

Cajete Forest Management Units 3 & 4

July 25, 2012 Stewardship Register

Proposed Stewardship Action

The Valles Caldera Trust (VCT) is proposing to thin 531 acres of forest located in the southwest corner of the Valles Caldera National Preserve (VCNP). Forest thinning entails the cutting of small diameter trees up to 16 inches in diameter¹, with most trees 7 – 12 inches. The boles of the trees would be yarded and decked for removal and utilization for chips or firewood or other small products. Tops and branches would be lopped and scattered, masticated, piled and/or burned. Thinning and slash disposal would be followed with a planned ignition of wildland fire (prescribed fire).

Removal of material would occur simultaneously or following thinning. Material could be removed as logs, chips or firewood size pieces. Deferred maintenance activities would occur on existing primary and secondary roads (see Figure 1) roads to permit access by vehicles and equipment.

Minor erosion control activities on historic roads (“other” roads in Figure 1) roads such as placing slash, chips logs or constructing draining features within the project area could also occur.

Purpose and Need

The purpose of the proposed stewardship action is to reduce the potential for crownfire, reduce potential fire severity, as well as to improve the health and vigor of the forest ecosystem and improve terrestrial wildlife habitat. The action is needed to address the current forest condition and to further progress towards meeting the purposes of the Valles Caldera Preservation Act (U.S.C., 2000) and the strategic restoration plan (Valles Caldera Trust, Santa Fe National Forest, 2010) developed for the Southwestern Jemez Mountain Landscape (SWJML).

Description

Cajete Units 3 & 4 are located in the southwestern corner of the Preserve in the Banco Bonito area west of the El Cajete crater. The vegetation type is ponderosa pine woodland and savanna.

The southwest corner of the Preserve has the potential to burn as a crown fire due to the dense forest canopy and the alignment to wind and slope. Canopy cover in this forested area ranges from 52-69 percent (moderately dense to dense) and is layered in multiple stories and is comprised of small to mid-sized trees; trees greater than 16 in. diameter account for 3-4 percent of the total canopy. Forests where the trees are dense and layered can more easily support a crown fire than open forests or forests of larger, taller trees. Smaller trees can be more easily ignited from a surface fire burning below them.

¹ Diameter measured 4.5 feet above ground on the uphill side.

When tree canopies are close or layered, fire can move from tree to tree, especially when the wind is blowing.

The project area is aligned to the west and southwest. This topography and alignment further contributes to the fire danger. The west and southwest exposure offer the fuels to longer exposure to heating and drying by the summer sun and direct alignment to the prevailing winds.

Human caused fire occurrence along the corridor of NM 4 is quite high due to the amount of recreational use as well as the presence of several residential communities. Lightning caused fires are also frequent (Valles Caldera Trust, 2011).

High fire occurrence, fuels, topography, and the alignment with wind and weather combine to create a high risk to crown fire or other fire behavior likely to exceed initial attack resource capabilities.

Besides the fire hazard, the current condition of the forest affects the ecosystem processes and services. The dense forest canopy intercepts snow and rain allowing the moisture to sublimate into the atmosphere; never reaching the forest floor, penetrating into the soil, or feeding the streams of the watershed.

Historic grazing, logging and the elimination of natural fire perpetuated this condition. Historic logging removed nearly all the large mature trees and scarified the land, encouraging tree seedlings to germinate and establish in the openings. Historic grazing removed the fine fuels needed to carry fire and significantly contributed to the elimination of natural fires (Allen, 1989). Without fire the seedlings that germinated and established, survived in unprecedented numbers.

Performance Requirements

The following requirements will mitigate or eliminate any potential adverse effects that could result from the proposed activities.

❖ Cultural Resources

- Cultural resource inventories will be completed prior to any ground disturbance activities.
- The Trust's Cultural Resource Clearance Process will be completed prior to implementing any ground disturbing activities.
- Specific mitigations to protect cultural resources will include:
 - Cultural resource sites will be clearly marked and identified to the contractor for avoidance.
 - Disclosure of site locations will be limited to the level necessary to ensure protection.
 - Thinning by hand crews with chainsaws may be permitted within sites where materials can be removed by hand.
 - Other specific protections may be identified for site specific activities.

