

U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E Market St
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-2008-037-EA

CASEFILE/PROJECT NUMBER: CO-937-2824-JW-EQ16

PROJECT NAME: East Jordan Prescribed Fire Project

LEGAL DESCRIPTION: T2N R95W Sec. 10, 15, 16, 21, 22, 23, 27, 28

APPLICANT: USDI, Bureau of Land Management - White River Field Office

ISSUES AND CONCERNS: Conduct a prescribed fire project utilizing aerial ignition within the Windy Gulch Wilderness Study Area (WSA).

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: Rio Blanco County (RBC) is among the top three counties in Colorado for probability of wildfire (Neuenschwander et al. 2000). As part of an emergency preparedness review, RBC evaluated risk of wildland fire through geographic information systems (GIS) analysis. This analysis identified the town of Meeker, CO and surrounding area as having a moderate fire hazard due to slopes and the fuels present on those slopes. Based on this assessment the Rio Blanco County Wildland Fire Management plan has identified the community of Meeker and surrounding area, including the RBC road 7 corridor, as wildland urban interface (WUI) (RBC Wildland Fire Management Plan – Revision D, October 2006) as directed in the Healthy Forest Restoration Act of 2004.

The project area is approximately 8 miles northwest of Meeker, Colorado in the East Jordan and West Jordan drainages located in the Windy Gulch WSA. The fuels in this area have the potential to allow fire to make substantial runs resulting in large amounts of acreage burned, as exhibited by the 2005 Pack Trail Wildland Fire Use (WFU) Complex. The Pack Trail WFU Complex resulted in 3,248 acres burned, including 1,486 acres of BLM land and 1,762 acres of private land. The proximity to private land coupled with the amount of flashy fuels increased the complexity of the incident and the resulting cost. As a direct result of this information the WFU management team recommended to Managers to consider conducting fuels treatments along the boundary of BLM in the area of the Windy Gulch and Black Mountain WSA's.

Proposed Action: The Bureau of Land Management (BLM) is proposing to conduct a 1,800 acre prescribed burn in the Windy Gulch WSA. The East Jordan and West Jordan drainages are the target areas within a 7,200 acre maximum manageable area (MMA). The MMA is the surrounding area where ignition is not planned but in the event fire should spread into this area it will be allowed to burn under specified conditions before being declared a wildfire. In the event that fire should spread from the target area into the MMA, the burn boss, holding specialist, and resource advisor will determine if suppression actions are warranted (subject to resource and suppression constraints identified in the White River Fire Management Plan). Checking actions will be taken where appropriate based on fire behavior and taking into consideration the location within the WSA. Further criteria may be identified by the prescribed fire plan.

The objective of this project is to reduce fuel loading and break up fuel continuity to reduce fire behavior and decrease the probability that a fire will impact private lands adjacent to Windy Gulch WSA. This will be a spring burn concentrating on the south and west facing slopes utilizing the east and north facing slopes as a control feature as they hold snow and moisture longer in the spring time.

Aerial ignition, by heli-torch or plastic sphere dispenser (PSD), will be used to reduce the amount of personnel needed, traffic within the surrounding private property and the logistics involved. The hazardous fuels objectives would be met by reducing the amount of live and dead fuel accumulation in Gambel oak, mountain big sagebrush, serviceberry, snowberry and Pinion-Juniper (P/J) thru a mosaic pattern. A minimum mortality of 60% in the brush types is required to adequately break up the fuel continuity. Ignition will be concentrated in the brush species and in areas where there is encroaching P/J, as directed in the 1999 Fire Management Plan environmental assessment (EA) (WR-99-099-EA). Points of ignition will not occur in locations where continuous Douglas fir stands may be threatened in order to preserve them as well as to promote a mosaic pattern of vegetation to achieve a younger age class of shrubs for big game, as stated in the WR-99-099-EA and the Northwest Colorado Fire Management Unit Fire Plan. This will result in a lower intensity wildfire in the event one should occur as compared to the current condition.

A notification letter will be mailed to all adjacent private land owners along the proposed project area identifying the project and giving an office contact for future questions. Public notifications will be conducted via radio and news paper prior to ignitions. The public notices will provide information about the project such as location and approximate time of project implementation. If needed, signs will be posted along Highway 64 and RBC road 7 for general public information. Additional notifications may be included in the burn plan.

All prescribed fire will be conducted in accordance with the State of Colorado Smoke Management Plan and Memorandum of Understanding (MOU), and will be regulated under Colorado Department of Public Health and Environment, Air Pollution Control Division, approved open burning permits, which must be issued in advance of the fire.

Mitigation:

1. The burn boss is responsible for informing all persons who are associated with the project

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 uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). 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 site can be used (assuming in situ preservation is not necessary)
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

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 cost. The AO will provide technical and procedural guidance 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.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, 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.

3. The area on the east, uphill side of the cabin remains should be brushed out for a break in the aerial and ground fuels that might endanger the cabin should the fire escape the prescribed burn area.

4. BLM personnel will apply herbicide to the two known infestations of Scotch thistle and musk thistle present in the drainage bottom in sections 10 and 15 in East Jordan Gulch as well as any additional infestations discovered any where in or adjacent to the project areas. Any houndstongue encountered will also be treated. Herbicide applications will be completed before plants produce seed in the 2008 growing season.

5. Should an undesirable event occur such as the fire exceeding prescription or direction of spread, checking options like line construction should be taken outside of the Wilderness Study Area if at all possible or if necessary be rehabilitated as soon as possible to minimize the impact of the human intrusion.

6. Avoid placing ignition sources in areas with slopes over 45 %.

7. Evaluate the area post-burn for potential hand tool work to reduce concentrated runoff in areas that have been impacted by the burn. Consider lopping and spreading junipers, placing brush and small water bars in areas that may have concentrated runoff with no treatment.

8. Avoid areas of contiguous Douglas fir stands and ignite the units in a manner that will not allow fire to move into Douglas fir stands.
9. Coordinate with the livestock operators to assure that the proposed burn is complete before livestock enter the allotment.
10. Minimize any ground disturbance in “checking” the fire.

