

# SCOPING REPORT AND OPPORTUNITY TO COMMENT

## San Rafael Valley Manzanita Fuels Reduction Project

Sierra Vista Ranger District  
Coronado National Forest  
Santa Cruz County, Arizona

### Introduction

This Scoping Report summarizes a U.S. Forest Service proposal to mechanically reduce manzanita (*Arctostaphylos pungens*) stands on mesas and ridges surrounding the San Rafael Valley in the Sierra Vista Ranger District, Coronado National Forest, Santa Cruz County, Arizona. The proposed project is considered a major Federal action that requires a National Environmental Policy Act of 1969 (NEPA) review prior to a decision on implementation.

This report is intended to inform interested and affected parties of the proposal and to provide the public with an opportunity to comment on the scope of impacts analysis early in the NEPA review process. Comments received in response to this Opportunity to Comment would be used to identify key issues to be addressed and if necessary, develop alternatives to the proposed action.

### Purpose of and Need for Action

The purpose of the proposed action is to redistribute fuel loads to manageable levels, create defensible space around private lands in the wildland-urban interface (WUI), reduce the probability of catastrophic wildfire, increase persistent soil cover, prevent erosion and loss of soil productivity, increase herbaceous production, restore the landscape to a more natural oak-savannah grassland, and generally improve wildlife habitat.

The proposed action is needed for the following reasons:

- Current fuel loads present high risk to life, property, and fire fighter safety in the event of wildfires;
- Most of the ridges and mesas surrounding the San Rafael Valley are in an undesirable ecological state (dense chaparral), which requires a disturbance to transition to a more desirable state (oak-savannah grassland);
- As chaparral density increases, herbaceous production decreases, leading to more bare soil, increased erosion, and increased water turbidity;

- Catastrophic wildfire in the chaparral type can burn intensely enough to create hydrophobic soils, reducing soil productivity, increasing erosion, and causing severe downstream flooding;
- Current chaparral densities create marginal habitat for many wildlife species such as turkey and white-tailed deer;
- Portions of the proposed area were crushed in the mid-1970's and are in need of maintenance treatments to address manzanita encroachment;
- Manzanita is actively encroaching into open grasslands on the fringes of the San Rafael Valley; and
- Dense chaparral makes livestock management difficult, and prevents optimal livestock distribution.

### Existing Conditions

The project area is located in the foothills of the Patagonia Mountains and Canelo Hills surrounding the San Rafael Valley (Map 1). Elevations range from 4,800 feet to 5,700 feet. Topography of the areas proposed for treatment predominantly comprises ridge tops and broad mesas. The dominant cover type is chaparral, primarily manzanita mixed with multi-stemmed oaks (*Quercus spp*). Several drainages in the project area support riparian vegetation. Drainages flow seasonally, but there are no perennial streams in the project area.

Many of the mesas and ridges on the west and northeast edges of the San Rafael Valley are in an undesirable ecological state due in large part to the presence of dense stands of manzanita or the active encroachment of manzanita into plains grasslands ecological types. The desirable ecological state for these mesas and ridges is oak-savannah grasslands. The current state is undesirable because as manzanita cover increases:

- fuel loads increase to unsafe levels, and chances of catastrophic wild fire rise to unacceptable levels;
- soil cover decreases, leading to an increased erosion, soil loss, and water turbidity;
- quality of habitat for many wildlife species decreases; and
- herbaceous production decreases.

In 2004, fire-regime condition class assessments were conducted in the project area. These assessments indicated that fire regimes have been substantially altered from their natural range, and the risk of losing key ecosystem components is high. Additionally, they indicated that mechanical treatment would be appropriate before a natural fire regime could be re-established. These assessments indicated that the majority of the project area is in a high-threat condition and should be a priority for fuels-reduction treatments.

There are several transects in the project area which were installed in the late 1950's to measure long term trends in soil and vegetation conditions. When read in recent

years, most of these transects indicate that as brush cover increased, herbaceous cover decreased. Most range and watershed conditions remain in fair or good condition, although in all cases the increased brush presence was noted as a significant concern for the long-term health and productivity of the sites.

In 1999 and 2000, estimates of riparian conditions were made at nine locations within the project area. All were found to be in satisfactory condition, although the absence of older age classes of riparian trees was noted.

The majority of the project area reached the current chaparral dominated ecological state due three primary factors:

1. In the late 1800's and early 1900's, large-scale woodcutting occurred to supply the local mines and surrounding town sites with charcoal for smelters and general-purpose fuel wood. This resulted in the removal of most large trees from much of the accessible portions of the Patagonia Mountains. Most brush species were ignored however, and grew well without the competition from the mature trees.
2. For at least the past 140 years, fire has been largely absent from the ecosystem due to such factors as heavy grazing and active suppression efforts. Manzanita is a fire-successional species, and a single fire event tends to germinate manzanita plants. However, a regular fire interval tends to keep the species in check and maintain a more open, savannah-type appearance to the landscape. Some portions of the project area were burned a single time, and never re-burned, encouraging manzanita plants to germinate, and eventually dominate many sites.
3. In the 1950's and 1970's management actions were taken to remove manzanita from some sites. The life expectancy of such projects is generally 25-30 years, and many of these areas are due for a scheduled re-treatment.

### **Desired Conditions**

The desired conditions for the project area include the following:

- Fuels reduced to safe, manageable levels;
- Reduced chance of catastrophic fire and subsequent watershed degradation;
- and
- Conversion of vegetation to an oak-savannah ecological type.

