

ENVIRONMENTAL ASSESSEMENT
DOI-BLM-CO-N040-2009-0006 EA
Reservoir Gulch Prescribed Burn

U.S. Department of the Interior, Bureau of Land Management
Glenwood Springs Field Office
2300 River Frontage Road Silt, CO 81652
Lands Managed by the Bureau of Land Management (BLM):
T8S, R92W, Sections 9, 8,15,16,17
Garfield and Mesa County's

PURPOSE

There are three goals to this proposed action; the first is to reduce fuel loadings in Gambel oak and other mountain brush species. The second goal is to treat fuels and reduce fuel loadings adjacent to private property. The third goal is to improve wildlife habitat by promoting regeneration of Gambel oak and mountain brush species.

The project area is located in an area that has over-mature and decadent Gambel oak 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 northeast corner. Other private land is also in close proximity to the northwest and east of the project area.

Native wildlife and ungulates use this area as wintering habitat and food source. There are signs of clubbing and heavy browse within the oakbrush inside the project area. By using fire as a tool to treat vegetation, regeneration and sprouting would occur that would benefit big game animals and provide better browse.

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 firefighting 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 Forest Service is planning to treat 603 acres adjacent to the BLM administered lands. The White River National Forest will provide separate NEPA documentation on its lands.

BACKGROUND:

Historically wildland fire served an important role in maintaining this type of fire dependent ecosystem. These ecosystems have evolved with fire as the main disturbance mechanism. Many of the 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 a 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 forb production due to less competition from overstory species. Increase in grass and forbs would benefit big game species and overall ecosystem diversity. As shrub species age, they become less palatable for big game species. Therefore any disturbance that regenerates shrubs creates a younger age class of brush that provides better forage for big game. The proposed treatment area is in winter range for both elk and deer.

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

Hazardous fuels on public lands are a complex fuel type defined by kind, arrangement, and volume, condition, and location that forms a special threat of ignition or suppression difficulty. The fuels within these watersheds are the predominantly continuous thickets of mountain shrub, primarily 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 reach an intensity that would not only exceed the capability of hand crews, but also use of aerial retardant would 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, improve wildlife habitat, and reduce fuel loadings adjacent to private property. The proposed prescribed burn unit is 1,042 acres in size (see attached map).

Timing of the prescribed burn would be in the spring but not limited to the fall. Hunting seasons would try to be avoided if at all possible.

After the burn is implemented, fences would be repaired or rebuilt on the BLM/USFS border located in the middle of the project and repair or replace fence along BLM/private boundary on northeast side of project.

This environmental assessment would cover maintenance of the unit for a period of 10 years after implementation of the project.

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) Improve wildlife habitat by promoting regeneration of mountain brush species
- 4) 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
- 5) Increase the quality of the forage for big game species on public lands thus lessening their impacts to private lands.
- 6) Return fire to a fire adapted ecosystem.

Prescribed Fire

Prescribed fire may be used as a stand-alone 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 and an approved burn plan.

Protection measures will be taken to safeguard any improvements on public land within any prescribed fire unit. Improvements include fences, stock tanks, recreation infrastructure etc. Prescribed burn areas will be monitored for any noxious weed infestations, pre and post-burn. If areas become infested with weeds, follow up weed treatments will be necessary.

Reservoir Gulch Prescribed Fire

The legal description for this project will be T8S, R92W, Sections 9, 8, 15, 16, and 17. The project is part of a broadcast prescribed fire that is an interagency project with White River National Forest and Grand Mesa, Uncompahgre, and Gunnison National Forests (GMUG). The total size of the BLM burn unit is 1,042 acres with the project MMA being 3,161 acres in size. The fuels on the BLM portion of this burn is predominately 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.

Fence Repair

Fences within and adjacent to project are in poor repair. After burning is implemented, it is probable that fences will need to be rebuilt or repaired to keep livestock within proper allotments. Fence work could consist of clearing vegetation with machinery along fence, digging new post holes, adding new stays, and stringing new wires. Fence construction would be consistent with BLM and USFS design criteria.

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 even greater threats to private land, privates infrastructure, 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 also would not be acceptable for this type of equipment.