No Action Alternative: Under the no-action alternative, the fuels reduction project would not occur.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: Mechanical treatment was considered but due to steepness of slopes and inaccessibility for crews it was not deemed practical or cost effective. The entire project is within the Windy Gulch WSA.

NEED FOR THE ACTION: The Meeker and surrounding area is identified in the 2006 Rio Blanco County Fire Plan as a Wildland Urban Interface area at moderate risk to wildfire. The Pack Trail Post Incident lessons learned paper also identified this area for future fuels reduction to avoid costly WFU incidents and to reduce complexity created with the proximity of private lands. The goal of the project is to reduce the probability of a fire exiting BLM onto adjacent private lands. By breaking up the fuel continuity and the accumulation of live and dead fuels, fire behavior and fire size should be reduced.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: 2-55

Decision Language: "Manage fire to protect public health, safety, and property as well as allowing fire to carry out important ecological functions." "Utilize prescribed fire, both natural and management ignited, to protect, maintain and enhance ecosystems, economic values, and multiple use resource management programs."

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: Air quality is not currently being monitored in the project area, however it is considered to be within the national and Colorado air quality standards. There are two Class I (visibility) areas located in northwest Colorado including the Flat Tops Wilderness 30 miles to the southeast. Dinosaur National Monument is about 35 miles northwest of the proposed action is considered a Class II Airshed.

This project will adhere to the Colorado Smoke Management Program administered by CDPHE. This includes a permit and direct approval from CDPHE 48 hours before ignition that may have conditions such as wind direction and speed. The decision to approve burning is made based on climate and weather conditions that impact smoke dispersal and the location of populated areas and/or protected areas near the burn. All potential constituents of the smoke are considered in this approval including PM-10.

Environmental Consequences of the Proposed Action: Both prescribed and wildland fires are potentially a significant source of air pollution emissions including particulate matter PM-10, volatile organic compounds, and carbon monoxide.

Under the proposed action, all fire activities will be conducted within the permit conditions issued under the Colorado Smoke Management Program, these will be protective of air quality. By complying with applicable air quality standards and regulations, impacts to air quality will be short term and considered acceptable.

Prescribed fires are conducted under atmospheric conditions that will promote air pollutant dispersion as required by the permit. Prescribed fires are typically smaller than uncontrolled wildfires that occur during peak burning conditions, would likely occur in more favorable atmospheric conditions and typically involve less total combustion than wildfire. This action may also 'protect' or lessen the severity of wildfires in adjacent areas. This burn is planned within a WRFO wide plan to reduce hazardous fuels available for wildfire. If this project is successful the treated acres would be less likely to be burned during a wildfire, therefore long-term impacts will be less to air quality as a result of this project.

Environmental Consequences of the No Action Alternative: The direct environmental consequences associated from this project will obviously be absent in the no action alternative.

However, greater long term impacts to air quality would likely occur as a result of increasing potential for larger and more complex wildfires. A large wildfire in this area has the potential to impact the Class 1 designated areas such as the Flat Tops Wilderness area and populated areas.

Mitigation: None identified, other than to comply with permit conditions.

CULTURAL RESOURCES

Affected Environment: There currently there is no inventory data for the area for the East Jordan Prescribed burn. Because the area is within a wilderness area and is heavily covered in mountain browse vegetation, and is on a relatively steep slope it is considered unlikely that sensitive cultural resources are present.

However, within the MMA for the burn plan is the remnants of what appears to have been intended as a homestead cabin. Several saw cut logs, notched and laid up in the first course are present. Further research is necessary to determine the date of the homesteading attempt and when it was abandoned.

Environmental Consequences of the Proposed Action: Should the burn escape the prescribed area and move to the east there is the potential to destroy the remnants of the homestead cabin. This would be considered an irreversible and irretrievable loss to the resource base.

Environmental Consequences of the No Action Alternative: There would be no new impacts to any cultural resources under the No Action Alternative.

Mitigation: None

INVASIVE, NON-NATIVE SPECIES

Affected Environment: Cheatgrass (*Bromus tectorum*), an invasive non-native annual grass species, is well established in the plant community in the southern ends of both East Jordan Gulch and West Jordan Gulch. Other noxious weeds of greater concern due to their close proximity to the proposed burn area are musk thistle (*Carduus nutans*) and Scotch thistle (*Onopordum acanthium*). There are two small infestations of these thistle species in the bottom of East Jordan Gulch. There is also a scattering of houndstongue (*Cynoglossum officinale*) throughout the bottom of East Jordan Gulch. There is a dense vigorous native grass component throughout the valley bottom adjacent to the burn area, which effectively competes with weed species.

Environmental Consequences of the Proposed Action: The proposed burn will be at least ½ mile away from cheatgrass infestations. The burn is planned to occur on slopes in native plant communities, and not extend into the native grass dominated valley bottom. Without treatment prior to seed production, the airborne seeds of thistles from infestations adjacent to the project

area could easily be carried by winds up the slopes into the burn area making establishment and spread likely. If the burn stays out of the valley bottom as is the plan, there is little likelihood of the houndstongue increasing its presence in the bottoms. Houndstongue seeds could readily be transported by wildlife beyond its current occurrence area and spread into the surrounding area.

Environmental Consequences of the No Action Alternative: There would be no change from the current situation. Unless treated, it is likely that the noxious weed infestations will spread beyond their current extent.

Mitigation: None

MIGRATORY BIRDS

Affected Environment: The proposed action intends to target mountain shrubland (e.g., gambel oak, serviceberry, snowberry, chokecherry, and big sagebrush) and pinyon-juniper habitats. Species such as dusky flycatchers (*Empidonax oberholseri*), green-tailed towhees (*Pipilo chlorurus*), MacGillivray's warbler (*Oporonis tolmiei*), Virginia's warbler (*Vermivora virginiae*), and orange-crowned warblers (*Vermivora celata*) nest in the mountain shrub. Black-chinned hummingbirds (*Archilochus alexandri*) and gray flycatchers (*Empidonax wrightii*) breed and nest within open pinyon-juniper woodlands.

