ENVIRONMENTAL ASSESSEMENT
DOI-BLM-CO-NO40-2010-0087 EA
West Divide Prescribed Burn

U.S. Department of the Interior, Bureau of Land Management
Colorado River Valley Field Office
2300 River Frontage Road Silt, CO 81652
Lands Managed by the Bureau of Land Management (BLM):
T8S, R91W, Sections 8, 17, and 20
Garfield and Mesa County's

PURPOSE

The goal of this proposed action is to reduce hazardous fuels and break up the continuity of fuels along the wildland urban interface by using prescribed fire and mechanical treatments. This project is in conjunction with the White River National Forest, Rifle Ranger District, and the Private Landowner.

The project is located in an area that has mature and decadent Gambel oak and mountain brush species as the primary vegetation type. The brush species are thick and heavy in biomass and fuel loadings. The proposed prescribed fire boundary is also located adjacent to private land on the west boundary and National Forest lands on the east boundary. Other private lands are also in close proximity to the northwest and east of the project area.

The proposed vegetative treatment will help achieve the goal of reducing fuels loadings and disrupting the continuity of hazardous fuels on the BLM lands. The reduction of fuels will help improve fire fighting success of safely containing a wildland fire on public lands before it reaches private land.

This project is in conjunction with the White River National Forest to provide a landscape treatment across agency boundaries. The White River National Forest will provide separate NEPA documentation on its lands.

BACKGROUND:

Historically wildland fire served an important role in maintaining fire-dependent ecosystems such as oakbrush/mixed mountain shrublands. These ecosystems have evolved with fire as the main disturbance mechanism. Many of the tree, shrub and plant species have fire related adaptations, for example many species re-sprout from the root following fire. Years of wildland fire suppression have allowed an unnatural build up of fuels. This has resulted in late succession vegetation that has an abundance of dead and down fuels as well of having a deep litter layer that exceeds the historical stand structure. As a result the wildland fires within these area burn more intensely and can grow larger than their historical counterparts.

As a result of fire suppression the age class structure of vegetation over the landscape has shifted toward the late successional stage. Historically, the area would have a variety of age classes in a mosaic pattern over the landscape. Each of these age classes would represent the period of time since the last disturbance. Each age class provides an important habitat niche for wildlife

depending on species. Lack of disturbance has decreased the diversity of age classes. Current conditions on the landscape show a lack of early successional age classes.

When a disturbance occurs in an area, converting vegetation to an early successional stage, there is an increase in the amount of grass and forbs production due to less competition from overstory species. Thus increase in grass and forbs would benefit big game species, livestock, and overall ecosystem diversity.

NEED FOR THE ACTION: BLM and private land within the West Divide Creek drainage are at risk from catastrophic wildland fire due to an increase of hazardous fuels within the watershed.

Hazardous fuels on public lands are a complex fuel type defined by kind, arrangement, volume, condition, and location that forms a special threat of ignition or suppression difficulty. The fuels within these watersheds are predominantly continuous thickets of mountain shrub, primarily Gambel oak brush. Scattered throughout the thickets of oak there are pockets of sage, pinyon juniper woodlands, aspen and a small amount of mixed conifer stands. The current structure of the Gambel oak stands in the area is at a density and height that potentially any wildland fire would burn at an intensity that would not only exceed the capability of hand crews, but also use of aerial retardant will be marginally effective at best in limiting fire spread.

With a continuous blanket of fuels within and surrounding private lands in this project area, numerous scenarios of spreading wildland fire are possible depending on the conditions at the time such as wind, fuel moisture, point of origin, direction of spread, and topography. A wildland fire could cross from private land to public land and vice versa and present a considerable threat to the safety of the residents and firefighters engaged in the fire. There is a need to reduce hazardous fuels on adjacent public lands in a manner that will modify fire behavior (flame length, fire intensity, rate of spread, spotting potential). Reduction of hazardous fuels will increase the success of safely suppressing any wildland fires that occur in this area. Reducing the hazardous fuels will also help protect private land from a wildland fire spreading off BLM lands onto private property.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Proposed Action:

The proposed action is to reduce hazardous fuels on public lands managed by the BLM, break up the continuity of fuels, and reduce fuel loadings adjacent to private property. The proposed prescribed burn unit is 381 acres in size (see attached map). Mechanical treatments would be used as a standalone, follow up, or maintenance tool. The use of a hydro-axe or rollerchopper could be used in areas where slope and terrain features would allow for machinery to work. This environmental assessment would cover maintenance of the project for 10 years.

General objectives of this environmental assessment and subsequent projects are as follows:

1) Reduce the hazardous fuel conditions on public lands to decrease the threat of catastrophic wildland fire moving from public land to private lands.
2) Reduce fuel loadings adjacent to private land.
3) Break up the continuity of fuels.

4) Create diversity in seral stages of the mixed mountain shrub/oakbrush vegetation types within the landscape by converting vegetation in the treatment areas to early seral stage.
5) Return fire to a fire adapted ecosystem.

Prescribed Fire

Prescribed fire may be used as a standalone treatment and as a maintenance treatment for future years. The prescribed fire will require an approved burn plan and a State of Colorado Smoke Permit.

Protective measures will be taken to safeguard any improvements on public land within any prescribed fire unit. Improvements include fences, stock tanks, recreation infrastructure etc.

All efforts would be taken to avoid initiating fire within the Brook and Pole Creek drainages. Transition from riparian vegetation to oakbrush and mtn. shrub vegetation would be used as the fire line. Fuel moistures and relative humidity within the drainages should act as a natural control feature to potentially exclude fire from riparian vegetation.

Prescribed burn areas will be monitored for any noxious weed infestations. If areas become infested with weed follow up weed treatments will be necessary. Post-burn monitoring for potential weed infestations will be done. If any weed infestations occur they may have follow up weed treatments.

Mechanical Treatment

The use of a hydro-axe or similar machinery may be used as a standalone, follow up, or maintenance treatment within the unit. Terrain within the prescribed fire unit would allow for a limited amount of acres to be treated by mechanical means. Machinery would only work on areas that are not steep and allow for safe operation and minimal ground disturbance. Oak, mtn. shrub species, juniper and pinion pine would be the target vegetation for mechanical treatments. Machinery would not be used within riparian vegetation.

West Divide Prescribed Fire

The legal description for this project is T8S, R91W, Sections 8, 17, and 20. The project is part of a broadcast prescribed fire that is an interagency project with White River National Forest and private landowner. The total size of the BLM burn unit is 381 acres, with the project MMA being 3,161 acres in size. The fuels on the BLM portion of this burn is predominantly oak brush and mixed mountain shrub. Some control lines will need to be constructed for this burn project and will be determined by the burn boss before the burn is initiated. Control lines can consist of chainsaw operations for clearing vegetation, digging fireline by hand and using natural fire barriers.

No Action Alternative: No fuel reductions or treatment would be conducted on public land. Areas that currently have high fuel loadings would continue to accumulate fuel leading to wildfires with even greater intensity which could lead to increased threats to private land, private structures and improvements, public safety and fire fighter safety.

Alternatives Considered But Not Carried Forward.

1. The use of a bulldozer to remove vegetation was considered but eliminated to keep surface disturbance and impacts to the least amount possible while achieving the goal of hazardous fuel reduction. A bulldozed line would create impacts far greater than those resulting from the proposed action. Terrain features within the majority of the treatment unit also would not be acceptable for this type of equipment.

PLAN CONFORMANCE REVIEW:

BLM Lands:
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: Glenwood Springs Resource Management Plan.

Date Approved: Amended in November 1991 - Oil and Gas Leasing and Development - Final Supplemental Environmental Impact Statement; amended Nov. 1996 - Colorado Standards and Guidelines; amended in August 1997 - Castle Peak Travel Management Plan; amended in March 1999 - Oil and Gas Leasing & Development Final Supplemental Environmental Impact Statement; amended in November 1999 - Red Hill Plan Amendment; and amended in September 2002 – Fire Management Plan for Wildland Fire Management and Prescriptive Vegetation Treatment Guidance 2002 and revised 09/2009..

Decision Number/Page: The proposed action is within Fire Management Unit C-140-01 - West of Glenwood Springs. The fire management Objectives, Strategies (including Prescriptive Vegetative Treatments) and the Priority Ranking are in Appendix B, pages 42 - 45 of the Fire Management Plan for Wildland Fire Management and Prescriptive Vegetation Treatment Guidance 2002 and revised 09/2009. Also within the Fire Management Plan, Chapter III page 10 discusses Fuels Treatment Prioritization.

Decision Language: The priority ranking for Fuels Treatments is "moderate". The goals for prescriptive vegetative treatments in this unit include the following:
*Reduce hazardous fuel loading and the risks of wildland fire escaping public lands.
*Maintain or create diverse seral stages and improve herbaceous understory in aspen stands and mixed mountain shrublands
*Maintain or restore shrublands by reducing the encroachment of pinion- juniper woodlands on shrub and sagebrush communities.
*Improve quality of decadent sagebrush communities with poor herbaceous understory.
*To reduce the risks of large scale fires in critical watersheds.
*To reduce fuels around significant cultural sites.

Standards for Public Land Health: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. The five 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.

The proposed action area lies within the Pole Creek & Cottonwood Allotment within Divide Creek Landscape Unit which was the subject of a formal land health assessment during the summer of 2009. The Divide Creek Land Health Assessment Report found that the allotment was meeting all of the Standards for Public Land Health at the time.

The five 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, the impact analysis must address whether the proposed action or any alternatives being analyzed would result in impacts that would maintain, improve, or deteriorate land health conditions for that specific parameter. These analyses are located in specific elements listed below:

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section provides a description of the human and natural environmental resources that could be affected by the proposed action and no action alternative. In addition, the section presents comparative analyses of the direct and indirect consequences on the affected environment stemming from the implementation of the various actions.

A variety of laws, regulations, and policy directives mandate the evaluation of the effects of a proposed action and alternative(s) on certain critical environmental elements. Not all of the critical elements that require inclusion in this EA are present, or if they are present, may not be affected by the proposed action and alternative (Table 1). Only those mandatory critical elements that are present and affected are described in the following narrative.

In addition to the mandatory critical elements, there are additional resources that would be impacted by the proposed action and alternative. These are presented under **Other Affected Resources.**

Table 1. Critical Elements of the Human Environment

Critical Element	*Present*		*Affected*		*Critical Element*	*Present*		*Affected*	
	Yes	No	Yes	No		Yes	No	Yes	No
Air Quality	X		X		Prime or Unique Farmlands		X		X
ACECs		X		X	Special Status Species*	X		X	
Cultural Resources	X			X	Wastes, Hazardous or Solid	X		X	
Environmental Justice		X		X	Water Quality, Surface and Ground*	X		X	
Floodplains		X		X	Wetlands and Riparian Zones*	X		X	
Invasive, Non-native Species	X		X		Wild and Scenic Rivers		X		X
Migratory Birds	X		X		Wilderness/ WSAs		X		X
Native American Religious Concerns		X		X					

* Public Land Health Standard

Critical Elements

Air Quality

Affected Environment: The proposed action area (Garfield and Mesa Counties) has been described as an attainment area under CAAQS and NAAQS (Colorado Ambient Air Quality Standards and National Ambient Air Quality Standards). An attainment area is an area where ambient air pollution amounts are determined to be below NAAQS standards.

Proposed Action:

Environmental Consequences/Mitigation: The proposed activities would result in short term localized emissions from smoke associated with burning activities. While the affects of these activities appear to be minor, they could affect individuals in the vicinity sensitive to smoke such as the elderly, infants and young children, and those with breathing problems. Others that may be at risk include pregnant women, those active outdoors, and people with allergies or diabetes. In addition to burning activities, fence building activities would result in short term localized emissions from vehicles and equipment. Dust generation may also occur if these activities are implemented during dry conditions.

Burning activities would be conducted in accordance with the current State of Colorado Smoke Management Plan and permitted by open burning permits issued by the Colorado Department of Public Health and Environment Air Pollution Control Division. The timing of these activities would be such to minimize the likelihood of excessive smoke production and transport of pollutants. In addition, visual monitoring of burning activities would occur in the area by qualified individuals. Given the scale, location, and the timing of the proposed activities; it is anticipated that overall impacts to local air quality would be minimal and no mitigation is recommended at this time.

No Action Alternative:

Environmental Consequences: Under the no action alternative, no fuels reduction activities would occur. The result could be catastrophic wildfire which would have more of an effect on local air quality than the proposed fuels reduction activities.

Cultural Resources

Affected Environment: A Class III cultural resources inventory (CRVFO #18011-1) has been conducted within the BLM proposed fuel reduction area. No historic properties were identified that are eligible for listing on the National Register of Historic Places (NRHP).

Proposed Action:

Environmental Consequences/Mitigation: There would be no direct impacts to cultural resources as a result of the fire. However, the clearing of vegetation to rebuild the fences may expose cultural resources that were buried in the duff or subsurface possibly damaging significant cultural resources. Possible indirect long-term cumulative impacts from potential increased

public access and the presence of project personnel could result in a range of impacts to undiscovered cultural resources. These impacts could range from illegal collection, vandalism or excavation.

No historic properties were identified within the proposed BLM fuel reduction area, therefore the determination of **No Historic Properties Affected** can be made in accordance with the National Historic Preservation Act (16U.S.C 470f), National BLM/SHPO Programmatic Agreement (1997), and Colorado Protocol (1998). If however, the fire spreads into the maximum manageable area there could be adverse impacts to unknown cultural resources. The Inadvertent Discovery stipulation needs to be added and all personnel need to be informed about reporting and protecting cultural resources.

Mitigation:
Prior to initiating the proposed burn on BLM lands the Cultural Resources Specialist must sign off on the plan.

