <input type="checkbox"/> National Park Service		Type of Planning Project: (Implementation projects, please use the alternate form) <input checked="" type="checkbox"/> Planning	
<input type="checkbox"/> Proposal is to plan for a possible new alternative transportation system where none currently exists. <input checked="" type="checkbox"/> Proposal is to plan for a possible expansion or enhancement of an existing alternative transportation system.			
ATPPL Funding Requested during FY 2008 <b>\$200,000</b>		Total Cost of Planning Project at Completion (All sources) <b>\$600,000</b>	
Were you awarded FY 2006 or FY 2007 ATPPL funds? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If answer "Yes," please provide amount awarded: \$			
Do you plan to request additional ATPPL funds in future years? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>(Note: If you wish to compete for future ATPPL fiscal year funds you must reapply).</b>			
If answer "Yes," please specify ATPPL proposed funding levels for out years below:			
FY 2009 <b>\$500,000</b>	FY 2010 <b>\$600,000</b>		
FY 2008 Funding Amounts from sources other than ATPPL funds? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If answer "Yes," please specify funding levels per source below:			
State \$	Local \$	Federal (other than ATPPL) <b>\$400,000</b>	Private sources \$

**CONTACT PERSON**Name: **Dr. Jeff Cross**Phone: **505-661-3333**Position: **Executive Director**E-mail: **jcross@vallescaldera.gov**Address: **Valles Caldera Trust, P.O. Box 359, Jemez Springs, NM 87025 USA****OTHER PROJECT SPONSORS (in addition to funding recipient)****U.S. Forest Service, National Park Service (Bandelier National Monument), Santa Clara Pueblo, Jemez Pueblo, Zia Pueblo, Santa Ana Pueblo, San Ildefonso Pueblo, County of Los Alamos, Sandoval County, Rio Arriba County, Village of Jemez Springs.****REQUIREMENTS** If a State, Tribal, or local government entity is proposing the project, the applicant has contacted the manager of the federal land unit(s) and has the consent of the Federal land management agency or agencies affected. **N/A** The project is consistent with the metropolitan and statewide planning process. The project is consistent with agency plans. The planning project will analyze all reasonable alternatives, including a non-construction option.**BASIC PROJECT DATA**Number of Visitors (Annual): **12,400 in 2007; projected 14,000 in 2008.**Daily Number of Visitors (Peak season): **~100**Average Number of Vehicles per Day at Peak Visitation: **~40**Current Road Level of Service at Peak Visitation: **USFS Maintenance Level 3 (10% of public roads); Level 2 (90%), 184 miles total (see p. 6).**

(Please consult guidance where available on determining this variable. You may use observational accounts or pictures to provide an assessment of this datum for FY 2008 proposals).

What time of the year does your land unit experience Peak Visitation?

 Spring Summer Fall WinterCurrent Carrying Capacity of Existing Roads: **To be determined.**What percent of that capacity is the site operating at during peak periods? **To be determined.**Current parking shortages during peak visitation: **Maximum parking is 200 spaces in 3 lots. Often exceeded during special events. Some lots full on daily basis in peak season.**Current Number of Persons who use the alternative transportation system (if one already exists) at peak visitation: **~80 per 100 visitors (80%)** (average number of visitors/daily at peak)Estimated Annual Number of Persons who will use the alternative transportation system at project completion: **40,000 minimum, 100,000 maximum** (anticipated number of riders or users/annually)Average number of auto collisions with wildlife in the area? **<1 collisions/year**

## Executive Summary

Please provide an executive summary of your proposal that is no more than one page in length.

The Valles Caldera National Preserve in northern New Mexico is a relatively new acquisition to the National Forest System. The 89,000 acre former ranch was purchased by Congress 8 years ago (*The Valles Caldera Preservation Act of 2000 (USC, 2000)*). Congress simultaneously established the Valles Caldera Trust (a wholly-owned Federal Government Nonprofit Corporation) to manage the land and develop programs for public access and use. The Trust assumed operational responsibility from the US Forest Service in August 2002, and since that time has been developing interim programs in recreation, fishing, hunting, livestock grazing, forestry, and public education and outreach. In 2007/2008, the Trust has begun the long-term planning effort for public access and use (to be developed in an Environmental Impact Statement (EIS)), a business management plan, and a forage utilization plan for livestock and wildlife (chiefly elk).

One of the major planning needs will be the public transportation plan into and within the Preserve. For the past 5 years, the Trust has restricted privately-owned vehicles, opting to test a van-based shuttle system in which participants park personal vehicles each morning at the welcome center and are driven in vans to trail heads and fishing beats. Van-based wildlife tours, educational field trips, and other special events also have been conducted. As a contrasting experiment, the Trust held a one-day “open house” in August 2006, during which the public was allowed to take personal vehicles on a designated route into the Preserve. The result was a traffic grid-lock by mid-day caused by over 1,400 cars entering the preserve in the morning, and the gates had to be closed 3 hours early for traffic safety reasons. Approximately 800 additional automobiles were stranded outside of the Preserve on the access highway (State Hwy 4) when the gates were closed. Traffic was slowed to a crawl within the Preserve for the 16 miles of road opened for this event. Thus, it became obvious that the Trust would need to develop options for alternative transportation plans to allow public access to this very desirable recreational area of public lands.

