EXECUTIVE SUMMARY

INTRODUCTION

The U.S. Forest Service (Forest Service) has prepared this Environmental Assessment (EA) in compliance with the National Environmental Policy Act (NEPA) of 1969 and other relevant Federal and state laws and regulations. This EA discloses the direct, indirect, and cumulative environmental impacts that would result from the Proposed Action and alternatives for the proposed Locke Mountain Fuels Management project (project). The project proposes to reduce hazardous fuels and improve habitat conditions throughout the Locke Mountain analysis area through the application of varied fuels treatment techniques.

ANALYSIS AREA

The analysis area consists of approximately 4,680 acres of National Forest System (NFS) lands located in the Wet Mountains southwest of Canon City in Fremont and Custer Counties, Colorado. The analysis area is located entirely within the San Carlos Ranger District on the San Isabel National Forest. The analysis area is located in T 20 S, R 70 W, Sections 19 and 28-34; T 20 S, R 71 W, Section 25; and T 21 S, R 70 W, Sections 4, 6, 8, and 9. It is located in the Oak Creek, Coal Creek, Newlin Creek, and Upper Oak Creek sixth-level watersheds. The elevation in the project area ranges from approximately 8,000 to 9,500 feet. The topography of the area varies from flat, open, park-like grassland meadows to steep, rugged forested terrain. The forested areas consist of a mosaic of ponderosa pine, Douglas-fir, limber pine, white fir, Colorado blue spruce, Engelmann spruce, pinyon pine, Rocky Mountain juniper, and aspen. Nonforested areas include meadows, stands of mountain mahogany and Gambel oak, and rock outcroppings. Portions of the analysis area were logged in the 1970s and early 1980s; precise mapping of these logging units is not available. The analysis area is currently managed for multiple-use, including recreation, wildlife habitat, livestock grazing, and forest products.

PURPOSE AND NEED

The purpose of the project is to create sustainable forest conditions that are resilient to fire, insects, and diseases, while providing for diverse wildlife habitats, recreation opportunities, and sustainable watershed conditions. This can be accomplished by reducing forest canopy density and ground and ladder fuels across the landscape. The risk of large-scale, high intensity wildfire with uncontrollable fire behavior, such as active crown fire, would therefore be reduced.

The need for the project is driven by current forest conditions. Historic fire suppression has created forests that are now more susceptible to large-scale and high intensity wildfire. The proposed project is needed to reduce the risk of this potentially catastrophic event. Additionally, the project is intended to improve local forest health and enhance ecological diversity in the project area, improving habitat conditions for plants and animals of montane meadows and woodlands of the Wet Mountains. The project would promote additional acreage for aspen stands and would diversify age-classes of aspen stands, which are used by a variety of wildlife species.

PROJECT OBJECTIVES

The primary objective of the project is to accomplish hazardous fuels reduction. Specifically, the proposed project would be designed to reduce the risk, intensity, and hazards associated with high intensity wildland fires on NFS lands within and adjacent to wildland-urban interface (WUI) communities near Locke Mountain and the City of Florence, Colorado municipal watershed, whose watershed headwaters are located in Newlin Creek in the eastern portion of the analysis area.

Additionally, one of the secondary objectives of the project is to promote and restore aspen sustainability/viability within the project area (as well as the Wet Mountains on a larger scale) by thinning, cutting, and/or burning in existing and remnant aspen stands. Removal of conifers in areas where aspen is still present; conducting patch cuts in aspen stands (where possible – some areas may require clearcuts due to forest pathogens); and conducting prescribed burning in conifer-encroached or existing degraded/remnant aspen stands would be important methods of accomplishing the objective stated above.

PUBLIC INVOLVEMENT

A project scoping letter was mailed to approximately 105 interested parties, including: private landowners, congressional representatives, local fire protection districts, special interest groups, county commissioners, property owners' associations, and local media, including radio stations and newspapers. The letter was intended to inform the public of the project, and to invite comments and feedback on the proposal and its potential impacts. The public was given approximately 30 days to respond with comments. Four comment letters were received and are available for review in the project record. The Project Interdisciplinary Team (ID Team) reviewed all of the comments received to determine the range of issues to be analyzed in the EA. The scoping letter, press releases, all comments received, and mailing list are also located in the project record available at the SCRD office in Canon City.

PROJECT CONSTRAINTS

In addition to applicable laws, policies, and regulations, various environmental constraints dictate where treatments are feasible and what types of treatments are appropriate within the analysis area.

