UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
BURNS DISTRICT OFFICE

CATEGORICAL EXCLUSION ENVIRONMENTAL REVIEW AND APPROVAL

A. Background

Categorical Exclusion (CX) Number: DOI-BLM-OR-B070-2015-0021-CX
Date: 01/14/15
Case File/Serial Number or Name: Carlson Creek Allotment File
Subject Function Code: 9264 Range Management
Preparer/Title: Louis E. Clayburn, Range Management Specialist
Applicant: Bureau of Land Management
Title of Proposed Action: Bone Creek Basin Fire Rehabilitation

Description of Proposed Action and Project Design Elements (if applicable):

The Burns District Bureau of Land Management (BLM) is proposing to rehabilitate portions of the Bone Creek Basin Fire located within Steens Mountain Wilderness (outside the No Livestock Grazing Area) and part of Carlson Creek and Fields Allotments (see attached maps). Rehabilitation would include the following:

1) Aerially seeding approximately 4,129 acres of rangeland in order to preserve portions of Preliminary Priority Habitat (PPH) and Preliminary General Habitat (PGH) for Greater Sage-Grouse that were burned within Carlson Creek and Fields Allotments. Approximately 1,016 acres planned for treatment are PGH and 2,671 acres are PPH. Aerial seeding would be contracted and completed in the spring of 2015.
2) Another 379 acres would be ground seeded by hand with bitterbrush seed. This would be accomplished by burying live seed in the ground in caches and hand planting live seedlings. Burns District BLM employees would complete the ground seeding of the bitterbrush (with the help of volunteers when available); ground seeding would be completed before the winter of 2015.
3) Rebuilding of multiple rock cribs within approximately 3.6 miles of fence line burned in the fire; the fence will be repaired in places, as needed. All fence work would be contracted and completed in the spring/summer of 2015. Use of All Terrain Vehicles (ATV) may be required to carry fence material to the site.
4) Erosion control devices would be placed at headcuts and other locations within Carlson Creek drainage in order to limit erosion. Carlson Creek drainage, located within Steens Wilderness, was severely burned in the fire, resulting in 75 to 80 percent of the riparian vegetation being removed from the creek channel. Multiple headcuts/erosion issues were exposed and identified along roughly three miles of the creek in various locations. Plans are to go to each location and place rocks or small diameter logs by hand to construct erosion control devices to limit the amount of down channeling and loss of stream integrity. Maximum size of the rock structures would be approximately 8 feet wide by 8 feet long by 2 feet to 6 feet high. The small diameter logs would be used to fill in a severely down cut side stream channel as much as possible; the dimensions for this will be a minimum of 10 feet wide by 12 feet deep to as long as a quarter of a mile (approximately). A chainsaw would be required in wilderness to cut down dead juniper and aspen trees burned in the fire. These trees would be used to fill the largest of the headcuts (in place of rock) in order to collect sediment behind them and act as erosion control devices. Appropriate mitigation measures as described in the North Steens Ecosystem Restoration Project would be used; this project would be contracted and completed before the winter of 2015.
5) Approximately 200 cottonwood cuttings (sourced from existing cottonwood trees native to many of the streams located on the east side of Steens Mountain) would be planted along the creek bank to control erosion and provide stream bank shading once they reach maturity. BLM district employees, along with volunteers when available, would hand plant the cottonwood seedlings before the winter of 2015. Tree tubes would be placed over the cottonwood trees to protect them from being pulled up by grazing wildlife until their roots have time to become firmly attached. The tubes are green to help them blend in with the natural vegetation. Maintaining the current integrity of the stream channel is critical for Greater Sage-Grouse due to the wet meadow systems that it supports along its channel. These meadows are crucial for brood rearing of sage-grouse. If the stream channel were to become incised, it would lower the water table which currently supports these meadows. Lowering the water table would cause these meadows to become dry.
6) Limited spot repair for emergency access is planned for the Carlson Creek road in order to reach several culverts in danger of becoming plugged from sediment runoff. Culverts would be removed and replaced with hardened rock water crossings less likely to washout while still slowing erosion. Carlson Creek Road was identified in the Travel Management Plan (TMP) as a permit route. The TMP Decision allows for the repair of permit routes, not to exceed conditions in place at the time wilderness was designated (TMP Decision, page14). The road alongside Carlson Creek would also be used to pre-stage rock at key spots for constructing the erosion control devices; the repair work would be done by the BLM Operations Crew and completed before the winter of 2015.
8) Once all other work has been completed, water bars would be installed in the road bed to keep the increased sediment and water runoff caused from the lack of vegetation on the hillsides from depositing large amounts of sediment into the creek and eroding the road. Road work would begin in late spring/early summer 2015, once conditions dry enough for equipment access; the repair work would be done by the BLM Operations Crew and completed before the winter of 2015.

