

CHAPTER 1 - PROPOSED ACTION, PURPOSE & NEED

LANDSCAPE RESTORATION & STEWARDSHIP PLAN (DRAFT – NOVEMBER, 2012)



This chapter is a summary of our proposed plan for the restoration and stewardship of the natural resources of the Valle Caldera National Preserve. This chapter presents the overarching goal (*purpose*), for the plan, the problems or issues we are intending to address and the laws and policies that guide us (*need*); and describes the *scope* of our analysis. Scope includes the range of actions and activities we are considering, the level of analysis and documentation we will be completing, what decision(s) we will ultimately make, when and how we have engaged the public, and how we will continue to engage the public throughout the process.

“It is not enough to be busy. The question is: What are we busy about?”

- Henry David Thoreau



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1.1 INTRODUCTION

The Valles Caldera Trust is proposing to implement a suite of integrated activities across the landscape of the Valles Caldera National Preserve aimed at restoring the structure, composition, and function of the preserve’s forest, grassland and riparian resources .

THE VALLES CALDERA NATIONAL PRESERVE & TRUST

Valles Caldera National Preserve (VCNP) is an 88,900-acre unit of National Forest System (NFS) land located in north central New Mexico (Figure 1.1 below), primarily in Sandoval County but with some inclusion in Rio Arriba County. The preserve was acquired by the Federal government in 2000 with the passage of the Valles Caldera Preservation Act. While most NFS land is managed by the

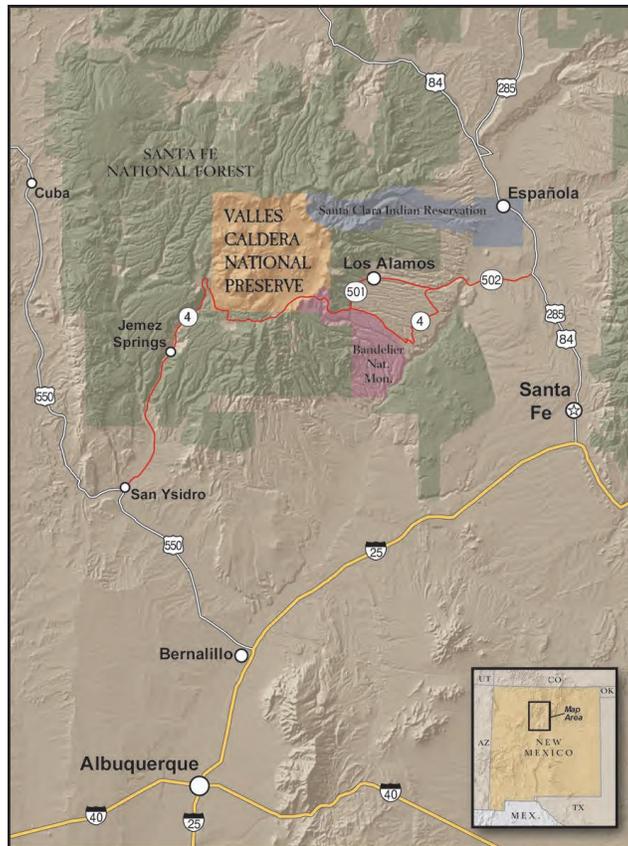


Figure 1. 1 - Vicinity Map of the VCNP

United States Forest Service (USFS), the VCNP is managed by a wholly owned government corporation – the Valles Caldera Trust (VCT). The VCT was also created by the passage of the Valles Caldera Preservation Act as an experiment in public land management charged with, “...mixing elements of public as well as private administration in an experimental management regime” aimed at achieving financial self sufficiency where consistent with other purposes (U.S.C. 2000).