There are no specialized or narrowly endemic species known to inhabit either the target areas or the MMA. However, the U.S. Fish and Wildlife Service (USFWS) recognize Virginia's warblers as a "bird of conservation concern" (BCC). The BCC list identifies birds that, without conservation actions, may become candidates for listing under the Endangered Species Act.

Environmental Consequences of the Proposed Action: Most songbirds return to summer breeding ranges in April, begin nesting in earnest in late May or early June, and have fledged young by mid-August. It is expected that the burn window for this project will be limited to early spring and the project will not be implemented after mid-May. It is possible that some early nesting attempts may be destroyed by the prescribed burn, but it is likely that the burn will have occurred before the majority of nesting attempts. It will also occur early enough in the season to accommodate renesting.

In the short-term, there will be a reduction in available nesting habitat for species that nest in shrubs or trees (e.g. gray flycatchers) or at the base of shrubs (e.g. green-tailed towhees). However, fire is a natural disturbance process and there are no highly specialized or narrowly endemic species that would be affected by the proposed action.

Environmental Consequences of the No Action Alternative: There would be no conceivable influence on migratory birds under the no action alternative

Mitigation: None.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: There are no threatened or endangered animal species known to inhabit the project area. However, the project area may provide habitat for several BLM sensitive species, including Townsend's big-eared bat (*Corynorhinus townsendii*), fringed myotis (*Myotis thysanodes*), Yuma myotis (*Myotis yumanensis*), and northern goshawks (*Accipiter gentilis*). Pinyon pines and juniper trees within the project area may provide suitable roosting habitat for the three bat species. Northern goshawks may nest in pockets of Douglas fir found within the MMA.

Environmental Consequences of the Proposed Action: It is possible that the prescribed burn may destroy roosting sites of BLM sensitive bat species. The burn is expected to take place in April or May. While some species of bats may form large maternity colonies in mines or caves, it is expected that roost sites in pinyon pines or juniper trees are used only by solitary individuals or very small colonies (e.g. 3 to 5 individuals). The prescribed burn will target mountain shrubland and pinyon-juniper on the south and west facing slopes and will result in a mosaic pattern. Available roost sites should still be present in unburned portions of the target area or MMA. In addition, the burned areas are likely to provide highly productive insect habitat and thus provide increased foraging opportunities for bats.

The proposed action is not expected to impact any northern goshawks that may nest within the MMA. Isolated pockets of Douglas fir found on the north and northwest slopes are not expected to burn due to snow cover and increased soil moisture present during the burn window.

Environmental Consequences of the No Action Alternative: There would be no conceivable influence on BLM sensitive species under the no action alternative.

Mitigation: None.

Finding on the Public Land Health Standard for Threatened & Endangered species: The area currently meets public land health standards for special status species and is expected to continue to meet those standards if the proposed action is implemented. While it is possible that the prescribed burn may destroy some bat roost sites, it will not eliminate all of the potential roost sites. In addition, the burned areas may provide highly productive insect habitat and thus increase foraging opportunities for bats in the area.

THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES (includes a finding on Standard 4)

Affected Environment: There are no plant species listed, proposed, or candidate to the Endangered Species Act, nor plants considered sensitive by the BLM, that are known to inhabit areas potentially influenced by the proposed action.

Environmental Consequences of the Proposed Action: Prescribed burning within the Windy Gulch WSA would have no conceivable influence on special status species or associated habitats.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have potential to influence special status species or associated habitats.

Mitigation: None

Finding on the Public Land Health Standard for Threatened & Endangered species: The proposed and no-action alternatives would have no influence on populations or habitats of plants associated with the Endangered Species Act or BLM sensitive species and, as such, would have no influence on the status of applicable land health standards.

WASTES, HAZARDOUS OR SOLID

Affected Environment: Hazardous or solid wastes are not expected to be a part of the affected environment. However, these materials may accidentally be introduced in the environment through the implementation of the proposed action. Fuel, oil, grease, and antifreeze are all associated with vehicles and fire suppression equipment needed for implementing the proposed action and would only be introduced into the environment because of equipment failure.

Ignition sources for this project will include aerial ignition, by heli-torch or plastic sphere dispenser (PSD), and potentially hand ignition in smaller locations. These systems typically use a diesel/oil mix in the case of the heli-torch and hand igniters. PSDs or ping-pong balls are plastic spheres containing potassium permanganate that are injected with ethylene glycol (antifreeze) as they are ejected from an aircraft. With regard to aerial ignition chemicals and fuels will be stored off-site where the helicopters are staged, and if equipment is working properly only ignited fuels or chemicals will occur in the project area.

Environmental Consequences of the Proposed Action: The most likely adverse impact from this project would occur due to equipment failure or an accidental spill of ignition chemicals or fuels. For any given accident or incident involving hazardous materials, consequences will be dependent on the volume and nature of the incident and material released. Short term impacts such as contaminations of soils, vegetation, and surface water could occur.

Environmental Consequences of the No Action Alternative: No hazardous wastes would be introduced into the environment under the no action alternative.

Mitigation: No additional mitigation needed, since proper handling of chemicals and fuels used for ignition would most likely occur.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: This project would occur in the East and West Fork of Jordan Gulch in the Windy Gulch WSA which is about 6-7 miles from the confluence of Jordan Gulch with the White River. Both the East and West Fork of Jordan River are considered ephemeral streams and therefore only have the potential to impact water quality during storm events. If sediment or nutrients are available to the channel during storm events they may be transported to the White River. The White River segment 9a, which is protected for the following beneficial uses: aquatic life 2, recreation 2, water supply and agriculture.

Environmental Consequences of the Proposed Action: Wildland fires reduce canopy and ground cover; thereby expose soils to wind and water erosion and increased runoff potential. Reduced cover and increased runoff would potentially increase sediment and nutrient loading as well as peak flows, which could degrade downstream water quality in some locations. However, since these projects are in the headwaters of drainages and the intensity of prescribed fire and the mosaic (60% burn) that is likely to occur, will significantly reduce impacts to hill slope runoff, it is unlikely this project would result in a measurable change in water quality downstream.

