2.0 PROPOSED ACTION AND ALTERNATIVES

2.1. Management Direction

The proposed action conforms to the Forest Plan goals, standards and guidelines, which are incorporated by reference (USFS 1984). The project area falls within the two Forest Management Areas described below.

Aspen Management (4D) emphasizes maintaining and improving aspen sites. Other tree species, if present are de-emphasized. Aspen is managed to produce wildlife habitat, wood products, visual quality, and plant and animal diversity. Aspen clones are maintained. On larger areas, a variety of aspen stand ages, sizes, shapes, and interspersions are maintained. Even-age management is practiced and is achieved by clear-cutting. Diversity objectives are achieved by varying the size, age, shape and interspersion of individual stands. Individual treatments are generally smaller than 40 acres.

Livestock Grazing (6B) emphasizes management for livestock conflicts between livestock and wildlife are resolved in favor of livestock. Range condition is maintained through use of forage improvement practices, livestock management, and regulations of other resource activities. Management activities are evident but harmonize and blend with the natural setting.

Federal And State Permits, Licenses

The USFS complies with the open burning application and permit requirements of the Air Pollution Control Division, Colorado Department of Health for all burning activities. No federal permits or licenses are necessary or required.

2.2. Public Involvement And Issue Identification

Issues to be analyzed in this EA were determined through scoping processes with the public, tribes, and federal, state and local agencies. The interdisciplinary team (IDT) for this project reviewed comments from those that participated in the scoping process and determined issues for analysis in this EA. Public involvement continue occur during public review of this document.

The Scoping Process

The proposed action was published in the Mountain Mail on August 1, 2006. In addition, a presentation was made to the Badger Creek Homeowner's Association and a project newsletter was mailed to 296 interested or potentially affected individuals, groups, organizations, tribes, and state and other federal agencies, describing the proposal and encouraging comments and participation in the planning process. Comments were accepted via mail, e-mail, faxed, or in person. 12 replies were received and are available for review in the project file.

Development Of Issues

Issues are defined as concerns about the potential effects of the proposed action. Issues about the proposed action were solicited from all interested parties as well as from the project IDT. Each issue was evaluated to determine its relevance to the decision and then placed in one of the following categories:

1) determined to be irrelevant to the decision and/or beyond the scope of the project;
2) eliminated from detailed study because of known minimal or no effects or because of effective mitigation;
3) listed as a substantial issue to receive full analysis and disclosure, but not a key issue for alternative development; or
4) listed as a substantial issue to receive full analysis and disclosure and a key issue for alternative development.

Issues Analyzed In Detail

The discussion of the affected environment and environmental consequences in Chapter 3 focuses on issues that were determined to be relevant based on comments from the public, and IDT members.These issues are considered important factors in the decision to be made regarding insect management and fuels reduction in the Herring Park analysis area. They are discussed in detail because: 1) they are potential factors in deciding among alternatives; 2) they are topics of high public interest; or 3) a law, regulation, or policy requires their analysis such that full disclosure was determined to be appropriate. Each issue is discussed in detail in Chapter 3 of this EA.

The issues carried through analysis include vegetation, fire/fuels, soils, hydrology, wildlife, and heritage resources. Other resource issues were not carried forward for detailed study because they were anticipated to experience negligible to no environmental impacts from the proposed action. Internal and public scoping did not identify any key issues that warranted development of other alternatives for analysis; therefore, only the no action and proposed action alternatives are analyzed in detail.

Issues Eliminated From Detailed Study

Noxious Weeds

Prior to implementation, if noxious weeds are determined to be present, locations will be mapped and treatment initiated. This effort is outlined in the “Invasive Species Action Plan” for the Pike and San Isabel National Forests approved in December 2006.

