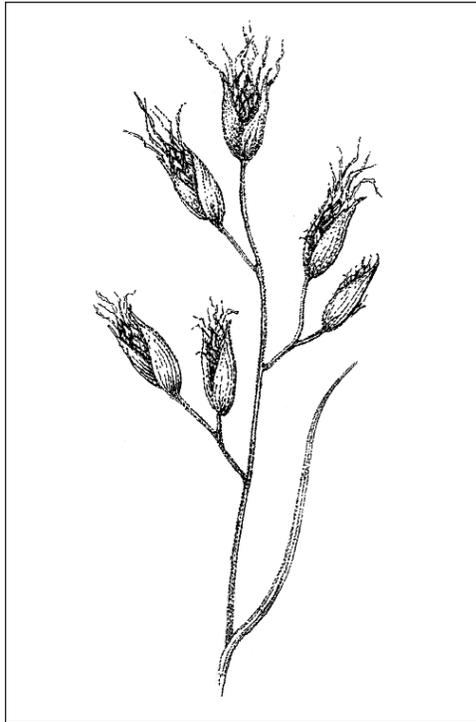


Arizona fescue is a bunchgrass common to the mountain slopes and valleys of the VCNP.



management—magnified by the capacity to train and supervise volunteers in key roles—was many times greater than had been the case a year or even six months earlier.

A lack of infrastructure for visitor services imposes a second limitation on the trust's ability to "open" the preserve. Without suitable parking lots and other staging areas and without reliable water and wastewater systems, it is difficult to accommodate significant numbers of people in a safe and sanitary manner.

The third factor, however, is as important as either of the preceding two. The trust has committed itself to the practice of science-based adaptive management. That is to say, the trust has resolved

to approach programs experimentally, launch them at a small scale, monitor their impacts, and adjust them periodically on the basis of accumulated learning. A gradual "dialing up" of programs, rather than a sudden launching of large undertakings, is entirely consistent with this approach.

Nevertheless, with a capable staff now assembled and so long as adequate funds for the development of infrastructure remain available, the trust anticipates that substantial operations will commence in most if not all of the preserve's anticipated program areas over the next several years. How might those programs look? What might be included?

The specific outlines of the trust's programs will be determined in the course of appropriate planning under its StARS and NEPA procedures (see chapter 6), but for the present we can at least suggest an idea—or vision—of the activities that may eventually be offered. As with many other matters pertaining to the VCNP, the outline of those suggestions may be found in the Valles Caldera Preservation Act: "The Baca ranch's natural beauty and abundant resources, and its proximity to large municipal populations, could provide numerous recreational opportunities for hiking, fishing, camping, cross-country skiing, and hunting" (sec. 102[a]6).

