

Decision Notice
& Finding of No Significant Impact
Escalante Forest Restoration and Stewardship Project

USDA Forest Service
Ouray Ranger District, Uncompahgre National Forest
Montrose County, Colorado

Decision and Reasons for the Decision

Background

I am pleased to announce that we have completed the analysis process and environmental assessment (EA) for the Escalante Forest Restoration and Stewardship Project (EFRS). As District Ranger for the Ouray Ranger District, I have made the completion of the EA for the Escalante Forest Restoration and Stewardship Project a priority as it is important in fulfilling our commitment to our many partners who have worked with the Forest Service on the Project. This proposal is a product of the Uncompahgre Plateau Collaborative Forest Landscape Restoration Project grant obtained by the GMUG National Forest in 2010.

The objective of all proposed treatments is to increase forest ecosystem resilience to anticipated forest disturbances over the next 50-100 years such as wildfire, insect and disease outbreaks, big game and livestock use and climate change through the management of vegetation density, structure, composition and pattern. The proposed action seeks to restore many of the key forest structure characteristics common prior to Euro-American settlement of the region that are lacking in today's forests. The absence of natural fire, road development, livestock grazing, and past timber management practices have affected forest resilience and forest structure. As a consequence, forests in the project area are more vulnerable to uncharacteristic stand-replacing fire and lack broad-scale forest successional structure that are thought to have been more prevalent historically.

The proposed action is described by vegetation zones present within the EFRS. A map of the project area (Appendix A) is attached for reference as you review the Decision Notice and illustrates the vegetation types and approximate locations.

Within forest vegetation zones adapted to frequent low-severity fires (ponderosa pine), the proposed action is intended to increase forest resilience to the effects of wildfires burning under extreme conditions. Implementation will result in more-open, early-development forest succession conditions by reducing canopy cover and favoring retention of fire-resistant tree species. In these zones, the proposed action will attempt to increase broad-scale forest resiliency to the expected effects of climate change by reducing stand density and favoring more drought tolerant species. In these low-severity fire-adapted forest types, timber harvesting associated with the proposed action will produce a limited amount of forest products value that will exceed the costs to removed small diameter trees and associated fuels.

Within cooler and moister, more high-severity fire-adapted vegetation zones (mixed conifer and Engelmann spruce), the proposed action will primarily increase early-development stand conditions currently lacking in these forests. Within the highest elevation forests of the project area, these efforts will be directed towards increasing the suitability of forest habitat in the project area for the snowshoe hare, a key prey species for the threatened Canada Lynx. Where Lynx habitat improvement is not the primary objective in these zones, the proposed action will seek to increase early-development stand conditions, and will also promote components of these forests such as Douglas-fir and aspen that have been reduced through a century of past management activity. In many portions of these forest zones, timber harvesting associated with the proposed action will create forest product value that can be used to offset costs of implementing the proposed action in other vegetation zones, and support local forest product related businesses.

Pinyon and juniper woodlands and mountain shrublands at the lowest elevations of the project area have great importance to ungulate herds within the project area as winter range habitat. The proposed action will seek to improve the quality of this habitat within previously managed areas using mechanical treatments and seeding, increasing forage quality and habitat suitability for big game species.

A broad-scale perspective is critical to address the landscape-scale objectives. A broad-scale perspective, both in space and time, is even more essential since current and likely future budgetary constraints provide a finite amount of financial resources for forest management planning and implementation.

The success of this approach requires collaboration between internal Forest Service personnel and forest management stakeholders, collaborators and interested parties. A cornerstone of this effort is a concise and periodically updated project implementation plan. The Escalante Project plan will provide a general schedule of treatment activities and set forth trigger points for collaborator involvement and required communications and surveys between agency staff. Perhaps most importantly, this plan will form a framework for ecological and social monitoring activities associated with projects. Concise and actionable monitoring information is essential for an effective adaptive ecosystem management project such as the EFRS project, which spans tens of thousands of acres over a 7-10 year period. Broad collaborative involvement in ecological monitoring has been a highlight of recent forest restoration efforts on the Plateau and is a key feature of the Uncompahgre Plateau Collaborative Forest Landscape Restoration Program. The EFRS project will build on this collaboratively-based monitoring foundation, informing project activities throughout the course of the project.

Decision

I have selected the proposed action with some modifications as recommend during the public scoping and comment period ending in January of 2013. The Purpose and Need for the project is described as follows:

Based on the information described above, the overarching objective of all treatments is to increase forest ecosystem resilience to anticipated forest disturbances over the next 50-100 years such as wildfire, insect and disease outbreaks and climate change through the management of vegetation density, structure, composition and pattern. There is a need to:

- Shift vegetation patterns, distribution and composition towards historical range of variability and a mosaic of conditions capable of facilitating the use of ecologically appropriate managed fire
- Protect human life and property from wildfire
- Increase the economic resilience of the local forest management and products sector
- Improve big-game wildlife habitat (forage)
- Improve primary prey species habitat for Canada Lynx

Here is how proposed treatments¹ are to be applied to meet these needs (See Table 1):

- Near private inholdings within the project area, mechanical surface and ladder fuels reduction treatments will be used to reduce wildfire intensity and the threat of crown fire behavior under extreme fire weather conditions. In some locations, focused coppice cutting units will be used to stimulate an aspen regeneration response to create long-term, fire-resistant vegetation conditions.
- In low and mixed-severity fire-adapted forest types such as ponderosa pine-oak and warm-dry mixed-conifer forests, evidence of the historical range of variability (HRV) within these areas will serve as the reference for forest restoration objectives. In general, forest restoration activities will increase the quantity of early-development (i.e. “early-seral” conditions) and open canopy, fire-maintained forest structures that have declined due to over a century of fire suppression.
- Within higher-elevation mixed to high-severity fire adapted forest types such as cool-moist mixed-conifer forests, creation of early-development successional conditions will be the goal of proposed forest harvest and non-commercial mechanical operations.
- Spruce-fir forests within the EFRS project have been identified as potential Canada Lynx habitat. Uneven-aged group selection harvests will be applied in currently unsuitable Lynx habitat to promote conditions capable of supporting populations of prey species.
- Low-elevation pinyon-juniper and mountain-shrub woodland ecosystems within the project area are often heavily used by big game species in the late fall through early

¹ A full description of each component of the EFRS Project proposed action is included in the EFRS EA available at the Ouray District Office or at <http://www.fs.usda.gov/projects/gmug/landmanagement/projects>

spring months. Heavy use of these areas degrades their habitat value and puts game use pressure on private lands during these months. Within previously managed areas in this vegetation zone mechanical vegetation treatments and native seeding will be used to promote habitat and forage values within these areas.