2. The use of a hydro-axe or roller chopper was considered but eliminated due to terrain features that would not allow a complete treatment.

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 09/2004..

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 41 - 43 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 Glenwood Springs Field Office is in the ongoing process of completing Land Health Assessments on a landscape basis. The

proposed action is found within the Divide Creek Landscape which was the target of the fieldwork for a formal land health assessment in 2009. The report and determination document are currently in preparation. According to draft data collected, the project area is meeting the Standards, although certain problems have been noted with pedestalling and water flow patterns, a higher amount of bare ground than expected, and a reduction in reproductive capability of palatable plants due to removal of seedheads through grazing.

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 2). 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 2. Critical Elements of the Human Environment

<i>Critical Element</i>	<i>Present</i>		<i>Affected</i>		<i>Critical Element</i>	<i>Present</i>		<i>Affected</i>	
	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					Water Quality, Surface and Ground*	X		X	
Floodplains		X		X	Wetlands and Riparian Zones*				
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					

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 (GSFO# 17310-1) 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). Within the MMA few cultural surveys have been conducted and many are considered inadequate.

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 MMA 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:

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 Russian knapweed, 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 was 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 Glenwood Springs Field Office is within the Southern Rockies/Colorado Plateau Bird Conservation Region (BCR). The 2008 list of Birds of Conservation include the following: Gunnison Sage-Grouse (*Centrocercus minimus*), American Bittern (*Botaurus lentiginosus*), Bald Eagle (*Haliaeetus leucocephalus*), Ferruginous Hawk (*Buteo regalis*), Golden Eagle (*Aquila chrysaetos*), Peregrine Falcon (*Falco peregrines*), Prairie Falcon (*Falco mexicanus*), Snowy Plover (*Charadrius alexandrinus nivosus/tenuirostris*), Mountain Plover (*Charadrius montanus*), Long-billed Curlew (*Numenius americanus*), Yellow-billed Cuckoo (*Coccyzus americanus*), Burrowing Owl (*Athene cunicularia*), Lewis's Woodpecker (*Melanerpes lewis*), Willow Flycatcher (*Empidonax traillii*), Gray Vireo (*Vireo vicinior*), Pinyon Jay (*Gymnorhinus cyanocephalus*), Juniper Titmouse (*Baeolophus ridgwayi*), Veery (*Catharus fuscescens*), Bendire's Thrasher (*Toxostoma bendirei*), Grace's Warbler (*Dendroica graciae*), Brewer's Sparrow (*Spizella breweri*), Grasshopper Sparrow (*Ammodramus savannarum*), Chestnut-collared Longspur (*Calcarius ornatus*), Black Rosy-Finch (*Leucosticte atrata*), Brown-capped Rosy-Finch (*Leucosticte australis*), and Cassin's Finch (*Carpodacus cassinii*).

The GSFO planning area provides both foraging and nesting habitat for a variety of migratory birds that summer, 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. The Gray Vireo, Pinyon Jay, Juniper Titmouse, Lewis's Woodpecker and Grace's Warbler are characteristically found in pinyon/juniper woodlands and the Brewer's sparrow (*Spizella breweri*) is found within sagebrush habitats. Many 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 could occur in the area. Raptor surveys have not been conducted in the area.

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. Reservoir Gulch is outside of mapped winter/winter foraging areas for bald eagles and the impacts to bald eagles are not considered further.

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 would 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: Treatments should not be conducted from May 15 to July 15. This will help minimize impacts to nesting migratory birds, nest abandonment and potential destruction of nests with eggs.

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 individuals 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 MMA. 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 orchid (*Spiranthes diluvialis*), Parachute beardtongue (*Penstemon debilis*), and DeBeque phacelia (*Phacelia submutica*).

There are no known occurrences or any suitable habitat for any listed, proposed or candidate plant species within or immediately adjacent to the project area.

BLM Sensitive Plant Species

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

Complete, intensive surveys have not been conducted within the Reservoir Gulch project area, however, previous spot surveys and general habitat overviews have not detected any BLM sensitive species or identified any suitable habitat for these species within the project area.