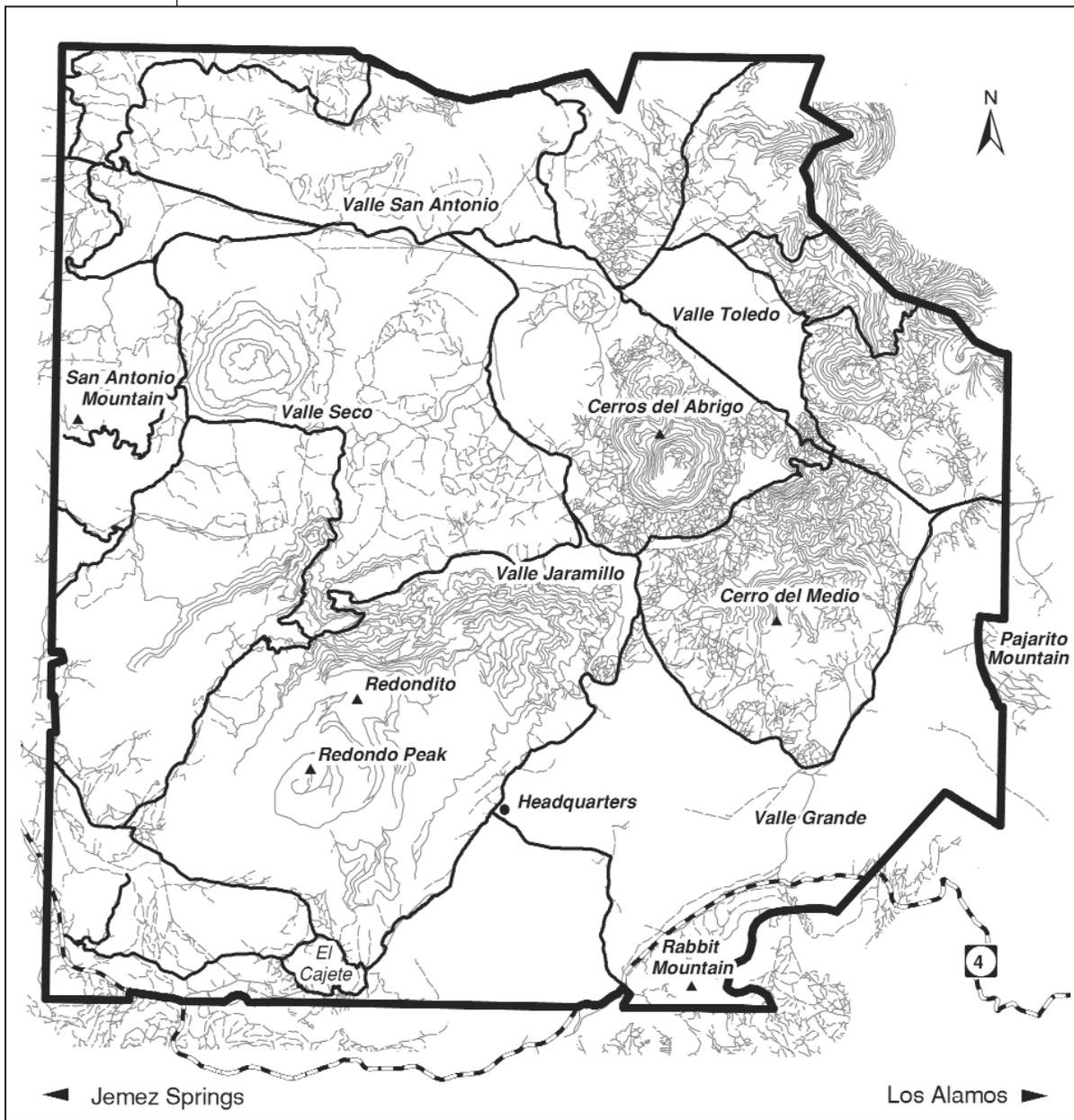
Imagine the VCNP in the winter of 2009–10. Blessed (we hope) with abundant snow, the preserve attracts scores of cross-country skiers and snowshoers every weekend and on many weekdays. A plowed, all-weather parking lot and staging area, close to Highway 4, provides a safe and convenient starting point for day trips into the Valle Grande, where a limited system of groomed trails is available. Not all the visitors, however, confine themselves to the trails. Many branch off into untracked snow, and some, burdened with bulky packs and having reserved space in one of the preserve's overnight huts or yurts, set off for the frozen backcountry of the caldera. The short days of winter yield to crystalline, starry nights, and those who elect to camp at this time of year are treated to moonlit snowscapes, perfect solitude, and one of the brightest and most spectacular showings of the Milky Way to be experienced anywhere. They also reap the benefit of all the piercing cold they can stand.

Uses of the preserve naturally change with the onset of spring. As snowdrifts melt and roads reopen, vehicle tours and other recreational activities gradually recommence, but the trust takes great care to coordinate these activities with the needs of wildlife. Elk calving season in late May and early June, for example, may require temporary

suspension of certain activities or closure of certain areas. Once this and possibly other milestones in the ecological year have passed, however, fishing, hiking, and camping programs will swing into high gear, featuring outstanding opportunities to experience the vastness and variety of the preserve. Vehicle tours also will grow in number and diversity. Certain outings might emphasize specific interpretive themes or activities: the geology of the preserve, cultural history, birding, or photography, to name only a few possibilities.

Program coordination will continue to command high priority as livestock come onto the preserve and grazing operations resume in June. Throughout the summer, the diversity of the preserve's programs and operations will be one of its distinguishing features. High-quality fishing, hiking, and camping will likely continue from week to week, together with livestock grazing and (probably) localized forest-thinning projects. And all of this will take place against a background of continuing scientific monitoring, archaeological inventory, and research.