This ATPPL requests planning funds for developing the landscape-level plan for public access, capacity and transportation from Preserve entrances to interior facilities, trails, fishing streams, picnic areas, visitor center, educational facilities, etc., and to design and select the mode(s) of transportation necessary to implement the overall plan – the intent is to evaluate the feasibility for reduction or elimination of the need for private automobiles to access the far interior of the Preserve, yet still allow increases in the numbers of visitors and quality of experiences. A business management plan is underway to ensure long-term financial sustainability (as required by the Valles Caldera Preservation Act). Environmental and cultural resource monitoring will be expanded to ascertain impacts, as per the Trust’s science-based adaptive management philosophy.

As part of the business plan, a detailed financial analysis will be undertaken with respect to both the costs of program operation and the potential income from user access fees. Operational costs will include the types of public mass-transport to be used, fuel types and costs, personnel operations costs, insurance liability costs, alternatives to the use of VCT staff (e.g., use of concessionaires) as drivers, routes and frequency of schedules, locations of destinations (trailheads, etc.), daily/weekly/seasonal variations in visitation, and financial impacts on supporting facilities (visitor center(s), housing, food service, law enforcement, EMS) and local communities (nearby businesses, motels, B&Bs, service stations, grocery stores, etc.). Income analyses will include market assessments, visitor surveys, and cost-benefit analyses for all alternatives considered in the plan to determine user fee schedules that will balance program expenses. Evaluations will be undertaken for complex fee schedules (e.g., age-specific) and use of lottery applications to fill the transportation capacity of systems serving the Preserve’s public visitor programs.

## Project Description

This project proposal is for a major alternative transportation planning initiative on the Valles Caldera National Preserve (VCNP) in northern New Mexico (Map 1). The funds will be used to contract with professional transportation and recreation planners to provide the Valles Caldera Trust with a series of alternative plans for public transportation into and within the Preserve in support of Preserve public activities. The Trust will cost-share this project in FY 2008 by dedicating \$200,000 for the first year of the NEPA Environmental Impact Statement development, and will provide an additional \$200,000 for a business plan and economic analysis of Preserve programs and transportation operations.

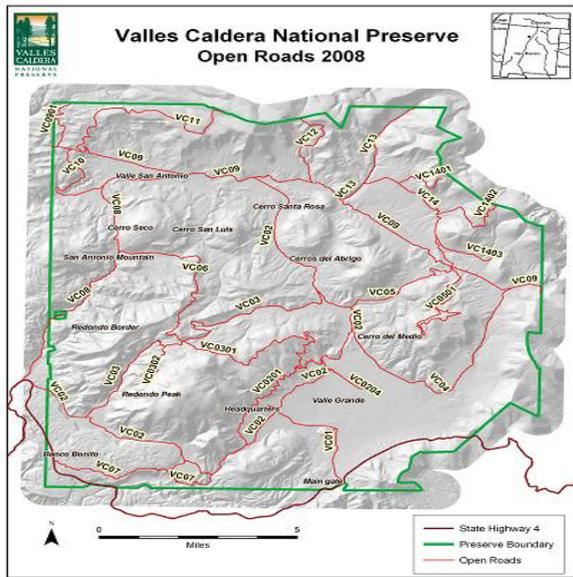
The goal of the proposed ATPPL planning project will be to design alternative solutions and feasibility analysis for a public transportation system that will continue the Trust's interim program of limiting privately-owned vehicles on the Preserve for recreational activities. The Trust anticipates a large increase in visitation during the next 5-10 years, and all programs and activities have to be designed to accommodate this increased visitor activity. Transportation networks (Maps 2, 3) and operations will have to be designed for this greater capacity (estimated as between 40,000 and 100,000 visitors per year, compared to ~12,000 visitors in 2007). Roads on the Preserve (Table 1, Fig. 1) are presently inadequate for this influx of visitors and traffic, and will require continued upgrades (currently underway) to handle increased van/bus traffic and restore environmental problems (such as wetland degradation and erosion sites; Fig. 2).

The VCNP has the advantage of being a newly-acquired unit of the National Forest System, and has been managed in a very conservative fashion since 2000. As such, there are no historic, established expectations by the public for recreational access; in fact, the public sentiment has consistently emphasized that the Preserve's viewsapes, solitude, silence and "pristine qualities" be protected and preserved as a first priority. Therefore, the Trust now has the opportunity to create a novel, conservative, energy-efficient, economically self-sustaining operational plan for public access and use, and an alternative transportation plan is a critical component of this overall plan.