This project will have minimal on the ground vehicle use due to aerial ignition and will not require holding lines since it is a spring burn and will use topography and snow cover to control the extent of the fire. Prescribed fire management activities would result in temporary surface disturbance and soil compaction, from increased vehicle traffic, and staging and/or fire camps. The construction of holding lines would increase erosion as a result the removal of vegetation, duff and the organic layer of the soil if there is a need to contain the fire and the planned topography and snow conditions are not adequate.

Environmental Consequences of the No Action Alternative: Fuel reductions would not occur in this area and potential impacts from a wildland fire in the Windy Gulch WSA in the future would likely be greater than impacts from this project.

Mitigation: None Identified.

Finding on the Public Land Health Standard for water quality: This project will not likely adversely impact the water quality of the White River, in fact may potentially have a long-term beneficial impact by reducing the likelihood and extent of a wildland fire.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: There are no wetlands or perennial streams within the target areas.

Environmental Consequences of the Proposed Action: There are no wetlands or perennial streams within the target areas, thus the prescribed burn is not expected to influence any riparian systems.

Environmental Consequences of the No Action Alternative: There would be no conceivable influence to wetland or riparian areas.

Mitigation: None.

Finding on the Public Land Health Standard for riparian systems: Since there are no wetlands or perennial streams occurring within the target areas, the proposed action will have no influence upon the Public Land Health Standard pertaining to riparian systems.

WILDERNESS:

Affected Environment: The Windy Gulch Wilderness Study Area (WSA) will be affected by this action. Management of WSAs is directed by the BLM's Interim Management Policy (IMP) which mandates management so as not to impair their suitability for preservation as wilderness. This language is derived from the Federal Land Policy and Management Act (FLPMA), and is referred to as the "non-impairment" mandate. The *Wilderness Study Report, Record of Decision, Craig District Study Areas* (BLM 1991) does not recommend that Windy Gulch WSA become a designated wilderness because of a lack of significant wilderness characteristics, yet the WSA will continue to be managed per the IMP until such time as Congress acts to either release the area to other multiple uses or designate it as wilderness.

The values listed below are typically used to describe the wilderness character of a WSA. The Windy Gulch WSA specific descriptions following each value are excerpts from the *Craig District Wilderness Study Report Record of Decision* (BLM 1991).

NATURALNESS: The Windy Gulch WSA is predominantly natural in character with negligible human imprints. Only minor imprints of humans are scattered within the WSA and are substantially unnoticeable due to screening (three stock ponds) or are being overgrown by vegetation (vehicle ways).

SOLITUDE: Topographic and vegetative screening within the WSA provides outstanding opportunities for visitors to experience solitude. The large blocked configuration of the WSA provides ample room for visitors to disperse and become isolated and segregated from others using the area. The relatively low use due to poor public access within the WSA also contributes to outstanding opportunities for solitude.

PRIMITIVE AND UNCONFINED RECREATION: The WSA contains outstanding opportunities for primitive and unconfined recreation. Big game hunting is the primary activity while others include hiking, backpacking, horseback riding and wildlife viewing. The rugged dissected topography and varying landforms are appealing for photography. The very diverse botanic communities within the WSA provide excellent opportunities for nature study. The large blocked configuration allows for unconfined movement within the WSA. Low use of this WSA contributes to excellent primitive recreation experiences. These opportunities are not considered to be outstanding in the regional context.

SPECIAL FEATURES/SUPPLEMENTAL VALUES: A portion of the WSA is identified as severe winter range and a winter concentration area for mule deer. No others special features have been identified.

Environmental Consequences of the Proposed Action: Impacts to the Windy Gulch WSA as a result of the proposed action are as follows:

NATURALNESS: The action, although human by its nature, will not adversely impact the naturalness of the WSA. Fire scars may be visible after the action but as several natural fire have burned in the area in the very recent past, this action should not appear substantially different than the natural fire scars.

SOLITUDE: Low flying helicopter during ignition operations will occur over the WSA at regular intervals and this event could impact wilderness users by introducing the sight and sound of mechanized equipment which would disrupt the experience of solitude. However, the duration of helicopter overflights during ignition operations will not exceed eight hours in a single day during a period when public recreational use will be at or near its lowest point in the year.

PRIMITIVE & UNCONFINED RECREATION: There will be no impact to primitive and/or unconfined recreation opportunities.

Mitigation: Should an undesirable event occur such as the fire exceeding prescription or direction of spread, checking options like line construction should be taken outside of the Wilderness Study Area if at all possible or if necessary be rehabilitated as soon as possible to minimize the impact of the human intrusion.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:

No ACEC, flood plains, prime and unique farmlands, or Wild and Scenic Rivers exist within the area affected by the proposed action. There are also no Native American religious or environmental justice concerns associated with the proposed action.

NON-CRITICAL ELEMENTS

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

SOILS (includes a finding on Standard 1)

Affected Environment: This area contains areas listed as fragile soils and landslide areas. There are about 767 acres of potential landslide areas and about 650 acres of potential fragile soils. These areas were identified as landslide and fragile soils by the range of slopes possible, see the table below. Ignition will be concentrated in the brush species and in areas where there are encroaching juniper woodlands.

Soils in the Project Area

Soil Complex	Slopes	Acres
Jerry-Thornburgh-Rhone complex	8-65% slopes	926.54
Mergel-Redthayne-Dollard complex	8-65% slopes	614.02
Rabbitex flaggy loam	10-65% slopes	1.2
Rentsac-Moyerson-Rock Outcrop complex	5-65% slopes	170.64
Torriorthents-Rock Outcrop complex	15-90% slopes	51.75
Yamac Loam	2-15% slope	14.49

Environmental Consequences of the Proposed Action: The construction of fire lines would increase erosion as a result the removal of vegetation, duff and the organic layer of the soil, impacts include increasing erosion, especially in areas with steep slopes and/or poor soils. Reduced infiltration in some areas would occur with extremely hot fires and would result in higher runoff and hillslope erosion. Localized erosion is likely to occur where the fire burns more completely. Due to the mosaic of the prescribed fire and the variability of the terrain actual landslides or mass wasting is unlikely. This fire will occur when fuel moistures are high, where as a wildland fire would more likely occur when fuel moistures are low. Therefore the intensity of this fire will be significantly less than a wildfire and the soil moisture will be high, which affords it some protection. Productivity in the spring in annual grasses and other vegetation will also likely be higher, and therefore the areas should revegetate quickly.

