

U.S. Department of the Interior
Bureau of Land Management
Little Snake Field Office
455 Emerson Street
Craig, CO 81625-1129

ENVIRONMENTAL ASSESSMENT

EA NUMBER: CO-100-2008- 033-EA

PROJECT NUMBER: EH 36

PROJECT NAME: Blacktail Mountain Prescribed Fire

LEGAL DESCRIPTION: T4N R84W Sections; 19, 20, 29 & 30

APPLICANT: Bureau of Land Management

PLAN CONFORMANCE REVIEW: The Proposed Action and Alternatives are subject to the following plan:

Name of Plan: Little Snake Resource Management Plan and Record of Decision

Date Approved: April 26, 1989,

Name of Plan: Northwest Colorado Fire Management Program Fire Management Plan

Date Approved: Approved annually since 2000.

Results: Little Snake Resource Management Plan and Record of Decision: The treatment area falls within Management Unit 4: Eastern Foothills. The management objectives for this unit, as outlined in the Little Snake Resource Management Plan, are to provide for the development of oil, gas and geothermal resources. The development of other resource uses/values within this unit is allowed consistent with the management objectives for oil, gas, geothermal and forest resources. The proposed action has been reviewed for conformance with this plan (43 CFR 1610.5, BLM 1617.3). The proposed alternatives are in conformance with the objectives of the Little Snake Resource Management Plan.

Northwest Colorado Fire Management Program Fire Management Plan: The proposed action falls within a B1 polygon, Urban-Interface. The vegetation description, as identified in the Fire Management Plan, of this polygon is described as supporting isolated stands of sagebrush, mountain shrub, aspen and rangeland. The resource management objective of the Fire

Management Plan for this fire polygon is to protect big game severe winter range, sage grouse habitat, and potential lynx habitat. In this polygon, fire is desired for habitat improvement and it is recognized as a priority area for hazardous fuels treatments to reduce the risk of urban-interface fires.

NEED FOR PROPOSED ACTION: In accordance with the National Fire Plan of 1999, public land agencies are directed to take actions to reduce hazardous fuels, especially in those areas where communities and human development are at risk from wildfire. The Little Snake Fire Management Plan identifies areas where fuels reduction treatments are desired and needed. The Blacktail Mountain area is surrounded by ranches and residences and is identified as a wildland-urban interface by the Fire Management Plan for the Northwest Colorado Fire Management Program.

PUBLIC SCOPING PROCESS: An information package was sent to citizens that live in the Stagecoach area and to concerned public interest groups. A public meeting was held at the Oak Creek Fire Station in September of 2008 to address additional concerns regarding the project. In addition, this project was posted on the Little Snake Field Office NEPA Log on the internet.

BACKGROUND: Blacktail Mountain is located northeast of Stagecoach Reservoir, approximately 25 miles from Steamboat Springs. Land ownership in the project area is shared by BLM, Colorado State, Upper Yampa Water Conservancy District and private landowners. Colorado state lands are managed by the Colorado Division of Wildlife and is named “Blacktail Conservation Easement State Wildlife Area.” Public access is restricted during winter months (12/1 – 5/31) to protect elk wintering grounds. The area is mapped by the Colorado Division of Wildlife as severe winter range for both mule deer and elk, and as an elk production area. Several private homes are located in close proximity of Blacktail Mountain, including Stagecoach housing development and Sundance Ridge housing development.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES: It is proposed to prescribe burn 915 acres on the southwest side of Blacktail Mountain. Vegetation within the treatment area is predominantly mountain shrub (oakbrush and serviceberry) and sagebrush with a native grass understory. Isolated stands of aspen are located at the northern edge of the treatment area. The objective is to burn 40% to 70% (366-640 acres) of the vegetation within the identified treatment area (see attached map) to create mosaic and edge effects for improved wildlife habitat. Through the use of prescribed fire, sagebrush would be killed, mountain shrub resprouting would be stimulated and grass and forb production would be increased. Natural barriers and environmental conditions would be relied upon to limit fire spread. Burning would take place in the spring, before April 16 in order to avoid conflicts with elk calving season. Hand ignition utilizing drip torches would be utilized.

Project activities would not be permitted during the months of May 15 through July 15 to prevent disturbance to nesting migratory birds.

There is a historic Golden Eagle nest located at the very northern boundary of the project area and measures will need to be taken to avoid disturbing this historic nest site. Prior to burning, a BLM biologist will mark the nest area and appropriate measures will be taken by the BLM fire crew to avoid this area during treatment (i.e. black line or removal of flammable vegetation surrounding the nest site).

Prior to burning, sediment traps would be constructed in select drainages leading to the reservoir and the river to reduce sediments reaching these waters.

In order to ensure healthy regeneration of grass and forbs after the prescribed fire is implemented, the allotment will be required to be rested from livestock grazing until the completion of the second growing season following treatment.

NO ACTION ALTERNATIVE: Under this alternative, hazardous fuel reduction activities would not occur.

AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES/MITIGATION MEASURES

CRITICAL RESOURCES

AIR QUALITY

Affected Environment: All fire activities need to comply with the applicable air quality regulations required by FLPMA and the Clean Air Act. Air quality in the vicinity of the project area is considered to be in compliance with the National Ambient Air Quality Standards. Steamboat Springs, which is located 25 miles to the north was designated a “moderate” non-attainment area for particulate matter (PM10) in 1993, but it has since attained compliance by implementing control measures outlined in a 1996 SIP Element. Subsequently, a PM 10 Redesignation Request and Maintenance Plan for the Steamboat Springs Area was adopted by the Colorado Air Quality Control Commission in 2002 and this plan was approved by the EPA in 2004. The proposed project is within the Steamboat airshed boundary that was identified as the boundary for this maintenance plan. Consultation on this project with Routt County Department of Environmental Health regarding any concerns occurred on 2/13/08. Routt County does not anticipate any exceedance of the particulate matter standards as a result of this project. There are three Class 1 (visibility) areas located in Northwest Colorado. These are the Mt. Zirkel Wilderness 20 miles to the north, the Flat Tops Wilderness 18 miles to the southwest and the Eagles Nest Wilderness 40 miles to the southeast. This prescribed fire would be permitted under the Colorado Air Pollution Control Division, Smoke Management Program and it will be conducted under the conditions of the permit.

