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# Scoping Report for the Big Creek-Pearl Hazardous Fuels & Beaver Creek Timber Sale Analyses

Parks Ranger District

MEDICINE BOW-ROUTT NATIONAL FORESTS &  
THUNDER BASIN NATIONAL GRASSLAND

Jackson County, Colorado

T.11N. R.82W. & R.83W.  
T.12N. R.82W. & R.83W.

Responsible Official: Parks District Ranger

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## INTRODUCTION

The purpose of this scoping report is to ask for your help in the planning of the Big Creek-Pearl Hazardous Fuels and Beaver Creek Timber Sale Analyses on the Parks Ranger District, Medicine Bow-Routt National Forests, Jackson County, Colorado (Figure 1). Situated in the Big Creek Lakes Geographic Area in the northeast portion of the Park Range directly south of the Colorado-Wyoming Stateline, these two separate proposals are driven by separate and distinct purposes and needs. Under the Big Creek-Pearl Hazardous Fuels proposal a combination of mechanical fuel reduction treatments and prescribed burning has been proposed on National Forest lands that surround or are adjacent to area private land and structures, along with permitted cabins on National Forest, to reduce the wildfire hazard in the vicinity. Located to the northwest of the fuels proposal, under the Beaver Creek Timber Sale a number of silvicultural treatments have been proposed to improve the health, resiliency, and growth of area timber stands.

This scoping report contains background information on these two separate proposals. Scoping is an integral part of the environmental analysis process. It provides the first opportunity for you to express your opinions about site-specific areas on the Forest that are being considered for possible projects or proposed actions. The purpose of scoping is to identify issues and concerns related to the proposed action(s). In addition, scoping may identify additional information and management opportunities that may be incorporated into the proposed action(s), as well as formulating alternatives to the proposed action(s).

## BACKGROUND

This analysis addresses two projects that were identified separately on the Medicine Bow-Routt National Forests & Thunder Basin National Grassland Schedule of Proposed Actions (SOPA). Analysis work on the Beaver Creek Timber Sale proposal has been occurring since the mid-1990s. Due to problems with the original analysis and subsequent decision, the District was directed to re-analyze the proposal to correct the deficiencies. With the administrative combination of the Medicine Bow and Routt National Forests in 1993, an opportunity arose to look at analyzing the Beaver Creek proposal with an adjacent timber sale proposal (McAnulty) directly to the north on the Medicine Bow portion of the Forest in Wyoming. Since that time, the Routt Forest Plan has been revised. A request for comments (scoping letter) was sent to the public concerning the McAnulty/Beaver Creek proposal on August 12, 1999.

Since this scoping effort in 1999, changes in District personnel and additional new project proposals--such as the Big Creek-Pearl Hazardous Fuels, have surfaced on both sides of the Stateline. Due to this, and difficulties in conducting a combined analysis for two separate Forest Plans, it was decided to combine all the projects that are in Wyoming into one analysis and all the projects in Colorado into a separate analysis. The resulting Wyoming project proposals were analyzed under the Blackhall-McAnulty Environmental Impact Statement (EIS). The record of decision (ROD) for this proposal was signed on February 9, 2004. This scoping statement and resulting future analysis is designed to analyze the remaining project proposals within Colorado and the Routt portion of the Forests. Any comments submitted in response to the previous scoping letters for the Beaver Creek proposal will be considered as part of this analysis.