Environmental Consequences of the No Action Alternative: A wildland fire could have significant impacts to soils in this area due to the low soil moisture and the burn intensity. This project if successful will lower the fuel loading making a wildland fire less intense and reducing the likelihood of a wildland fire occurring in this area.

Mitigation: None

Finding on the Public Land Health Standard for upland soils: This project is likely to improve the long-term productivity of the soils in this area by reducing the impacts of wildland fires if they were to occur and reducing the potential for these fires to occur in this area, and therefore impacts are expected to be positive for upland soils.

VEGETATION (includes a finding on Standard 3)

Affected Environment: The following table lists plant communities and the dominant plant species for the ecological sites or woodland types associated with the proposed action. The primary plant communities to be affected by this project include deciduous shrubs and pinyon/juniper. To a lesser extent the project will involve shrub/grass dominated slopes. Forb species, though important to the diversity of a community and comprising up to 25–30 percent of the composition of several of the plant communities listed, are not presented in the following table because they generally are not significant contributors to the general appearance of the community

Ecological Site / Woodland Type	Plant Community Appearance	Predominant Plant Species in the Plant Community
Brushy Loam	Deciduous Shrub / Grass Shrubland	Serviceberry, oakbrush, snowberry, mountain brome, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses
Clayey Foothills	Grass / Open Shrub Shrubland	Western wheatgrass, mutton grass, Indian rice grass, squirreltail, June grass, Wyoming big sagebrush, black sagebrush
Clayey Slopes	Grassland	Salina wildrye, mutton grass, western wheatgrass, June grass, squirreltail, shadscale
Loamy Slopes	Mix Shrub / Grass Shrubland	Mountain mahogany, bitterbrush, serviceberry, mountain big sagebrush, beardless bluebunch wheatgrass, western wheatgrass, June grass, Indian rice grass
Pinyon/Juniper	Pinyon/Juniper Woodland	Pinyon pine, Utah juniper, mountain mahogany, bitterbrush, serviceberry, Wyoming big sagebrush, beardless bluebunch wheatgrass, western wheatgrass, June grass, Indian rice grass, mutton grass

The following table shows the seral rating used by the BLM to rate rangeland vegetation communities in comparison to the Potential Natural Plant Community (PNC) for a particular ecological site.

Ecological Site Similarity Ratings	
Seral Rating	% Similarity to the Potential Natural Plant Community
PNC	76-100% composition of species in the PNC
Late Seral	51-75% composition of species in the PNC
Mid Seral	26-50% composition of species in the PNC
Early Seral	0-25% composition of species in the PNC

All vegetation communities that will be affected by the proposed project have been rated as either late seral or PNC.

Environmental Consequences of the Proposed Action: Implementation of the burn project will reduce the amount of live and dead Gambel oak, mountain big sagebrush, serviceberry, snowberry and pinyon-juniper in a mosaic pattern and will achieve a younger age class shrub community. Mountain big sagebrush and mountain mahogany will reinvade the treatment sites within 10-20 years depending on climatic conditions and the amount of grazing use by large herbivores, principally elk. Gambel oak serviceberry and snowberry will resprout following burning. Fire will result in almost complete mortality of pinyon and juniper in the burn units.

Herbaceous species are generally well adapted to fire. Grasses such as needle and thread and western wheatgrass respond favorably to fire and would be expected to be herbaceous co-dominants in the first ten years after burning. Mat forming forbs such as pussytoes (*Antennaria*) and buckwheat (*Eriogonum*) can be severely damaged by fire if the fire occurs under hot, dry conditions such as would occur in a wildfire. In general, if the burn is completed in the spring under prescribed soil moisture conditions, it will favor forbs in the post burn herbaceous

composition. Burning can be expected to enhance the nutrient quality of forbs and grasses on the burn sites.

Environmental Consequences of the No Action Alternative: Presently the treatment units are considered to be late seral or PNC in terms of plant community composition. Generally late seral woody plant communities have reduced browse utility than an earlier seral stage plant community. Gambel oak, serviceberry and snowberry are decadent with considerable dead material throughout the canopy. Pinyon and juniper trees have invaded the mountain big sagebrush type but they have not reached sufficient density and height to dominate the site. No action would allow the invasion process to continue so that over the long term, the treatment areas would be dominated in both structure and composition by pinyon-juniper trees, unless an uncontrollable wildfire event were to occur.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): Vegetation in the proposed project area currently meets the Standard. Successful implementation of this project, while decreasing pinyon-juniper, mountain and Wyoming big sagebrush cover over the short term, will result in a long term improvement in the vegetation cover and composition, and the standard would continue to be met.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: There are no aquatic wildlife species occurring within the target areas.

Environmental Consequences of the Proposed Action: None

Environmental Consequences of the No Action Alternative: None

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): Since there are no perennial waters occurring within the target areas, the proposed action will have no influence upon the Public Land Health Standard pertaining to aquatic wildlife.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The target areas are identified by the Colorado Division of Wildlife (CDOW) as winter range mule deer (*Odocoileus hemionus*) and as winter and summer range for elk (*Cervus canadensis*). Isolated Douglas fir stands may provide nesting habitat for raptors such as northern goshawks (see Threatened, Endangered, and Sensitive Animal Species

section).

There are no highly specialized or narrowly endemic terrestrial wildlife species known to inhabit the project area.

Environmental Consequences of the Proposed Action: The proposed action will create a mosaic landscape and should improve habitat for wildlife in the area. Important big game browse species, such as serviceberry, will resprout following burning. There will also be an increase in the herbaceous component of the ecosystem in the burned areas. Adjacent woodlands will be left intact, providing cover for big game species.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation.

Mitigation: None.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): The project area currently meets public land health standard for animal communities. Prescribed burning emulates a recurring ecological process and is consistent with continued meeting of the standard.