As summer ends and fall advances, hunting will take center stage at the preserve, but not to the exclusion of all other programs, many of which will continue in parts of the preserve that are



Road Network



- | | |
|-------------------|-----------------|
| Preserve Boundary | Open Roads |
| State Road 4 | Dirt Roads |
| | Primitive Roads |

excluded from hunting. Cattle will typically be removed by October 1. Throughout the year, the general level of visitor activity will be geared to a number of variables. Demand will vary from month to month, with early spring and early winter (both typified by broken snow cover) probably attracting the least public interest. The trust will also have to be mindful of the need to give the land and its wildlife adequate rest from visitor disturbance, and so “quiet days” characterized by reduced activity schedules or days of periodic closure every week or month may become regular features of preserve routine. The third constraint on visitor activity, however, may be the most important. It involves the challenge of maintaining the high quality of visitor experience by avoiding overcrowding. Determining visitor capacities that preserve opportunities for solitude and silence while also avoiding unwanted impacts on the ground represents a major challenge for the trust.

Roads and Transportation Infrastructure

Perhaps no set of decisions will shape the future of the preserve more profoundly than those that determine its transportation infrastructure. Most of the existing roads of the preserve are rough and primitive, and as has already been mentioned, they heavily

influence the ecological health of the landscape. Poor drainage and other problems produce localized erosion, which in some cases contributes to the sediment load of the preserve’s streams. One estimate of the cost of improving drainage and stemming erosion from existing roads approaches \$5 million. A plan for the future transportation infrastructure of the preserve will have to take into account the need to correct existing problems.

The board’s vision for the roads system of the preserve is that it should be safe; it should be organized and managed to avoid congestion; it should not intrude unduly on the aesthetics of the landscape; and it should avoid negative impacts on the lands, waters, cultural resources, and wildlife of the preserve. And finally and obviously, it should fully support use and administration of the preserve in conformance with the trust’s goals, values, and vision.

A further word about these goals. Most of the preserve’s existing roads are too rough to accommodate low-clearance highway vehicles, even in dry weather. Moreover, frequent blind curves and steep grades make safety a serious concern, especially for drivers without back-road driving experience. If roads are to be improved to a level fully accommodating the general public, including drivers with only urban driving experience and visitors



from foreign countries, then the most heavily used stretches will need to be paved and widened to two full lanes. Besides entailing great cost, such an enlargement of the footprint of the preserve's road system will have a substantial effect on the quality of the existing scenery, not least because amid the preserve's famously open spaces, viewing distances are quite long, and roads are typically situated at the critical forest-grassland edge. Enlarging the footprint of the preserve's road system will also impact cultural resources because many heavily used roads pass through important archaeological sites. Mitigating the impact of road

widening on these sites will involve significant expense.

Even if considerations in regard to safety, aesthetics, and archaeology can be successfully addressed, bringing substantial numbers of private vehicles into the interior of the preserve will likely have major impacts on general noise levels, wildlife viewing opportunities, the kinds of patrol and visitor services that will be needed, and many other aspects of life within the preserve, especially the quality of visitor experience. Certainly the challenge of avoiding congestion will be significant.

As the board weighs options for development of the VCNP's transportation infrastructure, it will

need to bear in mind that while the preserve feels large and spacious, in a functional sense, it is not. The nature of its topography—steep-sided volcanic domes separated by open valleys or narrow valley corridors—requires that virtually all traffic bound in a given direction pass through one or more constricted corridors. Road B north from the Valle Grande through the valleys Jaramillo and Santa Rosa to the San Antonio valle is a prime example. Often these corridors, by virtue of the access they provide to multiple areas, are areas of great archaeological importance, and they are also natural avenues for the movement of wildlife, especially elk. In the same way that a chain is only as strong as its weakest link, the effectiveness of the VCNP's efforts to resist congestion will be most severely tested along these naturally constricted corridors.

Management of people and cars is one of the most important issues in the administration of parks and public lands today. Grand Canyon National Park, for example, has 2,000 parking spaces but contends with an average influx of 6,000 vehicles a day. As a more local example, Bandelier National Monument, which receives approximately 350,000 visitors per year, sometimes exceeds its limit of vehicles and has to hold cars at the entrance until space is available after other visitors

leave. At both Grand Canyon and Bandelier, as well as at such other well-known destinations as Yellowstone, Yosemite, and Zion, reducing the congestion of people and vehicles has emerged as a management challenge of paramount importance.

