Seedhouse Fuel Reduction Project Descriptions

Project Area

The project is proposed along Seedhouse Road (NFS Road 400), located generally in T9N, R84 & 85W (see enclosed map). The project area extends less than two miles to the north and south of Seedhouse Road, and lies between Glen Eden in the west, and the Seedhouse Campgrounds and Guard Station in the east.

This area of the Forest is adjacent to many residences and experiences high recreation use. On the western end of the Seedhouse Corridor, along the Forest boundary near the community of Clark, the area is highly developed and considered wildland/urban interface. The eastern end of the corridor is a major portal to the Mount Zirkel Wilderness. In 2002, the Mount Zirkel Complex fires burned NFS lands in the area.

Inventoried Roadless land is north of Seedhouse Road. Three planned prescribed burn areas include a total of 667 acres in Inventoried Roadless, though no roads or other actions are planned in Inventoried Roadless.

On the east side of the private land in Hinman Park, the Elk River and its adjacent land is managed as potentially eligible as a National River System Scenic River. One prescribed burn area and two defensible space areas are proposed within this management area.

Purpose and Need

The purpose of this project is to protect private land (urban interface) from wildland fires by reducing fuels, thereby reducing fire intensity and rate of spread to levels that meet Forest Plan direction for fire management.

There is a need to improve defensible space by reducing hazardous fuels in the corridor near and adjacent to private lands. The fires of 2002 generated local awareness of this and many landowners have completed defensible space work on their lands. The Forest has been approached by both local landowners and local government to treat NFS lands to complement the work already completed. The Routt County Fire Management Plan identifies a need to reduce hazardous fuels in the wildland/urban interface identifying both Clark and the Seedhouse areas as priorities.

Currently, this general vicinity of the Forest is changing due to the presence of both spruce and mountain pine beetle epidemics. The Bark Beetle Analysis (2002) identified a purpose and need to minimize tree mortality in much of this area to meet desired conditions in the Forest Plan. With the continued threat of widespread conifer mortality, the proposed action is designed to prevent build-up of additional hazardous fuels with specific fuel management to complement the Bark Beetle Analysis.

The Yampa Valley Elk Winter Range Assessment (2003 & 2004) identifies several areas in need of regeneration to meet desired conditions. Regeneration of these shrub and aspen stands provides multiple benefits for wildlife, scenery and hazardous fuels.

The desired condition for the area is to have a variety of vegetative composition and structure which will provide for lower fire intensity levels, while providing for an aesthetically pleasing forest in this highly used public corridor.

Proposed Action

The proposed action for the Seedhouse Fuel Reduction Project is to implement three specific actions: Defensible Space Treatments, Slash Treatments, and Prescribed Fire Treatments.

1-Defensible Space Treatments (229 acres in units 1-A to 1-G): Defensible space treatments include mechanically removing or altering the vegetation, whether live or dead, to provide a zone of lessened fuels in close proximity to the forest boundary and existing structures. The action will be accomplished by hand, using chainsaws for bucking (cutting downed woody material into smaller lengths), limbing (removing lower tree limbs), and felling of small live trees. The Forest may use mechanical treatments around developed areas. No roads will be constructed. The woody debris created from this work will either be hand piled for later burning, used as firewood by the public, or chipped onto the forest floor.

The Forest stand characteristics are typically pole-sized, younger lodgepole pine with minor amounts of aspen, spruce and fir. Treated live vegetation will be small diameter (<7" Diameter Breast Height) trees that may be removed and/or pruned, thus decreasing interlocking crowns and reducing ladder fuel in the urban interface. The selection criteria for trees targeted for removal will be those diseased, suppressed or in otherwise poor form balanced with the need to reduce interlocking crowns and ladder fuels. Visual quality and screening is an important consideration. The remaining forest stands will appear as widely spaced mature tree stands with a clean understory. The defensible space treatments will work in conjunction with similar efforts occurring on adjacent private lands and within the permitted Summer Home Group. These treatments are meant to compliment or lead by example with FIREWISE type solutions to defensible space issues.