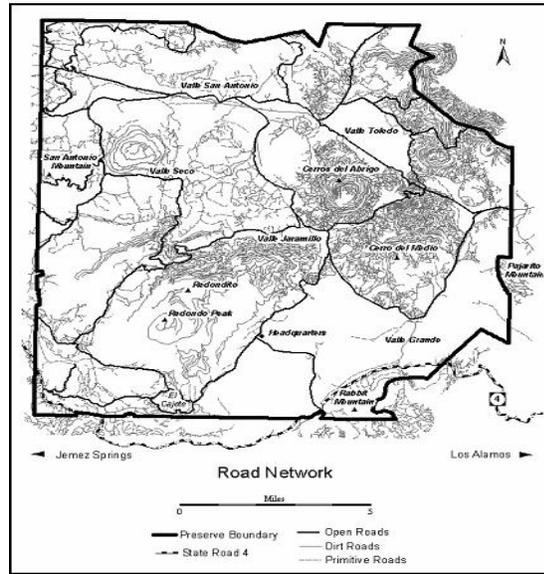
The components of the ATPPL planning project will include the designation of the Preserve public road network, along with the layout for all the transportation routes and destinations (trailheads for hikers, mountain bikers, and equestrians, picnic areas, fishing beats, educational facilities, visitor center, residences). Evaluations of all potential transportation systems will be undertaken to determine if restricting private vehicles from driving Preserve roads is environmentally and economically advantageous. Protection and preservation of natural and cultural resources will be the top priority (as directed by Congress), while allowing for increased use by the public for recreation and educational activities. The plan also will seek to maximize public health and safety by reducing traffic, while improving communications and response access for emergency personnel. The planning will emphasize the enhancement of the quality of visitor experiences without exceeding capacity of facilities, roads, trails or landscape aesthetics. Finally, the Trust must become financially self-sustaining by the year 2015, and therefore the resulting alternatives from the ATPPL planning project will undergo a rigorous economic evaluation to optimize cost-benefit ratios and maximize efficiencies.



Map 1. Topographic relief map of the Valles Caldera National Preserve. Volcanic caldera is 13 miles across, with multiple mountains within. Valles are grasslands, mountains are forested.



Map 2. Public road system in 2008  
The only paved highway is State Hwy 4 (dark line at bottom of map); USFS roads enter from N, E, and W.



Map 3. GIS data layer of all roads on VCNP, including 1,300 miles of old logging roads (now closed to traffic) from the 1960-1972 private forest-harvest period.

Table 1. Class and miles of VCNP administrative and public roads

	Class	Miles
Administrative Use Roads (Accessible at any time, except when snowed in).	Arterial	1.8
	Collector	14.0
	Local	36.9
	<b>Total</b>	<b>52.7</b>
Public Open Roads (Access times restricted by VCT)	Arterial	87.9
	Collector	34.5
	Local	8.9
	<b>Total</b>	<b>131.3</b>
<b>Grand Total</b>		<b>184.0</b>

Figure 1. Valles Caldera roads: Arterial (left), collector (center) and local (right) roads



Figure 2. Road upgrades: (Left) Flooded road, pre-upgrade. (Middle, right) Upgraded roads with restored wetlands.



## Planning Justification

### 1. Demonstration of Need

#### a. **Visitor mobility and experience:**

The current transportation network and operational plan consists of 184 miles of dirt/gravel roads (Table 1 above) accessing most of the valles, interior mountains, and caldera rim (Maps 1 and 2 above). A fleet of eight 12- and 15-passenger Ford vans supports a shuttle system for public access for hikers and fishermen, along with visitor tours for wildlife viewing, visits to historic sites, educational activities, and special events. Use of private vehicles on the Preserve is generally prohibited, except for elk hunts (autumn) and turkey hunts (spring), and some educational activities (e.g., school busses, or 4x4 SUVs). These programs have been enacted on an interim basis from 2002-2008. Development of the interim recreation program has been guided by public listening sessions held in 2001 and the public comments on the draft of the *Framework and Strategic Guidance for Comprehensive Management* (Valles Caldera Trust 2003). The public consistently requested that the Trust provide access while protecting the solitude, natural quiet and vistas of the Preserve. Recreation activities and programs are offered on the Preserve most of the year (Table 2).

Table 2. Annual visitor participation in public programs on the VCNP.

	2003*	2004	2005	2006	2007
Special Events	351	1,674	3,401	5,196	3,984
Fishing	1,735	2,010	1,919	1,585	1,814
Hunting	840	497	1,162	1,332	1,798
Sleigh/Wagon Rides	598	1,520	891	702	516
Hiking	1,276	1,620	565	446	1,020
Skiing/Snowshoeing	64	142	705	0	1,393
Tours	353	502	379	573	1,607
Equestrian	NA	213	198	104	273
<b>Total</b>	<b>5,217</b>	<b>8,178</b>	<b>9,220</b>	<b>9,938</b>	<b>12,405</b>

\* Data for all programs except elk hunting are for fiscal years (October 1 through September 30); data for elk hunting are calendar years.