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, 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 Reservoir Gulch 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 (<i>Mustela nigripes</i>)	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 (<i>Lynx Canadensis</i>)	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 (<i>Strix occidentalis lucida</i>)	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	
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	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 (<i>Boloria acrocneema</i>)	Patches of snow willow (<i>Salix spp.</i>) 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.

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. No mapped habitat or mapped linkage occurs within the area of the proposed action so 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.

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 3):

Table 3.

Name	Habitat/Range	Habitat Potential Present / Absent
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>) and Fringed myotis (<i>Myotis thysanodes</i>)	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	Present
Northern goshawk (<i>Accipiter gentilis</i>)	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	Present
Goldeneye, Barrow's (<i>Bucephala islandica</i>)	Rare winter resident and spring/fall migrant in lowlands and mountains; a few breed in the northern mountains. Uncommon - seasonal	Absent

Table 3.

Name	Habitat/Range	Habitat Potential Present / Absent
Ibis, white-faced (<i>Plegadis chihi</i>)	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
Greater sage grouse (<i>Centrocercus urophasianus</i>)	Resident of relatively large, open sagebrush flats or rolling sagebrush hills. Uncommon and unlikely in this part of the GSFO or associated habitats	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.

Goldeneye, Barrow's (*Bucephala islandica*). 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). Prefers alkaline-freshwater lakes in parkland areas and to a lesser extent subalpine/alpine lakes/beaver ponds for breeding.

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 GSFO.

Greater sage grouse (*Centrocercus urophasianus*). 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 (<500 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. Sage-grouse are still present in the Radium area between State Bridge and Kremmling (Northern Eagle/Southern Routt Greater Sage-Grouse Work Group 2004) and likely to occur in the Gypsum Hills area and the area north of Wolcott.

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.

Northern Goshawk.

The GSFO RMP currently protects raptor nesting and fledging habitat is with a timing limitation stipulation. This limitation restricts certain disturbing activities within a one-quarter mile buffer zone around the nest site from February 1 to August 15. No nest sites are known to occur within the area of the proposed action. Short-term loss of foraging habitat and prey habitat will occur. The proposed action does not contribute to the threats and the long-term functionality of foraging habitat for goshawks.

Mitigation:

If a goshawk nest is found within ¼ mile of the project area, disturbing activities will be mitigated or curtailed.

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, 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 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 evaluation report has not yet been completed; however, the initial results seem to indicate the landscape is 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 (<i>Oncorhynchus clarki stomias</i>)	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 (<i>Gila elegans</i>)	Large, fast-flowing waterways of the Colorado River system.	X	X	X	X	X
Colorado pikeminnow (<i>Ptychocheilus lucius</i>)	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 (<i>Gila cypha</i>)	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 (<i>Xyrauchen texanus</i>)	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* translocation 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 (<i>Rana pipiens</i>)	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 (<i>Catostomas latipinnis</i>)	Generally restricted to rivers and major tributaries.	Absent in project area but found in Colorado River

Name	Habitat	Habitat Potential Present / Absent
Roundtail chub (<i>Gila robusta</i>)	Generally restricted to rivers and major tributaries.	Absent in project area but found in Colorado River
Colorado River cutthroat trout (<i>Oncorhynchus clarki pleuriticus</i>)	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.

Proposed Action:

Environmental Consequences/Mitigation:

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

The proposed vegetative treatments would reduce Gambels oak cover and height of oakbrush and some mixed mountain shrubland vegetation. As proposed, no large expanses of bare ground should result from any of the treatments or combination of treatments. 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.

Big-river Fishes. 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.

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 and would predominantly come from municipal sources.

Due to the: (a) absence of any known occurrences within the 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 from the proposed action; it is concluded the proposed action will likely have “No Effect” on any Federally Listed, Proposed, Candidate species. The proposed action will also have negligible impacts on BLM sensitive species (Flannelmouth suckers and Roundtail chubs) which are ecologically similar Colorado River endangered fishes described above.

Leopard Frog. No perennial waters are located in the project area. The closest riparian area is Dry Hollow 0.7 miles to the west so this species is not considered further. Given the distance to a perennial stream, an adequate buffer exists to filter any potential sediment or litter moved offsite via thunderstorm activity or seasonal snowmelt. Potential leopard habitat would be affected only if the prescribed fire left the planned boundary.