- Heavy fuels will be removed from sites prior to prescribed fire use when features may be vulnerable to the effects of fire.
- Wooden features will be protected from fire by the removal of fuels, construction of control lines, use of foam, water, shelters or other barriers, and or management of ignitions.

❖ Soils

- The use of tracked equipment will be limited to slopes less than 30%.
- Equipment use will be limited during periods when soils are saturated and vulnerable to damage or compaction for equipment.
- Prescriptions will be developed to reduce the likelihood of hydrophobic conditions to minor² or localized levels.
- Prescription parameters will be developed to reduce the consumption of large down woody debris and organic material.

❖ Wildlife

- Merriam turkey
 - Roost trees for Merriam turkey will be protected from prescribed fire activities by the removal of fuels from the base of the trees and managing ignition patterns.
- Mexican spotted owl
 - Activities within mixed conifer habitat (40 percent slope, mixed conifer forest) would occur outside the breeding season for the Mexican spotted owl unless current surveys indicate that no owls are present.
- Jemez Mountain salamander
 - Prescription parameters will be developed to minimize consumption of large woody debris.
 - Fractured rhyolitic rock outcrops, large woody debris piles, or large decomposing Douglas-fir logs will be avoided during thinning activities.
 - The same habitat components (as above) will be protected from prescribed fire by managing ignitions, creating control lines, or reducing fuel loading.

❖ Air Quality

² "Minor" refers to impacts that may be measurable or visible but would not affect the structure composition of function of the resource and would be limited in space and/or duration.

- Follow New Mexico Environment Department Guidelines for managing prescribed fire.
- ❖ Old Growth Characteristics
 - Large and old trees
 - Thinning prescriptions will favor the retention large (>16”) and old ponderosa pine and Douglas-fir.
 - Large down logs and snags
 - Large down logs and snags (standing dead trees) will be protected from prescribed fire by the management of ignitions, removal of fuel, or creating control lines.

Goals, Objectives and Monitored Outcomes

Goals

Goals describe a desirable condition as sought by the Trust (Federal Register, 2003). A goal is both qualitative and quantifiable, but is not quantified. Goals stretch and challenge us, but they are realistic and achievable and flexible enough to persist over time.

Based on a review of the *State of the Preserve* (Valles Caldera Trust, 2007) and in pursuit of the central goal for management put forward in the Framework and Strategic Guidance for the Comprehensive Management of the Valles Caldera National Preserve (Valles Caldera Trust, 2004), the Trust adopted the following goal for the ecological condition of the Preserve: *“The ecological condition of the Preserve would be moving toward the composition of landscape vegetation and disturbance attributes that, to the best of our collective expert knowledge, can sustain current native ecological systems and reduce future risk to native diversity”* (Valles Caldera Trust, 2009).

This goal is synonymous with the collaboratively developed goal for the Southwestern Jemez Mountains Landscape: *“Improve the resilience of ecosystems to recover from wildfires and other natural disturbance events in order to sustain healthy forests and watersheds for future generations.”* (Valles Caldera Trust, Santa Fe National Forest, 2010).

Objectives

“Objective” means the desired outcome that can be meaningfully evaluated by location and timing within the Preserve. Measurable objectives are used to evaluate the progress towards goal attainment. The objectives proposed for assessing goal attainment are listed in Table 1.

Table 1 - Objectives

Objective	Desired Outcome
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Reduce Uncharacteristic Wildfire Potential	To reduce the likelihood of disturbances (especially fire, but also including insects and disease) occurring with uncharacteristic intensity, severity, frequency and/or at an uncharacteristic scale.
Reduce Crown Fire Potential	Reduce the likelihood and extent of crown fire potential.
Improve Forest Structure	Move the structure and composition of the Preserve’s ecosystems towards the reference condition. Improve the resilience of the ecosystem.
Improve Forest Function	Improve water capture, storage and yield, carbon sequestration, and succession.
Reintroduce Wildland Fire	Restore fire as a critical process in fire adapted ecosystems.