In 2008-2009, the Trust is undertaking the EIS for long-term planning of public access and use of the Preserve. The number of visitors to the Preserve has increased from about 200-300 people per year when the ranch was in private hands to over 12,000 people in 2007 (Table 3). Future visitor capacity needs to be assessed, but preliminary estimates range from 40,000-100,000 visitors/year. Planning for alternative transportation of public visitors is now required to determine the scope and layout of a transportation network and types/numbers of mass-transit vehicles to handle the anticipated increase in visitors.

Table 3. Annual visitation and revenues. Revenues include public access fees, fees for commercial activities, product sales, donations and direct grants to the Trust.

	2002*	2003	2004	2005	2006	2007
Visitors	~690	5,217	8,178	9,220	9,938	12,405
Revenues	\$320,750	\$647,350	\$517,461	\$652,219	\$794,844	\$749,957

\* Data are for fiscal years, October 1 through September 30

As a test for one alternative plan of allowing unlimited private vehicle access, the Trust held a public open house “Drive and Discover the VCNP” in August, 2006. A route of 16 miles was designated through the Preserve, and the gates were to be open from 9AM-4PM. By 8:15AM, traffic had backed up to a dead stop on NM State Hwy 4 (the only highway to the VCNP), so the gates had to be opened early. Over 1,400 cars entered the VCNP in the morning, causing a 16-mile traffic jam in both directions (Fig. 3). Preserve gates were closed on advice from police at 1PM. Not surprisingly, the Trust staff received numerous complaints about the traffic congestion and condition of the roads.



Fig. 3. Open-house traffic on VCNP

While this single-day experiment should not be construed as exemplifying a long-term “steady state” of motorized visitation, it does illustrate the potential for peak time traffic congestion.

Planning for increased visitation must also include parking areas and the location of activity hubs. Current parking is limited to 3 lots, with a total capacity of 200 vehicles. This capacity is exceeded for the Trust’s numerous special events; for example, the Trust will shut down all motorized traffic on the Preserve for marathon runs or mountain biking events, and participants are then free to run/bike on established road routes through the Preserve. Attendance at such events typically exceeds 400 people/day, plus spectators, quickly overwhelming parking capacity. This leads to driver frustration, safety problems and environmental damage from illegally parked vehicles.

In addition, while one of the Trust’s vans is accessible to disabled persons, there are currently no trails or fishing access areas for disabled persons; hence, the only available activities are van tours. Access for disabled visitors needs to be incorporated into the visitor access and use and transportation plan, part of which would be regular transportation of disabled visitors.

Finally, people who do not own a private vehicle have extreme difficulty in getting to the interior of the Preserve. However, there is now train service from Albuquerque (and soon from Santa Fe) to the town of Bernalillo, and from there via an inexpensive county bus route to Jemez Springs (where the VCNP HQ is located; about a 2 hr trip). Part of the Trust’s alternative transportation plan could include a public transport system from Jemez Springs to the Preserve (using either Trust staff and vehicles, or a concessionaire), and thus connecting to the VCNP transportation network. This aspect will need a full logistical and financial plan analysis.

**b. Environmental condition as a result of the existing transportation system:**

The present environmental condition of the Preserve is good, and has improved since 2000 when Federal management began. In the Trust’s recent *2008 State of the Preserve Report* to Congress, natural and cultural resources were described and summarized for the 2002-2007 period of Trust management. Watershed condition, water quality, and streambank

geomorphology have all improved (due to reduction of livestock densities) compared to conditions under private management. Vegetation cover in grasslands is nearly 100%, although much of the VCNP forests are second-growth and overly dense following logging in the 20<sup>th</sup> century. This condition puts the Preserve at risk of fire, and therefore visitor access planning must incorporate forest fire risk (both for preventing ignition events and undertaking evacuation actions). Monitoring programs for wildlife populations, including fisheries, have shown either stable populations or improvements. Stream functioning conditions have improved dramatically during 2001-2006 (Reports from S. McWilliams et al., 2001, 2006; Fig. 4).



Fig. 4. Rio San Antonio on the VCNP.

These improvements have come in spite of an increase in visitation from ~200 people per year as a private ranch, to over 12,000 visitors in 2007 under Trust management. The present van transportation system is working for the small numbers of visitors at this time, but an anticipated 4- to 10-fold increase in visitation will certainly overwhelm the system. As such, the Trust must analyze other alternatives for public transport that are more efficient and will require fewer vehicle trips to the Preserve interior. It is the Trust's intent to not only protect and preserve the natural and cultural resources as visitation increases over the next 10 years, but also to undertake restoration activities to further improve the natural resources on the VCNP. If properly conducted, the planning process will identify the locations of trailheads for hikers, mountain bikers, and equestrians, campgrounds, picnic areas, fishing beats, education centers, special events, etc., and allow a cost-effective transportation system to carry in excess of 40,000 visitors annually to their desired destinations. Thus, the overall objective, as described in the *2008 State of the Preserve Report*, is to develop the plan that maintains and improves the current quality of the Preserve's resources, while simultaneously increasing visitation and improving the quality of the visitor's experience.