Geographic Information System (GIS) mapping was used to delineate specific environmental resources within the analysis area that present constraints or limitations for fuels treatment. Various resource limitations were compiled into a constraints composite used to exclude sensitive areas from certain treatment types. Constraint considerations included: steep slopes (either >30% or >40%, depending on the alternative), soil units with **high** erosion hazard ratings, Mexican spotted owl (MSO) Protected and Restricted Habitat, Canada lynx habitat, and riparian habitats and the Water Influence Zone ([WIZ] 100 feet on either side of all intermittent and perennial streams and water bodies). Areas that contain steep slopes, sensitive soils, or MSO Protected Habitat characteristics have been excluded from all treatment types but prescribed fire. Pre-fire mechanical preparation may occur as site conditions permit the safe operation of crews and machinery. Treatments in the remaining constraint areas (MSO Restricted Habitat, lynx habitat, and riparian/WIZ areas) are restricted (e.g., no cutting of trees larger than 24" dbh) to protect valuable habitat characteristics and to prevent resource damage. Additional information on each constraint is available in the EA.

PROJECT DESIGN CRITERIA

Design Criteria are management practices that can minimize or eliminate adverse effects of project implementation. Design Criteria would be incorporated into the action alternatives to ensure compliance with the *1984 Land and Resource Management Plan for the Pike and San Isabel National Forests and Comanche and Cimarron National Grasslands* (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*.

ROADS AND ACCESS

No new permanent NFS or county roads would be constructed for the proposed project. Within the project area, there are 10.2 miles of existing open NFS roads. No existing open NFS roads in the project area would be decommissioned after the project is complete.

Approximately 8 miles of FDR 274 (Maintenance Level 2) would be rehabilitated to accommodate log trucks and other project vehicles. Pre-haul rehabilitation and maintenance would include grading and curve widening. The rehabilitation and maintenance activities would not change the road classification; all activities would be consistent with the maintenance level 2 standard.

Approximately 11 miles of maintenance level 1 roads (decommissioned) would be temporarily reopened to access treatment areas. These presently closed roads would be reconstructed to the minimum standard necessary (maintenance level 2) for safe and efficient use by project equipment and personnel; this would likely include some vegetation clearing and minor earth movement. During project implementation, these temporary roads would be gated and locked when treatments are not in progress to ensure public safety and to prevent unauthorized recreational or OHV use. The temporary roads would be closed, obliterated, and barricaded with earthen berms within 12 months of project completion. Upon successful restoration, as specified in the Roads and Access Design Criteria, these temporary roads would resume maintenance level 1 or decommissioned status.

Heavy equipment, including skidders, feller bunchers, and other harvest machinery, and vehicles would be allowed, but not encouraged, to travel cross-country in treatment units if existing or temporary access roads are not available (with the exception of riparian habitat or WIZ areas).

ALTERNATIVES

An ID Team, representing various resources and uses of the Forest, developed a range of reasonable alternatives for the proposed project. The ID Team identified relevant issues and reviewed concerns presented during the public scoping period, and then formulated alternatives in response to these issues. Consistent with the Healthy Forests Restoration Act, this EA will consider a minimum of three alternatives: No Action, Proposed Action, and one other action alternative.

Nine possible treatment options are proposed for the analysis area. The alternative descriptions identify which treatments are proposed for the respective alternatives and the acreages identified for that particular treatment method.

Alternative A (No Action Alternative)

The No Action Alternative provides a baseline for comparing the relative changes and effects that would occur with the implementation of any action alternative. It considers what may result if the proposed project is not implemented. It is defined as a continuation of existing management practices. Current management plans would continue to guide management activities in the project area.

Under the No Action Alternative, no vegetation or fuels reduction treatments would be implemented within the analysis area. Natural processes, such as succession, insect and disease epidemics, or wildfire, would continue to occur.

Alternative B (Proposed Action)

In addition to the activities identified as common to all action alternatives (see Chapter 2), the following criteria are specific to Alternative B – Proposed Action:

- Mechanical treatments would be used on slopes up to 40%, provided that crews and machinery could operate safely and without excessive resource damage.
- Mechanical treatments would be followed with prescribed fire treatments to the greatest extent possible.
- Implementation strategies would emphasize commercial treatments, including competitive bid or stewardship contracts; noncommercial strategies such as public fuelwood cutting would be allowed, but would not be emphasized.
- Implementation would occur over a 3 to 5-year period.

The following treatment methods are proposed for Alternative B – Proposed Action. Treatment method descriptions are provided in Chapter 2. Approximate treatment method acreages are provided in parentheses in **boldface** text.