2-Slash Treatment (145 acres in units 2-A to 2-G): Seven timber sale units currently marked and scheduled for sale within the Barley Patch Timber Sale have been identified in the proposal as occurring in strategic locations for fuel reduction techniques. These timber sale units, previously analyzed in the Bark Beetle Analysis FEIS (2002), can greatly improve the fuel hazard reduction in the Seedhouse area by incorporating specific slash treatment methods to all or parts of the identified units. If feasible, prior to logging of identified units, whole tree skidding or similar slash treatment options would be recommended for the entirety of units 2-A, 2-B and 2-C; and for 200 feet from roads that cross units 2-D, 2-E, 2-F, and 2-G.

Unit 2-C will include Barley Patch Timber Sale unit 3, a landing/slash disposal area adjacent and northwest of unit 3 in a previous clearcut, and the existing road leading from unit 3 to the landing. The landing is necessary to maintain mature forest cover in Barley Patch Timber Sale unit 3 when using whole tree skidding, because of the steep slopes and the location of FDR 440.2H.

Changing the slash treatments in these units would be dependant on a modification of the existing Barley Patch Timber Sale contract with Bighorn Lumber Company. These types of contract modifications require bilateral agreement by both parties. If this work cannot be accommodated through a sale contract modification, post sale treatment options will be considered, including hand piling, or other similar methods for fuel management. The overall intent is to limit, or significantly reduce, fuels remaining after timber management activity to compliment fuel reduction needs of the area. Timber harvesting when coupled with appropriate slash treatments can be extremely effective in fuel and fire behavior management.

3-Prescribed Burning (1156 acres in units 3-A to 3-E): The prescribed fire treatment areas identified in the proposal consist primarily of Gambel's oak, sagebrush and other mountain shrub types. Some aspen and conifer stands, or portions of stands, are also included for treatments with the objectives of

reducing surface fuels, regenerating aspen, oak and other shrub species, and returning fire to a fire adapted landscape. Units 3-A and 3-E have been previously inventoried and identified in the Elk Winter Range Assessment (2004).

Treatments will include prescribed burning in a mosaic pattern, with limited clearing or control line building, where needed, to provide for safety and improve prescribed fire feasibility. Burns will occur in either spring or fall to increase prescribed burn window options. Prescribed fire is often used in the spring where over winter snowpack can be used as control lines. When prescribed fire is used in the fall, constructed control lines, topography breaks, existing roads, natural vegetation breaks, topographic breaks, black-lining, and potentially minimal amounts of constructed handline (<5 acres) will be used for prescribed fire feasibility. Handlines will be determined on a case-by-case basis and further field analysis prior to implementation may be necessary. No dozer lines will be built.

The burning will result in a short-term reduction in fuel loading, and as the stand regenerates, a younger, more vigorous stand of shrubs should become established creating a mosaic of age classes. Fire is part of the natural system and the current vegetation community has evolved with fire. Re-introduction of fire to this system has the potential to improve the vigor and biodiversity of the existing plant community. In addition, prescribed burning has the potential to create more palatable forage (browse, forbs, and grasses/sedges) for both wildlife and livestock.

Not all acreage within the target areas will be burned. The target areas provide a logical landscape in which to conduct prescribed burning operations. Target areas provide for flexibility in implementation. Provide greater ability to use varying burn windows and landscape features for ignition, holding and desired fire effects. Gambel oak and other mountain shrub species will be a priority, when possible, based on prescribed fire feasibility, fuel reduction priorities, habitat improvement needs, and partnership relations.

Design Criteria

Terrestrial and Aquatic Wildlife/Botany

- Pre and post treatment for noxious weeds (in particular cheat grass) is required prior to and following implementation.
- Implementation should target initial fall burns for low productivity areas that are currently experiencing low elk use.
- Treatments in high elk use areas should be planned for the spring burn window, unless adequate adjacent habitat has been improved and has recovered for at least one growing season.
- Establish a no burn area around all known raptor nests. No burn areas should be designated on the maps and designated on the ground with pink and black striped flagging prior to implementation. The no burn area will be a 5-acre area for red-tailed hawks, Cooper's hawks, and flammulated owls. The no burn area will be 30 acres around northern goshawk nests.
    - Surface fire could be used if implemented in the non-breeding season in a manner that will not result in mortality of the overstory trees.
    - Do not implement any vegetative management actions within a 30-acre buffer zone around all known or suspected goshawk nest locations. This mitigation would apply at all times.
    - Maintain a ¼-mile "no disturbance" buffer and avoid all fuels reduction activities within that buffer zone around all active goshawk nest locations. Disturbance mitigations would apply to all activities from March 15 until August 30. Early fledging of brood may allow for modification of disturbance time period.