Environmental Consequences:

Proposed Action: Prescribed and wildland fires can contribute substantial emissions of air

quality pollutants including particulate matter, volatile organic compounds, and carbon monoxide. Prescribed and wildland fires also reduce visibility and contribute to regional haze. Prescribed fires are typically smaller than uncontrolled wildfires occurring during peak burning conditions. Prescribed fires involve less combustion and less total smoke emissions, since they are typically conducted under conditions when larger fuels (>3" diameter) are not consumed. Prescribed fires are also conducted under atmospheric conditions that would promote air pollutant dispersion. Each prescribed fire must be continually monitored to assure that the burning conditions remain within a previously determined prescription of controlled fire and smoke behavior. Although some impacts to regional air quality would be expected for a very short duration from implementing this project it is generally recognized that overall, impacts would be reduced in the long term by reducing the potential of having an uncontrolled wildfire.

This project is part of a larger ecosystem goal to reintroduce the beneficial effects of fire into the landscape to reduce large areas of continuous fuels. Prescribed fires such as this project are used in conjunction with managed wildfires and mechanical fuel treatments to provide mosaics of small burned and/or treated areas where fuel loading is reduced and not continuous. The treated landscape is expected to be more resistant to a large uncontrolled wildfire because of the discontinuous nature of the fuels in the area. The most effective means of controlling air pollution emissions from forested landscapes is to inhibit large catastrophic fires by using natural managed fires, prescribed fires and mechanical treatments to reduce hazardous fuel loading. Landscapes treated with prescribed fire and other fuel reduction treatments are expected to cause fewer air quality impacts both in the short and the long term because of the incremental reduction of fuels and the periodic release of small amounts of air quality pollutants. Pollutant emissions released at this smaller scale are not expected to cause air quality impairment to urban areas or Class 1 areas, or if they do would be of a much shorter duration. The early spring burn would have less impact on Class 1 airsheds and visibility with visitor use at low levels.

No Action Alternative: The direct environmental consequences associated with this prescribed burn project would obviously be absent in the No Action Alternative and the long term benefits of reducing fuels in this landscape with smaller controlled prescribed burns would be delayed or would not occur. If no action is taken a large scale wildfire could result in a substantial air quality impairment episode that could last several days. Uncontrolled wildfires tend to produce more smoke as a result of more fuel consumption, their larger size, and longer burning duration. A large fire in this area has the potential to cause an exceedance of the particulate matter standard in Steamboat Springs and reduce visibility within the Class 1 areas.

Mitigative Measures: None

Name of specialist and date: Ole Olsen, February 14, 2008

AREA OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: Not Present

Environmental Consequences, both alternatives: Not Applicable

Mitigative Measures: Not Applicable

Name of specialist and date: Rob Schmitzer February 19, 2008

CULTURAL RESOURCES:

Affected Environment: Cultural resources, in this region of Colorado, range from late Paleo-Indian to Historic. For a general understanding of the cultural resources in this area of Colorado, see *An Overview of Prehistoric Cultural Resources, Little Snake Resource Area, Northwestern Colorado*, Bureau of Land Management Colorado, Cultural Resources Series, Number 20, *An Isolated Empire, A History of Northwestern Colorado*, Bureau of Land Management Colorado, Cultural Resource Series, Number 2 and *Colorado Prehistory: A Context for the Northern Colorado River Basin*, Colorado Council of Professional Archaeologists.

Environmental Consequences: The proposed project has not undergone Class III cultural resources survey. This project requires cultural resource inventory to be complete before the action occurs and must be submitted in writing to the project proponent.

The proposed project may not proceed until the cultural resource inventory is completed. Regardless it will require the following standard mitigative measures in place. It may also require other mitigative measures depending on the identification of historic properties.

Mitigative Measures:

The following standard stipulations apply for this project:

1. The operator is responsible for informing all persons who are associated with the operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are encountered or uncovered during any project activities, the operator is to immediately stop activities in the immediate vicinity of the find and immediately contact the authorized officer (AO) at (970) 826-5000.

Within five working days, the AO will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places;
- The mitigation measures the operator will likely have to undertake before the identified area can be used for project activities again; and
- Pursuant to 43 CFR 10.4(g) (Federal Register Notice, Monday, December 4, 1995, Vol. 60, No. 232) the holder of this authorization must notify the AO, by telephone at (970) 826-5000, and with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c)

and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

2. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

Name of specialist and date: Robyn Watkins Morris, February 18, 2009

ENVIRONMENTAL JUSTICE

Affected Environment: The project would not directly affect the social, cultural, or economic well being and health of Native American, minority or low-income populations. The project area is relatively isolated from population centers, so no populations would be affected by physical or socioeconomic impacts from the project.

Environmental Consequences, both alternatives: None

Mitigative Measures: None

Name of Specialist and Date: Louise McMinn, February 14, 2008

FLOOD PLAINS

Affected Environment: The area affected by the prescribed burn treatment would primarily drain to Stagecoach Reservoir, although a small portion on the eastern edge of the proposed burn are on slopes above the Yampa River below the dam. The Yampa River floodplains are on State lands.

Environmental Consequences:

Proposed Action: A half mile of the floodplains along the Yampa River directly below the dam could receive sediments, debris and nutrients from the proposed burn treatment area. However, the potential for substantial amounts is low because of the early spring burn period, low impacts to the soil types on this portion of the project area and the resulting mosaic pattern of burn treatment. It is likely that a buffer strip of vegetation would also be left adjacent to the county road. Unburned areas within the project area, the buffer strip along the road and the inside road ditch would intercept much of the debris and sediment that is carried from the areas that are actually burned.

No Action Alternative: If no action is taken a large scale wildfire could result, which would release sediments, debris and nutrients into the floodplain.