Inadvertent Discovery
The National Historic Preservation Act (NHPA) requires that if newly discovered cultural resources are identified during project implementation, work in that area must stop and the agency Authorized Officer notified immediately (36 CFR 800.13). The Native American Graves Protection and Repatriation Act (NAGPRA), requires that if inadvertent discovery of Native American Remains or Objects occurs, activity must cease in the area of discovery, a reasonable effort made to protect the item(s) discovered, and immediate notice made to the BLM Authorized Officer, as well as the appropriate Native American group(s) (IV.C.2). Notice may be followed by a 30-day delay (NAGPRA Section 3(d)). Further actions also require compliance under the provisions of NHPA and the Archaeological Resource Protection Act.

If the fire extends past the proposed boundary and into the MMA a cultural resources inventory should be undertaken after the fire is extinguished and within one year after the fire.

No Action Alternative:

Environmental Consequences: This alternative would be neither beneficial nor detrimental to cultural resources.

Invasive, Non-native Species

Affected Environment: The area described in the proposed action has scattered infestations of canada thistle, biennial thistle, and houndstongue. Other noxious weed species may be present in the area; however a complete landscape wide survey has not been conducted.

Proposed Action:

Environmental Consequences: Under this alternative, noxious and invasive plant species would initially increase as a result of disturbance associated with the project. Disturbance provides a niche for noxious and invasive plant species to become established. Equipment and vehicles associated with the project could transport weed seed and reproductive vegetative plant parts to

the project area. As native vegetation recovers from the proposed disturbance, treatment of noxious and invasive weed species may need to be conducted in order to achieve desired results. Noxious and invasive plant treatment methods that would be used at the project site have been analyzed in Environmental Assessment DOI-BLM-CO-N040-2009-0078.

Mitigation: The project leader is to ensure equipment involved in land disturbing actions be clean of noxious weed seeds or propagative parts prior to entry on site. When working in areas with noxious weeds, equipment should be cleaned prior to moving off site.

The BLM fuels specialist or noxious weed coordinator will monitor the project area at least once annually during the growing season for three years following the treatments to detect the presence of any invading noxious weeds. Any Colorado-listed noxious weeds will be promptly treated and controlled according to the appropriate timing for each particular weed species. A Pesticide Use Proposal must be completed and approved by BLM prior to the use of herbicides.

No Action Alternative:

Environmental Consequences: Under this alternative the disturbance associated with the proposed action would not take place. Noxious and invasive plant species would continue at current levels.

Migratory Birds

Affected Environment:
BLM Instruction Memorandum No. 2008-050 provides guidance toward meeting the Bureau of Land Management's (BLM) responsibilities under the Migratory Bird Treaty Act (MBTA) and the Executive Order (EO) 13186. The guidance directs Field Offices to promote the maintenance and improvement of habitat quantity and quality. To avoid, reduce or mitigate adverse impacts on the habitats of migratory bird species of conservation concern to the extent feasible, and in a manner consistent with regional or statewide bird conservation priorities.

The 1988 amendment to the Fish and Wildlife Conservation Act mandates the U.S. Fish and Wildlife Service (USFWS) to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973." The "*BIRDS OF CONSERVATION CONCERN 2008"* (U.S. Fish and Wildlife Service 2008) is the most recent effort to carry out this mandate.

The MBTA prohibits the "take" of a protected species. Under the Act, the term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The USFWS interprets "harm" and "kill" to include loss of eggs or nestlings due to abandonment or reduced attentiveness by one or both adults as a result of disturbance by human activity, as well as physical destruction of an occupied nest.

The conservation concerns are the result of population declines - naturally or human-caused, small ranges or population sizes, threats to habitat, or other factors. Although there are general patterns that can be inferred, there is no single reason why any species is on the list. Habitat loss

is believed to be the major reason for the declines of many species. When considering potential impacts to migratory birds the impact on habitat, including: 1) the degree of fragmentation/connectivity expected from the proposed project relative to before the proposed project; and 2) the fragmentation/connectivity within and between habitat types (e.g., within nesting habitat or between nesting and feeding habitats. Continued private land development, surface disturbing actions in key habitats (e.g. riparian areas) and the proliferation of roads, pipelines, powerlines and trails are local factors that reduce habitat quality and quantity for many species.

The Colorado River Valley Field Office (CRVFO) is within the Southern Rockies/Colorado Plateau Bird Conservation Region (BCR). The 2008 list of Birds of Conservation Concern include the following:

Species	Habitat Description	Potential Occurrences in Project Area
Gunnison Sage-Grouse *(Centrocercus minimus)*	Sagebrush communities for hiding and thermal cover, food, and nesting; open areas with sagebrush stands for leks; sagebrush-grass-forb mix for nesting; wet meadows for rearing chicks. Year-round resident, breeding	Not Present
American Bittern *(Botaurus lentiginosus)*	Marshes and wetlands; ground nester. Summer resident.	Not Present
Bald Eagle *(Haliaeetus leucocephalus)*	Nests in forested rivers and lakes; winters in upland areas, often with rivers or lakes nearby. Generally winter resident, occasional breeding.	Present
Ferruginous Hawk *(Buteo regalis)*	Open, rolling and/or rugged terrain in grasslands and shrubsteppe communities; also grasslands and cultivated fields; nests on cliffs and rocky outcrops. Fall/ winter resident, non-breeding.	Unlikely
Golden Eagle *(Aquila chrysaetos)*	Open country, grasslands, woodlands, and barren areas in hilly or mountainous terrain; nests on rocky outcrops or large trees. Year-round resident, breeding.	Present
Peregrine Falcon *(Falco peregrines)*	Open country near cliff habitat, often near water such as rivers, lakes, and marshes; nests on ledges or holes on cliff faces and crags. Spring/summer resident, breeding.	Possibly Present
Prairie Falcon *(Falco mexicanus)*	Open country in mountains, steppe, or prairie; winters in cultivated fields; nests in holes or on ledges on rocky cliffs or embankments . Spring/summer resident, breeding	Unlikely
Snowy Plover *(Charadrius alexandrinus nivosus/tenuirostris)*	Sparsely vegetated sand flats associated with pickleweed, greasewood, and saltgrass. Spring migrant, non-breeding. Spring migrant, non-breeding	Not Present
Mountain Plover *(Charadrius montanus)*	High plain, cultivated fields, desert scrublands, and sagebrush habitats, often in association with heavy grazing, sometimes in association with prairie dog colonies ; short vegetation.	Not Present
Long-billed Curlew *(Numenius americanus)*	Lakes and wetlands and adjacent grassland and shrub communities. Spring/ fall migrant, non-breeding.	Not Present
Yellow-billed Cuckoo *(Coccyzus americanus)*	Riparian, deciduous woodlands with dense undergrowth; nests in tall cottonwood ,mature willow riparian, moist thickets, orchards, abandoned pastures. Summer resident, breeding.	Not Present
Burrowing Owl *(Athene*	Open grasslands and low shrublands often in association with prairie dog colonies; nests in abandoned burrows	Not Present

cunicularia)		
Lewis's Woodpecker *(Melanerpes lewis)*	Open woodland, often logged or burned, including oak, coniferous forest (often ponderosa), riparian woodland, and orchards, less often in pinyon-juniper.	Possibly Present
Willow Flycatcher *(Empidonax traillii)*	Riparian and moist, shrubby areas; winters in shrubby openings with short vegetation. Summer resident, breeding.	Not Present
Gray Vireo *(Vireo vicinior)*	Open pinyon-juniper woodlands. Uncommon summer resident, breeding.	Unlikely
Pinyon Jay *(Gymnorhinus cyanocephalus)*	Pinyon-juniper woodland. Year-round resident, breeding.	Present
Juniper Titmouse *(Baeolophus ridgwayi)*	Pinyon-juniper woodlands, especially juniper; nests in tree cavities. Year-round resident, breeding.	Present
Veery *(Catharus fuscescens)*	Dense riparian thickets and hillside brush near streams. Uncommon spring/fall migrant in Eastern Colorado.	Not Present
Bendire's Thrasher *(Toxostoma bendirei)*	Desert, especially areas of tall vegetation, cholla cactus, creosote bush and yucca, and in juniper woodland Possible summer resident.	Present in Summer
Grace's Warbler *(Dendroica graciae)*	Breeds in ponderosa pine forests. Uncommon summer esident in southwest Colorado.	Not Present
Brewer's Sparrow *(Spizella breweri)*	Summer resident that primarily breeds in sagebrush-grass stands and shrublands. Migrant at low elevations.	Present in Summer
Grasshopper Sparrow *(Ammodramus savannarum)*	Open grasslands and cultivated fields. Spring migrant, non-breeding .	Not Present
Chestnut-collared Longspur *(Calcarius ornatus)*	Open grasslands and cultivated fields. Spring migrant, non-breeding.	Not Present
Black Rosy-Finch *(Leucosticte atrata)*	Open country including mountain meadows, high deserts, valleys, and plains; breeds/ nests in alpine areas near rock piles and cliffs. Winter resident, non-breeding.	Not Present
Brown-capped Rosy-Finch *(Leucosticte australis)*	Alpine meadows, cliffs, and talus and high-elevation arks and valleys. Summer residents, breeding.	Not Present
Cassin's Finch *(Carpodacus cassinii).*	Open montane coniferous forests; breeds/ nests in coniferous forests. Year-round resident, breeding.	Possibly Present

The CRVFO planning area provides both foraging and nesting habitat for a variety of migratory birds that summer, breed, winter, or migrate through the area. The habitat diversity provided by the broad expanses of sagebrush, mixed mountain shrub, oakbrush, aspen, pinyon-juniper woodlands, other types of coniferous forests and riparian and wetland areas support many bird species. Species such as the Pinyon Jay, Juniper Titmouse, and Lewis's Woodpecker are characteristically found in pinyon/juniper woodlands.

Bald eagle (*Haliaeetus leucocephalus*). Bald eagles are increasing in numbers throughout their range and were removed from the federal threatened and endangered species list in 2007 however bald eagles are still protected under the Migratory Bird Treaty Act. Bald eagles are known to winter along portions of the Colorado, Eagle and Roaring Fork Rivers and its major tributaries. Wintering bald eagles are generally present from mid-November to mid-April. Large mature cottonwood trees along the rivers and their major tributaries are used as roosting and perching sites, and these waterways provide the main food sources of fish and waterfowl.

Upland habitats adjacent to these waterways are used as scavenging areas primarily for winter killed animals. Major threats include habitat loss, human disturbance and illegal shooting.

Golden eagles likely forage throughout the project area. Raptor surveys have not been conducted in the area for the project however no nest sites are known to occur in such small trees. Many other species of raptors (red-tailed hawks, Cooper's hawks, kestrels and owls) not on the Fish & Wildlife Service's Birds of Conservation Concern list also can be seen in the area.
Proposed Action:

Environmental Consequences/Mitigation:
Limited specific bird count or species data exists for the area. The documented effects of prescribed fire on avian communities are poorly understood. Generally responses of individual bird species to land management activities like prescribed fire are habitat and species specific. Most species are dependent on habitats beyond BLM lands for a substantial portion of their lives, and land use activities can at most only contribute to their conservation.

Effects on Habitat. The proposed action would somewhat mimic a natural fire disturbance for Gambels oak and mountain brush species. The overall short-term impact of the proposed action would be an increase in habitat for avian species that prefer: (a) a mosaic of habitat types, (b) a diversity of age classes of Gambels oak, (c) younger seral stage mountain brush species, or (d) an open tree/shrub canopy that increases in grasses, forbs, and other plants regenerated by the reintroduction of fire. However, benefits for those species are likely to be short-term (<10 years) because prescribed fire only kills the above-ground portions of oak brush. Intense sprouting follows almost immediately and usually causes the stands to become even denser. Control or eradication, of Gambels oak requires physically removing the stem and as much of the root system as possible (CSU 2009).

Migratory birds are also threatened by long-term changes in habitat due to a catastrophic wildfire. The proposed action could contribute locally to decreasing the threat of catastrophic wildland fire that changes large blocks of habitat indiscriminately.

Mortality. No intentional take of native bird species is anticipated under the proposed action. Adult and fledged migratory birds are generally able to escape prescribed fires but there is a possibility that adults and young in the nest may perish. In addition the trampling of ground nesting birds and/or their eggs could occur outside of the fire itself.

Disturbance and Displacement. The potential effects on migratory birds at the local scale includes disturbance of individuals from prescribed burning and pre/post fire activities. Immediately after any fire, there could be a loss of habitat for wildlife species. There would be direct and indirect impacts because of the loss of vegetative cover within the burned area. Wildlife would be displaced until the habitat is restored. The activities would physically disrupt daily activities and may cause nest abandonment by the adults who are intolerant to disturbance. It is likely that the proposed action would result in the temporary displacement of bird species due to noise associated with treatments and human presence. This impact would be minimal because the project size and the availability of similar habitats nearby.

Summary. Large fires can modify habitat and affect relationships between migratory birds and

their environment. To reduce the risk of uncharacteristic stand-replacing fires, BLM land managers are proposing a smaller prescribed fire. The negative effects of local large, high intensity wildfires would be reduced somewhat by the proposed action. The proposed action would help move BLM lands towards a condition where wildfires create early successional habitats but at smaller patch scales and in a more heterogeneous pattern, which should protect and improve wildlife habitat across the region. The effects of the proposed action (with the proposed migration below) on migratory bird species is expected to be mixed, minimal and isolated, but not enough to influence populations of migratory birds long-term on a landscape level.

Mitigation: The CRVFO currently applies Conditions of Approval (COA) to all activities that alter vegetation and to the broad use of pesticides in migratory bird habitat during the nesting season. This COA would apply to activities between May 15 and July 15. The COA considers the scale, type, and duration of the project; species potentially present; weather conditions; elevation and habitat types present; and type of motorized equipment to be used. An exception may be granted if nesting surveys indicate no nesting birds of conservation concern (BCC) species within 10 meters of the area to be disturbed
For this project area it is recommended that the COA apply between June 1 and July 15.

No Action Alternative:

Environmental Consequences/Mitigation:

If no large fires occur in the future, Gambels oak will develop into older stands that attain tree-like form with heights up to 20 feet, with a lush understory of grass and forbs (CSU 2009). The no action alternative would then support migratory birds that favor older seral stage habitats. No migratory birds would be displaced, disturbed or perish due to prescribed or wildland fires.

