The State of the Preserve is a document that is unique to the Valles Caldera Trust. It is a key component of comprehensive management of the Valles Caldera National Preserve. The purpose of the State of the Preserve is to provide the Board with the technical and scientific basis for comprehensive management. Since the Trust must prepare a State of the Preserve at least once every five years, it is also the basis for adaptive management. This is a summary of the first State of the Preserve published by the Trust; it examines past, present, and reasonably foreseeable future stewardship actions and their cumulative effects.

**Past Actions**

Over 1,400 miles of roads were built on the Preserve in the 20th century to facilitate logging and about 60% of the forests were harvested. Grazing was the first significant extractive use—at times, over 100,000 sheep and 12,000 cattle grazed on the Preserve. Natural fires apparently ceased in the 1880s. Intensive livestock grazing and, subsequently, active fire suppression greatly reduced fire frequency and increased the divergence of forest structure, composition, and function from the natural range of variability. Subsistence hunting, which began in prehistoric times, increased in the late 19th and early 20th centuries and decimated wildlife populations.

**Present Actions**

The Board assumed management of the Preserve in August 2002 and implemented interim public access programs, including recreation, special uses (research, commercial, and cultural), and education. The number of visitors increased from 200-300 people per year to...
Since assuming the office of Chair of the Board of Trustees of the Valles Caldera Trust on October 1, 2007, I have learned the duties of the Chair are substantial. We all owe a great deal of gratitude to Tracy Hephner, who has served as Trustee since 2003 and was Chair for more than two years. Also, for several months, Tracy served as acting Executive Director of the Trust. Tracy's diligence, devotion, and dedication to the Valles Caldera Preserve and the mandates of Congress in establishing the Preserve are awesome and I thank her for her service. Tracy remains as a member of the Board and, as the member of the Board with the longest length of service, Tracy provides a wealth of knowledge, an understanding of past decisions, and why the decisions were made, as well as vision for the future. I am grateful for her leadership.

Since becoming Chair, I have visited with Jeff Cross, our Executive Director, board members, and staff. I have taken several van tours to hear the descriptions of the Preserve and listen to staff members describe the wonders of the Preserve to our visitors. I have also accompanied our staff archaeologist and Acting Cultural Resources Coordinator, Ana Steffen, and an archaeologist from the State Historical Preservation Office on a tour of the Preserve with a focus on a major obsidian site. I accompanied Preserve Scientist Bob Parmenter and Natural Resources Coor-
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From Trust Chair, Bill Keleher
(con’t from page 2)

East Fork of the Jemez. (Photo courtesy of Paul Paryski.)

dinator Marie Rodriguez to inspect turkey traps and joined Preserve Manager Dennis Trujillo and Recreation Coordinator Rob Dixon, along with professional guides, to inspect the East Fork of the Jemez.

Hopefully, the Trust will have the East Fork open to public fishing by next Spring. The public has wanted the East Fork opened to fishing for years and the addition of the East Fork to the recreation program will be a major step forward. How the East Fork will be accessed and the fee for fishing still need to be determined.

The construction of a new entryway to the Preserve from State Highway 4, as well as a turn lane from the highway, is underway. Although the new entry will not be finished until Spring, the improvements, paid for by a special appropriation from Congress, will be of benefit to all and increase the safety of vehicles entering and exiting the Preserve.

How the Trust meets the requirement for financial sustainability remains to be determined. The cost of operating and improving the Preserve, while maintaining the ecological and cultural attributes of the Preserve and providing access and recreation to the public at reasonable cost, is a challenge.

For example, road improvements currently cost an estimated $100,000 per mile, with the cost of archaeology clearance an additional expense. The federal law authorizing the acquisition of the Valles Caldera requires the Trust to prepare a plan whereby the Preserve will be finally self-sustaining by 2015. Annual revenues from operations since acquisition are not anywhere near to meeting the goal and thus in my view, with only seven years left, the Board needs to develop a business plan to meet the objectives set forth by Congress. Development of a business plan will probably require a consultant to recommend feasible and economically possible programs.