Equipment on site may include a dump truck (for hauling rock), ATVs/Utility Task Vehicles (UTV) (to access fence and deliver materials), a grader (to create water bars), a backhoe (to remove old culverts and put in hardened water crossings), a heavy engine (for using pressurized water to assist in planting Cottonwood cuttings), and chainsaws (for cutting trees and brush). A Minimum Requirements Decision Guide (MRDG) (attached) would be completed to ensure the minimal tool is being used for each particular job

while also prioritizing the safety of staff

Legal Description: See attached maps for specific location of each portion of the rehabilitation work that would take place.

B. Conformance with Land Use Plan (LUP) (name): Steens Mountain Cooperative Management and Protection Area (CMPA) Resource Management Plan (RMP)/Record of Decision (ROD)

Date Approved/Amended: August 2005

The proposed action is in conformance with the CMPA RMP/ROD even though it is not specifically provided for because it is clearly consistent with the following LUP decision(s):

Riparian and Wetlands:
"Goal - Maintain, restore or improve riparian vegetation, habitat diversity, and geomorphic stability to achieve healthy, productive riparian areas and wetlands and associated structure, function, process and products that provide public land values such as ... structure and security necessary to meet the life history requirements of fish and wildlife;... water quality and quantity ..." (RMP-24).
"Objective 3. Manage riparian/wetland areas to maintain, restore, or improve soil moisture content and retention of alluvial ground water to augment base flow conditions ..." (RMP-24).

Special Status Species (SSS):
"Goal - Maintain, restore or improve Special Status ... animal habitats; manage public lands to conserve or contribute to the recovery of threatened or endangered species ..." (RMP-35).
"Objective 1. Manage Special Status plant species and their habitats so management actions do not contribute to their decline ..." (RMP-35).
"Objective 2. Conserve Special Status animal species and the ecosystems on which they depend." (RMP-35).

Wilderness:
"Goal 1 - Maintain or improve wilderness values ... under a principle of nondegradation and in a manner that would leave these values unimpaired ..." (RMP-73).
"Objective. Manage ... features including ecological..." (RMP-73).

Wildland Fire Management:
"Objective 2. Assess burned areas for appropriate biological and physical rehabilitation activities." (RMP-57).
Management Direction. "The MRDG will be followed prior to stabilization and rehabilitation activities within Steens Mountain Wilderness ..." (RMP-57).

Transportation:
"Goal - Provide travel routes to and through BLM-managed lands as appropriate to meet resource objectives while providing for private and public access needs." (RMP-61).
"Objective. Manage roads and ways within the CMPA consistent with the Route Management Categories and Maintenance Levels." (RMP-61).

BLM Categorical Exclusion (CX) Reference (516 DM, Chapter 11): I. Emergency Stabilization

"Planned actions in response to wildfires, floods, weather events, earthquakes, or landslips that threaten public health or safety, property, and/or natural and cultural resources, and that are necessary to repair or improve lands unlikely to recover to a management-approved condition as a result of the event. Such activities shall be limited to: repair and installation of essential erosion control structures; replacement or repair of existing culverts, roads, trails, fences, and minor facilities; construction of protection fences; planting, seeding, and mulching; and removal of hazard trees, rocks, soil, and other mobile debris from, on, or along roads, trails, campgrounds, and watercourses. These activities:

(1) Shall be completed within one year following the event;
(2) Shall not include the use of herbicides or pesticides;
(3) Shall not include the construction of new roads or other new permanent infrastructure;
(4) Shall not exceed 4,200 acres; and
(5) May include temporary roads which are defined as roads authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be part of the BLM transportation system and not necessary for long-term resource management. Temporary roads shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources; and
(6) Shall require the treatment of temporary roads constructed or used so as to permit the reestablishment by artificial or natural means, or vegetative cover on the roadway and areas where the vegetative cover was disturbed by the construction or use of the road, as necessary to minimize erosion from the disturbed area. Such treatment shall be designed to reestablish vegetative cover as soon as practicable, but at least within 10 years after the termination of the contract."