It is difficult to quantifiable the impacts of a potential catastrophic wildfire before it occurs. Some individual birds would likely perish in large unplanned wildland fires. Migratory birds would be threatened by long-term changes in habitat. Large fires destroy habitat locally and increase habitat fragmentation across the region. There would be direct and indirect impacts on migratory birds because of the loss of vegetative cover within the burned area. However it must be recognized that some migratory bird species utilize early successional habitats that develop following wildfires.

From a wildlife management standpoint the desired long-term condition where wildfires create early successional habitats but at smaller patch scales and in a more heterogeneous pattern, which should protect and improve wildlife habitat across the region habitat may not occur naturally.

Native American Religious Concerns

Affected Environment: The Ute tribes claim this area as part of their ancestral homeland. At present, there are no areas of Native American concern within the proposed BLM fuel reduction area and the survey did not identify any either. Additionally, none are currently known within the maximum manageable area. The Ute Tribes have indicated that they do not want to be

notified or consulted with if the project is small or if there are no areas of Native American concern within the proposed action.

Proposed Action:

Environmental Consequences/Mitigation: Although there would be no direct impacts from the proposed action, indirect impacts from increased access and personnel in the vicinity of the proposed project could result in impacts to undiscovered Native American resources. These impacts could range from illegal collection to vandalism.

The Inadvertent Discovery should be stressed to all personnel involved in this fuel reduction project about the importance of protecting Native American values, including informing them of their responsibilities to report any Native American resources encountered.

No Action Alternative:

Environmental Consequences: This alternative would be neither beneficial nor detrimental to Native American areas of concern.

Special Status Species - Plants (includes an analysis of Public Land Health Standard 4)

Affected Environment:
Federally Listed, Proposed or Candidate Plant Species
According to the latest species list from the U. S. Fish and Wildlife Service (http://mountain-prairie.fws.gov/endspp/CountyLists/COLORADO.htm), the following Federally listed, proposed, or candidate threatened or endangered plant species may occur within or be impacted by actions occurring in Garfield or Mesa County: Colorado hookless cactus (*Sclerocactus glaucus*), Ute ladies'-tresses (*Spiranthes diluvialis*), Parachute beardtongue (*Penstemon debilis*), and DeBeque phacelia (*Phacelia submutica)*.

Colorado hookless cactus. The Colorado hookless cactus is a federally-listed threatened plant typically found on rocky hills and alluvial benches in xeric fine-textured soils overlain with cobbles and pebbles. It grows in salt desert shrub and pinyon-juniper communities at elevations ranging from approximately 4,500 to 6,600 feet. The lowest elevation of the project area is approximately 7,500 feet which is above the elevational range for the cactus. There is no potential habitat for the Colorado hookless cactus in the project area.

Ute ladies'-tresses. The Ute ladies'-tresses is a federally listed threatened plant with a CNHP Rank of G2/S2. Habitat for this rare orchid includes seasonally flooded river terraces, subirrigated or spring-fed abandoned stream channels, and lakeshores. In addition, some populations have been discovered along irrigation canals, berms, levees, irrigated meadows, excavated gravel pits, reservoirs, and other human modified wetlands. This orchid is known to occur in isolated populations in Colorado, Idaho, Montana, Nebraska, Nevada, Utah, Washington and Wyoming. The Ute ladies'-tresses has been found in the Roaring Fork drainage between 6,100 and 6,300 feet elevation. None of the project area falls within the elevational range of the orchid. There is no potential habitat for the Ute ladies'-tresses within the project area.

Parachute beardtongue. Parachute beardtongue is a rare plant, endemic to steep, talus slopes on the southern escarpment of the Roan Plateau in Garfield County, Colorado. The plants are found only on the oil-shale rich Parachute Creek Member of the Green River Formation between 8,000 to 9,000 feet in elevation. There are no exposures of the Green River Formation within the project area and therefore, no potential habitat for the Parachute beardtongue.

DeBeque phacelia. DeBeque phacelia is a rare annual plant restricted to expansive clay soils derived from the Atwell Gulch and Shire members of the Wasatch Formation in Mesa and Garfield Counties, Colorado. The plant grows on sites that are nearly barren of vegetation. There are no exposures of the Wasatch Formation within the project area and therefore, no potential habitat for the DeBeque phacelia.

BLM Sensitive Plant Species

BLM sensitive plant species with habitat and/or occurrence records in Garfield or Mesa County include: DeBeque milkvetch (*Astragalus debequaeus*), Naturita milkvetch (*Astragalus naturitensis*), Roan Cliffs blazing star (*Mentzelia rhizomata*), Piceance bladderpod (*Lesquerella parviflora*), Harrington's penstemon (*Penstemon harringtonii*), and Cathedral Bluffs meadowrue (*Thalictrum heliophilum*).

DeBeque milkvetch. DeBeque milkvetch is found only on the Wasatch Formation in the vicinity of DeBeque and Rulison, Colorado. Plants are common on the Atwell Gulch Member of the Wasatch Formation but are rare elsewhere. Elevations of known populations are between 5,100 and 6,400 feet. There are no exposures of the Wasatch Formation within the project area and consequently, no potential habitat for the DeBeque milkvetch.

Naturita milkvetch. Naturita milkvetch occurs on sandstone mesas, ledges, crevices, and slopes in pinyon-juniper woodlands at elevations from 5,000 to 7,000 feet. It grows in areas of shallow soils over exposed bedrock. Naturita milkvetch has been found in several locations on the western end of the CRVFO. The project area does not contain any areas of exposed bedrock or sandstone mesas and ledges and no potential habitat exists for Naturita milkvetch.

Roan Cliffs blazing star. The Roan Cliffs blazing star is found only on steep talus slopes of the Green River Formation in Garfield County. The species occurs on eroding oil shale at elevations from 5,800 to 9,000 feet. In the GSFO, the Roan Cliffs blazing star is known to occur on the cliffs of the Roan Plateau, along Parachute Creek drainage and in Main Elk Creek, near New Castle, Colorado. The project area contains no exposures of the Green River Formation and consequently, does not contain potential habitat for the Roan Cliffs blazing star.

Piceance bladderpod. The Piceance bladderpod is a Colorado endemic known only in Garfield, Mesa, and Rio Blanco Counties. It occurs on shale outcrops of the Green River Formation, on ledges and slopes of canyons in open areas at elevations ranging from 6,200 to 8,600 feet. There are no exposures of the Green River Shale Formation within the project area, and therefore, no potential habitat for the Piceance bladderpod.

Harrington's penstemon. Harrington's penstemon is typically found in open sagebrush slopes (*Artemisia tridentata ssp. pauciflora* or *A. tridentata ssp. wyomingensis*) on the edges of pinyon-

juniper or oakbrush habitats but is rarely found in the deeper soiled sagebrush (*A. tridentata ssp. tridentata*) along drainages. It occurs in rocky clay loams derived from calcareous materials between the elevations of 6,100 and 10,000 feet. The nearest known populations of Harrington's penstemon occur on Grass Mesa approximately 10 miles to the northwest of the project area. No populations of Harrington's penstemon were found within or adjacent to the project area during the 2009 land health assessment fieldwork. The project area is dominated by dense stands of Gambel oak and mixed mountain shrubs which are not suitable habitat for Harrington's penstemon.

Cathedral Bluffs meadowrue. The Cathedral Bluffs meadowrue is known from 18 occurrences in Garfield, Mesa and Rio Blanco Counties. The meadowrue is a narrowly endemic plant found in dry shale barren communities between 6,200 and 8,800 feet in elevation. There are no shale barrens in the project area and therefore, no potential habitat exists within the project area.

Proposed Action
Environmental Consequences:
Federally Listed, Proposed or Candidate Plant Species
Due to the absence of any known occurrences or suitable habitat for any listed, proposed or candidate plant species within the West Divide project area, the proposed action should have "No Effect" on these species.

BLM Sensitive Plant Species
Due to the absence of any known occurrences or suitable habitat for any BLM Sensitive plant species within the project area, the proposed action should have no impact on these species.

No Action
Environmental Consequences:
Due to the absence of any known occurrences or suitable habitat for any special status plant species within the project area, the proposed action should have no impact on these species.

Analysis on the Public Land Health Standard 4 for Special Status Plant Species**:** (partial, see also Aquatic and Terrestrial Wildlife): In 2009, the BLM Glenwood Springs Office evaluated vegetation and other land health conditions within the project area as part of the Divide Creek Land Health Assessment. The project area was not determined to provide suitable habitat for any federally listed, proposed, candidate or BLM sensitive plant species, therefore, the proposed action would have no bearing on the ability of the landscape to meet Standard 4.

Special Status Species - Terrestrial Wildlife Species (includes an analysis of Public Land Health Standard 4

Affected Environment :

Federally Listed, Proposed or Candidate - Terrestrial Wildlife Species
According to the latest species list from the U. S. Fish and Wildlife Service (U.S. Fish and Wildlife Service. 2008), the following Federally listed, proposed, or candidate terrestrial wildlife species may occur within or be impacted by actions occurring within the GSFO (Table 1):

Table 1.

Terrestrial Wildlife Species	Habitat/Range	Eagle County	Garfield County	Mesa County	Pitkin County	Routt County
Black-footed Ferret (*Mustela nigripes*)	In Colorado habitat includes the eastern plains, the mountain parks and the western valleys. Specifically grasslands or shrublands that supported some species of prairie dog, the ferret's primary prey.	X				
Canada lynx (*Lynx Canadensis)*	Mesic forests of lodgepole pine, subalpine fir, Engelmann spruce, and quaking aspen in the upper montane and subalpine zones, generally between 8,000 and 12,000 feet in elevation.	X	X	X	X	X
Mexican spotted owl *(Strix occidentalis lucida)*	Mature montane forests, shady canyons, and steep canyons. The key components in montane forests are common to old-growth forests: uneven-age stands with high canopy closure and tree density, fallen logs and snags.	X	X		X	
Greater sage grouse (*Centrocercus urophasianus)*	Resident of relatively large, open sagebrush flats or rolling sagebrush hills. Uncommon and unlikely in this part of the GSFO or associated habitats	X				X
Yellow-billed cuckoo *(Coccyzus americanus)*	Mature riparian forests of cottonwoods and other large deciduous trees with a well-developed understory of tall riparian shrubs. Uncommon summer resident of Colorado.	X	X	X	X	X
Uncompahgre fritillary butterfly *(Boloria acrocnema)*	Patches of snow willow (*Salix spp.*) at high elevations.	X			X	

These species: their status, their distributions, habitat associations, and as appropriate their association to the project area is summarized below.

Black-footed Ferret (*Mustela nigripes*). Federally listed as endangered. Black-footed ferrets have ranged statewide but never have been abundant in Colorado. Their habitat included the eastern plains, the mountain parks and the western valleys – grasslands or shrub lands that supported some species of prairie dog, the ferret's primary prey. Little is known about their natural history. They mate in early spring and give birth to a litter of three or four mouse-sized pups after a seven-week gestation period. Black-footed ferrets are reported to be killed. They are susceptible to distemper, predators like owls and coyotes, and vehicles. It is assumed that plowing for agriculture and programs to eradicate prairie dogs have driven the black-footed ferret to the verge of extinction. State and federal biologists have established two major black-footed ferret colonies: one at Coyote Basin (Colorado-Utah border west of Rangely) and another at the BLM's Wolf Creek Management Area southeast of Dinosaur National Monument (CDOW 2009). Because no known occurrences have been documented and the occurrence of the species in this area is unlikely due to range and habitat conditions, this species is not considered further.

Canada Lynx (*Lynx canadensis*). Federally listed as threatened. Canada lynx (*Lynx canadensis*) was listed as a federally threatened species, effective April 24, 2000 (Federal Register Volume 65, No. 58). Canada lynx occupy high-latitude or high-elevation coniferous forests characterized by cold, snowy winters and an adequate prey base (Ruggiero et al. 1999). The preferred prey of Canada lynx throughout their range is the snowshoe hare (*Lepus americanus*). In the western United States, lynx are associated with mesic forests of lodgepole pine, subalpine fir, Engelmann spruce, and quaking aspen in the upper montane and subalpine zones, generally between 8,000 and 12,000 feet in elevation. Although snowshoe hares are the preferred prey in Colorado, lynx in also feed on other species such as the mountain cottontail (*Sylvilagus nuttallii*), pine squirrel (*Tamiasciurus hudsonicus*), and blue grouse (*Dendragapus obscurus*).

The U.S. Forest Service (USFS) has mapped suitable denning, winter, and other habitat for lynx within the White River National Forest (WRNF). The mapped suitable habitat in the WRNF comprises several areas known as Lynx Analysis Units (LAUs). Lynx analysis units (LAUs) are management areas that contain suitable lynx habitat and approximate the size of a female home range. Several LAUs border BLM lands however no areas large enough to be considered LAUs occur within the GSFO. BLM lands within the GSFO area generally support the movement of lynx dispersing to a new area or, potentially, moving to lower elevations during severe winter weather in search of prey. Because no known occurrences have been documented and the occurrence of the species in this area is unlikely due to range and habitat conditions, this species is not considered further.

Greater sage grouse (*Centrocercus urophasianus).* The U.S. Fish and Wildlife Service announced on Friday, March 5, 2010 that the greater sage-grouse (Centrocercus urophasianus) would be added to the Endangered Species Act "Candidate" list. The USFWS determined that proposing the species for protection is precluded by the need to take action on other species facing more immediate and severe extinction threats. As a result, the greater sage-grouse was placed on the list of species that are candidates for Endangered Species Act Protection. Evidence suggests that habitat fragmentation and destruction across much of the species' range has contributed to significant population declines over the past century. If current trends persist, many local populations may disappear in the next several decades, with the remaining fragmented population vulnerable to extinction.