## Scope of Work and Methodology

### 2. Methodology for Assessing - Visitor Mobility & Experience Benefits of Project

#### a. **Reduced traffic congestion:**

The planning project's scope will be directed at the projected 4- to 10-fold increase in visitor traffic to the VCNP, with the objective of developing a smooth-flowing, efficient traffic pattern while maximizing the quality of the visitor experience. The approach will include the logistical, aesthetic, and economic evaluations of alternative road and trail networks and vehicle types and access policies. Methods will range from straightforward mathematical calculations of vehicle densities and miles traveled, to simulation models of aesthetic impacts and atmospheric pollution, to field experiments (e.g., vehicle impacts on noise levels, dust production, aesthetics) for testing hypothetical alternatives. The results of the planning process will be reviewed and evaluated by profession planners, engineers, natural resource managers, recreation specialists and the general public through the NEPA process prior to being adopted in an action decision.

Current traffic on the Preserve is limited to the Trust's van fleet for visitors and administrative vehicles. During peak (summer, autumn) visitor times, van traffic to the Preserves backcountry range from 6 to 10 per day. If visitation increases 4- to 10-fold over the next few years, van traffic will become almost continuous in the backcountry, and will detract from the Preserve's solitude, quiet, and viewsapes that are treasured by the public. Larger vehicles with greater passenger capacity, yet sufficiently rugged to handle the road conditions, may be an option to reduce traffic and meet visitor increases. Route planning and location of destinations will allow an increase in alternative schemes. Such alternatives must be evaluated for logistics and economic cost-benefits to ensure long-term sustainability.

Clearly, the alternative of opening the Preserve to private vehicles creates problems. During the Trust's 2006 open house on the VCNP, in one day 1,444 vehicles carrying 3,746 passengers entered the Preserve; up to 800 vehicles were turned away. While the gate was open, vehicles entered the Preserve at a rate of one vehicle every 11 seconds for the 4.5 hours. The average number of passengers per car was 2.65. Vehicle density on the 16-mile road from Highway 4 to the San Antonio cabin was at 91 vehicles per mile (Fig. 3), leaving an average of 38 feet between bumpers for 16 miles. However, significant clumping of vehicles occurred that resulted in traffic back-ups and delays. This is a scenario the Trust wishes to avoid.

The proposed planning process will determine the capacity of the current road system, based on both engineering and aesthetic considerations. From there, a transportation plan for vehicles will be developed to optimize visitation while reducing vehicle trips. The location and sizes of parking areas and high-visitor-use sites will be incorporated into the plan to ensure a smooth and efficient traffic flow and visitor turnover, thereby enhancing the visitor's experience while maintaining the quiet and solitude of the VCNP.

**b. Enhanced visitor mobility, accessibility, and safety:**

The great advantage of the Trust's proposed planning effort is that there are only limited, interim programs operating on the Preserve at this point in time. Visitation at present is being handled well by our public transportation system, and while public demand for access and use for recreation is rising quickly, there are no established visitor centers, trails (except old logging roads), campgrounds, picnic areas, etc. – the entire Preserve is essentially *an empty canvass* upon which the planners can paint an efficient, high-quality, resource-conservative, cost-effective public transportation plan and integrate it into the Preserve-wide public and use plan right from the beginning. As such, components of visitor mobility, accessibility and safety, including integrated intermodal connectivity, expansive public access to resources, easy access for those with disabilities and low incomes, comprehensive traffic safety, pedestrian/cycling safety, and emergency plans for catastrophic events (i.e., forest fires or security threats), can all be incorporated from the initial stages, rather than being “retro-fitted” into an existing operational network with established public expectations. Thus, all of these aspects can be readily achieved during the Trust's planning for public access and use, because the planners will be aware of these objectives right from the start.

**c. Improved visitor education, recreation, and health benefits:**

Assessment for the Trust's planning project's impact on improvement of visitor education, recreation and health will be evaluated through visitor surveys, quantifiable data for public participation in visitor activities, and tracking records of visitor health. Some of these are fairly straightforward to assess. For example, the VCNP at present has no facilities for formal or informal visitor education, although considerable public demand for such facilities has been

expressed in numerous public meetings. Preserve facility inventories have been conducted, and all have been found in need of health and safety code upgrades before public occupancy can occur. All educational activities (public school classes, university field trips, public van tours) are field-based, with no laboratory time or indoor lectures. If thunderstorms chase students/participants back into vehicles for safety reasons (a common summertime occurrence), the educational event is essentially over. Thus, as facilities, programs and transportation systems are developed, the Trust can track the improvements via numbers of completed programs, person-days involved, and evaluations of participants.