The Valles Caldera National Preserve is so named because it contains much of the supervolcano known as the *Valles caldera*. *Valles* is Spanish for “valleys” and refers to the broad, grassy valleys of the preserve, which are contained within a volcanic *caldera*. *Caldera* is both a Spanish and geologic term. A series forested domes are dispersed throughout the caldera; Redondo Peak is the highest of these reaching 11,252 ft in elevation. The arrangement of the forests and grasslands resembles a paw print when viewed from space as shown in Figure 1. 2 below. The forests and grasslands are fed by over 70 miles of perennial streams, all of which originate within the preserve. The extensive montane grassland and wetland communities found on the preserve are relatively scarce anywhere in the southern Rocky Mountains (Muldavin and Tonne 2003). Surveys of the plant life of the preserve have identified over 550 species, with roughly another 100 species expected to be present. Some of these species are rare within the region. Maps and more detailed information about the preserve and trust can be found in Chapter 3 - *Affected Environment*.



Figure 1. 2 - The *Valles caldera* in a photo taken from space. Image courtesy of Earth Science and Image Analysis Laboratory, NSA Johnson Space Center <http://eol.jsc.nasa.gov>

1.2 PROPOSED ACTION

We are proposing to design and implement a 10-year Landscape Restoration and Stewardship Plan (stewardship plan) for managing and restoring the natural systems of the VCNP.

In 2009/2010 over 60 individuals representing 30 different organizations and agencies met through field trips and working meetings culminating in a 3-day workshop, to propose a strategy for the restoration of 210,000 acres in the southwestern region of the Jemez Mountains. This collaborative restoration strategy entitled: *The Southwestern Jemez Mountains Landscape Restoration Strategy* was submitted as a proposal for funding through the Collaborative Forest Landscape Restoration (CFLR) program¹ and subsequently awarded 10-years of funding for restoration on the VCNP and Santa Fe National Forest (SFNF). The proposed stewardship plan is a tactical plan for implementing that collaborative strategy. The proposed stewardship plan consists of a suite of integrated stewardship actions designed to restore the resilience² and adaptive capacity of the preserve's forest and grassland systems, protect and improve wildlife habitats, increase soil, riparian, and wetland resilience; reduce soil erosion, and restore watershed function. These actions fall within five categories:

- ❖ Forest Management – Thinning small diameter trees and disposing of the associated biomass.
- ❖ Wildland Fire Management – Using prescribed fire in association with forest thinning as well as a stand-alone tool and managing wildfire (unplanned) to protect people and property and enhance management objectives.
- ❖ Road Management and Erosion Control - closing, decommissioning, and maintaining roads; rehabilitating geothermal exploration areas, log landing sites, aggregate pit source sites;
- ❖ Riparian and Wetland Restoration - revegetating and otherwise stabilizing stream banks; restoring historic wetland flows; and
- ❖ Burned Area Rehabilitation – Stabilizing areas impacted by the Las Conchas Wildfire.

“[Restoration] Treatments must be flexible enough to recognize and accommodate: high levels of natural heterogeneity; dynamic ecosystems; wildlife and other biodiversity considerations; scientific uncertainty; and the challenges of on-the-ground implementation. Ecological restoration should reset ecosystem trends toward an envelope of “natural variability,” including the reestablishment of natural processes.”

- *Ecological Restoration of Southwestern Ponderosa Pine Ecosystems: A Broad Perspective*

As previously noted the proposed plan is based on the collaborative forest landscape restoration strategy developed for the SWJML (Valles Caldera Trust, Santa Fe National Forest 2010) and incorporates New

¹ The CFLR program was created under the Omnibus Public Land Management Act of 2009, Title IV (Pub. L 111-11, H.R. 146) passed by the 111th United States Congress and signed into law by President Barak Obama on March 30, 2009.

² For the purpose of this EIS “resiliency” means the ability of a system to remain within, or return to, its natural path of growth and development (succession) in the event of disturbances including fire, insects, disease and/or climatic events and/or changing climate.

Mexico Forest Restoration Principles³ and Ecological Restoration of Southwestern Ponderosa Pine Ecosystems: A Broad Perspective (Allen, et al. 2002).

1.3 PURPOSE & NEED FOR ACTION

The National Environmental Policy Act (NEPA) requires a clear statement of purpose and need for any proposed federal action. The purpose is the end goal towards which our efforts are directed. The need is the reason why we are proposing to take action here and now. What problems are we seeking to address? What are the laws, plans, or policies we are seeking to comply with?