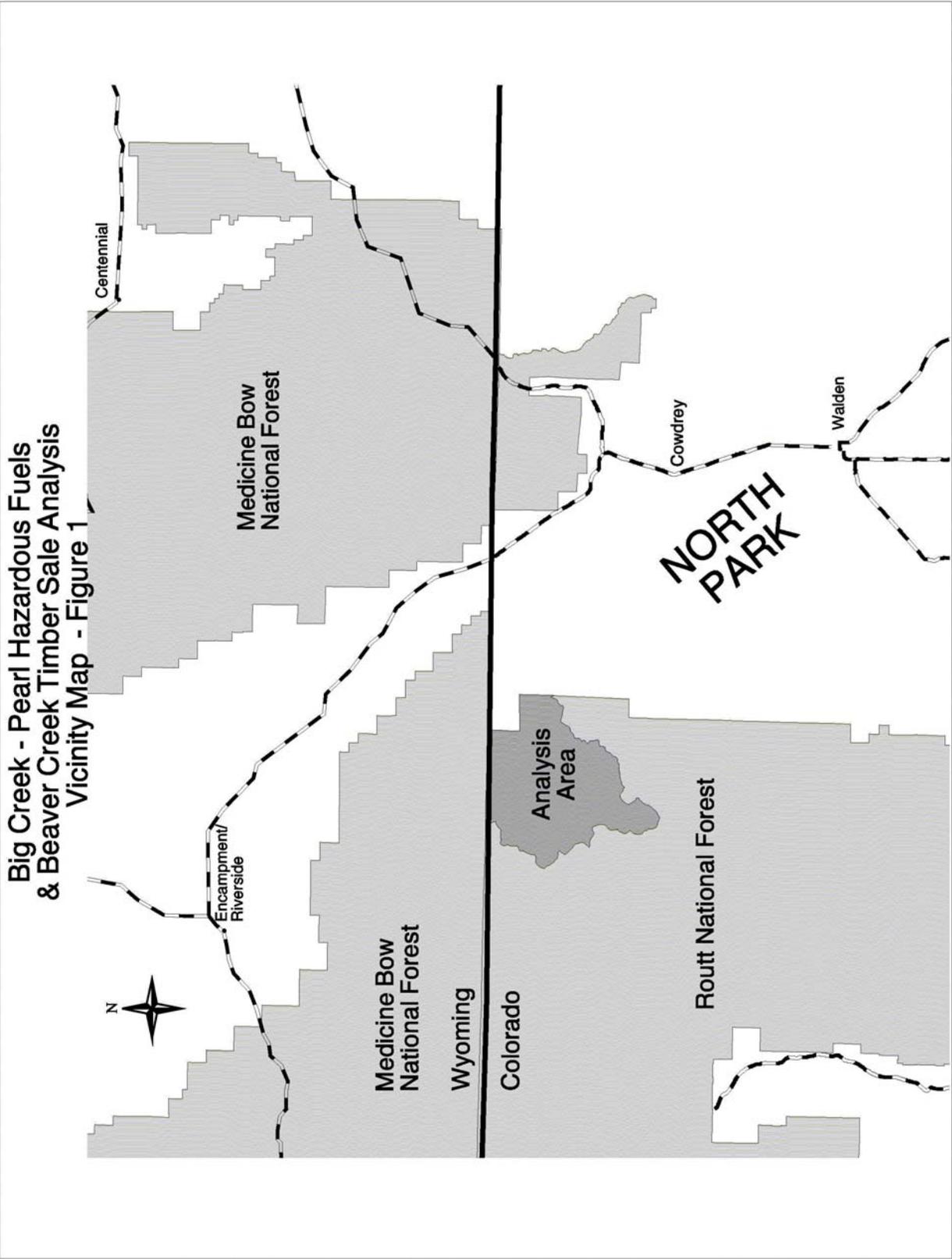
## ***Existing Condition***

The analysis area for the two proposals is located in Jackson County, Colorado approximately 20 miles northwest of Walden, Colorado, and 15 miles west of Cowdrey, Colorado. The legal description is T.11 & 12N., R.82 & 83W. The main route into the area is off Colorado Highway 125 at the small town of Cowdrey, Colorado, and then west on Jackson County Road 6W to National Forest System Roads (NFSRs) 80 and 600. The analysis area contains approximately 31,990 acres, of which an estimated 31,434 acres are National Forest System lands. There are approximately 556 acres of private land in the analysis area primarily in the vicinity of the old town site of Pearl, Colorado, and along the NFSR 600 corridor leading into the Big Creek Lakes. The extreme southern part of the project area (9,000 acres) is within Mount Zirkel Wilderness area. There are portions of Dome Peak and Kettle Lakes Inventoried Roadless Areas along the eastern boundary of the wilderness area and Big Creek Lakes. It is also in this same area that the Kettle Lakes Research Natural Area is situated. See Vicinity Map (Figure 1) for an approximate location of the analysis area.

The elevation and terrain of the analysis area is varied, ranging from 11,422' Davis Peak in Mount Zirkel Wilderness to 8,500' on the Forest boundary near Pearl. The analysis area is predominantly forested with parks or meadows of various sizes scattered across the landscape. Much of what is forested is dominated by stands of lodgepole pine poletimber and sawtimber. Engelmann spruce and subalpine fir dominate the higher elevations, along with many north facing slopes and riparian areas. The highest elevations of the area above the upper treeline at around 10,500 feet consist of tundra, along with rock and ice fields. Descending in elevation to the east, the lodgepole pine becomes more mixed with aspen. These lower elevation stands are interspersed with small meadows, sparsely forested, windswept ridges, and non-forested southerly facing slopes, along with a number of sizeable parks, including: Buffalo, Twisty, and Big Creek Parks. At the lower treeline at about 8,500 feet, the lodgepole pine and aspen become mixed with scattered limber pine, and unique, relic stands of Douglas-fir.

The project area provides a variety of year-round recreational opportunities. Along with high use during hunting season, major recreational uses include auto touring, dispersed camping, camping in developed sites, hiking, backpacking, ATV/ORV use, and personal use firewood cutting. NFSR 80 (Stateline Road) crosses the area from east to west, and is used to access the Hog Park area by many forest users. Big Creek Lakes Campground, which is accessed via NFSR 600, is situated within the southern part of the analysis area, along with a number of trailheads leading into Mount Zirkel Wilderness area. The NFSR 600 corridor has a number of dispersed campsites. It is also in this same area that there are permitted cabins on National Forest. Snowmobiling is the main winter activity in the area, with access off County Road 6W where Jackson County stops plowing.

Figure 1



Wildlife species occurring in the project area are typical of those occurring in similar habitats throughout the Park Range and the Medicine Bow-Routt National Forests. The analysis area contains deer and elk fawning/parturition areas at the lower elevations. Much of the analysis area is within the known elevational range for northern goshawks (under 9,200' in elevation). Though there are no threatened or endangered species known to exist in the project area, the analysis area is situated within a lynx analysis unit (LAU), which has been identified as having potential habitat for Canada lynx.

There is a portion of one grazing allotment (Beaver Creek) within the analysis area. Primary range for this allotment is located within sagebrush meadows at the lower elevations and non-forested hillsides at the middle and upper elevations.

The analysis area is drained by a number of sizeable creeks that find their sources primarily within the higher elevations of Mount Zirkel Wilderness. The analysis area is made up of two sixth level watersheds--Middle Fork and South Fork of Big Creek, which flow north into Wyoming. Davis, Line, Beaver, and Casteel Creeks within Colorado all join with other tributaries in Wyoming to eventually form the Middle Fork of Big Creek. The South Fork of Big Creek, which finds its source from the Big Creek Lakes, flows northeastward into Wyoming where it joins the Middle and North Forks to form the larger Big Creek. From this confluence, Big Creek flows into the North Platte River approximately six air miles to the northeast. There are a number of water diversions in the form of irrigation ditches in both watersheds that are used to irrigate hay meadows on private land in the vicinity.

### ***Vegetation Disturbance***

In the central Rocky Mountain ecosystem, disturbance is the critical factor in maintaining co-existing species. Without disturbance, subalpine fir and Engelmann spruce would replace disturbance dependent species such as lodgepole pine and aspen. The presence of these two species at the lower and middle elevations of the analysis area is reflective of disturbance in the form of fire. Natural and human-caused wildfires have been a major factor in forming the forests we see today in the analysis area. It is known that fire has periodically burned large portions of the area, playing an important role in the appearance of the landscape, and maintaining a mix of tree species in various successional stages.

Lower elevations that tend to be drier have a shorter fire return interval, while wetter, higher elevations have a longer fire return interval. Lodgepole and aspen are very dependent on natural disturbance such as fire to propagate. Lodgepole have serotinous seed cones (cones that do not open at maturity and persist on the tree). Serotinous cones open and release the stored seed when heated. Aspen typically resprout from their interconnected root system following being burned over by fire. Lodgepole and aspen stand origin dates, estimated from tree ring growth data, provide a rough map of where and approximately when stand replacing/regenerating fires occurred.

In examining the fire history or stand origin data for the vicinity, it appears that approximately half of the existing stands resulted from fires that burned the area before 1860 and prior to European-American settlement. Reflective of this settlement, another 30% of the areas stands appear to regenerated between 1860 and 1910, with the bulk occurring in the early 1880's. The southeastern part of the analysis area, towards Independence Mountain, appears to have burned around 1900. Since the establishment of the Routt National Forest in 1905, fire has been effectively controlled within the vicinity. Between 1910 and 1950 only about 1% of the existing stands originated during this time. The control of fire since 1900 appears to have contributed to the noticeable conversion through natural succession of what were aspen stands to subalpine fir and lodgepole pine stands at the lower forested elevations. The remaining stands that have regenerated since 1950 (26%) are more reflective of the timber harvest and clearcutting that has occurred in the area, rather than fire.