No Action Alternative:

Environmental Consequences:

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

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 cause no quantifiable impacts to any aquatic wildlife species.

It is difficult to quantifiable the impacts of a possible catastrophic wildfire on big-river fishes and leopard frogs. Due to the: (a) lack of suitable habitat for any listed, proposed or candidate aquatic wildlife species within the project area and (b) distance to suitable habitat; it is concluded the no action alternative will likely have “No Effect” on any Federally Listed, Proposed, Candidate species and have little effect on overall abundance, diversity, and number of leopard frogs.

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 has not yet been completed; however, the initial results seem to indicate the landscape is 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 Dry Hollow, Reservoir Gulch, and Alkali Creek.

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 of the White River National Forest, east of the ephemeral Dry Hollow Creek, and west of the ephemeral Alkali Creek. These activities would occur within the 15,199 acre Alkali Creek 6th field watershed that contains the ephemeral Reservoir Gulch that flows roughly south to north through the project area and is directly tributary to Alkali Creek to the east.

The State of Colorado has developed a *Stream Classifications and Water Quality Standards* (CDPHE, Water Quality Control Commission, Regulation No. 37) list that identifies beneficial uses of water and numeric standards used to determine allowable concentrations of water quality parameters. At this time only Dry Hollow Creek is on this list and is within the Lower Colorado River Basin segment 4d that includes Dry Hollow Creek and its tributaries. This segment has been classified aquatic life cold 2, recreation N, water supply, and agriculture. Aquatic life cold 2 indicates that this water course is not capable of sustaining a wide variety of cold water biota. Recreation class N refers to waters that are not suitable or intended to become suitable for

primary contact recreation. In addition, these waters are suitable or intended to become suitable for potable water supplies and agricultural purposes that include irrigation and livestock use.

The drainages mentioned above are not currently listed on the State of Colorado's *303(d) List of Water Quality Limited Segments Requiring TMDLS* (CDPHE, Water Quality Control Commission, Regulation No. 93) or the *Monitoring and Evaluation List* (CDPHE, Water Quality Control Commission, Regulation No. 94) as waterbodies suspected to have water quality problems. In addition, very little current water quality data are available for these drainages.

Proposed Action:

Environmental Consequences/Mitigation: Proposed burning activities would remove vegetation and could alter soil conditions through the development of a hydrophobic soil layer associated. Fence building activities would also 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 waterbodies. 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 waterbodies. 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 water quality would be short duration and very localized, making the likelihood of measureable water quality 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 5 for Water Quality: In 2009 the BLM Glenwood Springs Office evaluated area drainages as part of the Divide Creek Land Health Assessment. Both Alkali Creek and Dry Hollow Cree were sampled at that time and it was determined that state water quality standards were being met in area drainages. 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: A riparian zone exists along Dry Hollow (0.7 mile) on the western boundary of the proposed area. The riparian zone is not in the area targeted for prescribed burning but is adjacent to the west side of the MMA boundary. Dominant vegetation along the riparian zone consists of narrowleaf cottonwood with an understory of shrubs and herbaceous species such as buffaloberry, woods rose, horsetail and rush. Riparian vegetation cover is relatively sparse due to the highly erosive soils, flashy and high runoff events characteristic of this watershed,

Proposed Action:

Environmental Consequences/Mitigation: The riparian area is not within the area targeted for prescribed burning. In addition, the likelihood of fire escaping beyond the west side of the target area is remote. In the event fire does escape the planned target area and reaches the riparian zone, it is unlikely that little, if any, of the riparian area vegetation would be burned given the sparse cover present. Given the above, there would be no, or very minor, impacts to the riparian area.

No Action Alternative:

Environmental Consequences: Under the no action alternative, no burning activities 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.			
<i>Resource</i>	<i>NA or Not Present</i>	<i>Present and Not Affected</i>	<i>Present and Affected</i>
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. 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 Dry Hollow Reservoir Gulch grazing allotment (#08127). The public land portion of the allotment is 6,916 acres in size with 769 AUMs of authorized grazing use. A small parcel of private property is included in the allotment boundaries, although it is not included within the Rx Burn area. The table below outlines the authorized grazing use.