- Encourage prescribed burns to benefit Columbian Sharp-tailed Grouse (CSTG) in accordance with the following conservation actions found in the CSTG Conservation Plan (Hoffman, 2001).
    - Early spring and late fall burns will produce the best results with the least impacts.
    - Several, small (<100 ac, 40 hc), irregular shaped burns that result in a mosaic pattern of habitat types are preferred over large, contiguous block burns.
    - Use repeated fires (5-10 years) within the oak brush type to suppress oak, create openings and encourage growth of serviceberry.
    - Manage burned areas for at least 2 years post-burn to allow for establishment of grasses and forbs.
    - Manage shrub habitats for species beneficial to CSTG.
    - Strive to maintain 20-30% of the landscape in deciduous shrub dominated habitats preferably in a mosaic pattern with canopy coverage within these habitats varying from 5-50% and averaging 20-25%.
    - Avoid prescribed burns, other than pile burning, during the grouse nesting and brood rearing seasons (mid May to mid-August) in areas of occupied nesting and brood rearing habitat.
- Canada Lynx Conservation Agreement and Strategy – Design Criteria

  B. Wildland Fire Management
    - <u>Project planning - standards.</u>
        1. In the event of a large wildfire, conduct a post-disturbance assessment prior to salvage harvest, particularly in stands that were formerly in late successional stages, to evaluate potential for lynx denning and foraging habitat.
        2. Design burn prescriptions to regenerate or create snowshoe hare habitat (e.g., regeneration of aspen and lodgepole pine).
    - <u>Project planning - guidelines.</u>
        1. Design burn prescriptions to promote response by shrub and tree species that are favored by snowshoe hare.
        2. Design burn prescriptions to retain or encourage tree species composition and structure that will provide habitat for red squirrels or other alternate prey species.
        3. Consider the need for pre-treatment of fuels before conducting management ignitions.
        4. Avoid constructing permanent firebreaks on ridges or saddles in lynx habitat.
        5. Minimize construction of temporary roads and machine fire lines to the extent possible during fire suppression activities.
        6. Design burn prescriptions and, where feasible, conduct fire suppression actions in a manner that maintains adequate lynx denning habitat (10% of lynx habitat per LAU).

Recreation

- Avoid impacting permitted recreation activities in units3-B and 3-C during the high use season, typically June to mid-September.
- Treatments in Seedhouse and Hinman campgrounds will occur before the campgrounds open in the spring/early summer or after they close in the fall.
- Be aware of impacts to all recreation users during the summer and fall for all treatments. Burning should be conducted as much as possible in the spring to lessen impact to recreationists.
- Coordinate with recreation resident permit holders in the Elk River Summer Home Group to determine whether permittees or the Forest Service will conduct mechanical treatments.

Visual Resources

To create a natural appearing landscape, the following mitigating measures will apply where vegetation and ground conditions allow:

- Allow prescribed burn edges (fire lines) to be irregular and undulating as to create a natural appearing mosaic landscape pattern. Use minimum handline, natural vegetation and topographic breaks, road edges and black lining for fire lines as feasible.
- Retain and protect natural features such as rock outcrops, young healthy trees, understory trees of lodgepole pine, aspen and spruce/fir, shrubs and forbs in the immediate foreground (approximately 25 to100 feet from edges of road) of National Forest System Roads 400 and 440 as feasible to minimize the visual impact and to meet Partial Retention VQO. Slash shall be removed and stumps shall be cut as close as possible to the ground in the immediate foreground (approximately 25 to 75 feet) of the above mentioned roads and within developed recreation sites.
- Revegetate disturbed soils on landings, burned piles and skid trails with native seed mixture after the completion of fuel reduction project to reduce soil contrast and blend with the surrounding landscape.

Botany

- Slash piles will be limited to approximately 300 square feet when not located on landings. This size limit will minimize excessive soil heating during burning.
- Chipped material should be applied at a rate of no more than 3 inches depth at 25-50% ground cover within the activity area.