- Much of the project area contains vegetation types adapted to frequent low to mixed severity fire, but has not experienced fire for the last century or more. Broadcast burning will be applied in ponderosa pine-oak and warm-dry mixed-conifer forest zones, and focused in areas within and surrounding commercial and non-commercial mechanical treatment areas.
- Proposed mechanical treatments and commercial harvests will contribute to the economic resilience of the local forest management and products sector through ecologically and sustainable forest product utilization.
- Across the project landscape, important questions exist regarding the proper management of several distinct and unique vegetation types. Two applied silvicultural assessments will be used to experimentally evaluate potential management options within these areas and to promote and strengthen relationships with applied forest ecology research collaborators.

Facilitating the use of fire as an ecological process throughout the Escalante landscape is a primary objective of the Escalante Forest Restoration and Management Project. Despite the beneficial ecological processes associated with fire, recent history has shown that most large and uncontrolled wildfires typically burn under very hot and dry conditions, often dangerous and destructive to human life, property, and economic activities. This project will promote the management of landscape-scale managed fires across fire adapted portions of the landscape as an essential and beneficial ecological process, while recognizing the potential risks of all fires, even ecologically beneficial ones, to human and non-human ecosystems.

This action responds to the goals and objectives outlined in the Amended Land and Resource Management Plan for the Grand Mesa, Uncompahgre, and Gunnison National Forests (USDA FS 1991), and helps move the project area towards desired conditions described in that plan; Interim Directive 2020-2008-1 in Forest Service Manual FSM 2000, Chapter 2020 "Ecological Restoration and Resilience.

Proposed Action

Mechanical Treatments-General

The proposed action includes the use of a combination of commercial timber harvest and non-commercial mechanical fuels treatments and tree removal within each vegetation zone of the project area. Whenever possible, typically non-commercial coarse woody debris and slash in excess of amounts identified to be retained on-site (i.e. available woody biomass) will be offered for removal in conjunction with commercial and non-commercial mechanical treatments.

Mechanical treatment units within the project area will be confined to slopes less than 35% throughout each vegetation zones. Areas with slopes less than 35% and greater than 100 feet from second order streams or higher comprise the operable area within the project landscape.

Wildland-Urban Interface

The Proposed Action involves the management of National Forest land within the wildland urban interface, an area within a distance of ½ mile of private inholdings within the project area. Mechanical surface and ladder fuels reduction treatments will be used to reduce fireline intensity and the potential for crown fire behavior under extreme fire weather conditions to reduce negative impacts to human life, property, and economic activities. These efforts will be concentrated in two approximate locations within the project area: in the western portion of the project area near a 400 acre L-shaped inclusion of private inholdings and within a complex associated with approximately 3,700 acres of private land inholdings in the eastern portion of the project area.

Within the western project area, approximately 1,900 acres of WUI surround the 400 acre, L-shaped inholding. Previous coppice cutting in this area has proven successful in regenerating aspen. Aspen regeneration is generally resistant to all but the most extreme fire behavior. Aspen coppice cutting will be located along a steep north facing slope to the south of the private inholding and will serve as a barrier to fire spread from adjacent conifer-dominated forests into the private inholdings. All WUI acres in this portion of the EFRS project area will be integrated with historical range of variability-based treatments in mixed-conifer and ponderosa pine-oak vegetation zones in the area.

Within the eastern portion of the project area, approximately 4,300 acres of WUI in the spruce-fir-aspen zone and 1,300 acres of WUI in warm-dry and cool-moist mixed conifer and ponderosa pine-oak vegetation zones surrounds a complex of approximately 3,700 acres of private land inholdings. Targeted aspen coppice cutting is proposed along slopes to the south of the private inholding in the spruce-fir-aspen zone. These areas will serve as a barrier to fire spread from adjacent conifer-dominated forests into the private inholdings. Within the approximately 4,300 acres of WUI areas encompassing these coppice cuts in the spruce-fir-aspen vegetation type, mechanical vegetation treatments will have the objective of reducing surface and ladder fuels to reduce the potential for crown fire initiation and to reduce fireline intensity. The intent of such treatments is to leave vegetation canopy intact maintaining surface shading in these areas as to not increase fire ignition potential in these areas.

Within the 1,300 acres of WUI in the Eastern portion of the project area in warm-dry and cool-moist mixed conifer and ponderosa pine-oak vegetation zones, treatments intended to reduce negative impacts of wildfire to human life, property, and economic activity will be integrated with historical range of variability-based treatments. Ladder and surface fuel loadings and crown-continuity within these areas will be reduced closer to the low-end of the estimated-HRV and forest plan required ranges within these areas to ensure fuels and fire protection objectives are met.

Within WUI areas in the cool-moist and warm-dry mixed-conifer and ponderosa pine-oak zones in both the eastern and western portions of the project area, broadcast burning treatments will be applied where mechanical vegetation treatments have been applied. Burning may include limited amounts of non-mechanically treated vegetation inclusions or adjacent areas. For further information on prescribed broadcast burning treatments, see the *Prescribed Fire* section of the Proposed Action.

Ponderosa Pine Commercial Harvest and Non-commercial Mechanical Treatments

Approximately 5,000 and 8,100 acres of commercial harvest and non-commercial mechanical treatments are proposed within the ponderosa pine-oak vegetation zone. These areas include portions of the previously described wildland-urban interface. Stand-level objectives will be guided by recent and ongoing studies of historical forest structure and composition within the project area. Prescriptions will attempt to create conditions in these stands similar to what would be expected if 3-5 low to moderate-intensity fires had occurred since disruption of historical fire regimes around 1875.