Monitored Outcomes

“Monitored Outcome” means, “...the result or consequence of a stewardship action that can be meaningfully evaluated by location and time of occurrence” (Federal Register, 2003). Meaningful evaluation of outcomes ensures that progress is being made towards achieving plan goals and objectives. Such evaluations are used as the basis for adjusting management actions in a timely manner to ensure continued progress. Table 2 identifies outcomes selected for monitoring and evaluation and indicates the proposed frequency for measure. These measures may be taken on the Cajete Units or representative site.

Table 2 – Monitored Outcomes

Objective	Monitored Outcomes	Frequency
Reduce uncharacteristic fire potential	Crown base height, crown bulk density or canopy closure, surface fuel model	1-5 years following treatment
Improve forest structure - stand level	Tree size, species, and canopy density	1-5 years following treatment
Restore forest function	Carbon flux, water capture storage and yield	Continuously, summarized every 5 years

Scope

Public Involvement

Since 2009 the Valles Caldera Trust has been collaborating to implement a variety of actions aimed at restoring the health and resiliency of the Preserve’s forest and grassland and the surrounding National Forest System (NFS) lands. Based on this collaboration, the Trust proposed a long term plan for the restoration and management of the Preserve’s forest and grassland ecosystems. The proposed landscape restoration and management plan (LRMP) included and prioritized mechanical treatment in the southwest corner of the Preserve.

The proposed LRMP was presented to the public, special interest groups, interested agencies and tribal governments in detailed documents, maps and presentations provided through emails, surface mails, letters, public meetings, and dedicated web pages.

Agencies, individuals and organizations who participated or commented were supportive of the proposed action but expressed concerns about any removal of larger trees, maintaining wildlife habitats, and potential disturbances and impacts to cultural and natural resources. Public response contributed to the development of the performance requirements and mitigating measures as well as goals, objectives and monitored outcomes applied to the proposed forest management activities.

Environmental Documentation

In the Trust's NEPA procedures identify the categories of actions that can be excluded from documentation in an Environmental Assessment (EA) or an Environmental Impact Statement (EIS). These are actions which are known not to have significant direct, indirect or cumulative effects when implemented under normal³ circumstances and limited in context and intensity.

The proposed stewardship action can be categorically excluded from documentation in an EA or EIS under section 101.6, (11): *Treatment of forest structure and fuel conditions for the purpose of reducing the hazard of large, stand replacing crown fires in areas where such high severity fires are outside an historic range of variability. Projects under this category are limited to an aggregate area in the Preserve of no more than 640 acres in a calendar year, and may involve prescribed fire and/or the removal of live trees, the diameter of which will be:*

(A) No larger than nine inches at breast height; or

(B) Determined by publicly available site-specific size class information used to define an appropriate diameter and basal area distribution of trees to be removed;

No extraordinary circumstances³ are present which would require the preparation of an EA or EIS.

Decision(s) to be Made

Executive Director for the Valles Caldera Trust is the Responsible Official, the person responsible for overseeing the planning and implementation of the proposed stewardship action. The Executive Director will decide whether to thin the forest and use prescribed fire within the Cajete Forest Management Units 3 and 4.

Implementing Decision

The Implementing Decision will be made following a public review and comment period of not less than 14 days.

³ Extraordinary circumstances include, but are not limited to: Scientific controversy; high level of public interest; extreme weather or climatic conditions; or the potential for effects on environmental resources of critical concern such as cultural resource sites and habitat for candidate, endangered, or threatened species.