Sage grouse, as the name implies, are found only in areas where sagebrush is abundant, providing both food and cover. Although these birds are found at altitudes of 6000-8500 feet, they are not forest grouse and prefer relatively open sagebrush flats or rolling sagebrush hills. In winter, sagebrush accounts for 100% of the diet for these birds. In addition, it provides important escape cover and protection from the elements. In late winter, males begin to concentrate on traditional strutting grounds or leks. Females arrive at the leks 1-2 weeks later. Leks can occur on a variety of land types or formations (windswept ridges, knolls, areas of flat sagebrush, flat bare openings in the sagebrush. Breeding occurs on the leks and in the adjacent sagebrush, typically from March through May. Females and their chicks remain largely dependent on forbs and insects for food well into early fall. Cultivated herbaceous broad-leaved plants (alfalfa, clover) are important early fall food sources when available (CDOW 2009a).

The Northern Eagle/Southern Routt population, while small (<300 birds), probably has, or had, a relationship with the larger population in Moffat, Rio Blanco and western Routt counties, and probably with the Middle Park population to the east. The northern part of the project area does overlap with an isolated parcel of mapped sage grouse habitat. The GIS layer, derived from field personnel input, encompasses all mapped seasonal activity areas within the observed range of a population of sage grouse. The details of that information are not recorded. Because no known occurrences have been documented and the occurrence of the species in this area is unlikely due to range and habitat conditions, this species is not considered further.

Mexican Spotted Owl (*Strix occidentalis*). Federally listed as endangered. This owl nests, roosts, and hunts in mature coniferous forests in canyons and foothills. The only extant populations in Colorado are in the Pikes Peak and Wet Mountain areas of south-central Colorado and the Mesa Verde area of southwestern Colorado. Because no known occurrences have been documented and the occurrence of the species in this area is unlikely due to range and habitat conditions, this species is not considered further.

Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*). Candidate for Federal listing. This secretive species occurs in mature riparian forests of cottonwoods and other large deciduous trees with a well-developed understory of tall riparian shrubs. Western cuckoos breed in large blocks of riparian habitats, particularly woodlands with cottonwoods (*Populus fremontii*) and willows (*Salix* sp.). A few sightings of yellow-billed cuckoo have occurred in western Colorado along the Colorado River near Grand Junction (USFWS 2009b). Riparian areas in the project area do not provide suitable habitat for this species due to the patchy nature of the stands and the general lack of a tall-shrub understory. Because no known occurrences have been documented and the occurrence of the species in this area is unlikely due to range and habitat conditions, this species is not considered further.

Uncompahgre fritillary butterfly *(Boloria acrocnema).* Federally listed as endangered. The butterfly has been verified at only two areas in the San Juan Mountains in Colorado. There is anecdotal evidence of other colonies in the San Juans and southern Sawatch ranges in Colorado. The butterfly exists above treeline in patches of its larval host plant, snow willow. The butterfly is most often found on north and east facing slopes, which provide a moist, cool, microclimate. The greatest known controllable threat is butterfly collecting. Climatological patterns, disease, parasitism, predation, and trampling of larvae by humans and livestock might pose additional threats. Because no known occurrences have been documented and the occurrence of the species in this area is unlikely due to range, elevation and habitat conditions, this species is not considered further.

BLM Sensitive - Terrestrial Wildlife Species
According to the latest *Colorado BLM State Director's Sensitive Species List (Animals and Plants) June, 2000,* the following terrestrial wildlife species may occur within or be impacted by actions occurring within the GSFO (Table - BLM Sensitive - Terrestrial Wildlife Species):

Table - BLM Sensitive - Terrestrial Wildlife Species

Name	Habitat/Range	Habitat Potential Present / Absent

Table - BLM Sensitive - Terrestrial Wildlife Species

Name	Habitat/Range	Habitat Potential Present / Absent
Townsend's big-eared bat (*Corynorhinus townsendii*) and Fringed myotis (*Myotis thysanodes)*	Occur as scattered populations at moderate elevations on the Western Slope, along the foothills of the Front Range and the mesas of southeastern Colorado. Maximum elevation is 7,500 feet. Breeds and roosts in caves, trees, mines, and buildings; hunts over pinyon-juniper, montane conifer, and semi-desert shrubland habitats. Known occurrences - Potential in caves, mines or trees	Possibly Present
Northern goshawk (*Accipter gentilis)*	Resident in foothills and mountains and occasional in migration and winter at lower elevations. Predominantly uses mature stands of aspen, and pines (ponderosa and lodgepole). Uncommon – seasonal visitor.	Absent
Goldeneye, Barrow's (*Bucephala islandica)*	Rare winter resident and spring/fall migrant in lowlands and mountains; a few breed in the northern mountains. Uncommon - seasonal	Absent
Ibis, white-faced (*Plegadis chihi)*	Inhabits wet meadows, marsh edges and reservoir shorelines. Very rare, non-breeding, summer migrant to western Colorado valleys and mountain lakes. Main breeding area is in the San Luis valley.	Absent

The following paragraphs address species with a habitat potential to be present in the project area.

Fringed Myotis (*Myotis thysanodes*) and Townsend's Big-eared Bat (*Plecotus townsendii*). Occur as scattered populations at moderate elevations on the Western Slope of Colorado. Habitat associations are not well defined. Both of these bats will forage over water and along the edge of vegetation (pinyon-juniper woodlands, montane conifer woodlands, semi-desert shrublands) for aerial insects. Although they commonly roost in caves, rock crevices, mines, or buildings, they also may roost in tree cavities. Both species are widely distributed and usually occur in small groups. The animals roost in rock crevices, caves, mines, buildings and trees. Townsend's big-eared bat is not very abundant anywhere in its range and this is attributed to patchy distribution and limited availability of suitable roosting habitat (Gruver, J.C. and D.A. Keinath 2006).

Northern Goshawk *(Accipiter gentilis).* The Northern Goshawk is the largest North American accipiter. The goshawk is a forest habitat generalist that uses a variety of forest type, forest ages, structural conditions and successional stages. Goshawks prey on small-medium sized birds and mammals. It breeds in coniferous deciduous and mixed forests. The nest is typically located on a northerly aspect in a drainage or canyon and is often near a stream. Nest areas contain one or more stands of large, old trees with a dense canopy cover. A goshawk pair occupies its nest area from March until late September. The nest area is the center of all movements and behaviors associated with breeding from courtship through fledging. Because no known occurrences have been documented and the occurrence of the species in this area is unlikely due to range and habitat conditions, this species is not considered further.

Goldeneye, Barrow's (*Bucephala islandica).* This bird is a rare and local breeder in Flat Tops Wilderness Area in Garfield and adjacent counties. First confirmed record this century of fledged young or broods on 3 shallow lakes in Flat Tops Wilderness in 1990; also found in 1991 and 1994 (CLO 2009). Goldeneye's prefer alkaline-freshwater lakes in parkland areas and to a lesser extent subalpine/alpine lakes/beaver ponds for breeding. Because no known occurrences have been documented and the occurrence of the species in this area is unlikely due to range and habitat conditions, this species is not considered further.

Ibis, white-faced (*Plegadis chihi).* The species inhabits primarily freshwater wetlands, especially cattail (*Typha* spp.) and bulrush (*Scirpus* spp.) marshes. This species feeds in flooded hay meadows, agricultural fields, and estuarine wetlands. This species breeds in isolated colonies in mainly shallow marshes with "islands" of emergent vegetation. This species is more commonly found on the eastern slope of Colorado. Sparse historical records indicate that this species is uncommon within the CRVFO. Because no known occurrences have been documented and the occurrence of the species in this area is unlikely due to range and habitat conditions, this species is not considered further.

Proposed Action:

Environmental Consequences/Mitigation:

Federally Listed, Proposed or Candidate - Terrestrial Wildlife Species.
No U.S. Fish & Wildlife Service designated critical habitat for any of the above terrestrial wildlife species is found within the GSFO. No occupied habitat is present within the vicinity that could be directly or indirectly impacted by the proposed action. Due to the absence of any known occurrences, suitable habitat or landscape linkage for any listed, proposed or candidate terrestrial wildlife species, the proposed action should have "No Effect" on these species.

BLM Sensitive - Terrestrial Wildlife Species.
Fringed Myotis and Townsend's Big-eared Bats. Distribution is likely to be locally determined by availability of roosts, such as caves, mines, tunnels, crevices and masonry structures with suitable temperatures. No bat roosts or hibernaculum have been documented within the area of the proposed action. The greatest threats in order of priority to Townsend's Big-eared Bat (and likely Fringed Myotis) are the: (a) loss/modification/disturbance of roosting habitat resulting from uninformed closure of abandoned mines, recreation and renewed mining at historical sites; (b) loss/modification/disturbance of foraging habitat resulting from the conversion of native shrub and grasslands to urban or agricultural uses; and (c) exposure to environmental toxins (Gruver, J.C. and D.A. Keinath 2006).

Roosting habitat for bats in cliffs, rock crevices, and abandoned mines would not be affected by this alternative. Burning Gambel's oak would increase foraging habitat for some species of bats that use more open areas for foraging. There would be a short-term loss of foraging habitat for species that forage over mature shrublands and trees. Overall, the proposed action does not contribute to the threats and the long-term functionality of foraging habitat for bats.

No Action Alternative:

Environmental Consequences/Mitigation:

Federally Listed, Proposed or Candidate - Terrestrial Wildlife Species.
Due to the absence of any known occurrences, suitable habitat or landscape linkage for any listed, proposed or candidate terrestrial wildlife species, the no action alternative should have "No Effect" on these species.

BLM Sensitive - Terrestrial Wildlife Species.
If no large fires occur in the future, Gambel oak will develop into older stands that attain tree-like form with heights up to 20 feet, with a lush understory of grass and forbs (CSU 2009). The no action alternative would then support terrestrial wildlife species that favor older seral stage habitats. No species would be displaced, disturbed or perish due to prescribed or wildland fires.

If a catastrophic wildfire would occur, some individuals would likely perish in large unplanned wildland fires. Terrestrial wildlife would be threatened by long-term changes in habitat. Large fires destroy habitat locally and increase habitat fragmentation across the region. There would be direct and indirect impacts because of the loss of vegetative cover within the burned area. However it must be recognized that some terrestrial wildlife species and their prey utilize early successional habitats that develop following wildfires.

Analysis on the Public Land Health Standard 4 for Terrestrial Wildlife Special Status Species**:** (partial, see also Plants and Aquatic Wildlife): BLM utilizes *standards* (conditions needed to sustain public land health) and *guidelines* (management tools, methods, strategies, and techniques designed to maintain or achieve healthy public lands as defined by the standards) to assess and manage livestock grazing (BLM 1997). In 2009 the BLM Glenwood Springs Office evaluated vegetation and other land health conditions within the project area as part of the Divide Creek Land Health Assessment. The results indicate the landscape was meeting Standard 4 at that time.

Special Status Species - Aquatic Wildlife Species (includes an analysis of Public Land Health Standard 4

Federally Listed, Proposed or Candidate - Aquatic Wildlife Species
According to the latest species list from the U. S. Fish and Wildlife Service (U.S. Fish and Wildlife Service. 2008), the following Federally listed, proposed, or candidate aquatic wildlife species may occur within or be impacted by actions occurring within the GSFO (Table 2):

Aquatic Wildlife Species	Habitat/Range	Eagle County	Garfield County	Mesa County	Pitkin County	Routt County
Greenback cutthroat trout *(Oncorhynchus clarki stomias)*	Cold, clear, gravely headwater streams and mountain lakes. Originally found in the mountain and foothill areas of the Arkansas and South Platte river systems in Colorado and part of Wyoming.	X	X	X	X	X
Bonytail *(Gila elegans)*	Large, fast-flowing waterways of the Colorado River system.	X	X	X	X	X

Aquatic Wildlife Species	Habitat/Range	Eagle County	Garfield County	Mesa County	Pitkin County	Routt County
Colorado pikeminnow *(Ptychocheilus lucius)*	Swift flowing muddy rivers with quiet, warm backwaters of the Green, Yampa, White, Colorado, Gunnison, San Juan, and Dolores rivers.	X	X	X	X	X
Humpback chub *(Gila cypha)*	Deep, fast-moving, turbid waters often associated with large boulders and steep cliffs such as canyon-bound portions of the Colorado River system such as Black Rocks and Westwater canyons.	X	X	X		X
Razorback sucker *(Xyrauchen texanus)*	Deep, clear to turbid waters of large rivers and reservoirs over mud, sand or gravel. Currently low numbers in the Yampa, Colorado and Gunnison rivers. Reproducing populations remain only in the Colorado River near Grand Junction.	X	X	X	X	X

These species: their status, their distributions, habitat associations, and as appropriate their association to the project area is summarized below.

Greenback Cutthroat Trout (*Oncorhynchus clarki stomias*). Federally listed as threatened. The greenback cutthroat trout was not identified on the USFWS list for Garfield County; however, recent surveys have identified a population in Cache Creek, located several drainages east of the project area. The greenback is the subspecies of cutthroat trout native to the Platte River drainage on the Eastern Slope of Colorado, while the Colorado River cutthroat trout is the subspecies native to Garfield County and throughout the Western Slope of Colorado. Although the occurrence of greenbacks in Cache Creek and potentially elsewhere in the GSFO and WRNF areas is apparently the result of human intervention (e.g., sanctioned or *ad hoc* transplantation of fish from the Eastern Slope), its status as threatened applies to Western Slope populations. However, because drainages within the project area do not support this species, it is not considered further.

These four species of Federally listed big-river fishes occur within the Colorado River drainage basin downstream from the project area. The main factor identified as potentially affecting these fishes is the consumptive use of water from the Colorado River or its tributaries, resulting in decreased flows and adverse modification of critical habitat.

Bonytail (*G. elegans*). Federally listed as endangered. This large chub is a member of the minnow family. Their current distribution and habitat status are largely unknown due to its rapid decline prior to research into its natural history. Historically, bonytails were present in the Colorado River system, which includes the Yampa, Green, Colorado and Gunnison rivers. The bonytail is extremely rare in Colorado and no self-sustaining population exist throughout the Colorado River basin. Only one has been captured in the state since 1980. Restoration stocking of bonytail in the wild to develop adult populations is the priority recovery action in Colorado.