Many stands within this vegetation zone have been previously managed using even-aged silvicultural approaches which created closed-canopy conditions and uniform spatial pattern. This differs significantly from the historical forest conditions which were characterized by clumps of trees with interlocking crowns interspersed with treeless openings. Commercial and non-commercial treatments within this vegetation zone will have the broad objective of moving stand conditions toward spatial patterns consistent with historical conditions. These stand conditions should have a low potential for crown fire initiation and spread.

Today, open stand conditions are largely lacking within this vegetation zone as compared to historical estimates of these conditions. Treatments will attempt to recreate openings within the ponderosa pine-oak zone ranging in size from 0.25 to 1.0 acre across approximately 20-25% of harvested areas. Within these areas, conditions should favor development of understory plant cover and aspen regeneration in the short-term, and ponderosa pine regeneration over longer time frames.

Due to their relative scarcity within the project area, retention of large and old (predating 1875) ponderosa pine trees within this vegetation zone will be a stand-level objective of commercial harvests. Similarly, retention of small-diameter ponderosa pine will be an objective of commercial harvests and non-commercial mechanical treatments. An overall feature of both non-commercial and commercial treatments within this zone will be the promotion of multi-aged forest structure.

At a stand level, the degree to which commercial harvest will be employed relative to non-commercial mechanical treatments will be determined by the relative difference between current stocking, density and diameter distribution and estimated historical conditions. In instances where commercial sized trees dominate stocking, especially where past even-aged silviculture has been applied, commercial harvests will be used. In areas where non-commercial, small diameter non-commercial trees are in abundance, non-commercial treatments will be applied. In most stands, it is anticipated that a mix of both commercial

and non-commercial treatments will be necessary to move stand conditions closer to the historical range of forest structure variability.

Warm-dry Mixed-conifer Commercial Harvest and Non-commercial Mechanical Treatments

Approximately 4,000 to 8,200 acres of commercial and non-commercial mechanical treatments are proposed within ponderosa pine and Douglas-fir dominant, warm-dry mixed-conifer vegetation zone. These areas include portions of the previously described wildland-urban interface. Stand-level objectives will be guided by recent and ongoing studies of historical forest structure and composition within the project area. Prescriptions will attempt to create conditions in these stands similar to what would be expected if 2-3 low to mixed-severity fires had occurred since disruption of historical fire regimes around 1875. In mechanically treated areas, treatments should result in conditions largely resistant to crown fire initiation and spread.

Treeless patches within warm-dry mixed conifer forests of the project area were likely common prior to 1875. Today, open and early-development stand conditions are largely lacking within this vegetation zone as compared to historical estimates of these conditions. Similar to the ponderosa pine-oak zone, treatments in this vegetation zone will attempt to recreate treeless or aspen regeneration dominated openings ranging in size from 0.25 to 0.25 acre across approximately 20-25% of harvested and mechanically treated areas.

Historical forest conditions within these forests which were characterized at a fine-scale (less than 75 feet) clumps of overstory trees scattered randomly throughout stands. Commercial and non-commercial treatments within this vegetation zone will have the broad objective of moving stand conditions towards a similar spatial pattern consistent with historical conditions.

Treatments within these forests will favor retention of ponderosa pine and Douglas-fir, especially in areas where these species are lacking when compared to stand-level evidence of past dominance (e.g. large, old snags and large diameter cut stumps). Density and stocking of shade tolerant subalpine fir and spruce species will be reduced significantly in throughout this vegetation zone, especially where there is no evidence of this species in stands prior to approximately 1875. Shade tolerant species in this zone will be retained primarily in mesic or fire-isolated microsites within operable acres and within north aspects and drainage bottoms within non-operable areas of this vegetation zone.

As in the ponderosa pine-oak zone, at the stand-level, the degree to which commercial harvest will be employed relative to non-commercial mechanical treatments will be determined by the relative difference between current stocking, density and diameter distribution and estimated historical conditions. In instances where a commercial sized mix of shade-tolerant tree species dominates stocking, commercial harvests will be used. In areas where mainly non-commercial, small diameter non-commercial shade-tolerant tree species are in abundance, non-commercial treatments will be applied. In most stands, it is anticipated that a mix of both commercial and non-commercial treatments will be necessary to move stand conditions closer to the historical range of forest structure variability.

Cool-moist Mixed-conifer Commercial Harvest and Non-commercial Mechanical Treatments

Approximately 1,000 to 4,000 acres of commercial treatment and 1,600 to 9,500 of non-commercial mechanical treatments are proposed within the Douglas-fir and spruce dominant, cool-moist mixed-conifer vegetation zone. These areas include portions of the previously described wildland-urban interface (WUI). Stand-level objectives will be guided by recent and ongoing studies of historical forest structure and composition within the project area and broader regional studies of mixed-conifer forest historical structure (i.e. pre 1875) and by comparison of existing successional class structure to historical estimations of successional class ranges. Current forest successional class distribution within these forests differs somewhat from what would be expected under a historic disturbance regime, but not to the extent seen in warm-dry mixed-conifer and ponderosa-pine oak zones. Within this zone, the main characteristic of departure from estimated historical conditions is the relative lack of early-development or post-disturbance stand initiation conditions relative to mid-aged and stand conditions.

Early-development stand objectives will involve commercial and non-commercial canopy thinning and group selection harvests. Group selection harvests will remove 65-95% of existing tree cover in patches ranging in size 0.25 to 5 acres. Stand level objectives will include the retention of structural diversity elements such as Douglas-fir trees, advanced, shade-intolerant tree regeneration, and patches of overstory trees ranging in size from 0.1 to 2.5 acres.