To assist board members and staff to better understand what might be done to increase revenues, a half-day visit to the operation of the Chama Land and Cattle facility, owned by the Jicarilla Apache Tribe, was arranged the day preceding the September public meeting in Tierra Amarilla. We were impressed with the Chama facility, but whether elements of that operation are appropriate to the mission of the Valles Caldera remains to be seen as the business plan, when and if developed, must incorporate the varied values, needs, and interests of a wide range of stakeholders, always keeping in mind the six goals established by Congress. The law does not provide specific direction as to how conflicts are to be resolved. Conflicts in vision do exist between and among the various stakeholders and the Board will listen carefully and make every effort to arrive at a fair, reasonable, and just decision.

With respect to public access and recreation, there were public meetings held during July and August at Jemez Springs, Española, Los Alamos, and Rio Rancho. At each public meeting there were two sessions. Citizens gave their views and a professional facilitator assisted in a discussion of the various views. The four public meetings were “pre” NEPA. The Trust recently received the final report from the facilitators, which will be released to the public soon.

The advice and counsel of those who have contacted board members with respect to the operation of the Preserve is appreciated. We look forward to the financial and volunteer assistance from the members of Los Amigos and appreciate the efforts of Los Amigos.

We pledge to move forward in order that all may enjoy the wonders the Valles Caldera created over a million years ago for our present enjoyment and understand we must administer the Preserve for present and future generations.

The Board looks forward to discharging its duties under the law and making decisions to the very best of its ability.

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nearly 10,000 in 2006. Revenues from public access, commercial uses, product sales, donations, and grants increased from about $321,000 in 2002 to $795,000 in 2006.

Historically, the Preserve was a working ranch. There are 118 miles of fence, 136 stock tanks, eight corral areas, and numerous cattle guards and bypass gates. Since 2002, the Trust has grazed cattle in cow/calf, replacement heifer, conservation stewardship, and yearling programs. In 2007, the Trust managed 500 yearlings for four months under a contract awarded to an owner/operator through a competitive process.

When the ranch was in private hands, about 20 vehicles entered the Preserve per day; now, 6,000-7,000 vehicles enter each year. Since 2002, the Trust has upgraded 13 miles of ranch roads, which restored the natural hydrology to over 3,000 acres of wetlands. The cost of upgrading ranch roads exceeds $100,000 per mile. The Preserve has three parking areas with space for about 200 cars. The Trust uses existing logging roads for hiking programs. There are eight equestrian trails of about 20 miles.

The majority of the 38 facilities on the Preserve were present at the time of federal acquisition. The average age of these facilities is about 60 years and the overall condition is fair to good. They are valued at $5.5 million; deferred maintenance is estimated at $1.2 million and annual maintenance at $120,000.

The Trust planned and implemented forest thinning in two areas at risk from wildfire on Banco Bonito and around ranch Headquarters. In 2005, The Trust conducted an experimental prescribed fire in the Valle Toledo. The fire improved forage quality with no detectable effects on plant populations, soil erosion, stream water quality, and fish and invertebrate communities.

In 2001, the Trust established a science program to provide information for adaptive management. Natural and cultural resources have been inventoried to establish a baseline against which to measure the impacts of operations and management actions. The Trust monitors key indicators of climate, stream water quality, ecological condition, wildlife habitat, and plant and animal populations. The Trust collaborates with universities, agencies, and non-profit organizations on climate change; forest, range, and fire management; forest restoration; watershed restoration; hydrological cycles; infectious diseases; carbon cycling; fire history; elk/cattle interactions; coyote and predator studies; and cattle behavior.

Reasonably Foreseeable Future Actions

Reasonably foreseeable future actions are those actions which are being considered and whose effects may contribute to the condition of the Preserve over the next five years.

Public Access and Use. The Trust held public meetings last summer to gather information for an access and use management plan that will address visitation, visitor programs, and infrastructure for the next decade.
Making Improvements to Wetlands Throughout the Preserve

Los Amigos, the Valles Caldera Trust, and the New Mexico Environment Department have teamed up to restore wetland/riparian conditions along portions of San Antonio Creek; habitat for the rare “bog birch” (Betula pumila) in Alamo Canyon; and slope wetland/wet meadows along the southeast side of Redondo Peak near La Jara Creek.

Environmental Issues of Concern

With minor exceptions, the headwaters of the streams that flow out from the Preserve are entirely contained within the Preserve’s boundaries, making it a self-contained watershed unit. With no other land or land managers upstream from the Preserve, any changes in the quality of water leaving the Preserve or in the ecological condition of its aquatic wetland and riparian communities are wholly attributable to the interplay of human activities, ecological succession, geology, climate, and other natural processes occurring within the Preserve.