- Prescribed Fire (**198 Acres**; non-forest cover types)
- Meadow Enhancement (**458 Acres**)
- Combination of Mechanical Thinning followed by Prescribed Fire (**816 Acres**)
- Combination of Mechanical Harvest followed by Prescribed Fire (**1,302 Acres**)
- Combination of Mechanical Enhancement followed by Prescribed Fire (**102 Acres**)
- Limited Treatment (**1,808 Acres**)

Alternative C

With some minor exceptions, treatment area boundaries (polygons) are the same as in Alternative B. The main difference between the treatment area boundaries proposed in the two action alternatives is a result of different constraint areas. Due to the lower steep slope threshold in Alternative C (30% in Alternative C as opposed to 40% in Alternative B), more area is identified for prescribed fire treatments only or no treatment at all. Although the prescribed

fire differences are, for the most part, subtle, there are several areas that are easily discernible: Lion Canyon, Newlin Creek, Second Newlin Creek, and the eastern edge of the analysis area, including the eastern arm.

In addition to the activities common to all action alternatives, including road rehabilitation activities and the enhancement of limber pine stands, the following criteria are specific to Alternative C:

- Mechanical treatments would be used on slopes up to 30%.
- Mechanical and prescribed fire treatments would be exclusive; there would be no overlap between these treatment types.
- Implementation strategies would emphasize noncommercial treatments, including Forest Service Force Account, seasonal fuels and timber crews, and public fuelwood sales; commercial strategies would be allowed, but would not be emphasized.
- Implementation would occur over a 3 to 5-year period.

Each of the Alternative C treatment areas would receive only one treatment type, mechanical or fire (whereas Alternative B proposes to follow mechanical treatments with fire treatments to the greatest extent possible). For the purposes of discussion and analysis, the mechanical treatments proposed for the Alternative C polygons should be considered unique from the mechanical treatments described under Alternative B, with the exception of the "Mechanical Enhancement" treatment type.

The following treatment methods are proposed for Alternative C. Treatment method descriptions are provided in Chapter 2 of the EA. Approximate treatment method acreage is provided in parentheses in **boldface** text.

- Prescribed Fire **(155 Acres;** non-forest cover type**)**
- Mechanical Thinning **(655 Acres)**
- Mechanical Harvest and Public Fuelwood **(893 Acres)**
- Mechanical Enhancement **(44 Acres)**
- Meadow Enhancement **(431 Acres)**
- Limited Treatment **(2,505 Acres)**

MONITORING AND EVALUATION

Monitoring includes both Forest-level and project-level analysis and evaluation. Forest-level monitoring is discussed at length in the Forest Plan and is not reiterated here. Project-level monitoring is the focus of the following monitoring activities.

- **Current monitoring** includes monitoring activities that are presently occurring in the project area and will continue to occur regardless of project implementation.
- **Effectiveness monitoring** is long-term monitoring and focuses on determining whether the analysis area is meeting or moving toward desired future conditions, and if the rate of change is acceptable.
- **Overall project monitoring** would ensure that the desired future conditions are met and the design criteria have been successfully implemented. An Interdisciplinary

Implementation Team would review treatment areas and project implementation on an annual basis. The Interdisciplinary Implementation Team would ensure that treatments are appropriately adjusted if design criteria are not being properly implemented, if desired future conditions are not being achieved, or if the rate of change is unacceptable.

RESOURCES ANALYZED

The following resources and/or issues are described (existing conditions) and analyzed (potential impacts) in the EA:

- Air Quality
- Fish and Wildlife, including special status species
- Hydrology and Soils
- Recreation and Access
- Scenic Resources
- Vegetation and Wetlands, including special status species
- Wildland Fire and Hazardous Fuels
- Project Economics

ENVIRONMENTAL CONSEQUENCES

Alternative A – No Action

Overall, Alternative A would not result in any direct impacts to resources in the analysis area. In the long term, nonaction and the subsequent accumulation of hazardous fuels would result in increased potential or risk of stand-replacing wildfire. The potential adverse (or beneficial) impacts of a future stand-replacing wildfire, under these circumstances, are addressed by resource and by alternative in the Cumulative Effects discussions.

Alternative B – Proposed Action

Overall, Alternative B would result in short-term adverse effects to some resources in the analysis area. Impact intensities would vary by resource. Project implementation activities, including operation of machinery, road rehabilitation, presence of humans, and the removal of vegetation, would result in short-term, direct impacts. In the long term, the proposed treatments would result in beneficial impacts to many resources in the analysis area by diminishing the potential or risk of stand-replacing fire, rejuvenating forest stands and improving forest health, and enhancing wildlife habitat.

Alternative C

Overall, Alternative C would result in similar effects, both short and long-term, to Alternative B. Given that Alternative C does not include follow-up prescribed fire treatments in mechanically treated units, the short-term direct adverse effects are anticipated to be of somewhat lesser intensity than described for Alternative B. However, in the long term, the lack of prescribed fire follow-up treatments across the analysis area would also result in slightly less effective or less benefit to fire risk mitigation, forest health, and wildlife habitat than Alternative B.