Authorization #	Livestock # and Kind	Begin Date	End Date	AUM
0502938	10 Cattle	6/1	6/15	10
0507544	195 Cattle	6/1	6/15	96
	57 Cattle	6/16	10/15	229
0507580	73 Cattle	6/1	6/15	36
0507625	140 Cattle	6/1	6/15	69
0507641	315 Cattle	6/1	6/15	140
0507662	90 Cattle	6/1	6/15	44
0507712	285 Cattle	6/1	6/15	141

Proposed Action:

Environmental Consequences: The Rx Burn area targets 1,042 acres of the Dry Hollow Reservoir Gulch allotment. The project also encompasses other acreage on the US Forest Service. There is currently an old fence that separates the BLM and Forest Service lands which also serves as the allotment boundary. This fence may be burned during project implementation. The primary use of this part of the allotment is to move cattle onto the US Forest Service in mid to late June. 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. There are currently 5 livestock ponds within the RX burn area boundaries. Livestock may be more inclined to stay in the burn area if water and feed are available.

The boundary fence is currently in poor condition but topography, forage, and trailing use seem to have kept livestock within authorized areas in the recent past. Monitoring would be conducted to determine if there is a need to reconstruct the fenceline.

It is not anticipated that there would be any loss in AUMs due to the burn activity. Authorized use would not change. 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 five 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.

- Dollard-Rock outcrop, shale, complex (24) – This complex consists of shale outcrops and shale derived soils that are found on hills and mountainsides at elevations ranging from 6,000 to 7,500 feet and on slopes of 25 to 65 percent. Approximately 60 percent of the complex is the Dollard soil and 20 percent is shale outcrop. The Dollard soil is moderately deep, well drained and has rapid surface runoff with severe erosion hazard. Surface runoff for the Rock outcrop is rapid and the erosion hazard is very severe. This complex is primarily used for limited grazing and wildlife habitat.
- Jerry loam (39) – This deep, well drained soil is found on mountainsides at elevations ranging from 7,000 to 9,500 feet and on slopes of 12 to 50 percent. Parent material for this soil is sandstone, shale, and basalt. Surface runoff for this soil is slow and the erosion hazard is moderate. Primary uses for this soil include wildlife habitat and grazing.
- Morval-Tridell complex (45) – This soil map unit is found on alluvial fans and the sides of mesas at elevations ranging from 6,500 to 8,000 feet and on slopes of 6 to 25 percent. The Morval soil makes up about 55 percent of the unit and is found on lower slopes while the Tridell soil makes up about 30 percent of the unit and is found on the sides of mesas. Both soils are deep, well drained and have medium surface runoff and moderate erosion hazard. The primary uses for this soil map unit include grazing and wildlife habitat.
- Torriorthents-Rock outcrop complex, steep (67) – This complex consists of stony soils and exposed outcrops of Mesa Verde sandstone and Wasatch shale that occur on slopes of 15 to 70 percent. Approximately 60 percent of this complex is Torriorthents and 25 percent is Rock outcrop. The Torriorthents are clayey to loamy and contain gravel, cobbles, and stones; many of which are basaltic in origin. They are found on mountainsides below the Rock outcrop. Erosion hazard for this complex varies from moderate to severe. Primary uses for this complex include limited grazing, wildlife habitat, and recreation.

- Villa Grove-Zoltay loams (71) – These soils occur on mountainsides and alluvial fans at elevations ranging from 7,500 to 7,600 feet and on slopes of 15 to 30 percent. About 50 percent of this soil map unit is the Villa Grove soil and 40 percent the Zoltay soil. The remaining 10 percent of this soil map unit consists of varying amounts of Vale, Potts, and Morval soils. The Villa Grove soil is deep, well drained and has slow surface runoff with slight erosion hazard. The Zoltay soil is deep, well drained and has medium surface runoff with moderate erosion hazard. Primary uses for these soils include grazing, wildlife habitat, and irrigated pasture.