OTHER NON-CRITICAL ELEMENTS: For the following elements, only those brought forward for analysis will be addressed further.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access and Transportation		X	
Cadastral Survey	X		
Fire Management			X
Forest Management			X
Geology and Minerals	X		
Hydrology/Water Rights		X	
Law Enforcement		X	
Noise		X	
Paleontology		X	
Rangeland Management			X
Realty Authorizations	X		
Recreation			See Wilderness section
Socio-Economics		X	
Visual Resources			X
Wild Horses	X		

FIRE MANAGEMENT

Affected Environment: The proposed action is located in the D3 Citadel/Grey Hills fire management polygon. The D3 polygon has experienced 46 fires from 1995 to 2006 for a total of 3936 acres, most of which occurred in the 2005 Pack Trail Wildfire Use incident. The targeted area is the live and dead fuel accumulation in Gambel oak, mountain big sagebrush, serviceberry, snowberry (collectively known as mountain browse) and Pinion-Juniper (P/J) encroachment into these mountain browse types. Gambel oak, mountain big sagebrush, serviceberry, snowberry are classified as a Fire Regime Condition Class (FRCC) 2 (moderate departure from reference condition)

Environmental Consequences of the Proposed Action: The proposed action will result in reducing the potential fire behavior and fire intensities after the completion of the treatment for a period of 20 to 30 years. The treated areas will be dominated by grasses and forbs, and if they should burn, the intensities would be much lower than under the current situation. Suppression and Wildfire Use activities would be safer, more effective, and less costly than in the current situation with the heavier more continuous fuels. The project area as a whole will remain as an FRCC 2 but the action will create age diversity with in the vegetative community.

Environmental Consequences of the No Action Alternative: Under this alternative there would be no change to the current condition of the vegetation. In the absence of fire, the area will maintain at the FRCC 2 rating and slowly progress towards the FRCC 3 rating indicating a high departure from the referenced condition. The threat of large, difficult to control fires burning under extreme conditions would remain as well as limit management's ability to manage a fire for resource benefit.

Mitigation: None

FOREST MANAGEMENT

Affected Environment: This prescribed burn will be an aerial ignition in the Windy Gulch WSA that will have a total impact on 1,800 acres. The goal is to reduce the continuity of the mountain browse brush community and to reduce the amount of pinion-juniper encroachment into the mountain browse brush community. There are Douglas fir stands located in the southern portion of the burn units along the main drainage bottoms and in small side drainages that provide adequate protection and moisture to stimulate growth. The time of year in which the prescribed burn is proposed to occur will reduce the chances of fire spreading into the Douglas fir stands since there will be high moisture content of the fuels in the understory or snow will still be present.

Environmental Consequences of the Proposed Action: The proposed action would involve an aerial ignition in close proximity to known locations of pinion-juniper and Douglas fir. The removal of the pinion-juniper encroachment will allow better management of existing stands without the degradation of the surrounding mountain browse brush community. This action will also threaten the existing stands of contiguous Douglas fir that has had little to no disturbance in the past. Douglas fir stands have a forest structure that promotes a stand replacing fire based on the age class of trees that exist in the stand. This age structure allows for ladder

fuels to exist and creates a path for fire to move from a surface fire to a crown fire. A crown fire can range from a single tree torching to multiple trees involved in a crown run event. Removal of Douglas fir canopy will eliminate the shade component that allows moisture to remain on site which is needed to support the understory vegetation. As a result of this removal, additional solar radiation will cause a drying of the area which is not conducive with reestablishing the Douglas fir or its understory vegetation and an increase in erosion may occur. This is historically evident by the 1993 Escarpment Peak prescribed burn in which entire stands of Douglas fir were burned and the resulting site is comparatively more arid. Single outlying trees of Douglas fir are located within the burn units and loss of such outliers will not be detrimental to the species in the immediate area on an individual basis.

Environmental Consequences of the No Action Alternative: Under the no action alternative, the pinion-juniper will continue to encroach into the mountain browse brush community and there would be no threat to the Douglas fir stands.

Mitigation: None

RANGELAND MANAGEMENT

Affected Environment: The proposed project falls entirely within the Jordan Gulch allotment (#06620), which is a common allotment permitted to two different operators for livestock grazing. The permitted use is as follows:

Permittee	Livestock # and Kind	Grazing period begin	Grazing period end	% Public Land	AUMs
Harold Anderson	71 cattle	08/16	10/15	100	142
Barry Sepic	51 cattle	05/16	11/28	80	264

Environmental Consequences of the Proposed Action: The proposed action will be beneficial over the short and long term for overall rangeland forage and browse production and composition though the benefits will be primarily for wildlife. Due to the steep topography and distance to water, livestock currently make virtually no use of the areas to be burned. If the project area was commonly grazed by livestock, a two growing season deferment from grazing would be required.

Environmental Consequences of the No Action Alternative: There will be no change from the current situation.

Mitigation: None

VISUAL RESOURCE

Affected Environment: The proposed action is within a VRM class II area. The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not

attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The key observation point(s) (KOP) are limited primarily to the northern end of the Windy Gulch Wilderness Study Area which provides for scrutiny of the proposed action. The KOP receives little use and primarily during hunting season in the fall of the year. The action will be unseen due to its location in the center of a steeply bisected ridge system which provides rather complete screening from any of the local paved highways or private residences.

The form in the area could be described as rounded pyramid mounds. The general color of the area is derived from vegetation which ranges from dark greens (Douglas Fir) to much lighter and brighter green of the oak brush type. Lines are generally formed by the junctions of differing vegetation types (and rounded landforms) and tend to be abrupt in nature. The texture is by and large rough in nature with smoother textures within the continuous dark Douglas Fir stands.

Environmental Consequences of the Proposed Action: The proposed action is generally not visible from any key observation point; therefore, any modifications will be unseen to the casual observer, and VRM II objectives will be met. Furthermore, any burned vegetation will return making the action virtually unnoticeable within a period of a few years.

Environmental Consequences of the No Action Alternative: No impact on visual resources.