Douglas-fir, a historically dominant and long-lived tree species within this vegetation zone has been reduced in many areas through past management activity to a point where a seed source for this species no longer remains. In these areas, locally sourced, genetically suitable ponderosa pine or Douglas-fir seedlings may be hand planted to help improve the representation of these species in the overall stand composition.

Non-commercial treatments within this vegetation zone will focus on promotion of complex stand structures and more resilient forest structure conditions to disturbance. These efforts will be focused heavily in areas where previous forest management and harvesting operations have altered stand development to a structural conditions that might have not have developed under a natural disturbance regime. Efforts will include non-commercial thinning of insect damaged advanced regeneration and thinning or cleaning of shade-tolerant species where they currently dominate open stand conditions.

Spruce/Fir Commercial Harvest and Non-commercial Mechanical Treatments

In addition to areas identified in the WUI, approximately 1,000- 2,000 acres will be commercially harvested within the spruce-fir-aspen vegetation zone of the project area. These harvests will have the primary objective of diversifying forest structure in Canadian Lynx habitat, but will also create a source of commercial forest products for the local timber economy. Current forest successional class distribution within these forests is likely within what might be expected under an infrequent, high-severity disturbance regime. Although this forest zone is currently within the historical range of variability in forest

structure, this vegetation zone contains a relative lack of early-development or post-disturbance stand initiation conditions relative to mid-aged and stand conditions similar to the cool-moist mixed-conifer vegetation zone.

Eight broad group selection harvest areas within the spruce-fir-aspen zone will range from approximately 500-2000 acres in size.

Approximately 15-20% (75-420 acres) of each managed group selection harvest area will be harvested groups of a maximum size of 2 acres within lynx habitat and up to 3-5 acres outside lynx habitat areas. Within groups 65-95%, of existing tree cover will be removed.

In areas of the spruce-fir-aspen zone outside Lynx habitat, approximately 500-1000 acres of advanced regeneration and intermediate spruce and subalpine fir will be thinned to reduce overall tree density, move species composition towards spruce (in fir dominated stands) and increase overall tree vigor, similar to non-commercial mechanical treatments in cool-moist mixed-conifer forests.

Commercial Salvage and Sanitation Harvests

Between 900 and 2000 acres of commercial timber harvests of dead and dying beetle-infested or wind thrown trees will be used to respond to localized bark beetle infestations or dead trees scattered throughout the project landscape. These harvests are typically small operations and will provide a consistent source of wood products to the local timber economy. Where new infestations of spruce, mountain pine beetle or other less common bark beetles are identified, these harvests will be sanitation with the objective of preventing the spread of beetles to other non-infested trees. Snags will be left in accordance with the Forest Plan standards.

Salvage and sanitation harvests will typically consist of 3-5 salvage or sanitation cut units per year ranging in size from 40-50 acres each.

The expected distribution of insect infestations and windthrow events will make these contracts accessible to smaller timber purchasers and milling operations in the local area.

Non-commercial thinning or other non-commercial vegetation management activities consistent with the management for the historical range of variability for the vegetation zone may be integrated with salvage or sanitation operations where stand-level issues exist.

Non-commercial Pinyon-Juniper/Mountain Shrub Wildlife Habitat Improvement

Between of 3,100-5,000 acres within the pinyon-juniper/mountain shrub vegetation zone will be treated using non-commercial mechanical treatments through the 8-10 year duration of this project. Treatments will be focused in areas previously actively managed for winter and transition range habitat values. Past mechanical vegetation treatments in the pinyon-juniper vegetation type have included herbicide application, chaining and roller chopping as late as the 1960's to improve forage values for wildlife and livestock. Little has been done in the project area to maintain the winter range since this time and pinyon-juniper trees have regenerated within these areas to a point that mountain shrub species are

declining. The mountain shrubs that are present show signs of heavy browse pressure and are much less palatable due to larger stem size.

Prescribed fire use will be avoided in areas dominated by sagebrush, which is sensitive to broadcast burning treatments.

Following mechanical treatments or prescribed fire, a locally derived seed mix of native grass, forb and shrub species will be applied to treated areas to increase understory cover and forage value.

Prescribed Fire

Prioritization Framework

The primary focus area for fuels and fire treatments within this project area will be in the elevation band where ponderosa pine-oak and warm-dry mixed-conifer forest types are dominant. These forest types are most at risk for losing ecosystem functionality from disturbance because they are the most departed from the historic range of variability.

A prescribed fire fuels treatment prioritization framework has been developed for the Escalante project. This prioritization framework can be explained in the following manner:

1) Areas that have been treated mechanically by either harvest or non-commercial mechanical treatments within the broader fire-adapted zone. These areas will have broadcast burning and possibly pile burning.

Priority 1 areas include Wildlife Habitat Improvement, Wildland Urban Interface areas within the western portion of the project area and plantation thinning areas within the Pinyon-juniper vegetation zone.

2) Untreated inclusions within harvested and non-commercial mechanically treated areas, within the fire-adapted zone.

Both priority 1 and 2 area combined total to approximately 24,800 acres.

3) Those areas that are in the fire-adapted zone in between the areas where mechanical treatments will occur; approximately 56,300 acres.

4) Areas that have not been treated mechanically outside of the fire adapted zone. In most instances, this area will be outside of the primary burn unit and will be used as a contingency area where fire spread is unlikely; approximately 79,700 acres.

Prescribed fire may occur in any season, but will most likely occur during spring and fall burn windows. Additional prescribed fire design criteria are be dependent upon other resource area objective.

Fireline and Fuelbreak Construction

Prescribed fire operations will require control lines that serve to geographically contain fire effects. Roads, trails and natural features such as fire resistant vegetation types (aspen), snowlines and rock outcrops will be used as fire control lines whenever possible. When

creation of fire control lines is necessary, they will be coincident with any required temporary roads used in timber harvest and will be rehabilitated and monitored and treated to control invasive species establishment following use.

Each vegetation type and project area compartment may require targeted mechanical treatments to create fuelbreaks and firelines to facilitate the use of prescribed fire across the project landscape. This estimate is included in the non-commercial mechanical treatment acreage estimates for each vegetation zone.