The water-collecting basin of the Preserve contains a number of unique aquatic and wetland features, ranging from warm and extremely acidic geothermal waters to numerous springs, seeps, and boggy wetlands. These water-rich environments, combined with the Preserve’s many creeks and streams, provide a robust foundation for the ecological diversity and productivity that characterize the Preserve.

Past activities in the watershed include heavy grazing by livestock and elk for over 200 years, logging, and geothermal energy exploration. Under current management, cattle numbers have been greatly reduced. Current grazing practices include diverting the cattle to water tanks away from the riparian areas, daily herd man-
Los Amigos Members Journey into the Geologic History of the Valles Caldera

Thirty-seven members joined us on Saturday, September 1 for an exciting geologic tour of the north rim of the Valles Caldera led by local geologist, international tour guide, and Los Amigos member Kirt Kempter.

We left Española sometime after 9:00 a.m., and drove west on Forest Road 144 (also known as 39-mile road), stopping at several viewpoints as we wound our way into the northern Jemez Mountains. As we ascended the back side of Chicoma Peak, there were spectacular views of the Rio Grande Rift, Pajarito Plateau, and other geologic features. The road also cuts through the core of an old volcano, active 10 million years ago. Our destination was lunch near Cerro La Garrita above the Valles Caldera National Preserve. A lecture at this stop provided a geologic history of the caldera since the massive eruption occurred 1.2 million years ago, a dynamic story including multiple lakes and volcanic eruptions within the caldera since its collapse.

We returned through the Preserve on VC12 through the Valle San Antonio and then through the Valle Toledo and Obsidian Valley. In addition to the obsidian deposits, we ran into some of the cattle grazing on the Preserve.

Kirt Kempter is a geologist.
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Journey into Geologic History  (con’t from page 6)

who has conducted fieldwork and mapping for the U.S. Geological Survey in the Jemez Mountains for years, leads tours around the world for the Smithsonian and other organizations, and is co-author/producer of a new fold-out map and geologic history that can be obtained at the Trust’s gift shops on the Preserve and at the Jemez Springs offices.

This tour was such a hit, we hope to induce Kirt to do it again next year.

Wildlife Tour, September 26, 2007

Another group of 15 Los Amigos members took advantage of an offer from the Trust for a wildlife viewing tour during the hiatus in the elk hunt that occurs every year during mating season (the “rut”). The group was able to see many elk and hear them bugle into the night. The tour ended under a full moon.
From the Chair, Doug Fraser

Los Amigos has been busy with some fundraising and member-only events on the Preserve—a geologic history car tour of the north rim of the Valles Caldera (see pages 6-7), then an evening guided tour to listen to the fall rutting of the elk (see page 7). They make some very haunting mating sounds. A full moon enhanced the experience.

We will be discussing our volunteer planning schedule for 2008 at our next Board meeting. We hope to get approval from the Trust for that schedule by early 2008, so that we can put it out to our members well in advance of events. We would be interested in hearing your thoughts about activities you would like to see on the Preserve for Los Amigos members and what types of activities you would like to volunteer for. Please see the note on this page about volunteer opportunities on our wetlands restoration project.

The Trust is currently concerned with reaching its goal of economic self-sufficiency and has asked us to help them in that endeavor. We will be continuing our efforts to fundraise for restoration and historic preservation projects on the Preserve. But we could also use your help. If you could make a tax-deductible donation to Los Amigos this holiday season, it would be greatly appreciated. We will also be asking you to renew your memberships next year and possibly to bring us some new Los Amigos members. We thank you for your continuing support of Los Amigos and the Preserve.

Volunteers Needed!

Volunteers will be needed for the wetlands project described on pages 5 and 9. Next summer, we will conduct one volunteer workday a month for three months to install wetland restoration and in-stream structures along San Antonio Creek and in Alamo Bog. Participants will work with riparian experts and learn about wetland restoration hands-on. If you are interested, contact our Volunteer Coordinator, Greg Kendall.

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Low pH pool in Alamo Bog. (Photo courtesy of Kathy Fraser.)