Mitigation: None

CUMULATIVE IMPACTS SUMMARY: BLM has, and will continue to treat areas of heavy fuels throughout the White River Resource Area in accordance with the White River Fire Management Plan (BLM 1999). Treating various areas of heavy fuels will reduce the potential for catastrophic wildfire by transforming a running crown fire back to the surface, where suppression efforts can be more effective. Once the proposed action has been implemented, BLM can more safely treat other areas in the vicinity that have heavy or unnatural fuels buildup, using prescribed fire or fire use. This would further reduce the potential of wildfire damage to privately owned lands and improvements in the area and continue to allow fire to assume a natural role within the ecosystem.

By implementing the proposed action and other hazardous fuel reduction actions BLM will achieve a mosaic landscape with varying seral vegetation classes which result in a more fire resistant landscape and healthier rangelands. Effects are expected to be similar to effects from similar projects implemented within the White River Field Office since the Fire Management Plan was signed in 1999. To date the WRFO hazardous fuels program has treated 7,300 acres of public land since 1999 totaling 0.60% of all public land within the resource area. This, coupled with the design criteria and the small overall percentage of public land being treated, result in no significant cumulative impacts.

REFERENCES CITED:

1. Bureau of Land Management (BLM) White River Field Office. (1999). White River Fire Management Plan: Environmental Assessment Record Number CO-017-WR-99-99-EA. Available upon request from the White River Field Office, 220 E. Market Street, Meeker, CO. Phone 970-878-3800. Email wrfo_webmail@co.blm.gov.
2. Bureau of Land Management (BLM) White River Resource Area, Colorado. (1997). White River Record of Decision and Approved Resource Management Plan. Available on the BLM Colorado Web site: <http://www.co.blm.gov/nepa/rmpdocs/wrfodocs/wrformp.htm>
3. Neuenschwander, Leon F., James P. Menakis, Melanie Miller, R. Neil Sampson, Colin Hardy, Bob Averill, Roy Mask. (2000). "Chapter 3, Indexing Colorado Watersheds to Risk of Wildfire." Published in: Mapping Wildfire Hazards and Risks (ed: R. Neil Sampson, R. Dwight Atkinson, and Joe W. Lewis) Fodd Products Press. New York.
4. Hann, Wendel, Havlina, Doug, Shlisky, Ayn, et al. 2003. Interagency and The Nature Conservancy fire regime condition class website .USDA Forest Service, US Department of the Interior, The Nature Conservancy, and Systems for Environmental Management [www.frcc.gov].
5. Rio Blanco County Fire Management Plan Revision D, (2006) Available upon request from the Rio Blanco County Emergency Management Coordinator, Rio Blanco County Sheriffs Office, Meeker, Colorado

PERSONS / AGENCIES CONSULTED: Buffalo Horn Ranch Manager, Grant Edinger

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Bob Lange	Hydrologist	Air Quality, Wastes, Hazardous or Solids, Water Quality, Surface and Ground, Hydrology and Water Rights, and Soils
Ken Holsinger	Natural Resource Specialist	Areas of Critical Environmental Concern, Threatened and Endangered Plant Species
Michael Selle	Archeologist	Cultural Resources, Paleontological Resources
Mary Taylor	Rangeland Management Specialist	Invasive, Non-Native Species, Vegetation , Rangeland Management
Heather Sauls	Wildlife Biologist	Migratory Birds, Threatened, Endangered and Sensitive Animal Species, Terrestrial and Aquatic Wildlife, Wetlands and Riparian Zones
Chris Ham	Outdoor Recreation Planner	Wilderness, Access and Transportation, Recreation & Visual Resources
Jim Michels	Fire/Fuels Technician	Fire Management, Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Linda Jones	Realty Specialist	Realty Authorizations
Melissa Kindall	Range Technician	Wild Horses

Finding of No Significant Impact/Decision Record (FONSI/DR)

CO-110-2008-037-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analysis of the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) result in 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.

This determination is based on the following:

Factors Considered	Potential Impact	Reasons the Impact is not Adversely Significant
Public Health and Safety	Firefighter and public safety will be improved on approximately 1800 acres due to the reduced risk of destructive wildland fire.	The proposed action would not significantly affect public health and safety but would reduce current and expected risks.
Air Quality	Smoke from the prescribed burn may slightly diminish air quality for a short time period when burning operations are being conducted. This impact will be localized and not effect people or other resources. (see EA pages 5-6)	The proposed action will be conducted under atmospheric conditions that will promote air pollutant dispersion as indicated in the Smoke Permit that will be obtained from CDPHE Colorado Smoke Management Program.
Cultural Resources	Remnants of one historical cabin do exist in the East Jordan drainage. Design Criteria and project provisions will provide protection if new sites are discovered during project implementation (EA page 6).	Measures that reduce the risk of impacting this know site have been incorporated in the proposed action.
Sensitive Species	There are no threatened or endangered animal or plant species known to inhabit the project area.	None present
Invasive, Non-native Species	There are locations of musk thistle and scotch thistle in the East Jordan drainage and the proposed action could increase available seedbed for these species. (see EA pages 6-7)	Herbicide will be applied to the known areas before the species produce seed to reduce spread to the surrounding area.
Water Quality and Soils	Impacts associated with the proposed action include soil heating and increased wind and water erosion. Reduced water quality could result because of an increase in erosion and sediment yields. (EA pages 10 and 12 thru 13)	The proposed action will be conducted under moderate environmental conditions, which will not expose soils, perennial grasses and forbs to intense long duration fire. The result will be rapid re-growth of vegetation that will stabilize soils, reduce erosion and decrease sediment yield.
Wetlands and Riparian Zones	Because the riparian resources are not located within the target units, there is little chance that these resources would be impacted by the proposed action. (see EA pages 10and 11)	Not present in project area.