Proposed Action:

Environmental Consequences/Mitigation: Proposed burning activities would remove vegetation and could alter soil conditions through the development of a hydrophobic soil layer associated. Fence building activities would also remove vegetation and would result in soil displacement and compaction associated with vehicles and equipment. These impacts would result in an increase in erosion potential, possible offsite sedimentation, and potential nutrient loading in area waterbodies. 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 waterbodies. 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 water quality would be short duration and very localized, making the likelihood of measureable water quality 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. While the report has not yet been completed, the majority of soil conditions in the area appeared to be meeting Standard 1 at that time. At this time, it can be assumed that 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*), big sagebrush (*Artemisia tridentata*), Saskatoon serviceberry (*Amelanchier alnifolia*), squawapple (*Peraphyllum ramosissimum*), snowberry (*Symphoricarpos* sp.), Pinyon pine (*Pinus edulis*), and Utah juniper (*Juniperus osteosperma*). The palatable shrubs are hedged to a moderate degree, and some shrubs are becoming decadent. Prairie junegrass (*Koeleria macrantha*), slender wheatgrass (*Elymus trachycaulus*), Lupine (*Lupinus* sp.) and, bottlebrush squirreltail (*Elymus elymoides*) are present in the understory, however there is more bare ground than expected for this vegetation type. Although the allotment is grazed primarily from June 1 to June 15th, some cattle remain on the allotment until October 15th. During the land health assessment, evidence of moderate to heavy cattle and big game use was observed throughout the project area.

Proposed Action:

Environmental Consequences:

The proposed action involves a prescribed burn of about 1,042 acres of BLM land and an additional 600 acres of Forest Service land. The proposed burn would consume most of the existing vegetation. Following a fire of low to moderate intensity, all the shrubs mentioned above, except big sagebrush, would resprout and regrow. 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 project area seems to receive some concentrated livestock and wildlife use, particularly adjacent to the existing gas pads. The burned area may attract more livestock use due to an increase in palatable and nutritious early seral grass production. Livestock may be more inclined to stay in the burned area if water and feed are available. Concentrated or extended grazing on the palatable plants that sprout or regenerate following a fire would deplete the plants' carbohydrate reserves and may cause mortality of weakened plants. This would alter the vegetative composition following a fire and would increase the risk of noxious weeds becoming established.

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 pasture within 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 would occur, which could leave the area susceptible to possible wildfire hazard in the future. An intensive wildfire during the active growing season would consume existing vegetation 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 has not yet been completed; however, the overall vegetative conditions in the area appeared to be 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 III with an objective to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

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 III in partially retaining the existing landscape character.

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 III 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 GSFO, 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 Dry Hollow 0.7 miles to the west and is within the MMA boundary. Given the distance to a perennial stream, an adequate buffer exists to filter any 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.

No Action Alternative:

Environmental Consequences:

This action should not directly impact fisheries. However, if severe wildfires occur in the absence of the prescribed burn, potentially increased erosion, streamflow, and water quality impacts could negatively impact fish and amphibians in downstream waters.

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 has not yet been completed; however, the initial results seem to indicate the landscape is meeting Standard 4 at that time.

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

Affected Environment:

The GSFO 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*), Pinyon jay (*Gymnorhinus cyanocephalus*) western scrub-jay (*Aphelocoma californica*), and black-billed magpie (*Pica pica*). Two gallinaceous species, the wild turkey (*Meleagris gallopavo*) and the Dusty grouse (*Dendragapus obscores*), 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 jamaicensis*), golden eagle (*Aquila chrysaetos*) American kestrel (*Falco sparverius*), great horned owl (*Bubo virginianus*), 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. Fire suppression has resulted in decadent stands of oaks. These over-mature stands are much more vulnerable to large scale die-offs, particularly in recent drought years (CDOW 2007). Over 100 years of fire suppression has allowed woody species to continue to mature and become denser and less productive. In addition, fire suppression has allowed fuels to build up to the point that when wildfires do occur they are sometimes much more intense and destructive.

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 herpetofauna 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 wildlife species, such as squirrels and jays. Acorns of 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 Gambels Oak as well as create a mosaic of seral stages of Gambels 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 adjacent drainages.