Colorado Pikeminnow (*Ptychocheilus lucius*). Federally listed as endangered. The Colorado pikeminnow (formerly Colorado squawfish) Colorado pikeminnow were once abundant in the main stem of the Colorado River and most of its major tributaries in Colorado, Wyoming, Utah,

New Mexico, Arizona, Nevada, California and Mexico. Now, they exist primarily in the Green River below the confluence with the Yampa River, the lower Duchesne River in Utah, the Yampa River below Craig, Colo., the White River from Taylor Draw Dam near Rangely downstream to the confluence with the Green River, the Gunnison River in Colorado, and the Colorado River from Palisade, Colo., downstream to Lake Powell. Biologists believe Colorado pikeminnow populations in the upper Colorado River basin are now relatively stable and in some areas may even be growing. Designated Critical Habitat for the Colorado pikeminnow includes the Colorado River and its 100-year floodplain west (downstream) from the town of Rifle.

Humpback Chub (*Gila cypha*). Federally listed as endangered. The nearest known habitat for the humpback chub and bonytail is within the Colorado River approximately 70 miles downstream from the project area. Only one population of humpback chub, at Black Rocks west of Grand Junction, is known to exist in Colorado.

Razorback Sucker (*Xyrauchen texanus*). Federally listed as endangered. The razorback sucker was once widespread throughout most of the Colorado River Basin from Wyoming to Mexico. In the upper Colorado River Basin, they are now found only in the upper Green River in Utah, the lower Yampa River in Colorado and occasionally in the Colorado River near Grand Junction. Because so few of these fish remain in the wild, biologists have been actively raising them in hatcheries in Utah and Colorado and stocking them in the Colorado River. Designated critical habitat for the razorback sucker includes the Colorado River and its 100-year floodplain west (downstream) from the town of Rifle.

BLM Sensitive - Aquatic Wildlife Species
According to the latest *Colorado BLM State Director's Sensitive Species List (Animals and Plants) June, 2000,* the following aquatic wildlife species may occur within or be impacted by actions occurring within the GSFO (Table 4):

Table 4.

Name	**Habitat**	**Habitat Potential Present / Absent**
Northern leopard frog (*Rana pipiens)*	Wet meadows and the banks and shallows of marshes, ponds, glacial kettle ponds, beaver ponds, lakes, reservoirs, streams, and irrigation ditches.	Present 0.7 miles west in Dry Hollow
Flannelmouth sucker (*Catostomas latipinnis)*	Generally restricted to rivers and major tributaries.	Absent in project area but found nearby in West Divide Creek
Roundtail chub (*Gila robusta)*	Generally restricted to rivers and major tributaries.	Absent in project area but found nearby in West Divide Creek
Bluehead Sucker (*Catostomus discobolus*)	Found in a wide variety of streams from headwater streams to large rivers.	Absent in project area but found nearby in West Divide Creek
Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus)*	Occurs in clear, cool headwaters streams with coarse substrates, well-distributed pools, stable streambanks, and abundant stream cover.	Absent

The following paragraphs address species with a habitat potential to be present in the project

area.

Leopard Frog (*Rana pipiens*). Northern leopard frogs are generally found between 3,500 to 11,000 feet in Colorado, in wet meadows and in shallow lentic habitats. Northern leopard frogs require year 'round water sources, deep enough to provide ice free refugia in the winter. The presence of northern leopard frogs has been associated with sites with more herbaceous cover as opposed to sites with earlier successional stages of emergent vegetation. Leopard frogs feed primarily on emergent adults of aquatic insects or on terrestrial insects attracted to the water. Within the GSFO, this species has been documented in various locales. Suitable habitat is abundant within the GSFO, and is located where quality riparian vegetation exists in conjunction with reliable perennial water sources. Larger populations of this species have been documented northwest of King Mountain within the small drainage that feeds and exits King Mountain (Ligon) Reservoir, June Creek and East Divide Creek south of Silt, Colorado, and in portions of the Rifle Creek watershed north of Rifle, Colorado. Population declines have been attributed to habitat alteration and loss, the effects of introduced bullfrogs and gamefish, aerial pesticide applications, and droughts that limit the availability of year round water.

Flannelmouth Sucker (*C. latipinnis*), and Roundtail Chub (*Gila robusta*). These native non-game fishes generally have habitat requirements similar to those of the Federally listed big-river fishes described above. Both the flannelmouth sucker and roundtail chub are known to occur in the Colorado River. They are potentially affected by major activities that alter water quality or flow regimes in Colorado River tributaries. The main factor identified as potentially affecting these fishes is the consumptive use of water from the Colorado River or its tributaries, resulting in decreased flows and adverse modification of critical habitat.

Bluehead Sucker (*Catostomus discobolus*). The bluehead sucker is found in a wide variety of areas from headwater streams to large rivers. It is absent in areas of standing water, requiring water of moderate-to-fast velocity. The species also prefers a rock substrate. If a river substrate is composed of sand, bluehead suckers are found where rock shoals created by talus slopes reach into the water (CDOW 2010).

Proposed Action:

Environmental Consequences/Mitigation:

Federally Listed, Proposed, Candidate and BLM Sensitive - Aquatic Wildlife Species.

Big-river Fishes. The proposed action would likely result in the use of some water for control of planned fire activities. Water depletions occurring within the Upper Colorado River Basin have been determined to negatively affect the four listed fishes. Water use associated with the project is anticipated to be minimal.

Post-fire debris flow/sedimentation into local streams could occur. Rainfall that normally is captured and stored by vegetation can run off, causing creeks and drainage areas to flood with more debris and water than is expected under unburned conditions. The big-river fishes are endemic to the Colorado River basin and reside almost exclusively within the mainstem Colorado River and its periodically flooded side channel impoundments and backwater habitats approximately 20

miles away. All of these fish are all well adapted to the high sediment loads traditionally carried by the Colorado River and its larger tributaries. In general, periodic to frequent influxes of sediment are important in the creation and maintenance of important microhabitats for these species. Movement and redistribution of sediments helps to create and maintain backwater habitats important to many life stages of these fish. Periodic inundation of floodplain areas with water/sediment provides optimal seedbed areas for native cottonwood regeneration to occur.

Due to the: (a) absence of any known occurrences within the project area, (b) lack of suitable habitat for any listed, proposed or candidate aquatic wildlife species within the project area, (c) distance to suitable habitat, and (d) negligible indirect and off-site negative impacts anticipated from the proposed action; it is concluded the proposed action will likely have "No Effect" on any Federally Listed, proposed, candidate species.

Flannelmouth Sucker (*C. latipinnis*), Roundtail Chub (*Gila robusta*) and Bluehead Sucker (*Catostomus discobolus*). No perennial waters are located in the project area. The closest riparian area is West Divide Creek 0.5 miles to the west. Given the distance to a perennial stream, an adequate buffer exists to filter most potential sediment or litter moved offsite via thunderstorm activity or seasonal snowmelt. Fish and amphibians would only be affected if the prescribed fire left the planned boundary and then fire debris washed into amphibian and fish habitats.

Post-fire debris flow/sedimentation into local streams could occur (see above). The species present are native and tolerant to sediment. Temporary and slight increases in sediment could result from the project, however oakbrush vigorously resprouts and it is anticipated that in addition to oakbrush, grass and forb cover would increase with the reduction in dense brushy cover. Residual litter and debris would also help protect soils post treatment. It is anticipated that as trees and shrubs are reduced, an increase in understory grasses and forbs should result rather quickly which would further minimize soil movement concerns. The proposed treatments should have minimal impact on resident fish species in the area. The proposed action is anticipated to have negligible impacts on BLM sensitive species inhabiting West Divide Creek which are ecologically similar Colorado River endangered fishes described above.

No Action Alternative:
Under the No Action alternative, no fuel treatments would be conducted. No impacts to aquatic wildlife would result. However, it is possible that the lack of treatment of these sites could result in catastrophic wildfire in the future. While unpredictable, the results of a catastrophic wildfire in these areas could have adverse impacts to nearby streams and rivers and aquatic wildlife due to post fire ash, sediment, and debris flows.

Analysis on the Public Land Health Standard 4 for Aquatic Wildlife Special Status Species**:** (partial, see also Plant and Terrestrial Wildlife): In 2009 the BLM Glenwood Springs Office evaluated vegetation and other land health conditions within the project area as part of the Divide Creek Land Health Assessment. The evaluation report indicated the landscape was meeting Standard 4 at that time.

Wastes, Hazardous or Solid

Affected Environment: Implementation of the proposed activities would require the use of fuel and lubricants for vehicles during transportation of personnel, for ignition activities, and for vehicles and equipment during fence building activities. These activities would occur in close proximity to several ephemeral drainages that include West Divide, Pole, and Brook Creeks.

Proposed Action:

Environmental Consequences/Mitigation: As mentioned above, the project area contains several ephemeral drainages. In the event of a spill, there is potential that hazardous wastes could reach area drainages if proper clean-up doesn't occur prior to run-off events. To avoid these potential threats, fuel and lubricants would be stored in appropriate containers and refueling would occur in designated areas. In addition, proposed activities would avoid steep slopes and drainages to minimize the potential for contaminant transport to perennial streams and other negative impacts associated with spills and contaminant distribution. Based on existing slope angles and good vegetative cover; it is unlikely that fuels and lubricants would be transported to area drainages. However, it is recommended that appropriate and timely clean-up procedures do occur in the event of a spill to avoid the likelihood of contaminant transport during runoff events and that an adequate spill plan be in place during the life of the project.

No Action Alternative:

Environmental Consequences: Under the no action alternative there would be no fuel or lubricants present associated with vehicles and burning activities.

Water Quality, Surface and Ground (includes an analysis of Public Land Health Standard 5)

Affected Environment: The proposed activities on BLM lands would be located south of I-70 and the Colorado River, north and west of the White River National Forest, east of the perennial West Divide Creek, and west of the seasonal Clear Creek. These activities would occur within the 18,795 acre West Divide Creek 6th field watershed that contains perennial West Divide Creek, Clear Creek, Brook Creek, and Salt Creek. Clear Creek, Brook Creek, and Salt Creek are all tributary to West Divide Creek which flows into Divide Creek. Divide Creek is tributary to the Colorado River south east of Silt, CO.

The proposed project area is located within water quality stream segment 7b of the Lower Colorado River Basin. Stream segment 7b of the Lower Colorado River is defined as "The mainstem of Divide Creek, including tributaries and wetlands, from the boundary of the White River National Forest to the confluence with the Colorado River" (CDPHE-WQCC 2009).

Table 2 identifies stream classifications and water quality standards for Lower Colorado Basin stream segment 7b as outlined in CDPHE, Regulation No. 37.

Table 2:	Classifications	Numeric Standards

Stream Segment		Physical and Biological	Inorganic (mg/l)		Metals (µg/l)		
COLCLC07b	Aq Life Cold 1 Recreation E Water Supply Agriculture	T=TVS(CS-II) $_{o}$C D.O.= 6.0 mg/l D.O.(sp)=7.0 mg/ pH=6.5-9.0 E.Coli=126/100ml	NH_3(ac/ch)=TVS Cl_2 (ac)=0.019 Cl_2 (ch)=0.011 CN=0.005	S=0.002 B=0.75 NO_2=0.05 NO_3=10 Cl=250 SO_4=WS	As(ac)=340 As(ch)=0.02(Trec) Cd(ac)=TVS(tr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=WS(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=WS(dis) Mn(ac/ch)=TVS Hg(ch)=0.01(tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(tr) Zn(ac/ch)=TVS

Table data from CDPHE, Regulation No. 37.

The CDPHE ―Integrated Water Quality Monitoring and Assessment Report-2010 update to the 2008 305(b) Report was reviewed to determine the current status of assessment and determination of water quality within the project area. The Colorado Integrated Reporting Category (IR) value assigned to the assessment unit in the ―Status of Water Quality in Colorado – 2010 document was IR=1. Segment 7b was fully supporting all designated beneficial uses (CDPHE-WQCC. 2010b).

In Colorado, the majority of the assessed surface water bodies fall into IR Categories 1, 2, and 3. Colorado has elected to place segments where not all uses have been assessed in IR Category 2. In some cases, a complete assessment of all uses cannot be completed do to the lack of data, but the data that is available indicates that at least some of the uses that were assessed are fully supporting. IR Category 5 indicates that available data and/or information indicate that at least one classified use is not being supported or is threatened, and a TMDL is needed. Segments must be placed in Category 5 when, based on existing and readily available data and/or information, technology-based effluent limitations required by the Clean Water Act (CWA), more stringent effluent limitations, and other pollution control requirements are not sufficient to implement an applicable water quality standard and a TMDL is needed. This category constitutes the Section 303(d) list of waters impaired by a pollutant (CDPHE-WQCC. 2010b).

The 2010 CDPHE-WQCC Regulation No. 93 Section 303d List of Impaired Waters and Monitoring and Evaluation List, was reviewed to determine if Lower Colorado River stream segment 7b was listed. Lower Colorado stream segment 7b was not identified in Regulation No. 93 (CDPHE-WQCC. 2010a).

A review of the Colorado River Valley Spring database and Colorado Decision Support System Water Rights database (CDSS-Water Rights) revealed two springs within the project area. Franco's spring is located along the northern boundary of the project area in the NE, SW, SE section 8 T8S R91W while Pole Canyon spring #2 is located to the south of Pole Canyon in SW, SW, NE section 17 T8S R91W. Identified use type for each spring in water rights Case No. 84CW0337 is livestock and wildlife watering.

Groundwater within the project area occurs primarily in conjunction with near stream alluvial/colluvial deposits. Because the proposed action will buffer drainages, groundwater will not be affected.