A growing number of parks have endeavored to ease congestion by limiting or excluding the use of private vehicles, providing access to their interiors instead through

Many miles of roads within the VCNP need extensive maintenance or reconstruction.



various forms of public transportation—systems of buses, shuttles, or similar vehicles. Zion National Park has recently taken this approach, and its new shuttle system appears to have met with a high level of visitor satisfaction. As the VCT analyzes alternatives for its transportation infrastructure, it will need to give serious consideration to development of a similar system. In doing so, it will bear in mind that one of the attractions of the VCNP is the wildlife viewing opportunities it affords. Prospects for preserving these opportunities would likely be higher with a fleet of visitor vehicles operated by trained drivers than with a larger number of private vehicles operated independently.

Visitor Center and Related Infrastructure

Another way the national parks address the challenge of congestion is by moving the visitor services they provide away from core areas and toward a park's periphery. These services include parking and staging areas, visitor centers, hotels, campgrounds, restaurants, and other food outlets. Clearly if Grand Canyon National Park were being freshly established today, its planners would not crowd the South Rim with the infrastructure of an overpopulated small city, which is what one finds there now. The

VCT can learn from this experience by resolving to situate the greater part of its visitor infrastructure not at its core—near the present ranch headquarters, for instance—but at a location closer to the boundary of the preserve. The process of site selection will be conducted in accordance with the trust's StARS process (which includes its NEPA procedures) and will no doubt identify a range of characteristics that an ideal site might possess, possibly including the following: easy access to and from Highway 4, topographical features that allow its buildings to be shielded from intruding on the vistas of the Valle Grande, an adequate water supply, access to trailheads, and so forth.

The trust will also need to develop an administrative site where it would situate workshops, laboratories, storage facilities for equipment and supplies, offices, classrooms, and employee housing. The facility may be situated with (or incorporated into) the visitor center area or sited separately. It would host educational activities, visiting researchers, educators, and student groups.

In general, the trust intends to proceed slowly and carefully in the development of new infrastructure and to exercise equal care in the commitment of existing buildings, particularly those that are historically significant, to new program uses.

Volunteers, Friends, and Advisers

By mid-2003, volunteers were already contributing enormously to the activities of the preserve. Volunteers staffed the skiing and snowshoeing programs of the previous winter and were guiding hikes and van tours through the summer.

The trust expects to continue relying heavily on volunteers in many areas of operation. It also will consider working with interested members of the public to form a support organization, chartered as a 501(c)3 nonprofit corporation. Such a group, possibly called the Valles Caldera Conservancy, might assist the trust with marshaling volunteer participation in preserve programs, general fund-raising, special events, and a range of other functions. At present, however, the trust has no specific timetable for initiating or inviting the formation of a friends' group. The same can be said of the prospective formation of groups that might serve the trust in an advisory role. Readers should note that any entity filling a formal advisory function would be subject to regulation under the Federal Advisory Committee Act.

Fee Structure

Congress instructed the trust to strive to attain financial self-sufficiency. Congress's intention was to make the preserve as independent



as possible from reliance on annual appropriations by encouraging the realization of revenues through the collection of appropriate and reasonable fees for preserve programs. The trust's vision in regard to financial self-sufficiency is to do exactly what Congress has asked—to generate revenue from preserve programs and to do so in a manner consistent with the other, equally important goals Congress assigned it, one of which is to protect and

Twenty children, including these two girls, enjoyed a free fly-fishing clinic in September 2003.

preserve “the scientific, scenic, geologic, watershed, fish, wildlife, historic, cultural, and recreational values of the preserve,” another to provide for “public use of and access to the preserve for recreation.” As has been stated elsewhere in this framework (but it bears repeating), the trust draws two important conclusions from the interrelation of these goals. First, that the pursuit of revenue must never compromise the integrity of the preserve, and second, that the phrase “public use and access”

invokes the entire public, not just those possessing the economic means to pay high fees. As the trust states in its management principles, it commits itself “to providing fair and affordable access for all permitted activities.” The trust also recognizes, however, that the preserve is different from other public land, and not least in the quality and value of the outdoor experiences it can provide. These will be experiences worth paying for—but not more than is fair.