A clearly defined purpose and need for action is essential to define the scope of the analysis including the range of alternatives that we will consider.

PURPOSE

The purpose of the proposed action is to improve the resilience and adaptive capacity of the preserve's natural systems, protect people and resources from destructive wildfire, and to rehabilitate areas that were severely burned during the Las Conchas Wildfire.

The 10-year stewardship plan is intended to:

- ❖ Move the structure, composition and function of the preserve's natural systems towards the reference condition.
- ❖ Reduce the potential for unusually severe or extensive wildfire.
- ❖ Reintroduce fire as a natural disturbance and beneficial process on the landscape.
- ❖ Improve the characteristics of terrestrial and aquatic wildlife habitat.
- ❖ Improve water quality and watershed function.
- ❖ Repair and rehabilitate areas adversely affected by historic infrastructure, wildfire and post fire flooding and erosion.
- ❖ Enhance the objectives on surrounding lands and benefit local communities and businesses.

NEED

Currently the natural systems of the preserve are significantly departed from the reference condition and are at risk to a variety of threats especially fire but also forest pests and disease and post fire flooding and erosion. We need healthier⁴ and more resilient natural systems if we are to achieve the

³ A team of dedicated professionals representing conservation organizations, land management agencies, industry, and independent scientists collaboratively developed these principles. These principles for restoration should be used as guidelines for project development and they represent the “zone of agreement” where controversy, delays, appeals, and litigation are significantly reduced. <http://nmfwri.org/about-us>

⁴ For the purpose of this EIS the adjective “healthy” means a condition similar in structure, composition and function to the reference condition.

goals and purposes for which the preserve was established as well as the goals and purposes of the laws, policies and plans, which guide its management. These include:

- ❖ The Valles Caldera Preservation Act (U.S.C. 2000)
- ❖ The NEPA process specific to the VCNP (Federal Register 2003)
- ❖ Ecological goals for the preserve adopted by the trust (Valles Caldera Trust 2009)
- ❖ Federal Wildland Fire Management Policy and federal guidance for implementing the policy (NWCG 2009)
- ❖ The Collaborative Forest Landscape Restoration Program (CFLRP) established under section 4003(a) of Title IV of the Omnibus Public Land Management Act of 2009.
- ❖ Southwestern Jemez Mountains Landscape Restoration Strategy (Valles Caldera Trust, Santa Fe National Forest 2010) developed in response to the CFLRP.
- ❖ National Cohesive Strategy for Wildland Fire Management (USDA and USDI 2011)
- ❖ Valles Caldera Trust's Strategic Management Plan 2012-2018 (Valles Caldera Trust 2012)

These laws, policies, and plans all provide direction for a collaborative approach to management, which involves all interested and affected governments, agencies, organizations, and individuals, and considers all affected lands. For us to meet the intent of the collective laws and policies which guide the management of the preserve and those which guide forest restoration and the management of wildland fire on federal lands, we need to develop a collaborative plan that considers the entire landscape – the preserve as a whole, the objectives on surrounding lands, and the communities and businesses around us.

BACKGROUND

Since we assumed management of the preserve in 2002, we have been working to quantify and characterize the current condition of the preserve's natural systems. This allows us to measure, describe, and define the differences between the existing condition and the condition that we know to be sustainable and resilient in response to natural disturbances such as fire. We call this the *reference condition* and use it as a baseline to measure the degree of departure in terms of the physical and biological components and conditions of the existing ecosystems. Based on our research, it is clear that there is a significant degree of ecological departure between the existing condition of the preserve's natural systems and the reference conditions. In other words, the preserve's ecosystems are completely out of whack!

The most noticeable departure is the structure of the forest vegetation. Forest structure should vary across the landscape and should be dominated by large and old trees (USDA - Forest Service, USDI 2008, Swetnam and Baisan 1996, C. D. Allen 1989). However, nearly all of the forests in the preserve are dominated by young, dense forests of small diameter trees where large and old trees are scarce or absent.