Proposed Action:

Environmental Consequences/Mitigation: Proposed burning activities would decrease canopy cover limiting interception of rainfall. Reduced interception may temporarily elevate soil erosion potential due to rain drop impact associated with high intensity events. Furthermore, prescribed fire will consume litter and large woody debris currently contributing to surface soil stabilization. Decreased soil stabilization elevates potential sedimentation to area streams which may deteriorate water quality. However, under prescribed fire conditions, desirable vegetation will quickly re-establish, brush communities would persist in an early seral state as oak brush and other shrubs would not root kill. Likewise, re-establishment of a more "natural" fire regime will limit potential for high intensity wildfire which would alter soil properties (development of hydrophobic soils) and introduce a greater threat to water quality than under prescribed conditions. Under the proposed action soil stability and erosion rates can be maintained in a natural condition which will help maintain existing water quality in area streams.

Hydro-axing activities would remove vegetation and could alter soil conditions through compaction and displacement associated with vehicles and equipment. These impacts would result in an increase in erosion potential, possible offsite sedimentation, and potential nutrient loading in area water bodies. Additionally, there is a potential for contaminants associated with fuel and lubricant spills to reach area drainages.

To minimize potential sediment and nutrient transport to nearby drainages, proposed activities would avoid steep slopes and drainages. Additionally, it is anticipated that burn intensities would be moderate to low based on the fuel compositions minimizing soil burn severity. Based on the distance of the proposed activities from area drainages, the existing slope angle, and good vegetative cover; it is unlikely that sediment, contaminants, and nutrients would be transported to area water bodies. As a result, no site specific mitigation is being recommended at this time besides basic best management practices associated with prescribed burning procedures and following the burn plan. Any potential negative impacts to water quality would be short duration and very localized, making the likelihood of measureable water quality degradation minimal. Prescribed fire will not alter use types identified in water rights case number 84CW0337 for the affected springs.

No Action Alternative:

Environmental Consequences: Under the no action alternative no burning activities would occur, which could leave the area susceptible to possible wildfire hazard in the future. In the event of a wildfire, potential negative impacts associated with denuded groundcover, hydrophobic soils, and sediment transport would be much greater than negative impacts associated with the proposed activities. In addition, the potential for nutrient loading in nearby drainages would be much greater in the event of a wildfire.

Analysis on the Public Land Health Standard 5 for Water Quality: In 2009 the BLM Glenwood Springs Office evaluated area drainages as part of the Divide Creek Land Health Assessment. Both Clear Creek and Brook Creek were sampled at that time and findings were consistent with state water quality standards being met. Furthermore, the affected stream segment is not identified in CDPHE-WQCC Regulation 93 indicating water quality is meeting state standards. Based on the findings from the land health assessments and the above analysis, the proposed action and no action alternative would not likely prevent Standard 5 for Water Quality from being achieved.

Wetlands and Riparian Zones (includes an analysis on Public Land Health Standard 2)

Affected Environment: Riparian areas exist along Pole Creek (0.3 mile) and Brook Creek (0.1 mile) within the project area boundary. Dominant vegetation consists of narrowleaf cottonwood, understory of shrubs species such as redosier dogwood, chokecherry, alder and rocky mountain maple.

Environmental Consequences/Mitigation:

Proposed Action:

Under the proposed action, all efforts would be taken to avoid initiating fire within the Brook and Pole creek drainages. In addition, riparian areas are unlikely to burn because of their position on the landscape and the high live fuel moisture content that riparian vegetation typically has. In the remote chance that riparian vegetation does burn, these are typically resilient systems and would be expected to recover rapidly (within one growing season) after the fire. The return to the vegetation condition (i.e., age class) that existed prior to disturbance would vary considerably depending upon the riparian vegetation type. For example, in the event mature cottonwood trees are burned, it could take hundreds of years before age class diversity returned to what existed prior to fire. Willow communities could take five to 10 years, and riparian grass/forb communities would take one to two years. Again, the chance of riparian vegetation burning to any consequential degree is remote.

There might be short-term, localized increases in runoff and sedimentation into the stream channels and riparian zones. In the long-term, positive impacts to riparian areas should result. In most burn areas, percent ground cover of vegetation will be greater than what existed prior to the burn. This would result in an increase in water infiltration, a corresponding reduction in erosive runoff within watersheds, and a reduction of within- channel erosion. In addition, as fuel continuity is reduced overall, it will reduce the likelihood of catastrophic wildland fires, which could cause damage to riparian systems by destroying the vegetation and causing sedimentation in channels.

No Action Alternative:

Under the no action alternative, no burning would occur. There would be no impacts to the riparian zone from this alternative.

Analysis on the Public Land Health Standard 2 for Riparian Systems: Based on the above analysis, the proposed action and no action alternative would not prevent Standard 2 for riparian systems from being achieved.

Other Affected Resources

In addition to the critical elements, the resources presented in Table 3 were considered for impact analysis relative to the proposed action and no action alternative. Resources that would be affected by the proposed action and no action alternative are discussed below.

Table 3. Other Resources Considered in the Analysis.

Resource	*NA or Not Present*	*Present and Not Affected*	*Present and Affected*
Access and Transportation			X
Cadastral Survey		X	
Fire/Fuels Management			X
Forest Management	X		
Geology and Minerals	X		
Law Enforcement	X		
Paleontology	X		
Noise	X		
Range Management			X
Realty Authorizations	X		
Recreation			X
Socio-Economics	X		
Soils*			X
Vegetation*			X
Visual Resources			X
Wildlife, Aquatic*			X
Wildlife, Terrestrial*			X

*Public Land Health Standard

Access and Transportation

Affected Environment:

Proposed Action: The proposed action occurs within the lands that are managed for dispersed/undirected recreation activities and is in an Open OHV area.

Environmental Consequences:

Proposed Action:

Environmental Consequences: New trails or fire lines created during the prescribed burn could result in expanded travel routes in the area.

Mitigation: In order to minimize impacts to travel management, the access from existing routes to any new trails or fire lines created during the prescribed burn shall be blocked using natural debris such as trees or boulders.

No Action Alternative:

Environmental Consequences: Under the no action alternative there would be no change to Access and Transportation.

Recreation

Affected Environment:

Proposed Action: The proposed action occurs within the lands that are part of the Glenwood Springs extensive recreation management area (ERMA) where management is for dispersed/undirected recreation activities. The RMP does not have any specific, measurable or targeted recreation management objectives for ERMAs. However, the RMP provided a general overview of appropriate experience and activity opportunities that occur by adopted Recreation Opportunity Spectrum (ROS) class. The RMP direction was to maintain a generally roaded-natural setting for the physical, social and administrative setting characteristics for a variety of experience and activity opportunities. Current uses within the project area include; motorized and mechanized activities, hiking, hunting, and horseback riding.

Environmental Consequences:

Proposed Action:
The proposed action will not necessarily change the variety of experiences or targeted activity opportunities that occur or that are appropriate on public lands within an ERMA. The proposed actions could shift visitor use patterns during the short term due to project. Impacts to visitors within the project area would be minor depending on timing of implementation.
Through the attached mitigation, impacts to recreational visitors in both areas would be reduced and acceptable based on the expected implementation time frame and short duration of disturbance to visitors experiences. Human health and safety concerns would also be addressed through the following mitigation measures.

Mitigation: In order to minimize impacts to visitors "Public Notices" should be posted by fuels crews at all main access and entry areas. Notices must include when the project is occurring (starting and end date), why the project is being done, who is doing it, where (map), what exactly is being done. If possible, avoid burning during high use seasons, such as fall big game rifle hunting seasons.

No Action Alternative:
The no action alternative would not change recreation opportunities within ERMA. This could result in a larger scale escaped fire within the ERMA and/or on adjacent lands.

Range Management

Affected Environment: The proposed action falls within the Pole Creek and Cottonwood grazing allotment (#08126). The public land portion of the allotment is 962 acres in size with 115 AUMs of authorized grazing use. A parcel of private property is included in the allotment boundaries and is also included within the Rx Burn area. The table below outlines the authorized grazing use.

Authorization #	Livestock # and Kind	Begin Date	End Date	% Public Land	AUM
0507117	202 Cattle	5/1	5/29	5	10
	202 Cattle	5/29	6/15	75	90
	202 Cattle	10/15	10/16	75	10
	202 Cattle	10/17	10/30	5	5

Proposed Action:
Environmental Consequences: The Rx Burn area targets 381 acres of the Pole Creek and Cottonwood allotment. The project also encompasses other acreage on the US Forest Service and adjacent private lands. There is currently a discontinuous fence that separates the BLM and Forest Service lands which also serves as the allotment boundary. The fence has been maintained in good condition and aids in the distribution and control of livestock. There is also a north-south running fence just east of the centerline of section 17. There is a potential that both these fence may be burned during project implementation. There are currently 4 livestock ponds within the RX burn area boundaries. The primary use of the grazing allotment is to provide spring forage for cattle and to move cattle onto the US Forest Service in mid to late June and back off in October. Most of the cattle use is currently along existing roads and trails and close to water sources (ie. stream or pond). The burn area may attract more livestock use due to an increase in early seral grass production. Livestock may be more inclined to stay in the burn area if water and feed are available.

It is not anticipated that there would be any loss in AUMs due to the burn activity. Authorized use would not be affected unless fences are moved by the permittee onto the BLM-private boundary in section 17. It is not anticipated that livestock would need to avoid the burn or rest the allotment due to the timing of the burn, the expected recovery of the forage, and the amount of time the cattle are authorized on the allotment.

No Action Alternative:
Environmental Consequences: There would be no burn and therefore no change in permitted livestock grazing. Actual use would occur primarily in the lower portions of the allotment until livestock are moved onto the US Forest Service.

Soils (includes analysis of Public Land Health Standard 1)

Affected Environment: According to the *Soil Survey of Rifle Area, Colorado: Parts of Garfield and Mesa Counties* (USDA 1985), the proposed activities would be located on four soil map units which can be identified by the numerical code assigned by the soil survey. These soil map units are scattered throughout the northern portion of the project area and are described as having low to severe water erosion hazard ratings. It is however important to note, that these soil map units occur in the northern portion of the project area and that at this time no soils data is available for the southern portion of the project area as the respective soil survey has not yet been completed. In addition, some areas within the project area are mapped as CSU 4 (Controlled Surface Use) for erosive soils on slopes greater than 30% and NSO 15 (No Surface Occupancy) for slopes greater than 50% regardless of soil type. Following is a brief description of the five soil map units encountered in the project area.

- Bucklon-Inchany loams (12) – These soils formed in sandstone and shale residuum and commonly occur on moderate to very steep slopes located on ridges and mountain sides. About 55 percent of the mapping unit is Bucklon while 35 percent is Inchany. The Bucklon soil is on steep, convex portions of the landscape and Inchany on slightly concave portions. The Bucklon is shallow and well drained with moderate surface runoff potential and severe erosion hazard. The Inchany is moderately deep and well drained with moderate surface runoff potential and severe erosion hazard. These soils are primarily used for grazing and wildlife habitat.
- Cochetopa loam (17) – This soil formed in basaltix alluvium and commonly occurs on mountainsides and alluvial fans. This soil is deep and well drained with slow runoff and severe erosion hazard. This soil mainly is used for livestock grazing and wildlife habitat.
- Lamphier loam (42) – This soil formed in residuum from sandstone and shale and occurs on fans and mountain sides. Surface runoff is slow and erosion hazard is slight. This soil is used mainly for livestock grazing, wildlife habitat, and recreation.
- Torriorthents-Camborthide Rock outcrop complex, steep (66) – This broadly defined unit consists of exposed sandstone and shale bedrock, loose stones, and soils that are shallow to deep over sandstone/shale bedrock and stony basaltic alluvium. The soils and outcrops occur on moderately steep to very steep slopes ranging from 15-70 percent. Torriorthents make up approximately 45 percent of the complex, Camborthids make up 20 percent, and Rock outcrop makes up 15 percent. Erosion hazard is moderate to severe. This complex is used primarily from grazing, wildlife habitat and recreation.

Proposed Action:

Environmental Consequences/Mitigation: Proposed burning activities would decrease canopy cover limiting interception of rainfall. Reduced interception may temporarily elevate soil erosion potential due to rain drop impact associated with high intensity events. Furthermore, prescribed fire will consume litter and large woody debris currently contributing to surface soil stabilization. Decreased soil stabilization elevates potential sedimentation to area streams which may deteriorate water quality. However, under prescribed fire conditions, desirable vegetation will quickly re-establish, brush communities would persist in an early seral state as oak brush and other shrubs would not root kill. Likewise, re-establishment of a more “natural” fire regime

will limit potential for high intensity wildfire which would alter soil properties (development of hydrophobic soils) and introduce a greater threat to water quality than under prescribed conditions. Under the proposed action soil stability and erosion rates can be maintained in a natural condition which will help maintain existing water quality in area streams.

Hydro-axing activities would remove vegetation and could alter soil conditions through compaction and displacement associated with vehicles and equipment. These impacts would result in an increase in erosion potential and subsequent loss of topsoils essential to maintaining desirable vegetative communities. Additionally, there is a potential for contaminants associated with fuel and lubricant spills which if not properly contained and remediated may inhibit vegetative growth in those areas.

To minimize erosion and loss of topsoil, the proposed activities would avoid steep slopes and drainages. Additionally, it is anticipated that burn intensities would be moderate to low based on the fuel compositions minimizing soil burn severity. Based on the distance of the proposed activities from area drainages, the existing slope angle, and good vegetative cover; it is unlikely that excessive erosion would occur. As a result, no site specific mitigation is being recommended at this time besides basic BMPs associated with prescribed burning procedures and following the burn plan. Any potential negative impacts to soil resources would be short duration and very localized, making the likelihood of measureable soil degradation minimal.

No Action Alternative:

Environmental Consequences: Under the no action alternative no burning activities would occur, which could leave the area susceptible to possible wildfire hazard in the future. In the event of a wildfire, potential negative impacts associated with denuded groundcover, hydrophobic soils, and sediment transport would be much greater than negative impacts associated with the proposed activities. In addition, the potential for nutrient loading in nearby drainages would be much greater in the event of a wildfire.