Similarly, public recreational opportunities are fairly limited at this time, so as the VCNP plans are implemented, public evaluations from surveys or other solicited/voluntary comments will assist in program assessments, allowing adjustments by Trust management to be made in response. Public health benefits and safety will be measured through temporal tracking of accident reports or medical emergencies from visitors, as well as assessments of EMS and Rescue Team response times, and types and severity of injuries. The transportation system will clearly be an integral part of ensuring the health and safety of Preserve visitors.

### **3. Methodology for Assessing - Environmental Benefits of Project**

#### **a. Protection of sensitive natural, cultural, and historical resources:**

The proposed planning effort will determine the locations, routes, schedules and numbers of both vehicles and visitors, and therefore can specifically target particular areas for increased or decreased use at different times and for different activities. The use of a public transportation system on the VCNP will result in:

1.) Overall vehicle fuel conservation and energy efficiency by reducing by a large value (up to 1,400/day) the number of vehicles driving on Preserve roads;

2.) Decreasing vehicle impacts to Preserve roads (rutting, potholes, etc.) via fewer vehicles driven by trained personnel;

3.) Maintenance of a low accident rate with both other vehicles and wildlife (currently <1/yr on the Preserve);

4.) Increased public safety and improved response times to medical emergencies;

5.) Assurances that sensitive natural and cultural resource areas are protected (by not transporting visitors to such areas) or overused (by limiting and tracking the number of visitors to particular locations on the public transportation routes);

6.) Reduction in introduction or spread of non-native invasive species via private autos.



**Fig. 5. The Valle Grande from Redondo Peak**

Ecosystem sustainability, impacts on watersheds, vegetation, soils and wildlife, habitat corridors and sensitive locations will be addressed in the proposed planning effort as part of the Trust's scientific inventory and monitoring program. Baseline data on all these attributes have been inventoried over the past 7 years, and detailed GIS maps and databases are available to the planning team. Monitoring networks are in place and operating (e.g., gauged watersheds and

water quality program (see below), 45 long-term grassland study areas, 263 forest CSE plots, NRCS Level-II soils map, 216 streambank geomorphology cross sections on VCNP streams, wildlife monitoring (including radio-telemetry studies) of elk, coyotes, rodents, birds, fish, arthropods, non-native/invasive species and Federal- and State-protected species). These data will be incorporated into all planning efforts to maximize preservation and sustainability of the Preserve's ecosystems, and in the future to monitor the actual effects of the selected alternative.

**b. Reduced pollution:**

The proposed planning process will include calculations and projections of known pollutants and quantities from different vehicle types and numbers. The use of vans/buses in place of private vehicles will reduce total vehicle use by some factor (dependent on van/bus type), and miles saved and pollutants reduced will be calculated. For example, at present the Preserve has 184 miles of open roads, and if each van/bus would save 6-15 private vehicle trips on even 25% of available roads (46 miles/trip), then between 276 and 690 vehicle miles will be saved by each van/bus trip. If the VCNP is visited by 25,000 automobiles/yr, this would save 1,150,000 private vehicle miles (again, assuming only 25% of the roads are driven per trip). However, it will be imperative to actually measure the impacts of the selected alternative on the VCNP resources. Our plan will include the expansion of a monitoring network of environmental sensors to measure air, water, noise and visual pollution. *We anticipate that the Trust's public transportation system will continue to minimize vehicle traffic on the Preserve, and that, if successful, our natural resources will **not** experience an increase in pollution.* Current status and future trends in pollution will be monitored as follows:

**1.) Air pollution:** The basins of the valleys tend to trap and concentrate auto emissions (smoke and CO, CO<sub>2</sub>, NO<sub>x</sub> and SO<sub>x</sub>), particularly at night during calm winds. Studies by scientists from Los Alamos National Laboratory have documented *natural* summertime increases in CO<sub>2</sub> of over double normal concentrations (>800 ppm; normal should be 386 ppm). Automotive emissions will greatly aggravate this phenomenon, unless vehicle access is controlled. Monitors for CO<sub>2</sub> and other atmospheric pollutants will continue to be deployed in valleys periodically to assess vehicle impacts on air quality; control monitors already exist in the higher elevation forests. Haze and smoke may also degrade viewscapes and air quality. The VCNP has 6 meteorological stations (Fig. 6) located at different elevations and across the major valleys and mountains. These stations, in addition to measuring precipitation, temperature, relative humidity, wind speed and direction, and soil temperature and moisture at 3 depths, also are equipped with radiometers to measure the amount of sunlight reaching the ground. This provides a temporal and quantitative estimate of cloud cover and haze, and data from stations near the bottom of valleys and near traffic areas (e.g., Valle Grande station, 8,600 ft. elevation) can be compared with those at higher elevation and away from traffic (e.g., Redondito Peak station, 10,600 ft elevation). Finally, we will continue to monitor data from precipitation chemistry taken from the National Atmospheric Deposition Program (NADP) site in Bandelier National Monument (just downwind from VCNP) to assess rainfall chemistry changes.