### ***Past Timber Harvest***

Many of the forested stands within the analysis area show evidence of tie hack and pre-1950 selective logging. This early day logging also provided building materials and mine props for the area's short-lived mining activity. Evidence of this early 20<sup>th</sup> century logging, in the form of stumps and old overgrown logging roads, can be found throughout the area. With the creation of the National Forest in 1905, oversight and regulation of this early day logging became one of the first major resource issues dealt with by the early Forest Rangers. Throughout much of the first half of the 20<sup>th</sup> century selective logging continued in the area, supplying local area sawmills.

Large-scale timber harvesting in the form of clearcutting began in the area in the mid to late 1960's. It was also during this time that much of the area's existing Forest roads were constructed or reconstructed to provide access for the timber sales. The District resource information system (RIS) database lists an estimated 3,506 acres (approximately 10% of the analysis area) of harvest treatments that have occurred in the analysis area since 1950. Out of this amount, approximately 2,788 acres were clearcut. Today these clearcuts have regenerated predominantly to young lodgepole pine and aspen stands. Many of these stands that were harvested over 20 years ago have been precommercially thinned. There are currently no active timber sales in the analysis area.

### ***Forest Insects and Disease***

Dwarf mistletoe is present in lodgepole pine stands through out the analysis area. Selective logging prior to 1950 appears to have promoted the spread of mistletoe within a number of area lodgepole stands. Mistletoe is a parasitic plant that deforms trees, causes rot, and weakens a tree so that it is more susceptible to other insects and disease. The resource information system (RIS) database estimates that 60% of the lodgepole stands in the analysis area have mistletoe infestation. Associated with this, there are a number of forested stands where yearly tree mortality exceeds yearly tree growth. The presence of mature and overmature lodgepole pine with dwarf mistletoe provides a ready source of vulnerable trees for a growing mountain pine beetle epidemic to spread into.

Bark beetles are always present in the forest in low numbers. The various types of bark beetles that exist are specific to certain tree species. For example the mountain pine beetle is specific to the pine species such as lodgepole, ponderosa, and limber, while the similar spruce beetle is specific to the spruce species such as Engelmann and Blue. As its name would infer, the various types of bark beetles attack trees through the bark to feed on the underlying living tissue. In attacking the tree the beetles introduce a blue stain fungus into the tree's living tissues, interrupting the transport of water and nutrients, which eventually kills the tree. The tree's only defense against beetles is its sap, or resin, which the tree uses to "pitch out," attacking beetles. Younger, healthier trees produce more sap, thus are better able to ward off attack. Trees growing in crowded conditions or that are old, diseased, or weather/fire damaged, produce less sap, thus are more readily and successfully attacked by beetles. Under endemic conditions, the beetles cause periodic, very low amounts of single tree and small group mortality of what are typically the unhealthiest trees in the stand, providing important snag habitat to dependent wildlife. Endemic beetle populations are naturally regulated through cold winter temperatures and through predation by birds--such as woodpeckers, small mammals, and other insects.

Much like and possibly due to droughts, beetle epidemics are cyclic. When conditions are favorable, the beetle population increases to epidemic levels. Beetle epidemics were a part of the natural variation before settlement. A beetle epidemic is defined as the point in which annual tree loss is greater than annual tree growth, causing disturbances of normal relationships in the forest. Dense mature stands have little or no defense against these beetles, and are extremely susceptible when these insects reach epidemic levels. When beetle populations increase, even healthy trees are subject to infestation. Beetles often kill entire stands of trees during an epidemic. Fire often follows, taking "advantage" of the large accumulation of fuels and burning over the sites. Under dry conditions and with an ignition source such as lightning, tree mortality from bark beetles can provide a ready source of dead, dry fuels for the inevitable wildfire. Fire can also occur without the predisposition created by bark beetles.

Since 1998, aerial surveys conducted over this portion of the Medicine Bow-Routt by Forest Service entomologists have seen a marked increase in beetle activity and subsequent mortality within the area's three dominant conifer species. The most noticeable increase in tree mortality has been within area subalpine fir stands. Western balsam bark beetle, along with a root disease (armillaria), have caused scattered fir mortality at the lower forested elevations, with larger concentrations of fir mortality, some covering hundreds of acres, at the higher elevations within Mount Zirkel Wilderness area.

The next most prevalent beetle that has been detected in recent years in the vicinity is mountain pine beetle. Much of this current mountain pine beetle activity is outside the analysis area to east of the Forest boundary near Independence Mountain within large stands of lodgepole pine, where there is a mix of Bureau of Land Management (BLM), State, and private land ownerships. There has also been a major pine beetle outbreak directly to the northeast on the Medicine Bow part of the Forests. Aerial surveys of the analysis area conducted in 2003 have also detected growing epicenters of pine beetle tree mortality across the two project areas.

Finally, another potentially damaging insect that may pose a threat to the Engelmann spruce within the analysis area in upcoming years is spruce beetle. There are indications that spruce blow-down that has occurred in past years within watersheds to the southwest of the analysis area have provided a medium and/or epicenter for the start of a spruce beetle epidemic that is currently spreading through out the spruce dominated forests within and along the eastern perimeter of Mount Zirkel Wilderness area into the western portions of the two project areas.

Based on tree inventory data for the area, most of the area's older conifer stands are in the moderate-to-high risk category for bark beetle susceptibility. The current weather conditions and dramatic increase in the various beetle populations, along with the abundant conifer food source, indicate that there is a high potential for an epidemic to occur in the area. Under a worst-case scenario, it would be expected that stands rated as having a high hazard would have more than 50% tree mortality, while moderate stands would have 25%-50% mortality. Stands with a low risk rating would have less than 25% mortality.

### ***Wildland-Urban Interface***

Located approximately five air miles to the north in Wyoming, the 2002 Bear Mountain South Fire, and subsequent series of wildfires in Mount Zirkel Wilderness to the south in 2002 and 2003, alerted many landowners within and adjacent to the analysis area to the dangers wildfires present to private land and structures. Much of the 556 acres of private land within the analysis area is undeveloped. The exception to this are the scattered private in-holdings between the old town-site of Pearl and the Forest's eastern boundary west along the NFSR 600 corridor to Big Creek Lakes, where there are a number of small ranches and cabins that have been built over the years. It is also in this same area that there are a number of permitted cabins on National Forest system lands. The private land and structures in the Big Creek-Pearl vicinity have been identified by the 2002 Jackson County Wildland Fire and Fuels Management Plan as a community at risk. More specifically, a community at risk is defined as a wildland-urban interface community in the vicinity of Federal lands that are at high risk from wildfire in which there are on-going and/or plans for projects to conduct fuels treatments.