Analysis on the Public Land Health Standard 1 for Upland Soils: In 2009 the BLM Glenwood Springs Office evaluated area soil conditions as part of the Divide Creek Land Health Assessment. Results from this assessment show Standard 1 for Upland Soils is currently being met at all 59 upland sites, however some minor problems were observed. Most Soil and Site Stability Indicators and Hydrologic Function Indicators evaluated resulted in ratings of none to slight. The majority of the ratings were in the slight to moderate category with only a few moderate ratings and one moderate to extreme rating. Moderate ratings were primarily noted when water flow patterns were observed and connected. Often associated with the flow patterns was evidence of pedestalling and litter movement. Other moderate ratings were for the presence of a compaction layer, less litter than expected, and the presence of gully formation. The moderate to extreme rating was given for Hydrologic Function Indicator 10 due to the presence of cheatgrass dominating the plant community composition. The proposed action or no action alternative would not prevent Standard 1 for Upland Soils from being met.

Vegetation (includes an analysis of Public Land Health Standard 3)

Affected Environment:
Vegetation within the project area consists predominantly of Gambel oak (*Quercus gambelii*), mountain big sagebrush (*Artemisia tridentata var. pauciflora*), Saskatoon serviceberry (*Amelanchier alnifolia*), and snowberry (*Symphoricarpos* sp.). Letterman's needlegrass (*Achnatherum lettermanii*), mountain brome (*Bromus marginatus*), smooth brome (*Bromus inermis*), needle-and-thread grass (*Hesperostipa comata*) and numerous perennial forbs are present in the understory.

Proposed Action:

Environmental Consequences:
The proposed prescribed burn would involve approximately 381 acres of BLM land. Mechanical treatments could also be used either as an initial treatment or as a maintenance tool. The hydro-axe or rollerchopper would be used only on slopes that are not steep.

Prescribed burns are typically conducted when live fuel moistures are high enough so that the fire would be of low to moderate intensity and easily controlled. A low to moderate intensity burn may consume most of the above-ground vegetation but would be unlikely to damage or destroy the root crowns. Following a fire of low to moderate intensity, all the shrubs mentioned above, except big sagebrush, would resprout and regrow rapidly. Sagebrush would have to germinate from the seedbank and therefore, recovery of sagebrush would take from a few years up to 20 years longer than the other shrubs.

Unless the fire intensity was high, grasses and forbs would also resprout within one to several years following a burn. The decrease in shrub canopy cover following a fire or mechanical treatment would reduce competition for sunlight and moisture, allowing the grasses and forbs to increase in cover and density. However, the increase in herbaceous cover is likely to be short-lived as intense sprouting of shrubs following fire usually causes the stands to become even denser. Only repeated top-killing of plant stems at the low point of a plant's carbohydrate cycle can reduce density and canopy cover. Carbohydrates are usually at their low during periods of rapid growth, during flowering, fruit development, cold-acclimation, winter dormancy, and warm weather quiescence (Trlica 1977). Harrington (1985) reported only repeated top-killing with prescribed fire during midsummer causes a root energy reserve depression that appears to result in significant oak reductions.

The burned area may attract more livestock use due to an increase in palatable and nutritious early seral grass and forb production. Livestock may be more inclined to stay in the burned area if water and feed are available. It is not anticipated that livestock would need to avoid the burn or rest the allotment due to the timing of the burn, the expected rapid recovery of the forage, and the amount of time the cattle are authorized on the allotment. The allotment should be monitored during the grazing season for the first two to three years following the burn or other vegetative treatments to ensure that cattle are not concentrating within the treatment area to the detriment of the recovery of desirable vegetation.

Mitigation: Levels of grazing use and distribution within the burned area should be monitored for 2-3 years following the fire. If livestock are concentrating within the burned area and

utilization levels exceed an average of 40% by weight of the current year's growth, livestock should be moved to another portion of the allotment or removed from the allotment for the remainder of the growing season.

No Action Alternative:
Environmental Consequences:
Under the no action alternative no prescribed burning activities or mechanical treatments would occur, which could leave the area susceptible to possible wildfire hazard in the future. An intensive wildfire during the active growing season would totally consume existing vegetation, may damage or destroy the root crowns which would limit resprouting and may create areas of hydrophobic soils that would resist infiltration and inhibit germination and establishment of sprouts and seedlings. The extensive and prolonged areas of bare ground would create a niche for the invasion and establishment of noxious weeds.

Analysis on the Public Land Health Standard for Plant Communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): In 2009 the BLM Glenwood Springs Office evaluated vegetation and other land health conditions within the project area as part of the Divide Creek Land Health Assessment. The evaluation report indicated that the overall vegetative conditions in the area were meeting Standard 3 at that time. Any noxious weeds that are detected following the fire would be treated by BLM personnel at the appropriate time of year. The proposed action would not likely prevent Standard 3 for Plant Communities from being met.

Visual Resources

Affected Environment: The project area is located in VRM Class IV. The objective of Class IV is to provide for management activities that require major modifications to the existing character of the landscape. The level of change to the landscape can be high. The management activities may dominate the view and may be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repetition of the basic visual elements of form, line, color, and texture.

Proposed Action:

The proposed action would make short term contrasts to the existing landscapes form, line, color and texture. While some minor short term contrasts would be introduced into the landscape with the burn areas, the effects will be localized and would be viewed for a relatively small period of time. Therefore the proposed action meets the objective of VRM Class IV.

Mitigation: Due to design measures and mitigation incorporated into the proposed action, no additional mitigation is proposed for the project.

No Action Alternative:

Environmental Consequences: The existing natural landscape would be maintained and VRM Class IV objectives would be met. However, if a large wildfire occurred within the area, while it

would be a natural process, the landscape could experience a high degree of modification and contrasts to the existing landscape.

Wildlife, Aquatic (includes an analysis of Public Land Health Standard 3)

Affected Environment:

Fish. The area is mostly drained by ephemeral washes. No fish are known to exist within the project area boundary.

Amphibians. Several amphibians of interest are found within the CRVFO, the Boreal Toad *(Bufo boreas boreas)* and the Great Basin spadefoot toad (*Spea intermontana).* The distribution of the boreal toad is restricted to areas with suitable breeding habitat in spruce-fir forests and alpine meadows generally between 7,500 and 12,000 feet elevation. Breeding habitat includes lakes, marshes, ponds, and bogs with sunny exposures and quiet shallow water. Great Basin spadefoot toads occupy arid grasslands and high sagebrush, desert shrub, and pinion-juniper woodlands. Great Basin spadefoot toad has been documented in the western third of the field office from the town of Rifle west to the boundary with the Grand Junction Field Office. This represents the eastern extent (fringe) of the species overall range and populations are believed to be small and sporadic.

Proposed Action :

Environmental Consequences:
Amphibians. Some amphibians live their entire life in water, others breed in water but live on land as adults, and yet others spend their entire lives on land. Fire can remove/alter microhabitat structures (e.g. snags, decaying wood, and leaf litter) favored by amphibians. Although amphibians have evolved in the presence of wildfire, it is unclear at this time how the combination of fire and fuel-reduction management practices affects amphibians (USGS 2003). Without data to indicate that prescribed fires and fuel treatments create a measurable negative impact, the conclusion will be that aquatic species are generally adapted to disturbances such as fire and recover accordingly.

Fish. No perennial waters are located in the project area. The closest riparian area is West Divide Creek 0.5 miles to the west. Given the distance to a perennial stream, an adequate buffer exists to filter most potential sediment or litter moved offsite via thunderstorm activity or seasonal snowmelt. Fish and amphibians would only be affected if the prescribed fire left the planned boundary and then fire debris washed into amphibian and fish habitats.

The species present are native and tolerant to sediment. If slight increases in sediment resulted from the project, oakbrush vigorously resprouts and it is anticipated that in addition to oakbrush, grass and forb cover would increase with the reduction in dense brushy cover. Residual litter and debris would also help protect soils post treatment. It is anticipated that as trees and shrubs are reduced, an increase in understory grasses and forbs should result rather quickly which would further minimize soil movement concerns. The proposed treatments should have minimal impact

on resident fish species in the area. The proposed action is anticipated to have negligible impacts on aquatic species inhabiting West Divide Creek..

No Action Alternative:

Environmental Consequences:
Under the No Action alternative, no fuel treatments would be conducted. No impacts to aquatic wildlife would result. However, it is possible that the lack of treatment of these sites could result in catastrophic wildfire in the future. While unpredictable, the results of a catastrophic wildfire in these areas could have adverse impacts to nearby streams and rivers and aquatic wildlife due to post fire ash, sediment, and debris flows.

Analysis on the Public Land Health Standard 3 for Aquatic Animal Communities (partial, see also Vegetation and Terrestrial Wildlife)**:** In 2009 the BLM Glenwood Springs Office evaluated vegetation and other land health conditions within the project area as part of the Divide Creek Land Health Assessment. The evaluation report indicates the landscape was meeting Standard 3 at that time. The proposed action would not likely prevent Standard 3 for aquatic wildlife communities from being met

Wildlife, Terrestrial (includes an analysis of Public Land Health Standard 3)

Affected Environment:
The CRVFO supports a wide variety of terrestrial wildlife species that summer, winter, or migrate through the area. The habitat diversity provided by the broad expanses of sagebrush, mixed mountain shrub, aspen, pinyon-juniper woodlands, other types of coniferous forests, and riparian/wetland areas support many species. The current condition of wildlife habitats varies across the landscape. Some habitat is altered by power lines, pipelines, fences, public recreation use, residential and commercial development, vegetative treatments, livestock and wild ungulate grazing, oil and gas development, and roads/trails. These factors have contributed to some degradation/fragmentation of habitat as well as causing disturbance to some species.

Reptiles. Reptile species most likely to occur include the western fence lizard (*Sceloporus undulatus*) and gopher snake (bullsnake) (*Pituophis catenifer*) in xeric shrublands or grassy clearings and the western terrestrial garter snake (*Thamnophis elegans*) along creeks. Other reptiles potentially present along creeks, although more commonly found at lower elevations than the site, are the milk snake (*Lampropeltis triangulum*) and smooth green snake (*Opheodrys vernalis*).

Birds. Passerine (perching) birds commonly found in the area include the: American robin (*Turdus migratorius*), western scrub-jay (*Aphelocoma californica*), and black-billed magpie (Pica pica). Two gallinaceous species, the wild turkey (*Meleagris gallopavo*) and the Dusty grouse (*Dendragapus obscures*), are found here.

Birds of prey (eagles, falcons, hawks, and owls) may migrate through the area or nest in cottonwoods, conifers, or very tall oaks, while the numerous songbirds and small mammal

populations provide the primary prey base. Common raptor species in the area include the: red-tailed hawk (Buteo jamaicenis), golden eagle (Aquila chrysaetos) American kestrel *(Falco sparverius)*, great horned owl *(Bubo virginanus)*, Cooper's hawk *(Accipiter cooperii)*, and sharp-shinned hawk *(A. striatus)*.

Numerous streams, rivers, reservoirs, ponds, and associated riparian vegetation provide habitat for a wide variety of waterfowl and shorebirds. Common species include: great blue herons (*Ardea Herodias*), Canada geese *(Branta canadensis)*, mallards *(Anas platyrhynchos)*, pintails *(A. acuta)*, gadwalls *(A. strepera)*, and American wigeon *(A. americana)* are common.

Mammals. Numerous small mammals reside within the planning area, including ground squirrels *(Spermophilus* spp.*)*, chipmunks (*Neotamias* spp.), rabbits *(Sylvilagus* spp.), skunks *(Mephitis mephitis)*, and raccoons *(Procyon lotor)*. Many of these small mammals provide the main prey for raptors and larger carnivores. These species are most likely to occur along the drainages, near the margins of dense oakbrush, in pinyon-juniper woodland, or in the small area of aspen and spruce/fir. Larger carnivores expected to occur include the bobcat (*Lynx rufus*) and the coyote (*Canis latrans*). Black bears (*Ursus americanus*) make use of oaks and the associated chokecherries and serviceberries for cover and food, while mountain lions (*Felis concolor*) are likely to occur during seasons when mule deer (*Odocoileus hemionus*) are present.

Big Game. The mule deer *(Odocoileus hemionus)* is a recreationally important species that are common throughout suitable habitats in the region. Another recreationally important big game ungulate (hoofed animal), the Rocky Mountain elk *(Cervus elaphus nelsonii)*, is also present. Mule deer and elk usually occupy higher elevations, forested habitat, during the summer and then migrate to sagebrush-dominant ridges and south-facing slopes at lower elevation in the winter.

Mule Deer. The proposed action lies within CDOW game management unit (GMU) 42. The Grand Mesa North DAU Plan - DAU D-12 indicates the 2004 post hunt elk population to be an estimated at 30,500 deer within GMUs: 41, 42 and, 421. The CDOW recommended post-hunt population objective for deer is 28,000 – 30,000 animals. The deer population was relatively high in D-12 during the early 1980's through the early 1990's. Since that time, the herd declined dramatically, and then rebounded in recent years. The decline of this herd mirrored the falling numbers in most mule deer populations throughout Colorado and the Western U.S. (CDOW 2007).

Elk. The Grand Mesa DAU Plan - DAU E-14 indicates the 2005 post hunt elk population to be an estimated at 10,500 elk within GMUs: 41, 42, 52, 411, 421, and 521. The CDOW recommended post-hunt population objective for elk is 9,000 – 11,000. The elk population in E-14 was at similar levels to current populations during the early 1980's. There was dramatic growth of this herd during the mid-1980's through the mid 1990's, with the population increasing to approximately 17,000 animals in 1991. This large increase resulted in increases in hunting harvest which have caused a reduction of the herd to current estimates of approximately 11,500 animals (CDOW 2007a).