Mitigative Measures: None

Name of specialist and date: Ole Olsen, February 15, 2008

INVASIVE, NONNATIVE SPECIES

Affected Environment: Invasive and noxious weeds are present in the affected area. Hoary Cress (whitetop), houndstongue, dalmation toadflax, yellow toadflax, leafy spurge, oxeye daisy, Canada thistle, musk thistle, bull thistle and other biennial thistles are present in the vicinity of this project. Many dispersal mechanisms that can spread weed seed are present in the project area and include wind, wildlife, livestock and people.

Environmental Consequences:

Proposed Action: The Blacktail Mountain Prescribed Fire would be conducted early in the spring. Part of the prescribed nature of this fire project would be to burn prior to spring green-up. The timing of this fire would reduce the mortality of the herbaceous understory. It is expected that most of the burned area would have adequate herbaceous cover from the residual native plants present in the spring that would prevent heavy growth of invasive annual plants. It is unlikely that the burn would directly lead to an increased potential for biennial and perennial noxious weeds to become established although more use by big game species may increase the potential for them to introduce noxious weed seed. Reducing the brush canopy in the project area will increase the probability that noxious weeds would be detected and reported.

No Action Alternative: Under this alternative there would be no treatments conducted. This would allow buildup of ladder fuels and increase the potential for a wildfire to burn uncontrolled and at a much higher temperature resulting in increased mortality of herbaceous plants and native seed sources present in the soils. An uncontrolled wildfire could result in large burn areas and very high potential for annual invasive species establishment. The resources that would be utilized to control wildfires such as hand lines, dozer lines, and heavy vehicle traffic over disturbed areas all increase the potential for invasive species introduction and establishment.

Mitigative Measures: None

Name of specialist and date: Ole Olsen, February 28, 2008

MIGRATORY BIRDS

Affected Environment: The Blacktail Mountain area provides habitat for a variety of passerine species. The project area is dominated with Gambel Oak, Serviceberry, Chokecherry and Wyoming Big Sagebrush. Isolated stands of aspen are located at the northern edge of the

treatment area.

Environmental Consequences:

Proposed Action: Much of the sagebrush and mountain shrub community in the area has reached climax state and reintroducing fire into the ecosystem should improve the quality of the habitat by stimulating new growth. Burning should also improve habitat diversity by creating a mosaic of vegetation in different seral stages. The area has the potential to be used as both foraging and nesting habitat for neotropical birds and raptors. It is unlikely that there would be any direct take of avian species with this project, as prescribed burns will be conducted in the spring before nesting and in the fall. Common nongame bird species that use the woodlands and sagebrush would lose habitat, but this effect would not be substantial, due to the availability of adjacent habitat. Islands of shrubs that remain intact in the area would still provide some cover and foraging areas for avian species. There is one known historic Golden Eagle nest site at the very northern boundary of the project area and measures needed to protect this nesting site are described in the proposed action. Timing restrictions for nesting migratory birds discussed in the proposed action would eliminate concern for disturbance of nesting raptors or other bird species. Fire escaping into the allowable area may have an effect on wildlife in the area. This would increase the number of acres treated, thus increasing the amount of disturbance to wildlife.

No Action Alternative: Under this alternative, the woodland, shrubland and sagebrush/grassland areas would continue to exist in its climax stage. These areas, in its climax stage, are susceptible to disease and there is a potential for large catastrophic wildfires. If this area becomes susceptible to either disease or a large stand replacement wildfire, the migratory bird habitat would be degraded if not destroyed entirely until the area could recover. The decadent age class of the project area does not promote new growth and healthy vigor among plants and trees, which would eventually decrease the quality of habitat for migratory birds.

Mitigative Measures: None.

Name of specialist and date: Gail Martinez, April 21, 2008

NATIVE AMERICAN RELIGIOUS CONCERNS

A letter was sent to the Uinta and Ouray Tribal Council, Southern Ute Tribal Council, Ute Mountain Ute Tribal Council on May 5, 2008. The letter listed the FY08 and FY09 projects that the BLM would notify them on and projects that would not require notification. A followup phone call was performed on June 16, 2008. No comments were received (Letter on file at the Little Snake Field Office). This project requires no additional notification.

Name of specialist and date: Robyn Watkins Morris February 18, 2009

PRIME & UNIQUE FARMLANDS

Affected Environment: No Prime and/or Unique Farmlands are present in the vicinity of the proposed project.

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Ole Olsen, February 15, 2008

T&E AND SENSITIVE ANIMALS

Affected Environment: The project area provides overall habitat for the Columbian sharp-tailed grouse, a BLM sensitive species.

Environmental Consequences, Proposed Action: Much of the mountain shrub community in the area has reached climax state and reintroducing fire into the ecosystem should improve the quality of the habitat by stimulating new growth. The project area is on the fringe of suitable habitat for the Columbian sharp-tailed grouse. The nesting season for Columbian sharp-tailed grouse in this area is from early May to mid-July. The proposed action will take place no later than April 16 to avoid conflicts with elk calving season, thus avoiding the nesting period for Columbian sharp-tailed grouse. The proposed action will decrease the amount of habitat available for Columbian sharp-tailed grouse in the immediate area temporarily, but this effect would not be substantial, due to the availability of adjacent habitat. Islands of shrubs that remain intact in the area would still provide cover and forage for any animals in the area.

No Action Alternative: Under this alternative, the woodland, shrubland and sagebrush/grassland areas would continue to exist in its climax stage. These areas, in its climax stage, are susceptible to disease and there is a potential for large catastrophic wildfires. If this area becomes susceptible to either disease or a large stand replacement wildfire, the Columbian sharp-tailed grouse habitat would be degraded if not destroyed entirely until the area could recover. The decadent age class of the project area does not promote new growth and healthy vigor among plants and trees, which would eventually decrease the quality of habitat for Columbian sharp-tailed grouse.

Mitigative Measures: None

Name of specialist and date: Gail Martinez, April 21, 2008

T&E AND SENSITIVE PLANTS

Affected Environment: There are no federally listed threatened or endangered or BLM sensitive plant species within or in the vicinity of the proposed project.