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Management, and rotating the cattle. However, past grazing management practices have degraded some areas of this watershed, leaving little vegetation to provide shade to the rivers and eroding streambanks. Now rivers with-

in this watershed, including San Antonio Creek, have erosion issues, not enough pools, and are too wide and shallow in places. Poorly designed and placed low-standard roads, poor culvert placement, and livestock trailing have led to poor distribution of runoff onto the wet meadows. Poorly maintained roads contribute to sedimentation and degrade fish habitat. San Antonio Creek Watershed has an extensive road system, many of which are degraded and in need of maintenance. In the past few years, the Trust has begun to repair the main roads through the Preserve and restore habitat for wet meadow areas along main roads. Reparation includes correct culvert placement to maintain similar velocity and location of flow from upstream of the culvert. As well, French drains were installed to encourage the dispersal of flow across a meadow, versus channel formation downstream of the culvert.

A unique population of bog birch present in Alamo Canyon (the only population south of Colorado) is threatened by a lowering water table caused by a migrating headcut and a road. Additionally, geothermal exploration conducted in the past has created steep, eroding slopes due to road development and well pads that negatively impact the bog area by depositing large amounts of sediment into the bog.

La Jara Creek is a tributary to the East Fork of the Jemez River. It contributes 15% of the discharge of the river. Slope wetlands derived from springs on the slope of Redondo Mountain contribute to the flow of La Jara Creek. Valles Caldera Road 0201 (VC0201) runs along the slope of this mountain, interrupting the creek and small streams created from the springs. This road has poorly placed culverts and is poorly maintained, causing the springs to be eroded and channels formed where flow should be dispersed to provide habitat for slope wetlands.

Project Goals and Objectives

The goal of this project is to begin restoring wetland and wet meadow habitat in areas of the Preserve that have been damaged by past activity through the use of innovative “low-tech” erosion control and headcut techniques, by designing new low-tech structures to restore sheet flow across wet meadows, by addressing the needs of the Jemez watershed, and by developing new partnerships.

The overall outcome is to restore wetland acreage by at least 30 acres. We hope to decrease temperatures in San Antonio Creek by improving the width-to-depth ratios, improving sinuosity, stabilizing the elevation of the bed and channel slope, improving the pool to riffle ratio, and increasing and improving conditions for wetland vegetation along the creek.

Project outcomes for Alamo Canyon include restoring the habitat for the rare bog birch by lowering the height of the falls at the headcut to reduce the force of falling water, dispersing the flow, hardening the base of the falls to protect subsoil, and conserving soil moisture within the bog upstream of the headcut to protect existing wetland plant growth. The road contributing sediment to the bog will also be addressed through restoring the slope from the road to slow the velocity of runoff, planting on the slope, creating structures to maintain the sediment out of the bog, and possibly permanently closing the road.

The wet meadow project outcome will be to increase water availability to the slope wetland/wet meadows by improving sheet flow across VC0201.

So far, an inventory of San Antonio Creek has been completed and design work for the Alamo Bog restoration is in progress. We expect to begin some on-the-ground restoration next summer.

Damage to road near Alamo Bog from geothermal exploration. Riparian and road consultant Bill Zeedyk is in the foreground. (Photo courtesy of Julie Walker.)
future inventories will use volunteers and external funding. Cultural resource inventories will continue as the Trust undertakes ground-disturbing projects, and more areas are opened to public use. Data have not been systematically gathered on the characteristics of visitors to the Preserve; this becomes increasingly important as the Trust plans for long-term public access and use.

Monitoring programs will continue. Research programs will focus on the hydrologic cycle and management actions to increase water budgets. Watershed restoration projects may reduce water loss from snow sublimation, increase soil moisture (increasing tree growth and forage production), and increase groundwater recharge and spring snowmelt runoff. Wildlife projects could be developed to study interactions among species and response to human activities.

Cumulative Effects. Logging, grazing, fishing, road building, and road maintenance affect Preserve streams, especially during snowmelt and summer rains. Ecological condition ratings were assigned to upland and riparian areas in 28 sub-basin watersheds. Five basins show little or no departure from reference (expected) conditions and 23 show moderate departure; no sub-basins depart greatly from reference conditions. Four streams exceed New Mexico standards for temperature and turbidity. However, the number of days that stream temperatures exceeded the standards decreased by 20% from 2001 to 2006.

Preserve forests depart significantly from reference conditions. Unlike grasslands and riparian communities, forest conditions will not improve if left alone; they will only improve from management actions, such as silvicultural treatments and prescribed fire, or as a result of.
unplanned natural events (fire, disease, and insects).