Proposed Action:

Environmental Consequences:

General. Gambel oak has strong vegetative reproduction capabilities. In most of its range, Gambel oak regeneration depends more on sprouting than establishment from seed. The large underground structure (Lignotuber) of Gambel oak supports rapid and extensive sprouting following top removal. This vegetative reproduction is often dependent on disturbances such as fire and cutting (USU 2010). Prescribed fire may kill the above-ground portions of oak plants but it seldom kills the entire plant. Control, or eradication, of Gambel oak requires 1) physically removing the stem and as much of the root system as possible (CSU 2008) or 2) performing multiple treatments in close succession.

The most common effect of fire is to stimulate suckering with resultant thickening of open stands and merging of scattered stands into continuous thickets (Brown 1958). Intense sprouting follows almost immediately and usually causes the stands to become even denser. Only repeated killing at the low point of a plant's carbohydrate cycle can reduced density and canopy cover. Carbohydrates are usually at their low during periods of rapid growth, during flowering, fruit development, cold-acclimation, winter dormancy, and warm weather quiescence (Trlica 1977). Harrington (1985) reported only repeated top-killing with prescribed fire during midsummer causes a root energy reserve depression that appears to result in significant oak reductions.

Reptiles. Gambel oak provides cover for many reptiles. There are few reports of fire-caused injury to herpetofauna, even though many have limited mobility (Russell 1999). The immediate response of individual reptiles will be to seek shelter under rocks and underground. The terrain within the project area provides suitable refugia to protect reptiles from the direct effects of fire.

Birds and Mammals. Oakbrush provides cover and nesting habitat for many birds and mammals. The foliage and acorns offer valuable food and cover for many bird and mammal species, such as squirrels and jays. Acorns of older mature Gambel oak are an important mast crop in many areas, particularly for black bears and turkey in the fall. It is estimated that the proposed action would increase the health, vigor, and palatability of Gambel Oak as well as create a mosaic of seral stages of Gambel oak. This may be beneficial for species dependent on younger seral stages, but not for others. For example, some raptors and small mammalian predators will be able to locate prey more easily in burned areas. Sufficient thermal and hiding cover would be retained in adjacent drainages to support local populations of birds and mammals.

Wildlife species and their habitats are adapted to periodic fires. Some direct mortality of small birds and mammals (young of the year) may occur, but most wildlife species would move into adjacent unburned areas away from the fire.

Mule Deer and Elk. The proposed action would somewhat mimic the size and shape of a natural fire disturbance for Gambel oak and mountain brush species however the timing would likely be different (summer). The effects of fire on big game habitat are widely varied. In general, prescribed burns decrease hiding cover however smaller fires can create vegetation mosaics of forage that can be beneficial.

Although not highly palatable, the availability and abundance of Gambel oak in this area makes this plant a common component of big game forage. Oak brush can be important to mule deer

on some summer ranges. Elk generally forage on Gambel oak during the spring and winter (CSU 2008).

Deer and elk in some habitats can show a strong preference, at least initially, for burned areas because younger plants can be more palatable. Hobbs and Spowart (1984) tested the hypothesis that prescribed burning improves the nutritional quality of the diets of mule deer. Their study of fire on nutrition in Colorado revealed increases in the quality of deer diets due to changes in forage selection--not increases in nutrients of previously selected forage. Effects of burning on diet crude protein persisted for 2 years in the mountain shrubs communities. Kufeld (1983) recommended burning Gambel oak in autumn during or immediately following leaf fall because Gambel oak recovers quickly following fire.

Gambel oak reduction treatments to benefit big game should look long-term, incorporating and evaluating multiple treatment applications within a few years of each other to be the most beneficial for big game, particularly at low elevations where oakbrush forms thickets. The benefits of the project, without repeated summer or early fall treatments, are likely to be short-term (<3 years) for mule deer and elk.

No Action Alternative:

Environmental Consequences:

Terrestrial Wildlife. If no large fires occur in the future, Gambels oak will develop into older stands that attain tree-like form with heights up to 20 feet, with a lush understory of grass and forbs (CSU 2008). This seral stage of Gambels oak also benefits wildlife and big game.

It is difficult to quantify the impacts of a potential catastrophic wildfire before it occurs. Impacts of a large, severe wildfire could conceivably affect a larger habitat area and potentially have a greater impact on local wildlife populations. The direct impact of a catastrophic fire would be large scale vegetation changes that would likely reduce the local populations of reptiles, birds and mammals in the short-term. Since wildfires often burn larger acreage than the proposed prescribed burn, long-term negative effects are not known.

Wildlife species and their habitats are adapted to periodic fires. Some direct mortality of small birds and mammals (young of the year) may occur, but most wildlife species would move into adjacent unburned areas away from the fire.

Analysis on the Public Land Health Standard 3 for Terrestrial Animal Communities (partial, see also Vegetation and Aquatic Wildlife)**:** In 2009 the BLM Glenwood Springs Office evaluated vegetation and other land health conditions within the project area as part of the Divide Creek Land Health Assessment. The evaluation report has not yet been completed; however, the initial results seem to indicate the landscape is meeting Standard 3 at that time. The proposed action would not likely prevent Standard 3 for terrestrial wildlife communities from being met

Fire and Fuels Management

Affected Environment:
The project area has high fuel loadings, low to moderate recreation visitor use, and private property located in close proximity to boundaries. The area of Divide Creek also hosts oil and gas development activities and associated infrastructure. This activity occurs mostly to the east, southeast, and north of the burn unit.
This in conjunction with a moderate fire occurrence and moderate risk rating for threat of wildland fire provide the need for action within the units. Fire behavior could be modified from an expected crown fire to a ground fire where emergency personnel would be given the chance to catch an unplanned fire before it became a major threat to adjacent communities or private property. Fire fighter and public safety could be increased in the event of an unplanned wildfire within the units.

Proposed Action:

Implementation of the proposed action would lower but not eliminate the risk of a large-scale, high severity wildfire event occurring in the project area. The fire behavior in these units would decrease by the canopy being broken up and the different age classes of vegetation being produced. Analysis of total biomass tons per acre of within the unit pre burn is estimated at approximately 37 tons. Post burn estimations are approximately 18 tons per acre with expected timing, weather, fire behavior, and use of machinery where terrain will allow.

Environmental Consequences:

No Action Alternative:

Under this alternative no fuels treatments would occur. Fuel loading would continue to increase, thus increasing the threat of a stand replacing fire. A wildland fire in these units with the existing fuel loads would have a high probability of being stand replacing. Severe wildfires damage soils, watersheds, critical wildlife habitat, and other infrastructure. Firefighters and public safety would be placed at risk as fuel loads are high and subsequent fire behavior increased.

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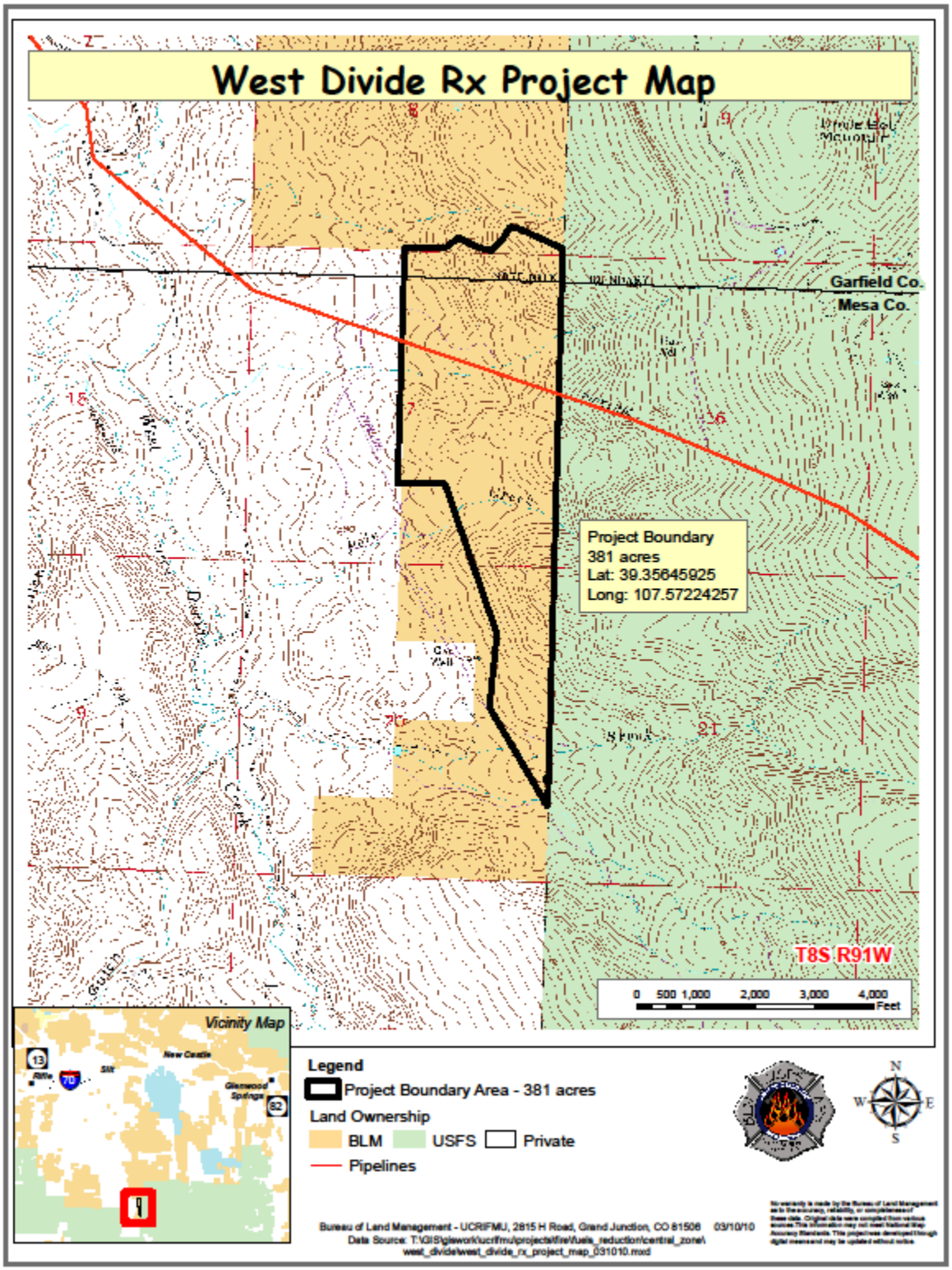
INTERDISCIPLINARY REVIEW:

Name	***Title***	***Responsibility***
Ody Anderson	Prescribed Fire and Fuels Specialist	Fire/Fuels
Kimberly Miller	Outdoor Recreation Planner	Recreation, Wilderness, Wild and Scenic River
Cheryl Harrison	Archaeologist	Cultural Resources, Native American Concerns
Monte Senor	Rangeland Management Specialist	Invasive / Non-native species
Brian Hopkins	Wildlife Biologist	Wildlife (Aquatic/Terrestrial), T&E Species, Migratory Birds
Isaac Pittman	Rangeland Management Specialist	Range
Greg Wolfgang	Recreation Specialist	Travel Management, VRM
Mike Kinser	Rangeland Management Specialist	Riparian
Nate Dieterich	Hydrologist	Soil, Water Quality, Air Quality
Carla Deyoung	Ecologist	SSS plants, Vegetation

PERSONS AND AGENCIES CONSULTED:
Britt Mclin, Fire Chief, Burning Mountain Fire District
Bob Leighty, White River National Forest
Toni Toelle, White River National forest
Dow Rippy, Landowner


West Divide Rx Project Map
Garfield Co.
Mesa Co.
Project Boundary
381 acres
Lat: 39.35645925
Long: 107.57224257
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Project Boundary Area - 381 acres
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The environmental assessment analyzing the environmental effects of the proposed action has been reviewed. The approved mitigation measures 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.

DECISION RECORD

DECISION: It is my decision to approve and implement this proposed action with the mitigation measures listed below.

RATIONALE: This proposed action will reduce fuel loading adjacent to private property. The proposed action will also reduce the risk of a wildfire burning from BLM administered land on to private property and improve safety to the public and firefighters in the event of a wildfire.

MITIGATION MEASURES:

Cultural/Native American Resources
Prior to initiating the proposed burn on BLM lands the Cultural Resources Specialist must sign off on the plan.

Education/Discovery/NAGPRA Stipulation
The National Historic Preservation Act (NHPA) requires that if newly discovered cultural resources are identified during project implementation, work in that area must stop and the agency Authorized Officer notified immediately (36 CFR 800.13). The Native American Graves Protection and Repatriation Act (NAGPRA), requires that if inadvertent discovery of Native American Remains or Objects occurs, activity must cease in the area of discovery, a reasonable effort made to protect the item(s) discovered, and immediate notice made to the BLM Authorized Officer, as well as the appropriate Native American group(s) (IV.C.2). Notice may be followed by a 30-day delay (NAGPRA Section 3(d)). Further actions also require compliance under the provisions of NHPA and the Archaeological Resource Protection Act.

Any person who, without a permit, injures, destroys, excavates, appropriates or removes any historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural item, or archaeological resources on public lands is subject to arrest and

penalty of law (16 USC 433, 16 USC 470, 18 USC 641, 18 USC 1170, and 18 USC 1361). Non-compliance could result in fines up to $500,000 and imprisonment of up to six years or both.

Equipment involved in land disturbing actions will be washed and cleaned to prevent the spread of noxious weed seeds.

The project area will be monitored at least once annually during the growing season for three years following the treatments to detect the presence of any invading noxious weeds.

No treatment activities will occur between June 1 and July 15 to mitigate disturbance to migratory birds.

Avoid drainages to prevent sediment transport into streams to mitigate water quality.

Public notices will be put up before project begins at main entrances to inform public.

Levels of grazing use and distribution within the burned area will be monitored for 2-3 years following the fire.

NAME OF PREPARER: Alton Anderson

SIGNATURE OF AUTHORIZED OFFICIAL:

Karl Mendonca, Acting CRVFO Field Office Manager

10/14/2010
Date