Environmental Consequences, all alternatives: None

Mitigative Measures: None

Name of specialist and date: Hunter Seim, February 13, 2008

WASTES, HAZARDOUS OR SOLID

Affected Environment: The areas proposed for project construction are remote areas that have little influence from human activity. Currently, there are no hazardous materials present within or in the vicinity of any of the four proposed project areas.

Environmental Consequences:

Proposed Action: Heavy equipment, pickup trucks, ATVs, and other support vehicles would be present during project activities. Fuel, oil, and coolant are potential hazardous materials that could be introduced to the project vicinity. If a release does occur, the environment affected would be dependent on the nature and volume of material released. If there are no releases, there would be no impact on the environment. Consequences would be dependent on the volume and nature of the material released. In most every situation involving hazardous materials, there are ways to remediate the area that has been contaminated. Short-term consequences would occur, but they can be remedied, and long-term impacts would be minimal.

No Action Alternative: There would be no impacts under the No Action Alternative as no construction activities would occur.

Mitigative Measures: None

Name of specialist and date: Gail Martinez, April 21, 2008

WATER QUALITY – GROUND

Affected Environment: Quaternary alluvium and vegetation potentially covering Cretaceous Mancos Shale aged shale and other middle Cretaceous bedrock consisting of sandstone interbedded with shale and possibly ash-beds.

Environmental Consequences:

Proposed Action: An increase in sediment after the burn is possible where Mancos Shale is exposed at the surface, should heavy rainfall occur prior to re-vegetation.

No Action Alternative: The prescribed burn would not occur, therefore ground water quality would not be affected.

Mitigative Measures: None.

Name of specialist and date: Marilyn D. Wegweiser, February 19, 2008

WATER QUALITY - SURFACE

Affected Environment: Stagecoach Reservoir is downslope of the project area except for a small portion of State and private lands on the eastern end that could contribute runoff waters to a segment of the Yampa River below the dam. Stagecoach Reservoir is listed on the 2008 Monitoring and Evaluation List for suspected impairment due to low Dissolved Oxygen (DO) levels. DO levels become a problem in Stagecoach Reservoir in late June or July when a hard thermocline sets up for the remainder of the hot season at a depth of 18 to 20-feet. Dissolved oxygen levels below the thermocline are reduced substantially and the waters become inhabitable for many fish populations.

The western end of the project area includes a steep ephemeral draw which collects runoff from westerly and easterly facing slopes on private lands. Runoff drainage from the project area would not likely drain directly to the reservoir because an improved county road runs directly below the entire area of the proposed burn with an inside drainage ditch. It is probable that a few culverts drain the inside ditch to the reservoir.

Environmental Consequences:

Proposed Action: The proposed action could have some short term effects to the water quality of Stagecoach Reservoir, including floating debris that may result from runoff waters. The degree of this impact would depend on the intensity of the burn and the weather conditions following the burn. However, the expected impacts are considered to be minimal due to the time of year that the burn would occur and due to the pattern and area of the proposed burn. The largest potential for impacts would be with an intense rainstorm that generates extreme runoff conditions within the first few weeks following the prescribed fire. After this period passes the residual herbaceous vegetation should break dormancy and quickly provide soil cover to reduce the impact of rain drops and slow runoff. As the residual vegetation grows the potential for excess sediments and nutrients in runoff water should diminish. The proposed fires would be ignited under prescribed (or favorable) conditions and would be expected to be of varying intensities creating a mosaic burn pattern. The mosaic pattern of the burn, leaving 30 to 60 percent of the area unburned would help buffer and dissipate the effect of surface runoff, keeping sediment and nutrient yields from increasing to harmful levels. Much of the potential contaminated runoff that could reach the reservoir would be in the first few months following the burn, therefore it would precede the period when the thermocline typically develops.

However, some increased amount of sediment, nitrogen, phosphorous, and cations are likely

to be carried by runoff water downslope of the burned areas. Sediment and nutrient transport to waters in Stagecoach Reservoir would be reduced and possibly totally mitigated by the presence of the improved road with the inside drainage ditch potentially trapping most of the sediment and debris that could be carried from the burned area. The effectiveness of the road ditch for retaining runoff water contaminants would be reduced with increasingly intense precipitation and runoff events. In the event that the prescribed burn is more intense than anticipated and adverse effects to the residual vegetation and soils is pronounced, silt fences or barriers could be installed to reduce the amount of sediment and debris that is carried towards the reservoir; floating booms installed in areas where runoff water enters the reservoir would also contain some of the debris. It would be recommended to avoid burning in the draw and the slopes immediately adjacent to it in the eastern portion of the project area. This would also reduce the amount of sediment, nutrients and debris that could wash into the reservoir.

No Action Alternative: No direct effects on water quality are anticipated from selecting the No Action Alternative. Indirect negative effects could result in the short or long term period following no action, if a large wildfire occurred in the area. In this event, substantially more sediment and nutrient loading of runoff waters would likely occur, it would be derived from a larger and more continuous burned area and it would likely occur when fish populations are relying on the upper 20-foot depths of the reservoir for habitat. The fire severity would likely cause much more understory plant mortality and more adverse effects to the soil resource. Organic matter consumption would result in readily available sources of nutrients (nitrogen and phosphorus) that if carried to the reservoir could increase eutrophication. Water quality impacts to Stagecoach Reservoir from a large wildfire could increase the potential for having dissolved oxygen impairment in the epilimnion during the hot season after a hard thermocline has established.

Mitigative Measures: Avoid the draw on private lands on the eastern end of the project area with direct burning activities. Maintain a 100-foot buffer along the slopes flanking the draw.

In the event that the prescribed burn is more intense than anticipated and adverse effects to the residual vegetation and soils is pronounced, silt fences or barriers should be installed to reduce the amount of sediment and debris that is carried towards the reservoir; floating booms installed in areas where runoff water enters the reservoir should be employed to contain some of the floating debris.

Name of specialist and date: Ole Olsen, April 2, 2008

WETLANDS/RIPARIAN ZONES

Affected Environment: No riparian systems are known to be present on the BLM lands included in this prescribed burn.