**Fig. 6. Met station in Valle de los Posos.**

**2.) Water pollution:** The VCNP currently monitors stream physical and chemical characteristics near major roadways, and will continue to do so. Parameters measured include temperature, dissolved oxygen, pH, conductivity, and turbidity (all at 15 min intervals, April-Dec), and monthly measures of nutrients (N, NO<sub>4</sub>, NO<sub>3</sub>, NH<sub>4</sub>, P), ions (F, Cl, Na, K, Ca, Mg), sulfate, carbonate, bicarbonate, alkalinity, hardness, color, total dissolved solids (TDS), and total suspended solids (TSS). Continuous discharge measurements (flumes and weirs) have been installed on 7 streams, and 4 more are proposed for installation in 2008. Vehicle or visitor impacts on water resources should be detected quickly through this stream monitoring network.

**3.) Noise pollution:** *The quiet solitude of the VCNP is one of its most attractive qualities, and noise pollution has yet to be a detracting factor.* In planning for vehicle traffic patterns, sound meters will be placed in strategic locations to ascertain decibel levels of vehicle traffic and visitor activities. We will conduct field experiments using different vehicle types at varying velocities to ascertain noise levels under different driving conditions. These data will contribute to planning decisions on numbers and types of vehicles to be allowed in certain areas and at different times of the day and night.

**4. Visual pollution:** The VCNP has long and wide landscape vistas *that must be preserved* (Fig. 7). The planning process will incorporate this need using computer simulations, field experiments (placing vehicles at certain locations to evaluate viewsapes), and repeat photographs at permanent photo-points. The Trust has a full-time landscape planner on staff, and considers this aspect critical to recreational planning for VCNP.



Fig. 7. Sweeping landscape vista of the Valle Grande

#### 4. Methodology for Assessing - Operational Efficiency and Financial Sustainability

##### a. **Operational efficiency:**

The management goals for protecting and preserving the Preserve's natural and cultural resources were set by Congress in the Valles Caldera Preservation Act of 2000:

- (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 and access to the Preserve for recreation.*

The proposed transportation and public use planning process must incorporate the preservation ethic delineated by Congress, while fulfilling the public's expectation for access and use. The operational plans will include the estimated levels of public use that can be supported while protecting and preserving the resources in Goal #2 above. Efficient transportation systems will allow a "maximum" number of people (a value to be determined) to access the Preserve while conserving the natural resources. Each alternative will be evaluated against these criteria.

**b. Financial feasibility:**

Congress also specified that the Trust should become financially self-sufficient by the year 2015, and therefore our planning effort must include a detailed business plan. The specific goal in the Valles Caldera Preservation Act reads:

*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.*

The Trust has budgeted \$200,000 in FY2008 for the development of a financial business plan that will include programmatic aspects of public access and use. The proposed ATPPL planning project will interface closely with this business planning activity, but funds for the business plan are not requested from ATPPL as these funds are already available. Each potential alternative will be evaluated in an economic analysis based on overall capital and operational costs, equipment depreciation and replacement, and potential for revenue generation through user fees.

**c. Cost effectiveness:**

Cost effectiveness will be evaluated for each proposed alternative action by comparing all capital/operational costs against the anticipated revenues generated by visitor user fees. Operational costs will include the types of public mass-transport to be used, fuel types and costs, personnel operations costs, insurance liability costs, alternatives to the use of VCT staff (e.g., use of concessionaires) as drivers, routes and frequency of schedules, locations of destinations (trailheads, etc.), daily/weekly/seasonal variations in visitation, and financial impacts on supporting facilities (visitor center(s), housing, food service, law enforcement, EMS) and local communities (nearby businesses, motels, B&Bs, service stations, grocery stores, etc.). Income analyses will include market assessments, visitor surveys, and cost-benefit analyses for all alternatives considered in the plan to determine user fee schedules that will balance program expenses. Evaluations will be undertaken for complex fee schedules (e.g., age-specific) and use of lottery applications to fill the transportation capacity of systems serving the Preserve's public visitor programs.