### **Proposed Action**

The Forest Service proposes to mechanically treat up to 12,000 acres of manzanita-dominated mesas and ridge tops with a hydro-axe machine. A hydro-axe is a rubber tired, articulated tractor with a front-mounted rotating mower-type attachment, which chops woody material into small pieces and scatters it on the ground, creating

mulch ground cover. The mower blade rotates in a horizontal plane, and can cut to within 4 inches of the ground, minimizing soil disturbance. Rubber floatation tires allow the machine to work on rocky country, and minimize ground disturbance on softer soils. Most models can cut woody material up to eight inches in diameter. Since the mower is mounted on the front of the machine, it can be far more selective than many other mechanical treatment tools.

Areas to be treated would be limited to less than 20% slope, and buffers would be maintained around all primary drainages. While manzanita is the target species, young oaks and junipers less than 8-inches in diameter would also be removed.

No seeding of herbaceous species is expected to be necessary, because there is ample seed already in the soil. All previously identified cultural resource sites and land-survey markers would be avoided. No work would be conducted in wet conditions to prevent soil compaction. Although 12,000 acres have been identified for treatment in the project area, a more realistic estimate of actual treatable acres is 9,000. The project would be implemented in stages over a period of several years.

### **Preliminary Assessment of Issues**

Plan-to-Project analyses indicate that the following potential issues should be addressed during the NEPA review. This list of issues would be refined based on comments received during scoping.

1. **Project effects on fire control:** The proposed action would not greatly reduce fuel loads in the short term, but it would significantly alter the spatial distribution of the woody fuels. This would result in decreased fire intensity, which would allow wildfires to be fought with decreased risk to life, property and firefighter safety.
2. **Project effects on wildlife:** Overall, the project would be beneficial for all species of concern. Actual implementation should be broken into stages to minimize impacts on individual populations.
3. **Project effects on cultural resources:** While all known cultural resource sites would be avoided, a surveying/sampling strategy needs to be developed to ensure sites are identified in a timely manner.
4. **Project effects on threatened/endangered/sensitive species:** The project may adversely affect some species and would be beneficial for others.
5. **Project effects on grazing permittees:** While the project would have long-term benefits to the range resource, and ease livestock management, it is unclear how long a treated area would need to be rested before it can be grazed again.
6. **Project effects on special-use permittees:** A special-use permittee harvests manzanita in small quantities within the project area.

### **Evaluation Measures**

The following measures are proposed for impacts analysis. Impacts would be quantified to the extent practicable.

1. **Project effects on wildlife:** narratives and tables describing effects, by alternative, as identified through a Wildlife Specialist's Report, Management Indicator Species Analysis and a Biological Assessment and Evaluation; consultation with federal and state resource agencies.
2. **Soil & watershed condition:** narrative and tabular descriptions, by alternative, as identified through a range and soil condition and trend analysis.
3. **Upland vegetation:** narrative and tabular descriptions, by alternative, as identified by ecological condition and trend analysis.
4. **Riparian:** quantity of riparian habitat in satisfactory condition or better, as defined using Forest Land and Resource Management Plan standards.
5. **Fuel modification:** narrative and tabular descriptions based upon Fire Risk Assessments

In addition, the effects of the alternatives on air quality, water quality and heritage resources would be addressed as required by Forest Service policy and regulations.

### **Preliminary Identification of Alternatives**

Following are potential alternatives to the proposed action. Further alternatives may be identified or alternatives may be revised if scoping results in the identification of significant issues not already identified, or if an additional management solution is identified that achieves the desired condition.

#### **Alternative 1 - No Action/No Treatment.**

No mechanical fuel reduction would be conducted. This alternative is required to be evaluated by the President's Council on Environmental Quality Regulations Implementing NEPA.

#### **Alternative 2 - Proposed Action.**

Manzanita would be treated using a hydro-axe type machine.

#### **Alternative 3 - Mechanical Crushing.**

Manzanita would be crushed by a water-filled drum towed behind a bulldozer. This method does have increased soil disturbance, limited selectivity, and marginal success in previous treatments.

#### **Alternative 4 - Prescribed Burning.**

Prescribed burns would be conducted to reduce the fuel loads. This alternative is limited due to the current unsafe state of the fuel loads, the necessity and cost of recurring treatments, and the practicality of safely burning the treatment area without jeopardizing lives, private property, and watershed conditions.

## How to Comment

You are encouraged to provide comments within the scope of the NEPA analysis for this proposed project, including potential issues, concerns, and project alternatives. Comments related to advocacy of the project shall not be considered as part of the project scope unless they are based on or linked to a specific issue or concern. To receive full consideration and to best assist the Forest Service in its NEPA review, comments should be submitted by June , 2004.

Written comments may be submitted via U.S. mail or electronic mail to Bill Edwards, Range and Watershed Staff, Sierra Vista Ranger District, 5990 S. Hwy 92, Hereford, AZ 85615, and [waedwards@fs.fed.us](mailto:waedwards@fs.fed.us). For further information about the project or to offer verbal or in-person comments on the proposed action, please telephone Mr. Edwards at (520) 378-0311.

Regarding privacy issues, please note that comments received by the Forest Service in response to this Opportunity to Comment, including the names and addresses of those who comment, will be considered part of the administrative record for this NEPA review, and as such, are available for public dissemination and/or inspection, in accordance with provisions of the Freedom of Information Act (FOIA). However, pursuant to 7 CFR 1.27 (d), any person may request that the Forest Service withhold a comment/submission and/or personal information from the public record based on an exemption granted in the FOIA. Requests for confidentiality are allowed under very limited circumstances, such as to protect trade secrets. Determination of eligibility for confidentiality will be made by the Forest Service, and the requester informed of the agency's decision. If a confidentiality request is denied, the agency will return the comment/submission to the requester and advise that the same comments may be resubmitted with or without name and address within 21 days of return.

In accordance with 36 CFR 215.5, additional opportunities for public and agency review of the project would occur as the NEPA review progresses.

Map 1. San Rafael Valley Manzanita Project Area