In 2007 a team of resource specialists evaluated data from over 700 vegetation plots and measures of water quality and stream condition. The team developed a system to summarize condition at a localized level and to systematically combine these measures to determine condition at various scales.

These data were collected over a period of years and were used to quantify the composition, structure and function of the riparian and grassland ecosystems and also to look for any trend in condition.

The following standards were applied as condition attributes:

- ❖ High: 70-100 percent of the values were within 30 percent of the optimum or reference condition.
- ❖ Moderate: 30-70 percent of the measures were within 30 percent of the optimum or reference condition.
- ❖ Low: Less than 30 percent of the measures were within 30 percent of the optimum or reference condition.

The overall degree of departure of the grassland and riparian systems measured by water quality, stream morphology, as well as vegetative cover and diversity has been described as moderate with an upward trend (Valles Caldera Trust 2007, TEAMS Enterprise Unit 2007). However, the morphology of the stream has changed profoundly over the past century. Historically, the streams of the valles were dominated by wetlands and multi threaded stream channels. Today, the valles are characterized by single-channel streams buffered by ribbons of wet meadows with fewer wetlands.

The degree of ecological departure is a cumulative result of excluding fire as a natural disturbance in combination with historical management activities, including intensive logging and grazing, geothermal exploration, and the development of infrastructure to support these activities. Infrastructure development included building approximately 1200 miles of logging roads with clearings (landings) for staging equipment and stockpiling logs, excavating 30 geothermal well pads, 10 gravel pits and 39 earthen watering tanks and dams, and establishing gathering locations and building corrals for concentrating sheep and cattle.

Based on the existing condition reports we prepared in 2009/10, we determined that the preserve's forests would likely burn with uncharacteristically high intensity and severity in the event of a wildfire and would not be resilient in the event of wildfire, drought, or other disturbance. The 2011 Las Conchas wildfire confirmed this projection. This fire, the largest in New Mexico's history, burned over 30,000 acres of the preserve. Although the grasslands actually benefitted from the burn, the forested area burned with high severity leading to long term impacts to the structure, composition and function that define these forests and the associated habitats. The fire, as well as the post fire flooding, impacted all resources and habitats, causing a near 100 percent kill of brown trout in



Figure 1.3 - Crown fire during the 2011 Las Conchas fire

San Antonio creek adjacent to the burn area and irretrievable losses to cultural resources.

The forest systems and habitats in their current state are degraded. Ecosystem services are inhibited including the capture, storage, and yield of water (watershed function); and the capture and sequestration of carbon. The degraded existing condition of these systems leaves them vulnerable and unable to adapt to current and predicted climatic trends, which are likely to be warmer and drier into the foreseeable future (The Nature Conservancy 2009). The current condition of the preserve's natural systems does not support the attainment of the purposes and goals from the Valles Caldera Preservation Act especially: *the protection and preservation of the scientific, scenic, geologic, watershed, fish, wildlife, historic, cultural, and recreational values of the Preserve* (U.S.C. 2000).

1.4 SCOPE

Scope is the extent of the proposed actions. It is also the extent of potential impacts in time and space during the planning period. Scope also refers to how the plan and environmental analysis be will be documented, how the public will be engaged.

Our analysis will consider the expected short-term (1-3 yr.), mid-term (3-10 yr.), and long-term (>10 yr.) direct, indirect, and cumulative environmental consequences resulting from implementing one of the alternative courses of action or taking no action at all. The analysis will consider activities and impacts at the project and landscape level.

DOCUMENTATION

We are documenting this analysis in an Environmental Impact Statement (EIS) consistent with the NEPA process developed specifically for managing the VCNP (Federal Register 2003). Some, if not most, of the management actions we are proposing (forest thinning, prescribed fire, road maintenance, inventory and monitoring) can be categorically excluded from documentation in an EA or EIS (Federal Register 2003) at the project level; and some (wetland and riparian restoration, noxious weed eradication) are already covered to some extent under current NEPA documents (Valles Caldera Trust 2004, 2006, 2009, Valles Caldera Trust 2009, Valles Caldera Trust 2003, Reviewed 2008, 2010). However, by including all actions under the stewardship plan we can ensure that the interactions and cumulative effects of all proposed as well as past, present and reasonably foreseeable future actions are adequately considered. In addition, this enables us to evaluate all actions under a systematic monitoring program in support of adaptive management.