Ground-disturbing activities associated with the proposed action may increase the susceptibility of the project area to invasion and spread of noxious weeds. Several noxious weeds currently occur in the project area. The potential for the introduction and spread of noxious weeds would be minimized by the application of standard resource protection, design criteria, and monitoring measures designed to prevent, detect, and eliminate noxious weed infestations in the project area.

Public Health And Safety

The concern with public health and safety is primarily related to the risk of prescribed burning on adjacent private lands and hauling (logging traffic) on county roads shared by the Badger Creek Homeowner's. Project design criteria and mitigation would be used to minimize risks to public health and safety. For example, treatments that carry a higher level of risk, such as broadcast burning, would be avoided directly adjacent to and downwind of private lands. Hauling restrictions would be applied during peak hours to avoid conflicts with homeowners and recreationist.

Environmental Justice

Executive Order 12898 (EO 12898), Environmental Justice, requires all federal agencies to consider low-income and minority populations in their processes. The project area has no known low-income or minority populations as defined by EO 12898, so no additional outreach or analysis has been completed as there will be no disproportionate negative effect on such communities due to any of the alternatives.

2.3. Description Of Alternatives

A range of alternatives was designed that would be consistent with management objectives while considering all issues that were raised during the scoping process. After consideration of the management objectives in conjunction with the internal and public scoping comments, the appropriate range of alternatives was narrowed to two alternatives: the no action alternative and the proposed action alternative. This section describes these two alternatives in detail. In addition, alternatives considered but dismissed are discussed along with the rationale for dismissal.

Alternatives Considered But Eliminated From Detailed Study

Throughout the planning process, alternatives might be considered but subsequently dropped as described below.

Alternatives Considered For Analysis

No Action Alternative

This alternative provides a baseline for comparison of relative changes and effects that would occur with implementation of the proposed action alternative. Under the no action alternative, no vegetation or fuels reduction treatments would be implemented within the analysis area. No effort would be made to restore historic conditions that would be more resilient to the effects of invasive insects, pathogens, plants and pests and fire resistance. There would be no opportunity to salvage or thin stands which would provide wood products to local markets or to the public for personnel-use firewood. No opportunity would exist to reduce the number of unclassified roads. The current MPB epidemic would run its course contributing to heavy fuel loading which would increase the fire hazard making control more difficult.

Natural processes (insect & disease epidemics, wildfire) would continue to occur under the no action alternative providing some benefits to the environment. Aspen regeneration and suitable range-land acreage will expand, wildlife habitat for some species will benefit from the open canopy and increase in snags. However, we lose the opportunity to manage for quality habitat through enhancement and protection on a smaller scale than what insect and disease or catastrophic wildfire have done in recent history.

Proposed Action Alternative

The proposed alternative (proposed action) would implement a combination of mechanical treatment, salvage activities, treatment of post-treatment debris (slash), and broadcast burning in order to achieve the desired conditions that are consistent with the standards and guidelines of the Forest Plan. Treatment objectives are to: 1) thin the over-story and mid-story to a density more representative of historical conditions that will reduce beetle spread and lower stand risk; 2) remove a majority of the understory ladder fuels; and 3) remove most of the MPB mortality to reduce future high levels of heavy down dead fuel loading. This in turn will reduce the risk of crown fires and make it easier to reintroduce fire to resemble historic fire regimes.

The total analysis area for this project consists of approximately 7,174 acres of San Isabel National Forest lands, 324 acres of state land, and 5,969 acres of private land with a total acreage of 13,467 acres within the analysis area. The proposed project would be implemented on USFS lands only.

The USFS proposes to mechanically treat vegetation on approximately 3,081 acres. Mechanical treatment would include salvaging insect-killed trees and reducing tree stocking levels. Prescribed fire would also be used to reduce fuel loadings throughout the project area; an additional 2,705 acres of montane grasslands will be burned with prescribed fire. The actual area burned would be about 5,786 acres; this includes portions of the 3,081 acres proposed for vegetative treatment.