### ***Roads***

Several road segments within the analysis area, both open and closed, have been poorly maintained or constructed. These segments contribute to stream network expansion, and to the connected disturbed area depositing sediment into adjacent streams. On ground surveys have identified a number of road repairs or upgrade maintenance to reduce erosion and sediment deposition in streams within the analysis area.

### ***Desired Condition***

Desired future condition refers to how an area would appear and function in the future under various management scenarios. A desired condition is developed based on what exists now, knowledge of how it got that way, what is ecologically possible, what is economically feasible, and what is socially desirable. A description of a desired future condition provides the management goals for an area. Goals for each resource are fairly broad under these descriptions and are based on the general geographic area desired condition discussed in the Forest Plan.

Under the 1997 Routt National Forest Land and Resource Management Plan Revision (Forest Plan), the Big Creek-Pearl and Beaver Creek Analysis Area falls within one geographic area—Big Creek Lakes. Management emphasis within the analysis area and larger geographic area is distributed among several Forest Plan management area prescriptions, including: 5.11 General Forest and Rangeland, 4.3 Dispersed Recreation, 2.2 Kettle Lakes Research Natural Area, 1.32 Backcountry Recreation-Non-motorized, 1.13 Wilderness Semi-primitive, 1.12 Wilderness Primitive, and 1.11 Wilderness Pristine. Located in the west central portion of the area, the analysis area also contains portions of Dome Peak and Kettle Lakes Inventoried Roadless Areas, identified under both the Routt Forest Plan Revision and the more recent Roadless Rule effort.

***Desired conditions pertinent to the Big Creek Lakes Geographic Area only (Chapter 3, pp.3-9 to 3-11) include:***

- Lodgepole pine and spruce/fir will continue to be dominant cover types.
- Forest on 51% of the area will appear older and less disturbed and will have more late successional structure than presently occurs.
- In areas allocated to management prescriptions 5.11 (49%), a variety of tree sizes and seral stages, including late successional, will be present.
- Vegetation diversity will provide habitat for a full spectrum of fauna, from elk to rodents.
- Areas seen from Forest Roads 80 and 600 and frequently used recreation points will have a natural appearance. Little evidence of human disturbance will be visible from the Mount Zirkel Wilderness, Kettle Lakes Research Natural Area, and backcountry non-motorized recreation areas.
- High-quality developed and dispersed non-motorized recreation opportunities will be available.

***Pertinent standards common to the management area emphasis include:***

- Use only vegetation management practices necessary to meet specific resource objectives other than wood production. Timber harvest is not scheduled and does not contribute towards the allowable sale quantity. (4.3, Chapter 2, 2-36 to 2-38)
- Use direct control or perimeter control as the wildland fire management strategy in this management area. (4.3, Chapter 2, 2-36 to 2-38)
- Use a full range of biologically appropriate silvicultural practices to provide for the production of sawtimber. Timber harvest is scheduled and does contribute towards allowable sale quantity. Opportunities exist to collect firewood. (5.11, Chapter 2, 2-39 to 2-41)
- Where available maintain a minimum of four snags per acre, calculated as per acre averages over the project area. (5.11, Chapter 2, 2-39 to 2-41)
- Retain live trees that are broken at the top, have mechanical damage or genetic defect, to replace snags wherever available. At a minimum, two live trees to replace each snag. (5.11, Chapter 2, 2-39 to 2-41)
- To allow direct attack, treat management activity fuels to reduce fire intensity levels within three years after management activities cease. (5.11, Chapter 2, 2-39 to 2-41)

- Use direct control or perimeter control as the wildland fire management strategy. (5.11, Chapter 2, 2-39 to 2-41)

## PURPOSE AND NEED FOR ACTION

As set forth in law, the mission of the Forest Service is to achieve quality land management under the sustainable multiple use management concept to meet the diverse needs of people. The Forest Service has responsibility for implementing the Forest Plan by completing analysis and evaluation of site-specific projects. The Forest Plan guides natural resource management activities and provides the Forest Service, forest users, and the public with an overall strategy for managing the Forest. The intent of these plans is to manage National Forest System lands for multiple-use and not for any single purpose. **Based on Forest Plan direction, National Fire Plan emphasis, the Healthy Forests Initiative, the Routt Roads Analysis Report, and the analysis area's current existing condition versus the desired condition, the Forest Service has identified the following resource needs for the Analysis Area:**

### Hazardous Fuels Reduction

Early day logging, years of fire suppression, and lack of recent vegetation management on National Forest lands adjacent to and surrounding the private land in-holdings in the Big Creek-Pearl area along NFSR 600 corridor have resulted in forest conditions that have a high risk of uncontrollable, high intensity fires occurring. There are also a number of permitted cabins on National Forest System lands in this same area. The 2002 Jackson County Wildland Fire and Fuels Management Plan identified the Big Creek-Pearl area as a community at risk where vegetation treatments on Federal and private lands should be implemented to reduce the current risk to private land and structure from future wildfires.

- ***There is a need to treat area vegetation in the Big Creek-Pearl area to reduce the wildfire hazard to adjacent private land and structures.***

### Forest Health/Resiliency

Since 1998 there has been marked increase in area bark beetle activity and subsequent tree mortality in the three dominant conifer tree species (lodgepole pine, Engelmann spruce, and subalpine fir) across the area. Area lodgepole pine that is infected with dwarf mistletoe is especially susceptible to future beetle spread and mortality. The presence of dense, overstocked conifer stands greatly increases the probability of an insect epidemic occurring in the vicinity.

- ***There is a need to improve the health and resiliency of area forests, to reduce the current outbreak of beetles and to decrease their susceptibility to insects and disease.***

## Timber Salvage/Wood Production

Much of the proposed project area is within a 5.11 General Forest and Rangeland Management Area. Most of the forested stands located within this management area are classified as being suitable for timber production and contributing towards the allowable sale quantity (ASQ) for the Routt National Forest. The National Forests have as a legitimate use, the sale of timber resources. This use originates in the Organic Act of 1897, and is reaffirmed in the 1960 Multiple Use – Sustained Yield Act and the 1976 National Forest Management Act. Local and regional sawmills depend on timber supplies from federal lands for their operation.