Factors Considered	Potential Impact	Reasons the Impact is not Adversely Significant
Wilderness	This action will affect the solitude of the Windy Gulch WSA by introducing a mechanized, equipment via low level helicopter flight, to the wilderness experience. A human ignited fire will occur within the WSA creating a visual scar. (see EA pages 11-12)	The helicopter flights will be minimized to reduce the amount of impact through mechanical equipment. Fire scar should not appear different than the natural scars in the area.
Wildlife	The project locale is encompassed by deer winter range and elk summer/winter ranges. Although no special functions are attributed to this area, its well-developed herbaceous understory is an important source of nutrition during the fall (e.g., fat deposition in preparation for winter) and spring (e.g., high nutritional plane required during lactation and later gestation). Pinion pine and juniper trees could provide roosting sites for some species of bats. Douglas fir could provide suitable habitat for northern goshawk nesting. (EA pages 15-16)	Measures that enhance the benefits and reduce the risk of this project on resident wildlife have been incorporated in the proposed action. The proposed action will not impact nesting raptors.
Forestry	Contiguous stand of Douglas fir may be impacted by the proposed action. This is a desired species and its preservation is important to possible northern goshawk nesting and wilderness visual aesthetics. (see EA pages 17-18)	Measures that reduce the risk of impacting these known sites have been incorporated in the proposed action.

DECISION/RATIONALE: It is my decision to approve implementation of the White River East Jordan Prescribed Fire project as described in the proposed action. This will result in a reduced fuel loading and risk of large-scale wildfire event that could threaten the privately owned lands, improvements in the Strawberry Creek drainage, and/or cause significant long-term ecosystem degradation. The proposed action will also result in greater latitude in managing future wildland and prescribed fire in the vicinity of the project and help improve the overall health of the ecosystem. This action is in compliance with decisions in the White River ROD/RMP and the White River Fire Management Plan. Environmental impacts are expected to be minimal.

MITIGATION MEASURES: Mitigation measures are incorporated into the Proposed Action

COMPLIANCE/MONITORING: Monitoring will be conducted as per required in mitigation under the proposed action.

NAME OF PREPARER: Jim Michels

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL:



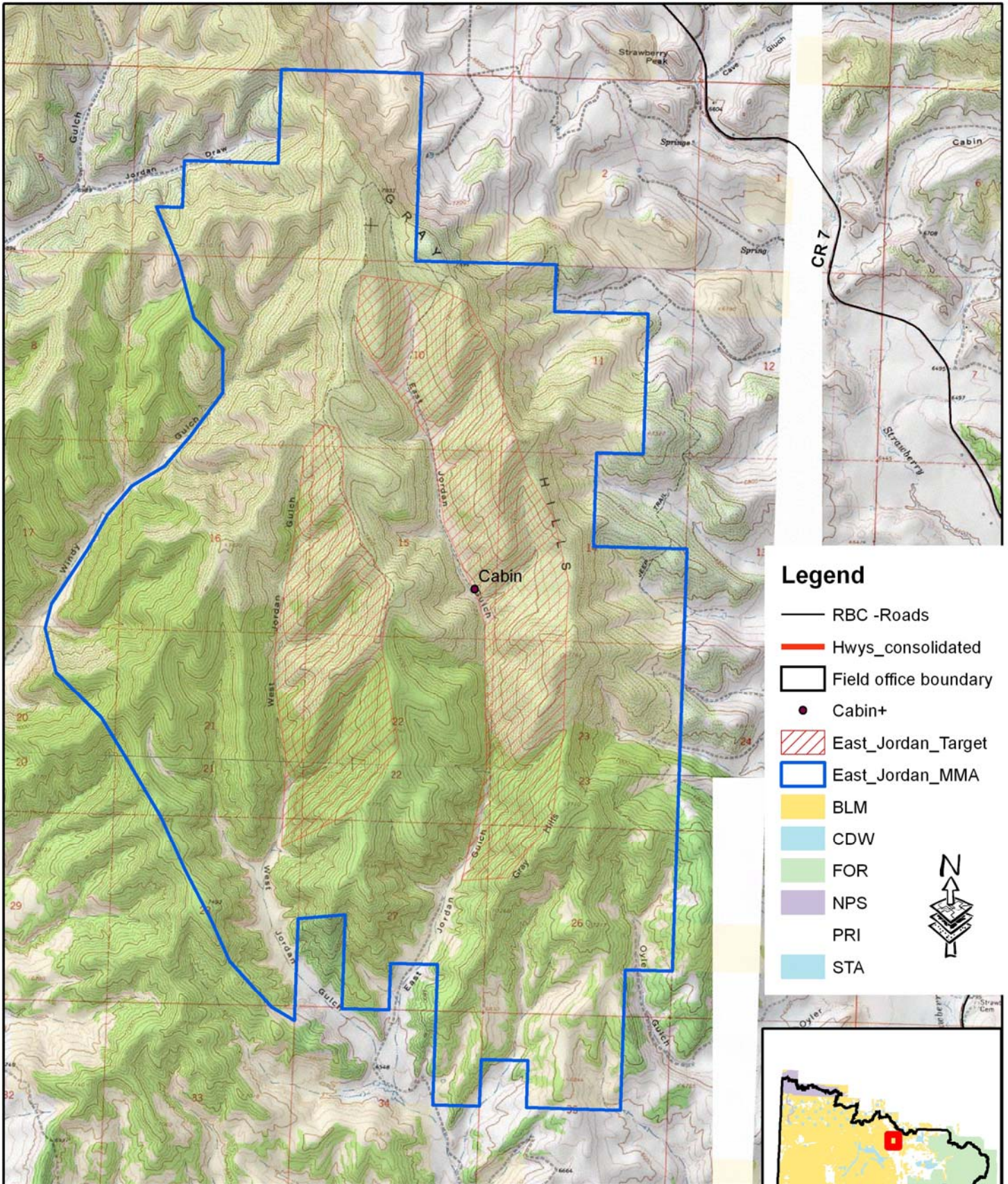
Field Manager

DATE SIGNED:

04/29/08

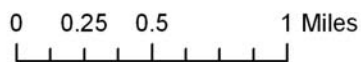
ATTACHMENTS: Map depicting project location

East Jordan Prescribed Fire Project



Legend

- RBC -Roads
- Hwys_consolidated
- Field office boundary
- Cabin+
- ▨ East_Jordan_Target
- East_Jordan_MMA
- BLM
- CDW
- FOR
- NPS
- PRI
- STA



3/26/2008