The type of treatment proposed for specific areas was chosen by USFS technical specialists based upon the physical and natural characteristics of the area. These characteristics include the current level of beetle infestation, slope, soils, cover type, cover density, and proximity to developed areas and private land. Descriptions of treatments types follow:

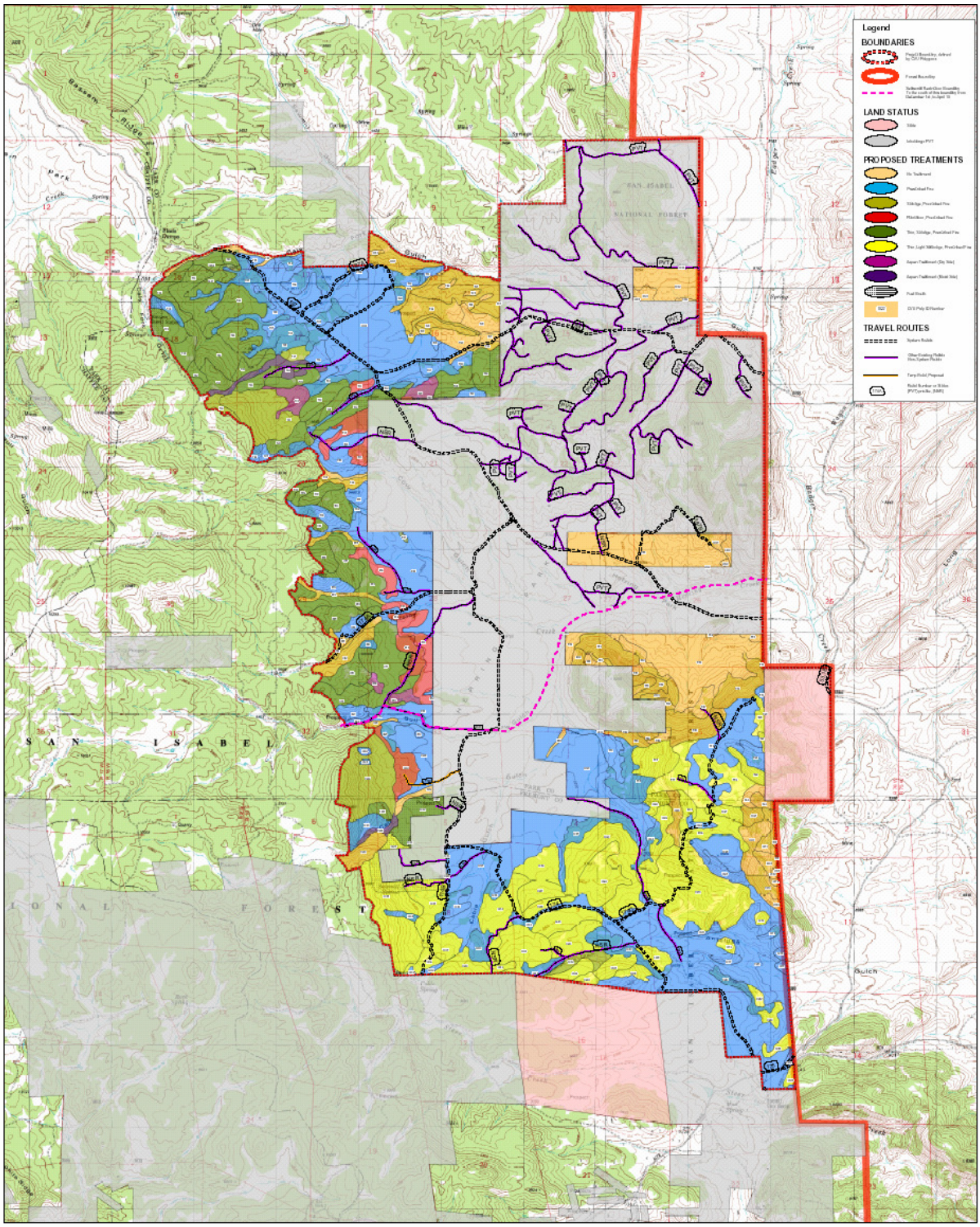
Mechanical Treatment Areas

On 3,081 acres of the project area, the following treatment methods or stand types Salvage, Thinning, Prescribed Fire (approximately 1067 acres), Light Salvage, Thinning, Broadcast Burning (approximately 1445 acres), Salvage Only, Prescribed Fire (approximately 268 acres), Aspen Treatment - Dry Site (approximately 55 acres), Aspen Treatment - Moist Site (approximately 42 acres), and Plantation Thinning (approximately 204 acres) would include mechanical thinning of live trees, and/or salvaging of dead trees combined with a full range of slash treatments. Mechanical treatments may be carried out with the assistance of equipment, such as harvesters, hydro-ax or bullhog heads, or by hand and power saws. A combination of USFS crews, stewardship, service contracts, and timber sales may be used to meet the objectives.

Salvage, Thinning, Prescribed Fire (approximately 1067 acres):

Ponderosa pine (approximately 335 acres): Dead stands of ponderosa pine and ponderosa pine trees infected with insect and disease may be harvested and removed from the area. In areas of heavy mountain pine beetle activity, infested trees will be removed and remaining trees may be thinned, if needed, to maintain the residual mature stand. Methods of removal include but are not limited to chainsaws, harvesters, skidders, dozers and log trucks.

Stands of healthy ponderosa pine (stands that have minimal or no insect or disease infestation) may be thinned to reduce overall stand density and improve the health and vigor of the remaining ponderosa pine.



HERRING PARK PROJECT

(Proposed Project Area) (Proposed Treatments)

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1 0.5 0 1 Miles

1:24,000

This Map changes CVU numbering from Psi_cvupnv to the Poly ID number.
Landlines are approximate.