Regulatory Requirements

Prescribed burning will be implemented according to an approved burn plan, which will be completed prior to implementing any phase of a prescribed fire. A Colorado State smoke permit will also be obtained prior to implementing any phase of a prescribed fire.

Slash Treatments

For any of the mechanical treatment proposals described above, a range of slash treatment strategies will be implemented to reduce the fire and insect risks associated with slash accumulations.

Relatively low slash loadings are anticipated from timber or other mechanical operations in the ponderosa pine-oak and warm-dry mixed-conifer vegetation zones. In these areas, slash will be lopped and scattered to facilitate safe post-harvest broadcast burning.

In cool-moist mixed-conifer and spruce-fir-aspen stands, post-harvest or mechanical treatment slash should generally be retained on site to discourage browse and create tree regeneration microsites, but may be piled and burned where fuel loadings are extremely high or where fire could be used to reduce bark beetle habitat quality.

In all forest vegetation types, coarse woody slash larger than three inches in diameter will be retained on-site to promote soil structure development and variability in surface microclimates. A minimum and maximum fuel loading will be specified in association with all harvests and fuels treatments. Within areas of heavy large diameter spruce (> 6 inches in diameter, small end) bucking (i.e. cutting) of residual large diameter coarse woody slash to short lengths may be required to reduce buildup of spruce beetle populations.

In extremely dense conifer stands or in stands adjacent to private inholding or other infrastructure values, harvest-generated fuels may be grapple or hand piled to reduce surface fuel hazard or a level conducive to achieving an effective and beneficial post-harvest underburn. Slash piles will be burned by the Forest Service in accordance with agency protocols.

Removal of slash in a raw or processed form (e.g. bundles or chips) to be utilized for energy production, landscaping materials or other purposes may also be utilized as a slash treatment method. Slash removal will be encouraged with all mechanical treatment contracts, consistent with coarse woody slash retention levels identified in project design criteria.

Applied Experimental Silvicultural Evaluations

Experimental silvicultural evaluations may be completed within the project area to address unanswered forest management questions specific to the project landscape (See Appendix A, Map 2: Commercial and Non-Commercial Treatment Priority Areas). The results of this formal scientific observation and reporting of treatment outcomes will benefit local and regional land management efforts and the broader forest ecology scientific community. Requirements for each evaluation are: 1.) Compliance with all applicable laws and regulations and best management practices relating to the management and activities on National Forest lands, 2.) Assessment of silvicultural treatments specifically intended to manage for forest conditions consistent with the historical range of variability or those expected in the near future given climate change estimations for the forest vegetation type 3.) Direct coordination with academic or agency research institutions, 4.) Professional publication of evaluation outcomes by research partners, and 5.) A formal summary and presentation of research results for dissemination to all interested stakeholders.

- Sudden aspen decline is currently occurring across hundreds of acres of low-productivity, low-economic value aspen stands at the edge between ponderosa pine-oak forests and pinyon-juniper/mountain shrublands at lower elevations within the project area. Many of these stands are in a condition where localized aspen clones may not be capable of regenerating naturally or with standard aspen regeneration approaches. A combination of non-commercial mechanical treatments and prescribed fire will be evaluated within up to 200-500 acres of declining aspen stands to evaluate management approaches capable of regenerating aspen within these areas.
- Cool-moist Mixed-Conifer forests of a mix of Douglas-fir, Engelmann spruce and aspen within the project area and across the Uncompahgre Plateau are located at the lower end of the typical elevation range for spruce in the Southern Rocky Mountain region. Stands within the project area are also located where significant climate warming is expected to occur over the next 50 years (Girevetz et. al. 2009; Nydick et al 2012). Vegetation within these areas has been identified as particularly susceptible to disturbance induced forest structure and composition changes associated with a warmer climate. A combination of non-commercial mechanical and commercial harvests will be employed within a 200-500 acre area comprising the lower end of the spruce-fir/aspen vegetation zone and the upper end cool-moist mixed-conifer zone to specifically evaluate non-traditional silvicultural approaches intended to promote resilience in low-elevation spruce fir stands in the context of expected climate changes. Treatments may employ a combination of coppice cutting, clearcutting, individual tree selection and group selection silvicultural approaches, application of prescribed fire as well as targeted reforestation activities such as seeding or slash manipulations to mimic expected stand conditions following mixed to high severity fires. These activities will be consistent with mechanical treatment acreages for the cool-moist mixed-conifer zone and forest management direction from the GMUG Amended Forest Plan (1991).

Trails and Transportation

Road Systems

Existing roads will be used for equipment access to the extent road location and condition permit reasonable access. Mechanical treatments and harvests will attempt to minimize temporary road construction whenever possible. No permanent roads will be constructed under this project. Following their use for harvest, temporary roads will be obliterated, which involves recontouring where significant sideslope exists, elimination of ditches, outsliping the roadbed, removal of ruts and berms, effectively blocking the road to normal vehicular traffic where feasible, and construction of drainage features such as cross ditches and water bars. Invasive species monitoring will occur after road obliteration and will be followed by weed treatments where needed.

Haul Routes

The most likely major haul routes in the project area are either down the Delta/Nucla road (National Forest System Road (NFSR) 503) to Delta or across the Divide road (NFSR 402) to old Highway 90 (NFSR 540) and down to Montrose. Timber hauling during the normal operating season will not be allowed on weekends or holiday weekdays to minimize the likelihood of conflicts with recreationists. If requested by the timber sale purchaser, winter haul and snowplowing of these roads may be permitted, subject to agreement by the Forest Service.

Road Decommissioning

Roads and trails identified in the Uncompahgre Travel Plan Record of Decision of 2002 for decommissioning will be decommissioned as a result of this project. These routes may be used as haul routes during project activities, but following use, these routes will be decommissioned as outlined in the travel plan decision.