- *There is a need to contribute to the Forest Plan goal of providing for timber harvest.*

## Soil Erosion/Sedimentation

The 2003 Routt Roads Analysis Report provides direction for the completion of site-specific travel management analyses to decide the future status of the Forest Transportation System at the project level. There are a number of roads within the project area that have been identified as requiring maintenance and/or repairs to reduce soil erosion and sediment entering area creeks.

- *There is a need to minimize human-caused soil erosion within the area.*

## PROPOSED ACTION(S)

Based on a review of the existing condition of the area's resources, Forest Plan(s) standards and guidelines, desired future condition, and resource management needs, a preliminary Proposed Action(s) has been developed for the Analysis Area. Containing both commercial and non-commercial treatments, the Proposed Action is a mix of protection, prevention, suppression, and restoration treatment activities, geared to address the purpose and need for action on National Forest lands within the analysis area.

It is currently envisioned that two distinct project proposals or Proposed Actions will result from this analysis. The ***Big Creek-Pearl Hazardous Fuels Proposed Action*** will address concerns for reducing the wildfire hazard to private land and structures along the NFSR 600 corridor. The ***Beaver Creek Timber Sale Proposed Action*** will address the remaining area resource needs of improving forest health/resiliency, salvaging timber, and managing area forests for future timber production. Associated with the road system needed for the proposed timber sale, it is also anticipated that the watershed restoration proposals identified during this analysis will be included as part of the Beaver Creek Timber Sale Proposed Action. No treatment is proposed in Mount Zirkel Wilderness, the Kettle Lakes Research Natural Area, or Inventoried Roadless Areas under either proposal.

### ***Big Creek-Pearl Hazardous Fuels Proposed Action***

An analysis of the area has found that a number of vegetation treatments could be used to move the vicinity's vegetation towards the desired future condition for the area. Situated along the NFSR 600 corridor from the old town site of Pearl and Forest eastern boundary west to Big Creek Lakes Campground, the primary purpose of the proposed treatment is to decrease fuel quantity and continuity, lessen fire behavior and intensities, and create defensible space between wildlands and rural home-sites in the vicinity.

Fuel treatments have been identified for the forested and non-forested National Forest System lands surrounding the NFSR 600 corridor. Mechanical and prescribed fire silvicultural treatments within identified non-forested and forested areas would be designed to reduce the amount and continuity of existing fuels, to decrease the potential for and increase the controllability of a wildfire if it was to occur in the corridor vicinity. Having objectives for both decreasing hazardous fuels and maintaining and promoting fire dependent plant communities, a number of aspen stands have been identified as having opportunities for mechanical treatments to set back subalpine fir encroachment. Specifically, the fuel treatments are designed to limit fire behavior to surface fuels in these areas, thereby allowing direct attack by hand crews, mechanical equipment, and/or aerial retardant. Potential silvicultural treatments to be considered under this proposal include: thinning, roller chopping, strip piling, and prescribed burning. See Figure 2.

It is anticipated that no new specified road construction or reconstruction will be needed for this proposal. The existing area two-track road system and a minimal amount of temporary roads will be needed to provide adequate access to specific treatment units. All new and reconstructed temporary roads used for this proposal will be closed (obliterated) following completion of the project. Other associated treatments to be included in this proposal include the designation of commercial and personal use Christmas tree/firewood areas along the NFSR 600 corridor. It is currently envisioned that this proposal will take 2 to 3 years to accomplish and would be completed primarily through non-commercial service contracts. Consideration will be given to using a small commercial post & pole timber sale to treat some of the units. All burning associated with the project will be done by qualified personnel.

**Table 1. Big Creek-Pearl Hazardous Fuels Proposed Action Summary**

<b>Fuels Treatment</b>	<b>Slash Treatment</b>	<b>Est. Total Acres</b>
Thinning	Pile Slash & Burn Chip Slash (Campground)	90
Rollerchop	Broadcast Burn	32
Thinning/Aspen Enhancement	Pile Slash & Burn Under-Burn Aspen	112
Strip Pile	Pile Slash & Burn	56
Aspen Burn	Broadcast Burn	19
<b>TOTAL</b>		<b>309 ACRES</b>

**Table 2. Big Creek-Pearl Hazardous Fuels Proposed Action - Roads**

<b>Type of Road</b>	<b>New Construction</b>	<b>Reconstruction Existing</b>	<b>Total Miles</b>
Specified	0.0 miles	0.0 miles	0.0 miles
Temporary	1.0 miles	1.0 miles	2.0 miles
<b>TOTAL</b>	<b>1.0 miles</b>	<b>1.0 miles</b>	<b>2.0 miles</b>

***Description of Hazardous Fuels Prescriptions and Slash Treatments:***

**Thinning** – Proposed for Units 1, 7, 10, 11, and 12, thinning (timber harvest) would be used to reduce tree densities and improve stand health in these post & pole size lodgepole pine stands. Thinning would be estimated at 35-50% removal, depending on stand condition. If commercially treated, whole tree skidding/yarding would occur, essentially removing the tops and limbs of harvested trees from the unit. If the unit is non-commercially treated, it is envisioned that the slash will be handpiled. Slash piles created by the treatment would be burned in late fall or during the winter when there is adequate snow. One thinning unit (11) that is situated directly to the east of Big Creek Lakes Campground would have the slash chipped within 100' of the campground road.

**Roller Chopping** - The intent of this treatment is to use some type of mastication (i.e., mowing, roller chopping) within this highly suppressed, “dog hair” stand of lodgepole pine (Unit 2). The area would then be broadcast burned. Treatment would also provide for regeneration of a new stand that could potentially be managed into the future to promote a fire safe and silvicultural acceptable condition.

**Thinning/Aspen Enhancement** – Proposed for Units 3, 5, 6, and 8, thinning would be used to reduce tree densities and improve stand health in the portion of these stands that is dominated by post & pole size lodgepole pine. Thinning would be estimated at 35-50% removal, depending on stand condition. If commercially treated, whole tree skidding/yarding would occur, essentially removing the tops and limbs of harvested trees from the unit. If the unit is non-commercially treated, it is envisioned that the slash will be handpiled. Slash piles created by the treatment would be burned in late fall or during the winter when there is adequate snow. The aspen portion of these units is primarily small decadent or suppressed aspen. The aspen component has significant dead and down with encroaching ground juniper. The aspen would be broadcast burned. The burning will reduce fuel quantity and stimulate aspen regeneration and sprouting. Aspen is often considered a “living fireline” and is often used as safety zones and fireline during fire suppression operations.