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After harvesting is complete, the slash and hazardous fuels in the area may be reduced through fuelwood gathering and/or prescribed fire. Prescribed fire includes pile burning, broadcast burning or a combination of both. See the section on prescribed fire for more details. The desired result will be less than 40% canopy closure. The basal area will be an average of 50 square feet over the treatment area, incorporating areas with heavier thinning (less than 50 ba/acre) and areas that are greater than 180 square feet of basal area with interlocking canopy. Existing regeneration needed for desired stocking levels will be protected where practical.

Mixed conifer-Ponderosa pine & Douglas-fir mix (approximately 732 acres): Dead stands of ponderosa pine and Douglas-fir may be harvested and removed from the area. In areas of heavy mountain pine beetle activity, infested trees will be removed and remaining trees may be thinned, if needed, to try and maintain the residual mature stand. Remaining healthy stands may be thinned to reduce stand density and improve forest health. Methods of removal include but are not limited to chainsaws, harvesters, skidders, dozers and log trucks.

After harvesting is complete, the slash and hazardous fuels in the area may be reduced through fuelwood removal and/or prescribed fire. Prescribed fire includes pile burning, broadcast burning or a combination of both. See the section on prescribed fire for more details. The desired result will be less than 40% canopy closure. The basal area will be an average of 60 square feet over the treatment area; incorporating areas with heavier thinning (less than 60 ba/acre) and areas that are greater than 180 square feet of basal area with interlocking canopy in areas with residual aspen stands the objective of the treatment will be to stimulate the regeneration of aspen. Large diameter trees, minor species and five-needled pines will be favored for retention. Existing regeneration needed for desired stocking levels will be protected where practical.

Fuel Break Treatments (approximately 176 acres): Fuel Break treatments are secondary and acres are included in the Salvage, Thinning and Prescribed Fire treatments. Objective of this treatment is to create a "shaded" fuel break along the adjacent private lands near the Badger Creek Subdivision. Forested stands would be thinned to approximately 30 square feet of basal area per acre for approximately 400 feet from the private land boundary. Natural openings, ridgelines and other fire control features will be utilized where possible in the design and layout of these fuel breaks.