DECISION TO BE MADE

The Executive Director of the Valle Caldera Trust is the Responsible Official, who will oversee the planning and implementation of the proposed Stewardship Plan. Based on the environmental impact analysis presented in this EIS, and input from the public, tribes and other agencies, the Executive Director will decide whether to

"The survival of man in a world in which decency and dignity are possible, is the basic reason for bringing man's impact on his environment under informed and responsible control"

-Senator Henry Jackson, upon introducing Senate Bill 1075 (NEPA)

select and implement one of the action alternatives as the long-term Stewardship Plan for the VCNP or to take no action at this time. This decision will be documented in a Record of Decision (ROD).

PUBLIC INVOLVEMENT

In their October 2007, *Collaboration in the NEPA Process*, the President’s Council on Environmental Quality (CEQ) refers to a “Spectrum of Engagement in NEPA Decision-Making” adapted from the International Association for Public Participation’s Public Participation Spectrum⁵. The spectrum shows four levels of potential engagement for a lead agency with other governmental and non-governmental entities. Beginning with the level of least shared influence by parties, they are to: Inform, Consult, Involve, and Collaborate (CEQ 2007).

At the **Inform** level, the agency informs interested parties of its activities. At the **Consult** level, the agency keeps interested parties informed, solicits their input, and considers their concerns and suggestions during the NEPA process. Here the agency consults with parties without necessarily intending to reach agreement with them. At the **Involve** level, the agency works more closely with interested parties and tries to address their concerns to the extent possible give the agency’s legal and policy constraints. At the **Collaborate** level, parties exchange information and work together towards agreement on one or more issues at one or more steps in the NEPA process (CEQ 2007).

We worked at the *collaborative* level with other governmental and non-governmental entities in developing the Southwest Jemez Mountains Collaborative Forest Landscape Restoration Strategy (SWJML) (Valles Caldera Trust, Santa Fe National Forest 2010). This collaboration and strategy served as our basis for developing the purpose and need for action and the proposed action.



Figure 1.4 - Collaborative strategic planning workshop, February 2010, Santa Fe, NM

We are committed to engaging the public (you) at the *involvement* level of the public participation spectrum throughout the NEPA process.

Towards this end, we provided an extended opportunity for you to comment during scoping (July 16 – September 29, 2010). We have provided you with summarized “easy to read” documents on the existing condition of the preserve’s ecosystems as well as detailed specialist reports and background information. We have made these different levels of information

available on an interactive web page dedicated to the proposed Stewardship Plan. The web page allowed you to comment and review the comments of others during the scoping period. We updated the page as alternatives were developed so you could see how your comments shaped the development of the

⁵ Available at <http://www.IAP2.org>.

proposed Stewardship Plan; and provide an opportunity for you to review and comment on issues, alternatives and performance requirements. We hosted public meetings during both scoping and alternative development. Due to the delay in planning and decision-making caused by the Las Conchas fire, we provided an update and made early drafts of Chapter 1 – Proposed Action, Purpose and Need and Chapter 2 – Alternatives available for public review. The public will have a minimum of 45-days to comment on the Draft EIS.

Affected and interested local, federal, and tribal governments and agencies participated at the collaborative level during the strategic planning for the SWJML and informal consultation was conducted in the spring and early summer of 2011. In 2012 we hosted a public meeting and workshop to provide updated information on the SWJML condition and plans for continued monitoring. Formal consultation with interested tribal governments and the USFWS will be conducted concurrent with the release of the Draft Environmental Impact Statement (DEIS). Additional consultation both informal and formal would continue during the implementation if one of the action alternatives were selected.

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