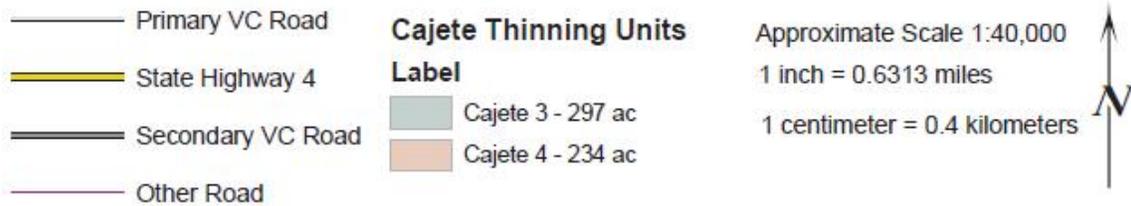
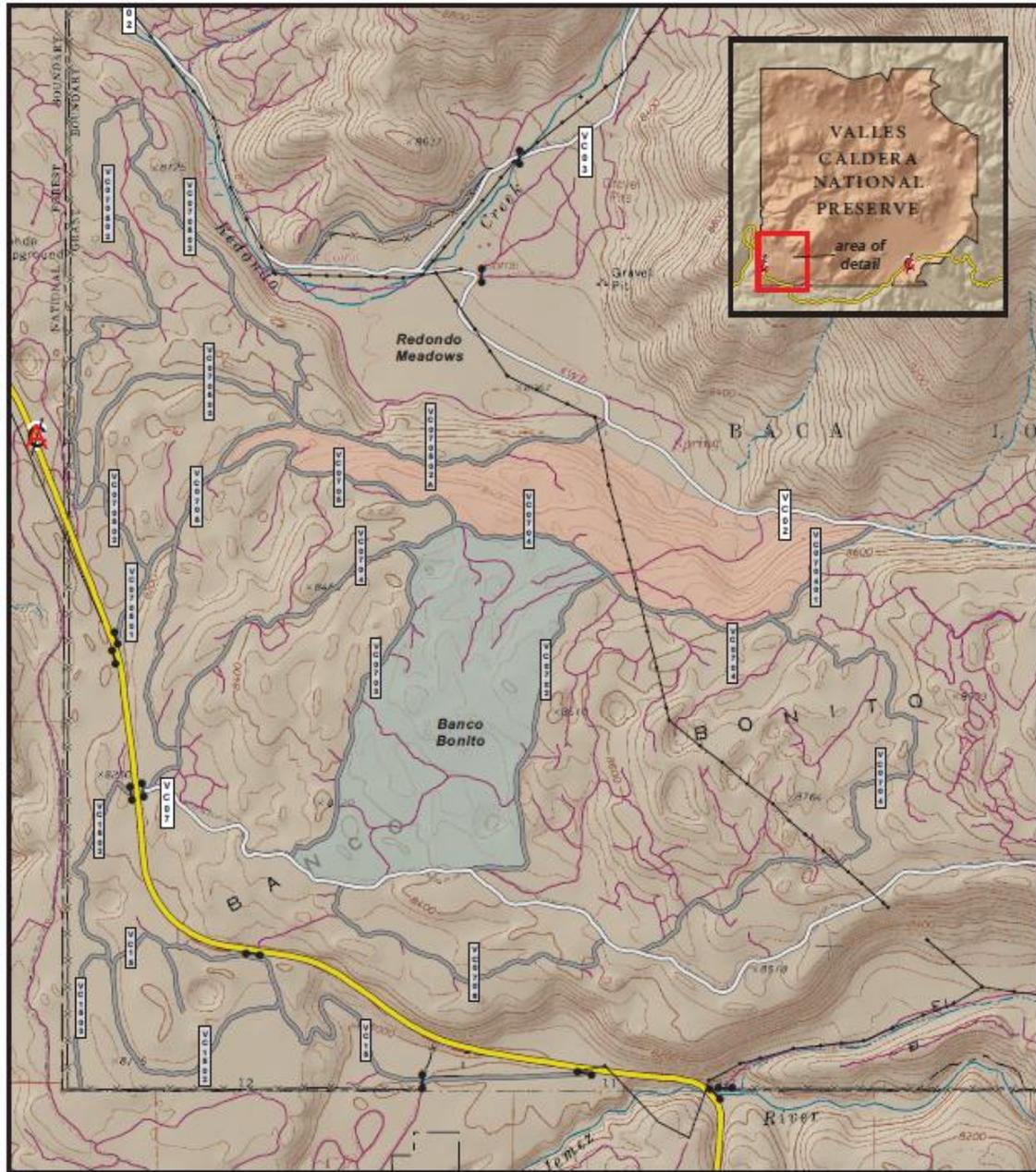


Figure 1 – Cajete Forest Management Units 3 & 4