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. Although not highly palatable, the availability and abundance of Gambels oak, particularly on winter ranges, make this plant important for big game forage. Oak brush is especially important to mule deer; on some summer ranges it reportedly provides more deer forage than all other species combined. Elk generally rely on Gambels oak during the spring and winter. Deer and elk show a strong preference for burned areas and seek the nutritious new growth that occurs after fire. Burned areas are generally considered to be beneficial for deer and elk (CDOW 2007 and CDOW 2007a).

The proposed action would somewhat mimic a natural fire disturbance for Gambel oak and mountain brush species. Elk and deer will benefit from the increase in growth and palatability of browse species that will be available on burned areas. Foraging opportunities for big game and other herbivores would increase as understory grasses, forbs, and shrubs reestablish. However, the benefits for mule deer and elk 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 Gambel oak requires physically removing the stem and as much of the root system as possible (CSU 2009). Despite the benefits of wildland fires, there is also the drawback that disturbance increases the possibility of noxious weed invasion, particularly of cheatgrass (CDOW 2007a).

In the long-term, the cumulative effect on wildlife from proposed action would be beneficial to the extent that the proposed action reduces the intensity of future wildfires.

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 2009). 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.

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 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.

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.

INTERDISCIPLINARY REVIEW:

<i>Name</i>	<i>Title</i>	<i>Responsibility</i>
Ody Anderson	Prescribed Fire and Fuels Specialist	Fire/Fuels
Jeff O'Connell	Hydrologist	Soil, Water, Air, Geology
Dereck Wilson	Rangeland Management Specialist	Invasive, Non-native species
Cheryl Harrison	Archaeologist	Cultural and Native American Religious Concerns
Carla DeYoung	Ecologist	ACECs, Land Health Stds, Special Status Plants, Vegetation
Brian Hopkins	Wildlife Biologist	Migratory Birds, Special Status Wildlife, Terrestrial/Aquatic Wildlife
Isaac Pittman	Rangeland Management Specialist	Range Management
Mike Kinser	Rangeland Management Specialist	Wetlands and Riparian Zones
Greg Wolfgang	Recreation Specialist	Visual, revreation, and access and transportation

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PERSONS AND AGENCIES CONSULTED:

Britt Mclin, Fire Chief, Burning Mountain Fire District

Lathan Johnson, Assistant Fire Management Officer, UCRIFM

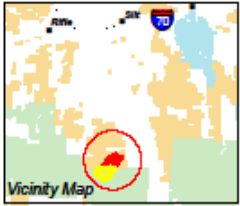
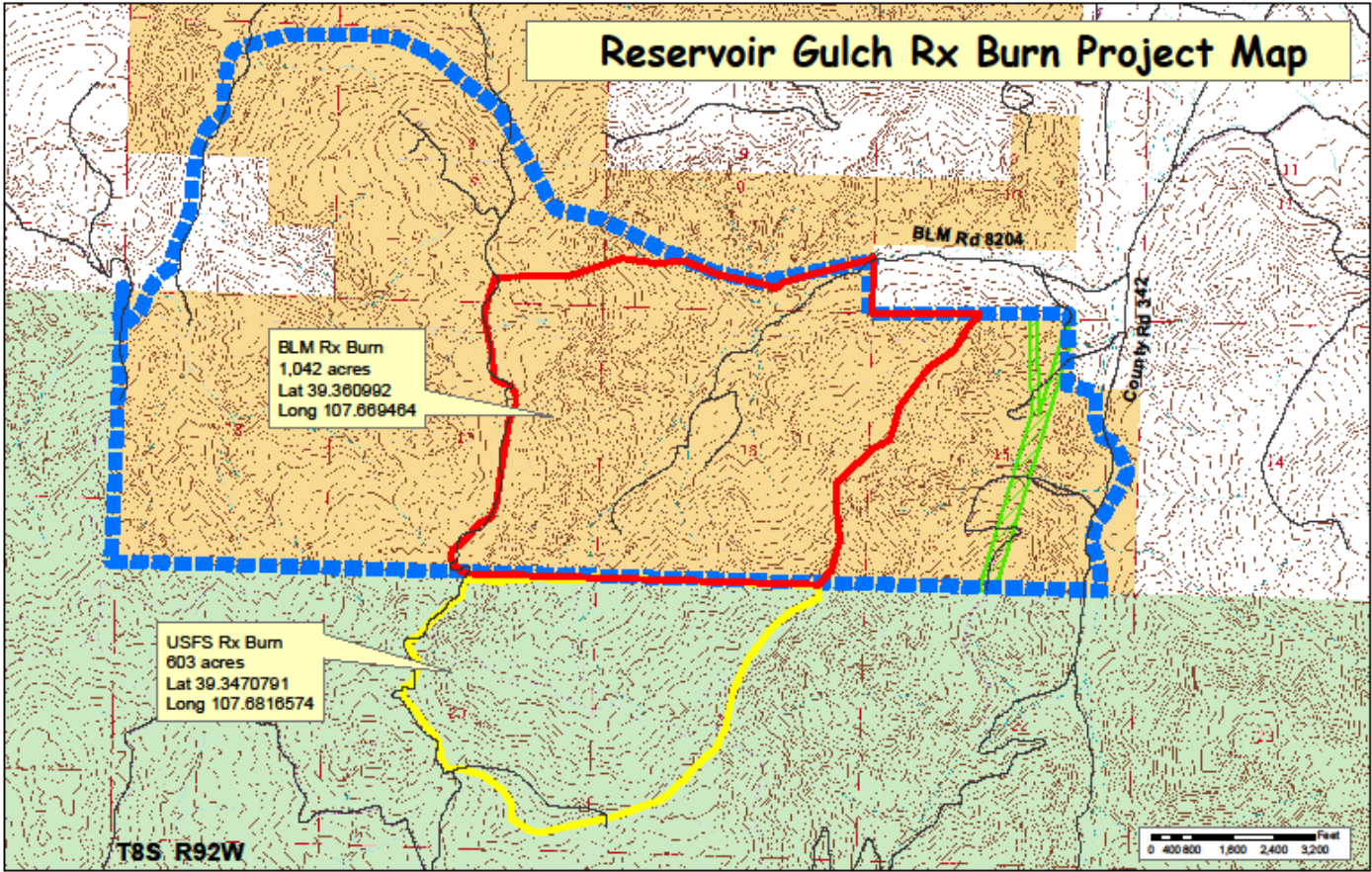
Bob Leighty, White River National Forest

Mark Murrell, GMUG National Forest

Kelly Couey, Landowner

Bob Fulton, Landowner

Reservoir Gulch Rx Burn Project Map



- Legend**
- BLM Rx Burn Unit Boundary - 1,042 acres
 - USFS Rx Burn Unit Boundary - 603 acres
 - MMA Boundary - 3,161 acres
 - Transmission Line
 - BLM Land
 - Private Land
 - USFS Land

Bureau of Land Management - UCRIFMU, 2815 H Road, Grand Junction, CO 81508 10/14/08
 Data Source: T:\gwork\project\fire\fuel_reduction\central_zone
 reservoir_gulch\reservoir_gulch_rx_burn_map_101408_w_rma.mxd



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This project was developed through digital means and may be updated without notice.

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DOI-BLM-CO-NO40-2009-0006-EA

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 being taken into consideration.

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 firefighter in the event of a wildfire.

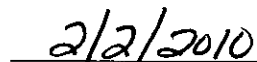
MITIGATION MEASURES:

- Monitor weeds annually for a period of three years after implementation
- Cultural discovery stipulation for finding of artifacts or cultural articles
- If fire moves into MMA, a cultural inventory should be undertaken within one year
- Treatment will not take place from May 15 through July 15 to minimize impacts to nesting migratory birds.
- If a Goshawk or Goshawk nest is discovered within ¼ mile of project, disturbing activities will be curtailed or mitigated
- Public notice of prescribed fire would be posted at all access points.

NAME OF PREPARER: Alton Anderson

SIGNATURE OF AUTHORIZED OFFICIAL:


Karl Mendonca
Associate Field Office Manager


Date