Environmental Consequences, both alternatives: None

Mitigative Measures: None

Name of specialist and date: Ole Olsen, February 15, 2008

WILD & SCENIC RIVERS

Affected Environment: Not Present

Environmental Consequences, both alternatives: Not Applicable

Mitigative Measures: Not Applicable

Name of specialist and date: Rob Schmitzer , February 19, 2008

WSAs, WILDERNESS CHARACTERISTICS

Affected Environment: Not Present

Environmental Consequences, both alternatives: Not Applicable

Mitigative Measures: Not Applicable

Name of specialist and date: Rob Schmitzer , February 19, 2008

NON-CRITICAL ELEMENTS

SOILS

Affected Environment: On BLM lands the soils that are mapped on the higher southerly slopes of Blacktail Mountain and the area they occupy in descending order are: Samrock gravelly loam, 3 to 25 percent slopes, very stony; Lintim loam, 3 to 12 percent slopes; Slater-Routt complex, 5 to 25 percent slopes, stony; Peeler-Pagosa complex, 30 to 65 percent slopes; and Namela-Rogert complex, 35 to 80 percent slopes, very stony. These soils continue onto the State and private lands with the Samrock gravelly loam soil still representing the largest area within the proposed burn. Additional soils are mapped on State and private lands within the project area and of these the Rabbitears loam, 12 to 25 percent slopes, Quander very stony loam, moist, 25 to 65 percent slopes, Routt loam, warm, 25 to 65 percent slopes and Foidel loam, 15 to 25 percent slopes cover most of the remaining project area on the western end. The Quander and Routt soils appear to have the most continuous and heaviest fuel loading on the westerly facing slopes flanking the unnamed draw in the western portion of the project area.

The potential for damage by wildfire or prescribed burns is rated low for the larger areas of the project in the Samrock, Lintim, Slater and Routt soils and moderate for the Peeler-Pagosa, Namela-Rogert and Quander soils. A small horseshoe shaped band of soils mapped as

Cryoborolls, cryorthents soils, rock outcrop, 25 to 99 percent slopes has a high rating for potential damage by fire; this is probably due to the shallow to moderate depths of this variable soil, as well as the slopes on which they can occur. This soil type is located on State lands just above the road and the reservoir in the SW quarter of section 29. One additional soil mapped as the Fluvance-Dorpat complex, 3 to 25 percent slopes, very stony is also rated high for potential damage by fire. This small area of soils occurs on the higher slopes along the northwestern edge of the project area and has a surface layer of slightly decomposed plant material; the Quander and Routt soils also have this surface layer characteristic. These ratings are based on the potential for damage to nutrient, physical and biotic soil characteristics if fire is intense enough to remove the duff layer and consume the organic matter in the surface soils. Except for the Cryoborolls-Cryorthents soils which have shallow to moderate depths and the Namela-Rogert soils that are moderately deep all of the other soils have deep soil profiles. The shallow to moderately deep soils also have an erosion hazard characterized as very severe and the remaining soils are characterized as moderate to severe. These erosion characteristics are reflective of 50 to 75 percent of the soil surface being exposed by some sort of disturbance and are largely determined by slope.

Environmental Consequences:

Proposed Action: The effects of prescribed burning on soils is directly related to the depth and intensity of soil heating, the consumption of soil organic matter by fire as well as vegetation removal which exposes the soil surface to the impacts of raindrops and wind and water erosion. Depending on the temperature and depth of soil heating varying degrees of soil microbe losses and nitrogen volatilization can occur. As the adverse impacts to these factors increase it generally equates to an increase in the fire severity that occurs, requiring a longer period of time for these soil characteristics to become reestablished. This prescribed burn project would be conducted in the early spring when soils are wet and vegetation is still dormant. The level of soil moisture that is expected to be present would be capable of absorbing some of the heat energy and reducing the fire severity of the prescribed burn on soil organic matter, thus mitigating fire damage (or severity) on soils with a moderate and high rating for potential damage. Although moderate to heavy fuel loading is present throughout the project area especially on the higher slopes on the western end, the discontinuous burn pattern and the soil moisture levels should ameliorate many of the adverse effects. The fire intensity that is anticipated to occur throughout the project area is not expected to cause significant mortality of the dormant perennial grasses and forbs. If mortality of the herbaceous vegetation occurs some increase in soil erosion for one to two growing seasons may result; however herbaceous vegetation cover should increase above pre-burn levels after two to three years thereby increasing soil stability and infiltration and reducing soil erosion.

Small areas within the project area have a greater potential to experience moderate to high fire severity but this would be variable and dispersed. Fire in the heavier fuels found on the Quander and Routt soils may result in moderate or high severity and adversely affect soils for a longer duration. This is due to generally steeper slopes, lower composition of perennial forbs and grasses, duff surface layer and moderate to heavy fuels. Mortality of the residual vegetation

and soil microbes may be greater. It might be two or three years before adequate herbaceous vegetation is established to reduce erosion to pre-burn conditions. Although the prescribed fire treatment is likely to increase soil erosion from the project area in the short term it is considered to be at an acceptable level compared to soil erosion that would inevitably occur with a large intensely burning wildfire.

No Action Alternative: No direct impacts to the soil resource would occur if no actions are implemented. However, the threat of a larger more intense fire occurring under extremely dry conditions exists if fuel reduction treatments are not implemented. The scale and duration of adverse soil effects would be much higher under the extreme burning conditions that exist for large fire occurrence. The fire severity would cause much more understory plant mortality, consume soil organic matter and higher soil temperatures would increase losses of nitrogen by volatilization. Although increases of available nutrients from the consumption of organic matter would promote plant growth in the short term nutrient deficiencies could result in the long term. Suppression activities would cause additional soil disturbances affecting surface flow patterns and causing additional soil erosion. Additional funds would likely be needed to buy seed and have it applied on some areas where mortality of the understory vegetation occurs.