**Strip Pile** – The majority of Unit 4 is post and pole size lodgepole pine with a significant component of dead and down. The proposed treatment is to hand pile all dead and down in four or five 100' wide strips that would alternate parallel to the slope. Piles would be disposed of through burning in the late fall and winter when there is adequate snow.

**Aspen Burn** – Unit 13 is primarily an aspen stand with encroaching conifer. The intent is to broadcast burn the area. Any small diameter (less than 5 inches dbh) conifer would be felled prior to burning. The felled conifer may be removed, piled and burned, or left to lie to assist in carrying the broadcast burn through the aspen stand. Results should reduce current fuel loading and stimulate aspen sprouting and regeneration.

## ***Beaver Creek Timber Sale Proposed Action and Watershed Restoration Projects***

### ***Commercial Timber Sale***

Situated predominantly in a 5.11 (General Forest and Rangeland Management Area), a preliminary analysis of the area has found that most of the acreage proposed for treatments would result in treating commercial-size trees (lodgepole greater than 5 inches in diameter). Past experience has shown that in such situations a multiproduct timber sale or a combination of commercial sales is the most efficient method to salvage dead trees, reduce the spread of mountain pine, spruce, and western balsam beetles, along with implementing treatments to reduce the future susceptibility of area stands to these beetles. Harvest units would be situated predominantly within areas that have had past timber sale entries.

Under this proposal, harvest treatments (clearcut, overstory removal, and sanitation/salvage) would be designed to salvage dead and infested trees to suppress and reduce the spread of beetles from currently infested trees into adjacent uninfested trees, along with reducing the spread of dwarf mistletoe in area lodgepole pine. The sanitation/salvage treatment is also geared to thin area stands to reduce their future susceptibility to beetles. Lastly, the group selection prescription has been proposed for a number of mixed conifer stands in the area. Under this uneven-aged treatment, small groups of trees are harvested to improve the stands health and resiliency, along with promoting conditions for new mixed conifer regeneration. Potential commercial silvicultural treatments include: clearcutting, overstory removal, sanitation/salvage, and group selection. See Figure 2.

Though portions of the analysis area are well roaded, many of the areas that have been identified for treatment have poor access and would need new specified road construction to be adequately accessed for treatments. Acres impacted by right-of-way clearing for this road construction are included (Table 3) as part of the acreage totals to be impacted by the proposal. All new specified and temporary road construction would be closed following completion of the proposal. It is anticipated that the specified roads would be closed with gates, retaining the road template for future timber management access. All temporary roads would be obliterated. Associated projects with the multiproduct timber sale(s) would include: lodgepole pine seed collection, broadcast seeding, slash treatment, regeneration surveys, release and weed thinning, aspen enhancement, personal use firewood, and noxious weed control.

**Table 3. Beaver Creek Timber Sale Proposed Action Summary**

<b>Treatment</b>	<b>Est. Total Acres</b>
Clearcut	75
Overstory Removal	39
Group Selection	124
Sanitation/Salvage	41
Right-of-way Clearing	11
<b>TOTAL</b>	<b>290 ACRES</b>

Table 4. Beaver Creek Timber Sale Proposed Action - Roads

Type of Road	New Construction	Reconstruction Existing	Total Miles
Specified	1.5 miles	4.7 miles	6.2 miles
Temporary	2.5 miles	0.4 miles	2.9 miles
<b>TOTAL</b>	<b>4.0 miles</b>	<b>5.1 miles</b>	<b>9.1 miles</b>

*Description of Proposed Treatments:*

**Commercial Treatments**

**Clearcut** - Under this analysis, the clearcut prescription has only been proposed in units that have lodgepole with high to moderate amounts of mistletoe adjacent to uninfected lodgepole stands, or in stands where a new aspen stand is the objective. Consideration has also been given to using clearcutting to increase patch size of areas that have had past harvesting. Under this treatment all merchantable lodgepole pine, subalpine fir, and Engelmann spruce is harvested (100%). Portions that have existing healthy regeneration would be treated with an overstory removal harvest. If the site has good aspen potential, consideration would be given to using prescribed fire to burn the logging slash following harvest. If not broadcast burned, depending on amount of slash, either scattering and/or piling and burning would be used to treat slash.

**Overstory Removal** - The overstory removal prescription has been proposed in units that have a predominantly lodgepole overstory with high to moderate amounts of mistletoe over a lodgepole, fir, and spruce seedling/sapling understory. Along with reducing the spread of mistletoe from the lodgepole overstory to the lodgepole understory, consideration has also been given to using overstory removals to increase patch size of areas that have had past harvesting. Due to inadequate existing regeneration in some portions of these units, there will be areas (most less than an acre in size) that will resemble a clearcut following harvest. Under this treatment all merchantable lodgepole, subalpine fir, and Engelmann spruce is harvested (80%). Slash is lopped and scattered.

**Group Selection** - Under this variation of the uneven-aged selection prescription, 30 to 40% of the existing overstory is harvested in small groups less than  $\frac{3}{4}$  acre in size to improve the health of the stand and to create stand openings for new and existing regeneration. Proposed for areas of forest that are dominated by mixed conifer or spruce-fir, an emphasis is made on harvesting merchantable lodgepole that is either dead, beetle infested, with moderate to high amounts of mistletoe, and/or of poor form to maintain and promote the existing uneven-aged stand structure. Slash is typically lopped and scattered.

**Sanitation/Salvage** - Under this treatment, 30-40% of the existing overstory would be salvaged to improve the health of the stand. Proposed for areas of forest that have had past pre-1950 partial harvest with known active pockets of beetles, an emphasis is made on harvesting merchantable lodgepole that is either dead, beetle infested, with moderate to high amounts of mistletoe, and/or of poor form. Slash is typically lopped and scattered.

**Right-of-Way Clearing** – It is anticipated that approximately 11 acres would need clearing to construct the estimated 1.5 miles of new specified road construction. Similar to a clearcut, the right-of-way clearing will remove all existing vegetation along these routes. Though these roads will be physically closed to motorized use following completion of the proposal, the road templates will be retained for future timber sale entries in the area. Slash is lopped and scattered.