Hydrology

- Riparian areas would not be intentionally ignited during firing operations, and a sufficient buffer strip would be left to filter increased sediment and ash loads that may result from burning operations. For all spring or fall burning, direct ignition would never occur within any riparian area. This includes riparian areas adjacent to perennial or intermittent channels, and ephemeral draws containing riparian vegetation. Buffer strips will be based on four variables; type of stream, side slope, riparian width, and season.
- <u>Spring burns:</u> For spring burns in areas containing perennial and intermittent streams, ignition locations would be a minimum of 100 feet from defined streams, or be based on a natural topographic break. Deciding whether to use a minimum distance or topographic break should be based on which one would first and foremost minimize burning in the riparian area and provide for an adequate buffer to filter ash and sediment, yet meet the intent of the prescribed burning. A 100 foot buffer will be used from perennial and intermittent channels where adjacent side slopes are less than 30% slope. Where greater than 30 %, 150 feet shall be used. Additionally, where the riparian vegetation width exceeds 50 feet, buffers will be applied from the edge of riparian vegetation and follow the same guidelines with regard to slope. When there is a question, the priority would be maintaining an adequate buffer strip over increasing the burn target area. If fire backs into the riparian or buffer strip area after ignition, direct suppression actions would not occur unless a chimney scenario were to develop.

  For spring burns in areas with ephemeral draws, direct ignition would not occur directly in the ephemeral draw. Ignition would occur on the contour above the ephemeral draw where there is either: 1) a natural topographic break, or 2) a change in vegetation from wetter to drier species such that the fire would be carried up the side slope away from the ephemeral draw by the drier vegetation which is more likely to burn. In many cases during spring burning, the proper conditions occur when the ephemeral draws still contain snow or are extremely wet, while the upper drier vegetation is snow free. If fire backs into the ephemeral draw or buffer strip area after ignition, direct suppression actions would not occur unless a chimney scenario were to develop.

- Fall burns: For fall burns, it is recommended that the buffer strip for direct ignition be expanded to 125 feet away from defined stream channels with side slopes less than 30%, unless a distinct topographic break provides sufficient protection. The purpose for expanding the buffer distance during fall burns is that riparian and other vegetation would be drier, and therefore more likely for fire to back into the riparian areas. As with spring burns, side slopes greater than 30% will have an increased buffer zone that extends 175 feet from defined stream channels. Additionally, where riparian vegetation width exceeds 50 feet, buffers will be applied from the edge of riparian vegetation and follow the same guidelines with regard to slope.
  For ephemeral draws, buffer strips should be increased to the extent necessary to prevent fire from backing into the ephemeral draws. Where possible, use topographic breaks.
  Coordination with watershed staff during development of the burn plan and implementation is recommended. This would help to develop the best plan which protects water quality and aquatic resources, yet meets the intent of the prescribed burning.
- Mechanical Exclusion Areas: Design criteria will include staying out of riparian areas and maintaining buffer strips along stream courses. No equipment on any slopes within 150 feet of a water course or water body. Slash resulting from the mechanical treatments must be prevented from entering stream channels, and minimize the connected disturbed area. When not operating, all equipment requiring fuel must be parked or stored 200 feet from any water body or water supply (campground wells) and have on-site fuel spill containment equipment. Mechanized equipment operated in Defensible Space units will utilize existing roads and compacted surface for operation prior to creating new disturbed site for fuel reduction.
  The identified buffer strips were used for planning purposes only, and may be adjusted on the ground where natural topographic breaks or changes in vegetation communities would be more effective than the identified distances. In all cases, the purpose would be to minimize increases in stream sedimentation, turbidity, and delivery of nutrients to the stream network.

Heritage Resources

- Avoidance: The Seedhouse CCC Outhouse (5RT462**)** and the historic road (5RT2282.1) should be avoided by all destructive project activities.
- Pre-Implementation Survey: If any *new actions*, such as hand lines, are planned that were not specifically identified in the proposed action, an archaeological assessment will be required. The assessment may find that additional cultural resource surveys will be needed.
- Erosion Reporting: To mitigate the effects of erosion on cultural resources after thinning and burning, Forest Service personnel need to report substantial erosion in treatment areas to archaeologists.
- Discovery and Education: All persons associated with operations under this authorization must be informed that any objects or sites of cultural, paleontological, or scientific value such as historic or prehistoric resources, graves or grave markers, human remains, ruins, cabins, rock art, fossils, or artifacts shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with operations under this authorization any of the above resources are encountered, the proponent shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the Medicine Bow-Routt National Forest authorized officer of the findings. The discovery must be protected until notified in writing to proceed by the authorized officer (36 CFR 800.110 & 112, 43 CFR 10.4).