Trail Use and Maintenance

Several motorized and non-motorized trails are located within the project area. Use of these trails will be maintained in a manner to protect the safety of recreationists. In general, if the current trail consists of an existing historical timber haul road, this road may be used during management activities and rehabilitated to the desired trail use condition following use. If the trail consists of single-track (i.e. Parallel Trail) the trail will not be used, altered or restricted in association with vegetation management activities. Wherever possible, felling or removal of hazard trees within 150 feet of system trails and road will be completed in association with proposed harvest and non-commercial mechanical treatments.

Forest Vegetation Zone Assumptions

An implicit goal of the proposed forest restoration activities within the EFRS project is to retain and promote compositional and structural diversity where present within the project area landscape to support the overall project objective of increasing forest ecosystem resilience. Inconsistencies between fine-scale and predicted vegetation composition and structure are anticipated within all vegetation zones. Where discrepancies exist between

the actual and predicted vegetation composition and structure, proposed treatments will follow ground-based fine-scale evidence instead of predictions of vegetation composition and structure. However, the maximum acreage of proposed treatments will be constrained by the acreage of proposed actions contained within the EFRS proposed action. For instance, the proposed acreage of group selection harvests within spruce-fir-aspen forests will not increase if additional fine-scale evidence obtained during project activities indicates a broader range of spruce-fir-aspen than previously predicted.

Project Implementation Plan

Annually, a concise project implementation plan will be updated to provide a general schedule of treatment activities and set forth trigger points for collaborator involvement and required communications and surveys between agency staff. This plan should form a framework for ecological and social monitoring activities associated with the project. This plan should be available to all interested parties and will be shared with collaborators at the Uncompahgre Plateau CFLRP monitoring meeting held each spring. Each annual project plan should include but will not be limited to the following:

Proposed Action Implementation Details

- Location and acreage
- Treatment Types
- Required or Desired Pre-treatment Surveys

Monitoring Projects

- Proposed annual monitoring activities
- Monitoring objectives
- Collaborators involved
- Data collection procedures

Important Monitoring Outcomes

Proposed activities are anticipated to occur from west to east throughout the project area over the next 10 years. Exceptions to this general pattern are salvage and sanitation efforts and wildlife habitat improvement mechanical treatments in the pinyon-juniper/mountain shrub zone. Salvage and sanitation efforts will be annual opportunistic harvests of wind thrown and insect infested or killed trees where they occur throughout the project area. Wildlife habitat improvement mechanical treatments will occur as funding becomes available and will likely begin within treatments east of the Roubideau Special Area within the eastern portion of the project area.

Monitoring

Monitoring associated with the EFRS project should include present and past surveys associated with project design and implementation, pre and post treatment ecological monitoring and landscape-scale assessment of restoration treatment effects on landscape structure and function.

Monitoring efforts may involve contributions from academic partners at Colorado State University, the University of Montana, the Rocky Mountain Research Station, the Colorado Forest Restoration Institute (CFRI), the Uncompahgre Plateau Project, Public Lands Partnership and any members of the interested public to monitor project treatment outcomes. The broad, multi-stakeholder monitoring group should evaluate treatment results to improve future management practices. Monitoring efforts are an integral component of the EFR project and are split into several components:

Continued learning from Ecological Monitoring associated with Ongoing Forest Restoration Demonstration Efforts

The Uncompahgre Mesas Forest Restoration Demonstration Project has served as a valuable adaptive management aid for the development of this project. Community-based collaborative monitoring has occurred over the 3 years of this project and is expected to continue for several more years. Monitoring outcomes and lessons learned from this project will continue to contribute to fine-scale variation in treatments proposed with the EFRS project.

Ongoing Collaborative Multi-party Monitoring

Collaborative monitoring efforts not only provide input to the adaptive management process, but ongoing collaborations with one or more external partners will provide an inherent window of transparency into forest restoration efforts and outcomes.

Public Involvement

Process

The proposed action was developed through an informal collaborative process beginning with the design the Uncompahgre Mesas Forest Restoration Demonstration Project which was first implemented in 2009. The EFRS project is a similar landscape, and contains similar forest structure objectives and similar commercial and non-commercial mechanical and prescribed fire treatments to this project. The collaboration group included the Uncompahgre Plateau Project (UP Project); several environmental organizations including the Black Canyon Audubon Society, Colorado Wild, and Western Colorado Congress; the Colorado State Forest Service; the Colorado Forest Restoration Institute at Colorado State University (CFRI); livestock permittees, timber and restoration industry; and the USDA Forest Service. Collaborators were involved with developing principles to guide the implementation and have participated in ecological monitoring associated with this project.

The Escalante Forest Restoration and Stewardship project has evolved through a similar and concurrent process. The project initiation letter was issued by the Ouray District Ranger in July of 2011. Field trips to forest restoration activity areas within the Uncompahgre Mesas Project Area have occurred with various collaborators since this time to discuss the outcomes of the Uncompahgre Mesas project and to discuss the goals and objectives for the upcoming EFRS project. In March of 2012, a public meeting was held to introduce the project concept and project area and objectives to collaborators. Another public meeting in May of 2012 was held with stakeholders to develop principles and goals to guide forest restoration activities within the Escalante areas. In November of 2012, a public meeting was held with collaborators to discuss the draft proposed action for the EFRS project. Collaborator participation in crafting the forest restoration principles document and in discussion of the draft proposed action was used in developing a formal proposed action for the EFRS project released for a 30 day formal public review and comment period December, 14 2012. A notice of this proposed action was published in the Montrose Daily Press and an exhaustive list of interested parties and collaborators, landowners and forest permittees were specifically notified by email or mail about the project details and the opportunity to comment.

Issues

The Forest Service has developed the proposed action in a collaborative effort over a period of approximately two years. The collaboration group included the Uncompahgre Plateau Project (UP Project); several environmental organizations including the Black Canyon Audubon Society, Colorado Wild, and Western Colorado Congress; the Colorado State Forest Service; the Colorado Forest Restoration Institute at Colorado State University (CFRI); livestock permittees, timber and restoration industry; Back country sportsman; and the USDA Forest Service.