Mitigative Measures: None

Name of specialist and date: Ole Olsen, April 10, 2008

UPLAND VEGETATION

Affected Environment: The area of the Proposed Action consists primarily of a mountain shrub community. Plant composition within the area includes Gambel oak (*Quercus gambelii*), serviceberry (*Amelanchier alnifolia*), chokecherry (*Prunus virginiana*), Wyoming big sagebrush (*Artemisia tridentata wyomingensis*), lupine (*Lupinus* spp.), common yarrow (*Achillea millefolium*), alpine timothy (*Phleum alpinum*), mountain brome (*Bromus marginatus*), bluegrass (*Poa* spp.), tall larkspur (*Delphinium exaltatum*), sedges (*Carex* spp.), purple aster (*Symphyotrichum patens*), and quaking aspen (*Populus tremuloides*). The precipitation (average ~24") and cool growing season contribute to the plant community in this area being vigorous and productive. Many of the plant species found in the proposed area of treatment are tolerant of fire.

Environmental Consequences:

Proposed Action: The Proposed Action would improve plant diversity by reducing the sagebrush component and increasing the re-sprouting of shrubs such as Gambel Oak, serviceberry and chokecherry. In this type of a fire the shrub species would be top killed and larger branches would survive the fire. Fire would make these shrubs more accessible to browsing animals by lowering the height of palatable growth. Removal of a portion of the sagebrush component would create additional resources (light, water, and nutrients) to become available to grasses and forbs in the understory. As a result, the grass and forb component of the community would colonize the interspaces and increase in production. This would decrease soil

erosion and increase sediment holding capabilities. Additionally, the burning of vegetative litter through a prescribed burn would accelerate the nutrient cycling within the plant community

The proposed burn objective of 40-70% would improve the age class distribution of the vegetation. A mosaic type burn, as proposed, is most preferable for increasing the age and species diversity of a site. Sagebrush is susceptible to kill by fire while many forbs, grasses, and shrubs are only slightly damaged or relatively unharmed. Over time (10-20 years) the sagebrush would begin to reestablish. This treatment would improve the ability of the site to produce usable forage for livestock and wildlife.

The productivity of this site also creates a large fuel load increasing the potential for large, uncontrolled natural fires that would impact human activities and dwellings in the area. The Proposed Action would reduce the available fuel to sustain such a fire and provide a measure of protection to the urban interaction in this area.

No Action Alternative: Under this alternative, sagebrush would continue to occupy and encroach into the area reducing total production and diversity of the plant community. Elevated levels of sediment release into the watershed would continue to be possible. Fuel loads would continue to accumulate and increase the risk for catastrophic wildfires.

Mitigative Measures: None

Name of specialist and date: Christina Rhyne, February 15, 2008

FORESTRY

Affected Environment: There are no commercially viable tree stands present; however scattered aspen groves are present at the higher elevations of the project area and on northerly aspects. Most stands are in a declining state due to lack of disturbance and heavy browsing.

Environmental Consequences:

Proposed Action: Due to the spring timing of the prescribed burn, only small areas of aspen are expected to burn. This is a result of the shading and higher moisture associated with the tree understory. If areas of aspen were to burn, some of the older trees and trees with high accumulations of surface fuels nearby would be top-killed. This has the affect of stimulating new sprouting from the roots. In most cases, aspen is a disturbance dependent species and requires fire or other physical disturbances in order to perpetuate itself.

No Action Alternative: In the absence of disturbance, aspen stands would continue their slow decline in extent and health. Moister sites would likely see some invasion of subalpine fir over time.

Mitigative Measures: None

Name of specialist and date: Dale Beckerman, March 3, 2008

RANGE MANAGEMENT

Affected Environment: The proposed treatment area includes the South Blacktail Mountain Allotment #4180. This allotment is permitted for 91 AUMs of cattle use from May 1st through September 30th. The allotment is grazed through the first part of the summer and then the cattle are pushed up onto National Forest property. In late summer the cattle are again trailed back down through the allotment. There are no existing BLM range improvement projects on the public land parcels in this allotment in the area of the Proposed Action.

Environmental Consequences, Proposed Action: The inclusion of a two year growing season rest in the Proposed Action would require the permittee to modify grazing use of this allotment for the time period following the burn. This would impose a low level of temporary hardship on the permittee to find an alternate grazing source or to modify current use of the allotment. Following assessment of successful vegetation recovery after the deferment period, grazing could resume as permitted in the lease alleviating this hardship.

Environmental Consequences, No Action Alternative: There would be no impact to grazing operations or improvements under this alternative.

Mitigative Measures: None

Name of specialist and date: Christina Rhyne, February 15, 2008

AQUATIC WILDLIFE

Affected Environment:

The area surrounding the Blacktail Mountain Prescribed Fire is a valuable recreational fishery. Stagecoach Reservoir and the Yampa River tailwater below the Stagecoach Dam contain a variety of trout species including rainbow trout, brook trout, brown trout. Rainbow trout in this area are of a Whirling Disease (WD) resistant strain that the CDOW has stocked in the area as part of a high profile research study. Mountain whitefish, white sucker, sculpin, and northern pike are also found in these waters.

Environmental Consequences:

Proposed Action: The Proposed Action to treat 40 % to 70 % of the 915 acre project area with a prescribed burn in the spring may have some short-term (less than 2 years) impacts on the fishery resources in Stagecoach Reservoir and the Yampa River below Stagecoach Dam. Impacts would primarily be to salmonid species and sculpin within the river segment below Stagecoach Reservoir. White suckers and northern pike would be minimally affected. It is recognized that

uplands may be devoid of vegetation for a short time until grass and forb species resprout. It is anticipated that revegetation would occur quickly post fire and provide for good ground cover to help stabilize soils and reduce erosion potential. Erosion concerns would be centered on areas with steep slopes during spring snowmelt periods, or short-term high intensity thunderstorm activity.

Potential impacts include increased sediment loading in Stagecoach Reservoir and the Yampa River. Increased sediments can impact salmonid species and sculpin by silting in important habitats. Since the burn is planned for the spring, resident rainbow trout, and mottled sculpin could be impacted as these species are spring spawning fish. Increased sediment can impact spawning habitats by covering clean gravels and smothering eggs and/or fry which would reduce fish productivity.