Light Salvage, Thinning, Broadcast Burning (approximately 1445 acres):

Ponderosa pine (approximately 331 acres) & Mixed conifer-Ponderosa pine & Douglas-fir mix (approximately 1114 acres): These treatments are the same as the above "Salvage, Thinning, Prescribed Fire" treatments except salvage of standing dead and down-dead material is secondary to the thinning of the existing "green, live trees". This is because the current mountain pine beetle infestation/mortality is lower in these stands and treatment emphasis is on maintaining the "live, un-infected forested" stands. If MPB populations drastically increase, more emphasis would then be put on salvage operations. Post-treatment of broadcast burning is anticipated following these treatments. Post-treatments may also include release and weeding, and thinning of existing regeneration.

Aspen Treatment - Dry Site (approximately 55 acres): Objective of this treatment is to maintain the "dry site" aspen clone by removing non-commercial conifer tree species (less than 8 inches diameter breast height (DBH)). Prescribed fire would be allowed within these sites where appropriate and/or feasible.

Aspen Treatment - Moist Site (approximately 42 acres): Objective of this treatment is to maintain the larger diameter aspen trees. Where appropriate, treatments around the aspen clone would be designed to enhance/increase the size of the aspen clone. Use of mechanical equipment would be allowed with site specific restrictions. Prescribed fire would be allowed within these sites where appropriate and/or feasible.

Plantation Thinning (approximately 204 acres): Commercial and Pre-commercial thinning of the existing ponderosa pine "plantations" to desired and prescribed stocking levels per silvicultural prescriptions. Prescribed fire would be allowed within these sites where appropriate and/or feasible following the thinning treatments.

Salvage Only followed by Prescribed Fire (approximately 268 acres)

Salvage of standing dead and down-dead material would be allowed. Mountain pine beetle infested "green" trees would be removed. Prescribed fire would be allowed within these sites where appropriate and/or feasible.

Prescribed Burning:

In addition to the 3,081 acres of broadcast burning that would occur in conjunction with mechanical treatments, prescribed burning would be the only method of treatment on 2,705 acres of **montane grasslands (2,206 acres), aspen sites (472 acres), and low maintenance Ponderosa Pine / Douglas-fir stands (27 acres).**

Prescribed fire would be used to reduce hazardous fuel accumulation, promote regeneration (grass, forbs, shrubs, and trees) and reintroduce fire into fire-dependent ecosystems. To ensure fire safety, prescribed fire units will be delineated using natural fuel breaks, roads, handline, and wetline; mechanical thinning may be completed prior to ignition to improve holding features. Aerial ignition (ping-pong ball, helitorch), hand ignition (drip torches, fusees) and/or all terrain vehicle (ATV) ignitions may be used. Fire managers will work with resource specialist to determine if handlines need to be rehabilitated.

A prescribed fire plan and appropriate smoke permits will be completed and approved prior to burning. The prescribed fire plan will address such items as unit delineation, weather parameters, necessary holding resources, sensitive areas (i.e. power lines, highways, and improvements), public safety, and smoke concerns. Broadcast burning would not be implemented in mechanically treated areas that do not meet minimum safety requirements for prescribed burning operations, or are located in areas judged innapropriate by USFS staff.

These could include areas in close proximity to private or developed lands and/or areas that exhibit other characteristics such as unsuitable terrain, erratic wind patterns, smoke dispersal issues, or other factors that increase risks during broadcast burnings. Prescribed burning of individual units will likely be completed in 2 to 3 days, with residual smoke lasting 3 to 5 days.

Pile burning will take place when the ground is snow covered in areas where broadcast burning is not desired or where fuels must be reduced prior to broadcast burning (ie. fuel breaks). The average size of hand piles is 6 feet x 6 feet x 6 feet. The average size of mechanical piles is 6 feet x 6 feet x 10 feet. The burning of the piles usually takes place in the winter months.