In the course of collaboration, all conflicts/issues concerning alternative uses of available resources have been resolved. In accordance with 36 CFR 220.7(b)(2)(i), this EA need only analyze the proposed action without consideration of additional alternatives.

Comments

Several letters, emails and phone calls from a group including landowners, long-time Ouray District collaborators, ex-agency employees, forest economic activity stakeholders and county government officials were received at the Ouray District Office during the 30 day comment period. The overwhelming majority of comments specifically expressed support for the project although two responses were critical of elements or the entirety of the proposed action. Substantive comments, critical of the proposed action or included design features addressed in this EA are discussed specifically below. All other comments and Forest Service responses to these comments are contained in the project record file at the Ouray District office in Montrose, Colorado.

A comment referred to a lack of discussion of the influence of historical range management activities across the Uncompahgre Plateau. Based on this comment, a discussion of the influence of this activity on development of current range conditions within the project area has been addressed within this EA.

Another comment was received regarding range management and the best management practice of resting broadcast burned areas for 1-2 years following burning. While this specific design feature was not incorporated into the proposed action, it did lead to internal discussions regarding range management practices. Range management objectives for the project area will incorporate desired conditions from the Uncompahgre Rangeland Initiative and the Horsefly Rangeland Assessment. Management actions required to meet desired objectives may include resting of burned areas 1-2 years, but include more or less intensive actions and restrictions based upon many other factors. These factors could include, but are not limited to the type of animal, intensity of grazing, seasonal and annual precipitation variation and the season, severity and extent of broadcast burning. Due to the wide range of factors affecting the desired objectives, no specific resting period will be included as a design feature.

A comment was received mentioning the need to specifically identify areas with unroaded character within the EFRS project area to defer from commercial harvest activities. In response to this comment, a more detailed consideration of the proposed actions within unroaded and lightly roaded portions of the project area was undertaken. Unroaded areas requiring extensive temporary road construction to meet forest structure objectives have been specifically excluded from proposed commercial mechanical treatments to maintain their primitive character and due to other potential travel management and economic considerations. The remaining areas of commercial mechanical treatment have been identified (See Appendix A, Map B), and will require segments of less than $\frac{3}{4}$ mile for completion of restoration treatment activities.

The previous comment is related to a broader set of comments relating the need for the Forest Service to be more specific and clear in the discussion of the locations, acreages and types of proposed actions, especially due to the large extent of the project area and proposed activities (Although another comment mentioned the proposed action was too prescriptive and inflexible). The reception of these comments has stimulated an analysis and revision effort to develop a more specific and targeted proposed action:

- An analysis was undertaken comparing existing successional class information (LANDFIRE 2013) to broader desired conditions from forest successional dynamics modeling completed for the Uncompahgre Plateau in 2006 (USDA FS 2006). This analysis has led to the clarification between commercial and non-commercial treatment acres within the cool-moist mixed-conifer zones.
- A re-evaluation of the prescribed fire component of the proposed action was undertaken to address the specificity and clarity of this component of the proposed action. This effort has led to a prioritization of locations within the project area for different types of proposed prescribed fire activity.
- Commercial and non-commercial proposed actions have been organized by vegetation zone and specific priority areas for each proposed action type within the

project landscape. Locations of stands or mechanical treatment units below the priority area scale have not been identified, as the EFRS Interdisciplinary Team has indicated that flexibility in specific fine-scale activity and the location, orientation, shape and interspersed of these units within each vegetation zone would allow provide the greatest likelihood for accomplishing desired treatment objectives and future conditions.

- Local information describing the range of historical forest structure conditions is currently available for specific areas of the project landscape where treatments are proposed. Efforts to supplement this existing dataset are ongoing, and will continue throughout the course of the project period.

Several comments were received relating to the proposed decommissioning of temporary road and pre-existing non-system or use-created roads. Comments received questioned the ability and commitment of the Forest Service to truly decommission these roads. These comments have been addressed in the design criteria for decommissioning roads. Further, the recent decommissioning of four sections of non-system and temporary road completed during the fall of 2012 within the Uncompahgre Mesas project area highlight the Forest Service commitment to decommissioning roads of this sort during forest restoration contracts.

Comments were received regarding economic scale of proposed the proposed commercial salvage and sanitation efforts of beetle infested and windthrown trees. These efforts, while typically of a small-size and total economic value, will not be restricted to a total value of \$10,000 or less. All salvage sales prepared on the Ouray District in the recent history have been awarded to local timber purchasers, thereby supporting local economies. It is possible that in the event of a large localized beetle infestation or windthrow event, a larger sized effort would be more efficient economically and in improving forest health. This scenario would be more likely in a higher timber value market. For these reasons, no restrictions will be placed on the size and value of salvage and sanitation timber sales.

We received a large summary of opposing views related to the effects of clearcutting, alternative means for reducing the risk of wildfire damage to homes, dead and dying tree harvests related to insect and wildfire activity, road damage to fisheries and watersheds and concerns with the use of glyphosate herbicides. When applicable to the proposed action, these opposing views have been analyzed by project interdisciplinary team specialists. All other opposing views tangentially related or not applicable to the proposed action have been addressed specifically to this effect. Responses to these opposing views are available in the project record at the Ouray District office in Montrose, CO.

Finding of No Significant Impact

After considering the environmental effects described in the EA, I have determined that these actions will not have a significant effect on the quality of the human environment

considering the context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared. I base my finding on the following:

(a) Context. This means that the significance of an action must be analyzed in several contexts, such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant (40 CFR 1508.27).

The disclosure of the effects in the EA found the proposed actions to be limited in context. While the project area is large in extent, mechanical treatment acres are limited to less than a thirty percent of the total landscape area. Activities are limited in duration, occurring within approximately 10 years following the start of implementation. Effects are local in nature and are not likely to significantly affect regional or national resources.

(b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following are considered in evaluating intensity (40 CFR 1508.27).