Increased sediments can also impact salmonids by silting in pool habitats which reduces depth and usability. Pools are important as seasonal thermal refuges and overwinter holding habitats. Sediment can also fill in the interstitial spaces between stream substrates and reduce aquatic insect productivity. This can result in reduced food sources for fish, bats, and some bird species. The proposed prescribed burn may increase sediment slightly. Increased sediment loads required to cause these impacts are not expected as a result of the proposed prescribed burn. These types of impacts are more likely to occur after a severe wildfire. To help minimize sediment impacts, silt traps could be constructed prior to completion of burning activities in critical areas to reduce the potential of sediments reaching the reservoir and the river. It is believed that Rout County Road 18 and the upland areas between the county road and the reservoir will serve as a buffer to reduce potential impacts associated with sediments. The tailwater section has a similar buffer in place but may not be as effective. This would be the most likely location to see impacts from sedimentation.

In addition to sediment, the proposed action could result in slight short-term increases in water temperature in the Yampa River. The potential for this to occur as a result of the prescribed burn is lower than what could occur as a result of a severe wildfire. Higher water temperatures could increase the metabolic rate of the cold-blooded fish. This in turn would increase the fishes need for oxygen, as well as food resources, which as discussed above, could be slightly reduced due to sediments. Increased temperatures would likely be very site specific and minimal given the high spring mixing flows associated with snow melt. In addition, the occurrence of high spring flows at the same time as the burn would help to scour and move sediments through the system distributing it downstream which would reduce negative impacts to resident fish. Treating the project area as a prescribed burn would reduce intensity of the fire relative to a hot season wildfire. This would minimize the described impacts compared to a wildfire in terms of overall fire size and intensity. The reduction in fuels resulting from the prescribed burn would minimize chances of a catastrophic wildfire that could be really damaging to the fisheries.

No Action Alternative: The No Action Alternative would not allow for the reduction in fuel loads. This would leave the project area susceptible to a large catastrophic wildfire that would increase potential impacts to aquatic resources.

Mitigative Measures: Prior to burning, construct sediment traps in select drainages leading to the reservoir and the river to reduce sediments reaching these waters.

Name of specialist and date: Timothy Novotny, February 9, 2009

WILDLIFE, TERRESTRIAL

Affected Environment: The Blacktail Mountain area is an area rich in vegetation and wildlife. The area provides habitat for mule deer, elk, black bear, mountain lion and blue grouse. It is also used by raptors and small non game birds and mammals. The project area is dominated with Gambel Oak, Serviceberry, Chokecherry and Wyoming Big Sagebrush. Isolated stands of aspen are located at the northern edge of the treatment area. The southern ½ of the project area is mapped by the Colorado Division of Wildlife as Elk Severe Winter range and the northern ½ is mapped by the CDOW as an elk-calving area.

Environmental Consequences:

Proposed action: The mountain shrub communities of the Blacktail Mountain area provide habitat for a variety of wildlife species. Much of the serviceberry in the area has reached climax state and reintroducing fire into the ecosystem should improve the quality of the habitat by stimulating new growth. Burning should also improve habitat diversity by creating a mosaic of vegetation in different seral stages. Common non-game bird species and small mammals that use the mountain shrub community and sagebrush would lose habitat, but this effect would not be substantial. Islands of shrubs that remain intact in the area would still provide some cover and foraging areas for these species. The northern 1/2 of the project area is mapped as elk production area. Activity in the area could have an impact on these elk, but mitigation measures will minimize this impact. Burns conducted in the fall may conflict with the big game hunting season in the area.

No Action Alternative: There would be no direct impact to wildlife if no treatments are done, however the threat of large wildfires occurring under dry conditions exists if nothing is done. The impacts to wildlife will be greater if a catastrophic wildfire burns large areas.

Mitigative Measures: See proposed action.

Name of specialist and date: Gail E. Martinez, April 21, 2008

OTHER NON-CRITICAL ELEMENTS: For the following elements, those brought forward for analysis will be formatted as shown above.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Fluid Minerals		MDW 02/19/08	
Forest Management			DB 3/3/08
Hydrology/Ground		MDW 2/19/08	
Hydrology/Surface		OO 2/28/08 discussed in Water Quality	
Paleontology		MDW 02/19/08	
Range Management			CR 2/15/08
Realty Authorizations	LM 2/14/08		
Recreation/Travel Mgmt		RS 2/19/08	
Socio-Economics		LM 2/14/08	
Solid Minerals		JAM 2/11/08	
Visual Resources		RS 2/19/08	
Wild Horse & Burro Mgmt	KM 2/15/08		

CUMULATIVE IMPACTS SUMMARY:

STANDARDS

PLANT AND ANIMAL COMMUNITY (animal) STANDARD:

Proposed Action: The standard is being met within the South Blacktail Allotment. The Proposed Action would continue to meet this standard as well as increase the diversity and habitat structure of the animal community. The greater potential under this alternative for creating landscapes composed of several plant communities that vary in successional stages and patterns would contribute to meeting this standard.

No Action Alternative: The alternative to not do any fuel reductions in the project area is less likely to meet this standard on a landscape basis. Without treatment, there would be fewer age classes and successional stages across the landscape, which would reduce vegetation and animal diversity. Allowing the vegetation across large areas to become old and decadent reduces the health and vigor of plants as well as their reproductive capability. It also promotes large, even-aged stands of vegetation that are more prone to large catastrophic wildfires.

Name of specialist and date: Gail Martinez, April 21, 2008

**SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (animal)
STANDARD:**

The project area provides overall habitat for the Columbian sharp-tailed grouse, a BLM sensitive species. The proposed action may result in a short-term loss of habitat or displacement of individuals but would not appreciably impact the stability or growth of special status species' populations. When assessed in 2005, the South Blacktail Allotment was meeting the standard for healthy, stable, and increasing populations of sensitive and protected species. The project area will continue to meet this standard once the proposed action is implemented. The No Action Alternative would meet this standard as BLM sensitive species animals would not be affected as a result of this project.