**d. Partnerships and funding from other sources:**

The Valles Caldera Trust has budgeted \$200,000 in FY 2008 for initiating the Environmental Impact Statement for public access and use on the Preserve, and an additional \$200,000 in FY 2008 for the development of a financial business plan that will lead to economic self-sustainability. During this process, the Trust will partner, consult and cooperate with neighboring land management agencies (Bandelier National Monument [NPS], the Santa Fe National Forest [USFS], and Santa Clara Pueblo), along with the New Mexico Department of Game and Fish (the agency that regulates wildlife on the Preserve), and nearby area Pueblos with whom potential business relationships may be developed (Jemez Pueblo, Zia Pueblo, Santa Ana Pueblo, San Ildefonso Pueblo, Pojaque Pueblo and Tesuque Pueblo), and local municipalities (Los Alamos, Sandoval and Rio Arriba Counties and the village of Jemez Springs). Theirs will be in-kind contributions of their staff's time and expertise. Letters of cooperation from the most directly involved entities are attached (NPS, USFS, Jemez Springs).



United States  
Department of  
Agriculture

Forest  
Service

Santa Fe National Forest

1474 Rodeo Road  
P.O. Box 1689  
Santa Fe, New Mexico 87504-1689  
505-438-7840 FAX 505-438-7834

File Code: 1580

Date: FEB 26 2008

Dr. Jeff Cross  
Executive Director  
Valles Caldera Trust  
PO Box 359  
Jemez Springs, NM 87025

RECEIVED

FEB 27 2008

VALLES CALDERA TRUST

Dear Jeff:

On behalf of the Santa Fe National Forest, I extend our support for your proposal to the Alternative Transportation in the Parks and Public Lands Program. The future public access and use of the Valles Caldera National Preserve will clearly be linked closely with public use of surrounding lands on the Santa Fe National Forest, and the development of public transportation plans need to be integrated with those of the National Forest. The Preserve and the three Forest Service districts (Jemez, Coyote and Espanola Districts) that border the Preserve currently share roads, trails, streams and watersheds that cross jurisdictional boundaries, and as such, we will all benefit greatly from an integrated and coordinated planning effort for public recreational use of these lands.

We recognize the high demand for public access to the Jemez Mountains for recreation, fishing, and hunting; and the opportunity to develop a multi-agency planning effort in your proposed ATPPL planning project for the Valles Caldera is exactly what is needed at this time. We also acknowledge that public use of the Jemez Mountains will increase markedly once the Preserve is fully open for public access and use; hence, developing viable alternatives for public transportation systems within the Preserve and the Jemez Mountain region is critical.

Your ongoing development of the Environmental Impact Statement for public access and use, along with the creation this year of the Business Management Plan for Preserve programs, will integrate well with the planning efforts for an alternative public transportation system on the Preserve. Therefore, the timing of this proposal is helpful for ensuring a close integration with other regional planning efforts in 2008-2009. We look forward to working closely with you on this planning project.

Sincerely,

DANIEL J. IRON  
Forest Supervisor





United States Department of the Interior  
NATIONAL PARK SERVICE  
Bandelier National Monument  
15 Entrance Road  
Los Alamos, New Mexico 87544-9508



IN REPLY REFER TO:  
A22(BAND)

FEB 25 2008

RECEIVED  
FEB 26 2008  
VALLES CALDERA TRUST

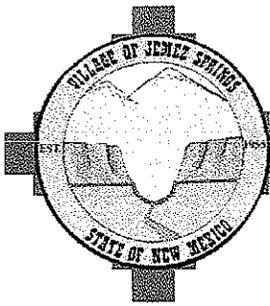
Dr. Jeffrey N. Cross  
Executive Director  
Valles Caldera Trust  
P.O. Box 359  
Jemez Springs, NM 87025

Dear Dr. Cross,

Thank you for the opportunity to partner with your organization in planning your various transportation needs. Bandelier National Monument stands ready to participate in whatever way we can to make the transportation plan something that protects the resources under your stewardship while making those resources available to the public. Since we share a border and have compatible missions, we will also share some similar problems. We look forward to working with you to find solutions that work for the Valles Caldera Trust, and maybe for Bandelier National Monument too.

Sincerely,

Bradley S. Traver  
Superintendent



# VILLAGE OF JEMEZ SPRINGS

P.O. Box 269  
(505) 829-3540  
website: [www.JemezSprings.org](http://www.JemezSprings.org)

Jemez Springs, NM 87025  
Fax: (505) 829-3339  
email: [vclerk@JemezSprings.org](mailto:vclerk@JemezSprings.org)

**John H. Garcia, Mayor**

RECEIVED

February 21, 2008

FEB 26 2008

VALLES CALDERA TRUST

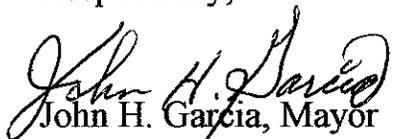
Jeff Cross  
Executive Director  
Valle Calderas Trust  
P.O. Box 359  
Jemez Springs, NM 87025

Dear Mr. Cross,

The Village of Jemez Springs highly supports the proposal from the Valle Calderas Trust to the Department of Transportation ATPPL program for the purpose of getting some planning funds for the Trust regarding alternative transportation operations.

Please contact me if you need further assistance.

Respectfully,

  
John H. Garcia, Mayor  
Village of Jemez Springs

JHG/opt