### ***Watershed Restoration Projects***

The soil and water concerns would be addressed as either part of the timber sale proposal, through annual area road maintenance, or as separate watershed restoration projects:

- Excessive erosion and sediment transport would decrease or be eliminated at several locations along NFSR 682 where inadequate drainage features and runoff concentrations have resulted in extensive loss of the road surface, gulying of the ditchline, and deep rilling extending into the road subgrade. The road embankment at the Buffalo Ridge Trailhead crossing location would be stabilized.
- Sloughing of the road embankment on NFSR 80 near milepost 28 would be repaired.
- Resurfacing of NFSR 600 would occur and surface flows on NFSR 600 would be dispersed, reducing sediment transport into the adjacent Big Creek.
- The large multi-plate culverts at the NFSR 690 and 691 crossings of Line Creek would be removed and restoration of streambanks and physical channel dynamics would occur.
- Additional drain dips would be installed along NFSR 690, eliminating concentrated road surface flows.
- The current erosion on NFSR 681.1B would be eliminated.
- The severe potholing and access problem on NFSR 689.1A, which serves as the access for the overflow camping area for Big Creek Lakes Campground, would be eliminated.
- Drainage problems on NFSR 692.1A would be corrected.
- Stabilization work such as ripping and seeding of roadbeds and cross drain installations to reduce connected disturbed area would occur on NFSRs 349.1A, 688, and 688.1A.
- There are problems with surface erosion from the NFSR 689 crossing that is impacting Beaver Creek. The problem can be corrected by either hardening the road surface for 100 yards linear distance and/or by creating sediment traps in roadside ditch, above water influence zone.
- The area road deferred maintenance backlog would be reduced by 28.3 miles.

## **ALTERNATIVES TO THE PROPOSED ACTIONS**

Past scoping efforts for the Beaver Creek Timber Sale portion of the proposal resulted in the development and consideration of two other possible action alternatives.

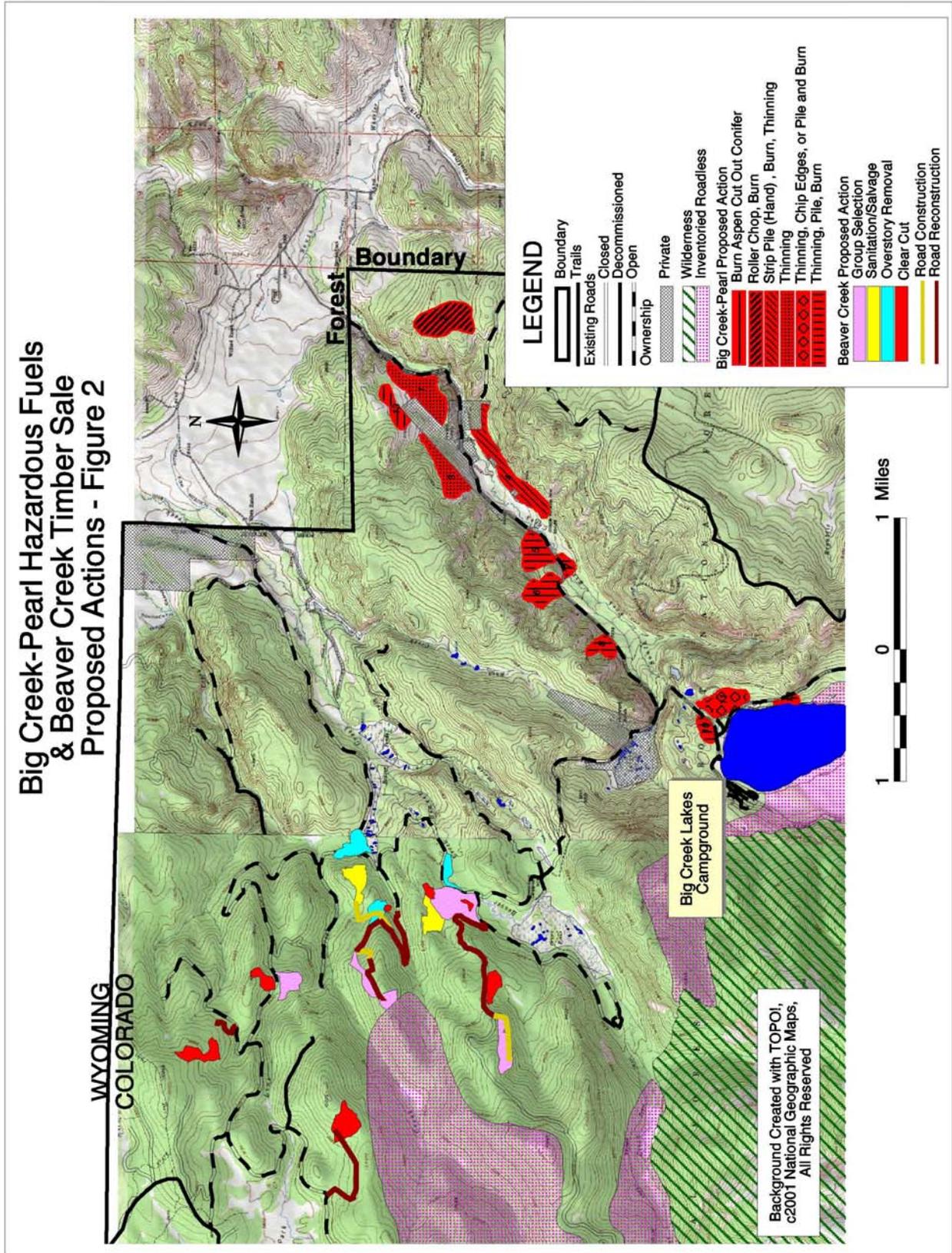
### ***Beaver Creek Timber Sale – Alternative 2***

Designed to address concerns for the clearcut prescription, under this potential alternative all units proposed to be clearcut (75 acres) under the Proposed Action would be dropped from the proposal, along with associated specified and temporary road construction (0.9 miles) and reconstruction (1.3 miles). All other silvicultural treatments, road construction and reconstruction, and watershed restoration projects identified under the Proposed Action would be implemented under this alternative.

### ***Beaver Creek Timber Sale – Alternative 3***

Designed to address concerns for new road construction, under this potential alternative all new specified (permanent) road construction (1.5 miles) proposed under the Proposed Action would be dropped from the proposal, along with the associated harvest units (53 acres). All other silvicultural treatments, road construction and reconstruction, and watershed restoration projects identified under the Proposed Action would be implemented under this alternative.