Name of specialist and date: Gail Martinez, April 21, 2008

PLANT AND ANIMAL COMMUNITY (plant) STANDARD:

This standard is being met within the South Blacktail Allotment. The allotment contains healthy, diverse, native plant communities. The present plant communities are vigorous and productive. The Proposed Action would continue to meet this standard as well as increase the diversity and habitat structure of the vegetative community.

The No Action alternative would not increase the diversity or structure of the plant community and would continue to accumulate vegetative litter that could potentially fuel a wildfire. Over time, as the plant community became more dominated by sagebrush, the monoculture would lead to decreased productivity and vigor. Under this alternative the standard would eventually not be met.

Name of specialist and date: Christina Rhyne, February 19, 2008

**SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (plant)
STANDARD:**

There are no federally listed threatened or endangered or BLM sensitive plant species within or in the vicinity of the proposed project. For plants, this standard does not apply.

Name of specialist and date: Hunter Seim, February 13, 2008

RIPARIAN SYSTEMS STANDARD:

No riparian system is known to occur on the public lands in the project area. This standard does not apply.

Name of specialist and date: Ole Olsen, February 15, 2008

WATER QUALITY STANDARD:

Proposed Action: The water quality standard for healthy rangelands is met with the selection of either alternative. The water quality of the Yampa River segment below Stagecoach Reservoir and the water quality of Stagecoach Reservoir are presently supporting the designated uses that are classified for these water bodies. The effect of the proposed action on the water quality of Stagecoach Reservoir is expected to be minor and short term. Several fire control measures will be followed with the prescribed burn and the burn would be limited to 40 to 70 percent of the area. The road ditch that could intercept sediment and debris from the burned areas provides additional runoff control. Avoiding the draw with direct burning activities on the western end of the project area will greatly reduce the potential for excessive sediments to reach Stagecoach Reservoir. In the long term the proposed action would have a positive impact to water quality. This would be because of the decreased potential of experiencing a large scale wildfire and the expected increase in plant diversity and ground cover, resulting from the planned treatments.

Water quality would remain unchanged under the No Action Alternative. Not reducing the fuel loading by prescribed fire may someday result in a larger intense wildfire having much greater adverse impacts to the soil resource, resulting in more sedimentation and nutrient contamination of reservoir waters. This could lead to more dissolved oxygen impairment during the summer when fish populations are confined to a relatively shallow epilimnion.

Name of specialist and date: Ole Olsen, April 2, 2008

UPLAND SOILS STANDARD:

Proposed Action: The uplands soil standard for healthy rangelands is met for the Proposed Action and No Action Alternatives. If the proposed burn is implemented as prescribed minor adverse impacts to the soil resource would be expected over the majority of the project area. Existing herbaceous vegetation will break dormancy or re-sprout following the burn and begin to immediately cover the soils. The increased nutrients and greatly reduced canopy will enhance the production of the soil covering vegetation and the finer litter component will be easily decomposed and incorporated into the soil for nutrient cycling. The fire severity in some areas could result in mortality of the existing vegetation and some adverse effects to the soil resource could occur but this should be confined to small areas that would be colonized by adjacent vegetation.

Upland soil health would remain unchanged under the No Action Alternative. However, this could change if a large wildfire occurs when soil conditions are not favorable for reducing fire severity. Since fire is a natural component of the ecosystem and it can have very devastating effects over thousands of acres under extreme conditions it is desirable to reduce the potential for this to occur, by implementing smaller prescribed burns as proposed.

Name of specialist and date: Ole Olsen, April 10, 2008

PERSONS/AGENCIES CONSULTED: Uintah and Ouray Tribal Council, Colorado Native American Commission, Colorado State Historic Preservation Office.

ATTACHMENTS: Map located on page 25

SIGNATURE OF PREPARER:

DATE SIGNED:

SIGNATURE OF ENVIRONMENTAL REVIEWER:

DATE SIGNED:

Finding of No Significant Impact

The environmental assessment, analyzing the environmental effects of the proposed action, has been reviewed. With the implementation of the attached mitigation measures there is a finding of no significant impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

1. Beneficial, adverse, direct, indirect, and cumulative environmental impacts have been disclosed in the EA. Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests or the locality. The physical and biological effects are limited to the Little Snake Resource Area and adjacent land.
2. Public health and safety would not be adversely impacted. There are no known or anticipated concerns with project waste or hazardous materials.
3. There would be no adverse impacts to regional or local air quality, prime or unique farmlands, known paleontological resources on public land within the area, wetlands, floodplain, areas with unique characteristics, ecologically critical areas or designated Areas of Critical Environmental Concern.
4. There are no highly controversial effects on the environment.
5. There are no effects that are highly uncertain or involve unique or unknown risk. Sufficient information on risk is available based on information in the EA and other past actions of a similar nature.
6. This alternative does not set a precedent for other actions that may be implemented in the future to meet the goals and objectives of adopted Federal, State or local natural resource related plans, policies or programs.
7. No cumulative impacts related to other actions that would have a significant adverse impact were identified or are anticipated.
8. Based on previous and ongoing cultural surveys, and through mitigation by avoidance, no adverse impacts to cultural resources were identified or anticipated. There are no known American Indian religious concerns or persons or groups who might be disproportionately and adversely affected as anticipated by the Environmental Justice Policy.
9. No adverse impacts to any threatened or endangered species or their habitat that was determined to be critical under the Endangered Species Act were identified. If, at a future time, there could be the potential for adverse impacts, treatments would be modified or mitigated not to have an adverse effect or new analysis would be conducted.
10. This alternative is in compliance with relevant Federal, State, and local laws, regulations, and requirements for the protection of the environment.

SIGNATURE OF AUTHORIZED OFFICIAL:

DATE SIGNED:

Legend

-  Blacktail Prescribed Fire
-  Stagecoach Lake

Blacktail Mountain Prescribed Fire

915 acres

Location: T4 N R 84 W
Sections: 19, 20, 29 & 30