Meadows & shrublands (approximately 2206 acres): Prescribed fire will be used to improve the health of the montane grasslands and improve the forage. The desired result will be a mosaic pattern in the meadows and shrubland of approximately 50 to 75% of the vegetation burned. Preparation work may be needed to ensure the prescribed burn is maintained within the prescription set forth in the prescribed fire plan. Examples of preparation work include the construction of handlines, to mineral soil, and the removal of brush. Where available, natural and existing fuel breaks will be used.

Aspen (approximately 472 acres): Prescribed fire treatments would be allowed through these stands with the objective to reduce fuel loading and also to stimulate regeneration of the aspen clones.

Ponderosa pine & Douglas-fir (approximately 27 acres): Prescribed fire will be used to maintain healthy stands of ponderosa pine and Douglas-fir in their current condition, reduce hazardous fuel accumulations, and return fire to the ecosystem. The desired result will be a mosaic of approximately 50 to 80% of the understory (duff, needles, grass, and small trees) vegetation burned.

Light mechanical preparation work may be needed to ensure the prescribed fire is maintained within the prescription set forth in the prescribed fire plan. Examples of preparation work include: 1) limbing trees to a height of approximately 6 to 10 feet (primarily along firelines and at critical holding points), 2) construction of handline and/or ATV dragline, to mineral soil, as a boundary between burn units, 3) bucking and removing large concentrations of dead and down material from beneath larger live trees and snags (dead and down material would be moved to open areas within the unit), and 4) falling snags near holding lines to ensure control of the prescribed burn. Where available, natural and existing fuel breaks will be used.

Mechanical thinning may be needed to allow the prescribed fire to carry in a controlled fashion. Examples of thinning include: 1) limbing trees and 2) falling and limbing trees. Additional light mechanical preparation work may be needed to ensure the prescribed fire is maintained within the prescription set forth in the prescribed fire plan. Examples of preparation work include: 1) construction of hand line as a boundary between burn units, 2) bucking and removing large concentrations of dead and down material from beneath larger trees (dead and down material would be moved to open areas within the unit), and 3) falling snags near unit boundaries to maintain control of the prescribed burn. Where available, natural and existing fuel breaks will be used.

Road System

Existing county and USFS system roads would be used as much as possible to access the project area. These roads would be maintained as needed for safety and environmental considerations. No new system roads would be constructed in association with the proposed project. Within the project area, there are 13 miles of existing system roads. No system roads in the project area would be decommissioned after the project is complete.

Within the larger project area, 15 miles of temporary roads are proposed that would be used to access treatment areas. Some of these roads already exist as two-tracks and could be utilized.

These roads would be constructed/reconstructed to the minimum standard needed for safe and efficient use by project equipment, which will likely include some level of vegetation clearing and minor earth movement. The temporary roads will be closed and obliterated once the project is complete.

A roads analysis is not necessary for road related activity associated with the proposed action. No changes in system road access, current use, traffic patterns, or road standards would occur as a result of the proposed action. Temporary roads do not require a roads analysis completed for their use.

Design Criteria and Monitoring Requirements

Design criteria and monitoring requirements (Appendix A) have been incorporated into the proposed action to reflect different ways of responding to relevant issues raised internally and externally. They are not to replace or substitute Forest Plan Standard and Guides but to aid and support where Forest plan direction is lacking or outdated due to recent scientific research. They are to ensure compliance with the Forest Plan to avoid, minimize, rectify, reduce, eliminate, and/or compensate for adverse impacts of the proposed activity. This includes specific monitoring requirements for the avoidance of unexpected resource effects and the completion of project design and implementation as planned. The effectiveness of all design criteria, mitigation and monitoring will be assessed in more detail in Chapter 3 – *Affected Environment and Environmental Consequences.*