1. Environmental Effects - Environmental effects associated with the project are discussed in the Environmental Consequences section of the EFRS EA (47-103). These impacts are within the range of those identified in the Forest Plan and would not have significant impacts on resources identified and described in the EA.
2. Public Health and Safety – Forest restoration activities would be conducted in a safe manner to protect the public. Management activities similar to those described in the EA have occurred within other areas of the Forest and the nation without incident of issue with public health and safety.
3. Unique Characteristics of the Area –The selected alternative would not impact the unique characteristics of the historical or cultural resources within the project area. There are no park lands, prime farmlands, wetlands, wilderness, or wild and scenic rivers within the project area. A determination of may affect, and is likely to adversely affect, the Canada lynx. This finding was substantiated through informal consultation with the US Fish and Wildlife Service. A Biological Opinion (BO) from US Fish and Wildlife Service is on file, dated June 20, 2013. Implementation of the proposed action will follow guidelines proposed in the Biological Assessment for the EFRS project, part of the EFRS project file, located at the Ouray District Office, Montrose, CO.
4. Controversy - The effects of the proposed action on the various resources is not considered to be highly controversial by professionals, specialists, and scientists from associated fields of range, wildlife biology, fisheries, hydrology, etc. Further, based on the limited amount of interest expressed in this project, I do not believe that there is significant controversy over the effects of this project.

5. Uncertainty - Scoping did not identify highly uncertain, unique, or unknown risks. Actions similar to the proposed actions have been implemented throughout the Forest and the region and have been well studied. The technical analyses conducted for determinations of the impacts to the resources are supportable with the use of accepted techniques, scientific evidence, and professional judgment. Therefore, I conclude that there are no highly uncertain, unique, or unknown risks associated with the alternatives.

6. Precedent Setting Decision - This decision is like one of many that have previously been made and will continue to be made by Forest Service responsible officials regarding livestock grazing activities on National Forest System lands. The decision is within the scope of the Forest Plan and is not expected to establish a precedent for future actions. The decision does not represent a decision in principle about a future consideration.

7. Cumulative Impact - There are no significant cumulative effects on the environment, either when combined with the effects created by past and concurrent projects, or when combined with the effects from natural changes taking place in the environment or from reasonably foreseeable future projects of this type.

8. Programmatic agreements between the Forest Service and the Colorado State Historic Preservation Office (SHPO) to comply with Section 106 of the National Historic Preservation Act have been put place. These agreements outline the process for inventorying cultural resources, and documenting survey results and conclusions prior to implementation of the proposed mechanical and prescribed fire vegetation treatments, and they contain agreed-upon measures for minimizing or avoiding potential effects on cultural or historic resources. *These measures have been included in the environmental document as design criteria.*

Assessments and literature reviews conducted prior to this Environmental Analysis suggest that there is a potential for prehistoric and historic cultural resource sites within the area of potential effect, and approximately 36% of the proposed treatment area has already been inventoried for cultural resources. Five sites are eligible and 32 unevaluated sites have been recorded within the project area. Based on the avoidance and minimization measures, properties on or eligible for the National Register of Historic Places, or any unevaluated cultural resources, will not be adversely affected by the proposed action.

9. The project may effect and is likely to adversely affect, the Canada lynx. Refer to the Wildlife portion of the Environmental Consequences section of the EFRS EA (pages 74-75) and the EFRS Biological Assessment. Proposed actions are consistent with the Southern Rockies Lynx Amendment to the GMUG Forest Plan (2009). While adverse effects of the proposed action are likely to occur in the short-term, the proposed action is likely to benefit the Canada lynx in the long-term. Formal consultation was initiated with US Fish and Wildlife Service in April 2013. A Biological Opinion from the U.S. Fish and Wildlife Service supporting this determination was received on June 20, 2013.

10. Legal Requirements for Environmental Protection - This decision complies with other Federal, State, or local laws and requirements imposed for the protection of the environment.

Findings Required by Other Laws and Regulations

This decision to implement the Escalante Forest Restoration and Stewardship Project is consistent with the intent of the forest plan's long term goals and objectives. The project was designed in conformance with land and resource management plan standards and incorporates appropriate land and resource management plan guidelines for range, wildlife, riparian, heritage resources, fuels, timber, recreation, watershed, and socio-economics.

Implementation Date

If no appeals are filed within the 45-day time period, implementation of the decision may occur on, but not before, 5 business days from the close of the appeal filing period. When appeals are filed, implementation may occur on, but not before, the 15th business day following the date of the last appeal disposition.

Administrative Review or Appeal Opportunities

This decision is subject to administrative review (appeal) pursuant to 36 CFR Part 215. The appeal must be filed by regular mail, FAX, email, hand-delivery, or express delivery with the Appeal Deciding Officer, U.S.D.A. Forest Service, Rocky Mountain Region, 740 Simms, Golden, CO 80401.

The office business hours for those submitting hand-delivered appeals are: 8:00 a.m. – 4:30 p.m. Monday through Friday, excluding holidays. Electronic appeals must be submitted in a format such as an email message, plain text (.txt), rich text format (.rtf), or Word (.doc) to appeals-rocky-mountain-gmug@fs.fed.us. In cases where no identifiable name is attached to an electronic message, a verification of identity will be required. A scanned signature is one way to provide verification.

Appeals, including attachments, must be filed within 45 days from the publication date of this notice. The Montrose Daily Press, the newspaper of record, published in Montrose, Colorado is the exclusive means for calculating the time to file an appeal. Those wishing to appeal this decision should not rely upon dates or timeframe information provided by any other source. Attachments received after the 45 day appeal period will not be considered.

Individuals or organizations who submitted substantive comments during the comment period specified at 36 CFR 215.6 may appeal this decision. The notice of appeal must meet the appeal content requirements at 36 CFR 215.14.

Contact

For additional information concerning this decision or the Forest Service appeal process, contact Matthew Tuten, IDT Leader, (970) 240 - 5417, Ouray Ranger District, 2505 S. Townsend, Montrose, Colorado 81401.

/s/Tammy Randall-Parker
TAMERA K. RANDALL-PARKER,

Date: June 24, 2013

District Ranger, Ouray Ranger District