Figure 2



## ENVIRONMENTAL IMPACTS OF THE TWO PROPOSALS

A cursory analysis of both the Big Creek-Pearl Hazardous Fuels and Beaver Creek Timber Sale Proposed Actions has found that they are both generally consistent with the 1997 Routt Forest Plan Revision for all affected resource areas. A final analysis of the proposed actions and possible action alternatives will be made for each resource area to determine consistency with the Forest Plan and other pertinent National laws and regulations. This final analysis will determine if there is a need to make design changes or apply mitigation measures to the proposals to bring them into compliance with the Forest Plan and other laws. Table 5 provides a breakdown of the Cumulative Effects of past and proposed vegetation treatments in the analysis area:

**Table 5. Summary of Cumulative Effects in the Analysis Area**

ANALYSIS AREA	ACRES
National Forest System lands	31,425
Private Lands	566
<b>TOTAL ACRES</b>	<b>31,991</b>
FORESTED/NON-FORESTED	ACRES
Forested	26,162 (82%)
Non-forested	5,829 (18%)
PAST TIMBER HARVEST SINCE 1950	
Clearcut	2,788
Partial Cut/Thinning	718
% Forested	13%
*% Suitable (10,521 acres)	33%
BIG CREEK-PEARL HAZARDOUS FUELS PROPOSED ACTION	ACRES
Roller chop/Aspen Burn	41
Partial Cut/Thinning	268
% Forested	1%
BEAVER CREEK TIMBER SALE PROPOSED ACTION	ACRES
Clearcut	75
Partial Cut/Thinning	215
% Forested	2%
ANTICIPATED CUMULATIVE EFFECTS OF PAST AND PROPOSED VEGETATION TREATMENTS	ACRES
Past Harvest Since 1950	3,506
Big Creek-Pearl & Beaver Creek Proposed Actions	599
% Forested	16%
*% Suitable	39%

\*Suitable Forest lands are those lands that have been determined capable for timber management and production by the 1997 Routt Forest Plan Revision.

There are a number of projects and analyses occurring directly to the north on the Wyoming portion of the Forest. The Holroyd Timber Sale is currently being implemented. A decision for the Blackhall-McAnulty Analysis and Environmental Impact Statement was made on February 9, 2004. An Environmental Assessment for the Upper North Platte Allotment Management Plan is scheduled for completion this spring. Though most of this allotment is in Wyoming, a small portion overlaps into the Beaver Creek area in Colorado. The effects of these proposals will be analyzed for cumulative effects along with Big Creek-Pearl and Beaver Creek proposals.

## **PRELIMINARY ISSUES AND CONCERNS**

The following potential issues and concerns were identified through internal and past scoping for the Analysis Area:

### **Risk of Wildfire**

The private land and structures in the Big Creek-Pearl vicinity have been identified by the 2002 Jackson County Wildland Fire and Fuels Management Plan as a community at risk. More specifically, a community at risk is defined as a wildland-urban interface community in the vicinity of Federal lands that are at high risk from wildfire. As part of the planning requirements under this effort, Federal agencies have been directed to assess the level of wildfire risk, and the types and extent of treatments required to mitigate the risk.

*It is anticipated that the Big Creek-Pearl Hazardous Fuels proposal will address this concern.*

### **Forest Insects and Diseases**

Much of the project area is situated with a 5.11 General Forest and Rangeland Management Area. Most of the forested stands located within this management area are classified as being suitable for timber production and contributing towards the allowable sale quantity (ASQ) for the Routt National Forest.

Aerial and on-the-ground surveys have found that there has been a recent increase in bark beetle activity and associated conifer mortality in the vicinity.

Forested stand inventories have found that the parasitic plant, dwarf mistletoe, is infecting a high percentage of lodgepole pine stands in the analysis area.

*It is anticipated that the Beaver Creek Timber Sale proposal will address these concerns.*

### **Clearcutting**

There is concern over the use of the clearcut treatment and the cumulative effects past clearcutting, partial cutting, logging slash, and associated roads have had on other area resources such as water and wildlife.

*It is anticipated that the Beaver Creek Timber Sale proposal will address these concerns.*

## Cumulative Impacts

There is concern about the cumulative impacts of past and proposed treatments. The analysis area has been affected by past timber harvest, road construction, recreation use, livestock grazing, and water diversions. These activities have all contributed to changes in the hydrologic and sediment regime. While portions of the affected watersheds should be able to accommodate additional timber harvest and road construction--which incorporate Best Management Practices (BMPs), watershed concerns in other more impacted areas may be a limiting factor. A roads analysis will be completed to identify opportunities for road decommissioning (closure) and other soil and water improvements within the analysis area.

The analysis area is situated within a number of lynx analysis units (LAUs). The cumulative effects of past activities and proposed mountain pine beetle treatments will need to be fully analyzed for their effects on potential lynx habitat and other wildlife, aquatic, and plant species of concern that exist within the area.

***It is anticipated that both the Big Creek-Pearl Hazardous Fuels and Beaver Creek Timber Sale proposals will address these concerns.***

## ANALYSIS SCHEDULE

Based on your comments, these issues will be refined, expanded, and new ones identified as needed. Major issues will be identified, and alternatives to the proposed action(s) will be developed to respond to the major issues. Due to the possibility of receiving funding to begin hazardous fuels treatments during 2004 and increases in beetle activity and associated tree mortality, this analysis has been recognized by the Forest and District as a very high priority for completion.

To adequately address the effects of the proposals, current plans are to conduct and complete one analysis of the two project proposals (fuels reduction and timber sale). Following this analysis it is anticipated that the Big Creek-Pearl Hazardous Fuels Proposal will be covered through a decision during the spring of 2004. The Beaver Creek Timber Sale will be covered through a separate decision during the summer of 2004. It is anticipated that potential fuels treatments could begin as early as the summer of 2004, while the potential timber sale is not scheduled to be sold until 2006. At this time it is anticipated that the Parks District Ranger will be the Responsible Official for these two proposals.

There may be additional opportunities for hazardous fuels reduction around other private land in-holdings (i.e., Twisty Park) in the analysis area that will not be treated under the current proposal. It is estimated that there may be up to 400 to 600 acres of additional fuels treatments in the form of prescribed burning and thinning that could be implemented in the vicinity to further reduce the current fire hazard. Any such future proposal would require additional environmental analysis, appropriate documentation and public input/involvement.

To ensure consideration in this process, comments must be submitted within 30 days following the date of publication of the legal notice in the *Jackson County Star*. Please address your comments to Terry DeLay, ID Team Leader, USDA Forest Service, PO Box 249, Saratoga WY 82331. Those commenting should include (1) name, address, telephone number, organization represented, if any, (2) title of the document on which the comment is being submitted, and (3) specific facts and supporting reasons for the Responsible Official to consider. E-mail: [comments-rocky-mountain-medicine-bow-routt-brush-creek-hayden@fs.fed.us](mailto:comments-rocky-mountain-medicine-bow-routt-brush-creek-hayden@fs.fed.us). (Acceptable format for electronic comments: rtf, pdf, word)