Forage conditions on the Preserve are good; plant cover exceeds 98% in the open valles. Summer forage production, while higher than most rangelands in New Mexico, is extremely variable depending on rainfall. Between 2002 and 2006, forage production ranged from 814 to 1,796 pounds per acre. The nutritional value of forage is fair to good during the summer, but very poor in the winter.

Wildlife species in the Jemez Mountains have undergone substantial changes in the 20th century. Grizzly bears, wolves, and elk were extirpated from New Mexico in the early 1900s. Elk were reintroduced after World War II and the population expanded to over 7,000 animals. A considerable amount of forage is required to support the 3,000 elk estimated to be on the Preserve. The 2006 summer monsoons produced record forage (1,796 pounds per acre) and forage use averaged 19% (Trust goal for maximum use is 40%). Forage production was much lower in 2002 (915 pounds per acre) and use was 31%. In years of below average precipitation, elk consume a large portion of available forage.

The cumulative effects of road building, logging, geothermal development, infrastructure development, and herbivore grazing affect archaeological resources. Because most archaeological resources are soil deposits containing the remnants of prehistoric cultural activities, their condition follows the recovery of vegetation communities, stream health, and reduced erosion. Actions by the Trust that enhance these values will maintain and enhance the condition of intact prehistoric cultural deposits.

**Conclusion**

The Valles Caldera Preservation Act contains the goals that direct Trust management actions. These goals stretch and challenge the Trust; they are realistic and achievable and will continue to guide the Trust as it moves from interim to long-term management of the Preserve. The Act identified three key benchmarks to measure Trust performance – public access, comprehensive management, and financial self-sufficiency.

1. The Act requires the Trust to provide reasonable access to the Preserve within two years of acquisition. This goal has been met with a variety of interim programs for recreation, education, research, cultural and personal uses, and commercial uses.

2. The Act requires the Trust to develop a comprehensive management program. With the completion of the first State of the Preserve, the basic components of comprehensive management are in place.

3. The Act defined financial self-sufficiency as “…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.” Interim programs have grossed less than 25% of current Trust appropriations. The goal of financial self-sufficiency will continue to challenge not only the Trust, but also the stakeholders engaged in this experiment. Other sources of revenue, such as grants and donations, will play an important role in restoration of the lands and facilities of the Preserve, and in support of Trust operations.
Wild Turkey Hunting on the Preserve

In 2007, the Preserve offered its first wild turkey hunt since the property became public land. The much-sought-after Merriam's turkey was offered to the public on a fair chase basis and under low hunting pressure, using a bow or shotgun.

The Trust provided two spring turkey hunting programs in 2007:

1) The first program on April 21-23 included the sale of eight hunting packages at a cost of $1,800 each. The package comprised one day of scouting and three days of hunting, four nights of lodging at the Casa de Baca Lodge, and meals. A guest could accompany the hunter and enjoy the food and lodging for an additional $400. The hunters provided their own transportation. The Trust did not provide guides. A mandatory hunting and safety orientation was held the day before the hunt.

Six turkeys were taken in the first hunt, the largest turkey weighing 18 pounds 7 ounces with a beard length of 9.5 inches. The average weight of turkeys taken was 17 pounds 7 ounces.

2) The second program on April 28-30 allowed the public to enter a lottery for six access authorizations. The cost of the lottery was $20 per chance and included one day of scouting and three days of hunting. The hunters selected through the lottery had day access only and were allowed one guest at no cost. A mandatory hunting and safety orientation was held the day before.

Two access authorizations for the second hunt were donated to the National Wild Turkey Federation (NWTF). The NWTF auctioned one authorization at their national convention and raffled the second one at a state meeting. These donations greatly assisted the Trust with publicizing the program. Members from the National Wild Turkey Federation provided 610 hours of volunteer time for both hunts.

Seven turkeys were taken in the second hunt, the largest turkey weighing 19 pounds 12 ounces. The longest beard was 9.5 inches and the longest spur was 1.125 inches. The average weight of turkeys taken was 17 pounds 3 ounces.

Both of the hunts had a bag limit of one turkey with a visible beard per hunter, as authorized by the New Mexico Big Game and Furbearer Rules and Information for Game Management Unit 6B.

All of the hunters rated the turkey hunt on the Preserve as excellent.

Plans for a 2008 spring turkey hunt are underway. If you are interested, there will be information on the hunt on the Trust's website as soon as it is available.