Screening for Exceptions: The followir extraordinary circumstances (516 DM 2, Appe x 2) may apply to individual actions within the categorical exceptions. The i ated specialist recommends the proposed acti es *not*:

CATEGORICAL EXCLUSION EXTRAORDINARY CIRCUMSTANCES DOCUMENTATION
2.1 Have significant impacts on public health or safety.
Specialist: John Petty, Safety Officer Signature and Date: 3/12/15
Rationale: Minimal impact on public health or safety by controlling the access to the site during aerial seeding and rehabilitation work.
2.2 Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); flood plains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas.
Migratory Birds Specialist: Andy Daniels, Wildlife Biologist Signature and Date: 3/12/15
Rationale: As there is useable habitat surrounding this area and the birds would not be limited to nesting within the burned areas within the fire area, there would be no effect to migratory birds or their habitat as a result of this action.
Historic and Cultural Resources Specialist: Scott Thomas, District Archeologist Signature and Date: 3/12/15
Rationale: If they are present, historic and cultural sites would be protected through avoidance.
Areas of Critical Environmental Concern (ACEC)/Research Natural Areas (RNA) Specialist: Caryn Burri, Natural Resource Specialist (NRS) (Botany) Signature and Date: 3-12-15
Rationale: There are no ACECs or RNAs within the project area; therefore there would be no impact.
Water Resources/Flood Plains Specialist: Jarod Lemos, Natural Resource Specialist (Riparian and Fisheries) Signature and Date: 3/12/15
Rationale: The Bone Creek Basin Fire removed all upland and riparian vegetation along Carlson Creek. Vegetation slows the flow of water, which allows it to infiltrate into the soil where it is stored and safely released throughout the year. Without vegetation in place, we would see more overland flow and an increase in sediment entering the waterway, negatively effecting water quality. The proposed action of installing headcut structures and riparian plantings would help dissipate flows and stabilize the stream channel from incision. They would also capture/filter sediment that flows downstream, which would raise the water table depth and allow high flows better access to their floodplain. The proposed action would secure and improve water resources/flood plains within the Carlson Creek watershed.
Soils, Biological Soil Crust (BSC), Prime Farmlands Specialist: Caryn Burri, Natural Resource Specialist (Botany) Signature and Date: 3-12-15
Rationale: Soils and BSCs (if present) would be disturbed by installing erosion control devises; however, the long term benefits of preventing future soil loss would outweigh any short term effects. Aerial and hand seeding/planting would stabilize soils and allow BSCs to recover (1 to 50+ years) by preventing future soil loss as a result of erosional factors. There are no Prime Farmlands within the proposed project area.
Recreation/Visual Resources Specialist: Eric Haakenson, Outdoor Recreation Specialist Signature and Date: 3-11-15
Rationale: There would be no effects to recreation due to implementation of the proposals; however, in five to ten years, as the riparian area improves due to the trees and seedings establishing and headcuts rehabilitating, this would improve the recreational value of the area.

The project area is within Visual Reso[illegible] Management (VRM) Class I. The objectives f[illegible] VRM Class I are to preserve the existing landscape, keep the level of ch[illegible]e very low, and provide for natural ecologica[illegible]nge and for limited management activity. Recreationists hiking up Carlson Creek would notice the planted trees due to the protective tree tubes; however, the tree tubes would be removed once they are no longer needed. Also, the rock structures used to rehabilitate the headcuts would vary in size and dimensions depending on the headcut; at their maximum dimensions they would be approximately 8 feet wide by 8 feet long by 2 feet to 6 feet high. These projects would only be seen if one is in the near vicinity since the structures are small in size. As trees and seedings become established and the headcuts start rehabilitating, the visuals would improve. Therefore, objectives for VRM Class I would be met.

Wilderness/Wild and Scenic River (WSR) Resources
Specialist: Tom Wilcox, Outdoor Recreation Specialist

Signature and Date: [signature] 3/12/2015

Rationale: The proposed action meets the requirements for emergency stabilization and recovery categorical exclusion. There are no Wilderness Study Areas, WSRs, or Lands with Wilderness Characteristics affected by the proposed action.

The proposed actions would preserve wilderness character in the Carlson Creek Basin by removing installations, reducing sediment transfer on the permittee route, vegetating fire-burned landscapes, and stopping headcutting on Carlson Creek. Manipulating the creek bed and landscape is a temporary trammeling, however the benefit to the wilderness character of naturalness in the long term outweighs the short term trammeling. The location of the trammeling would occur on the permittee route, a previously disturbed surface; on the creek bed where the headcuts are; on the meadows where the tree seedlings would go; and on the open range areas where grass and sage grew before the fire. Mitigation measures reduce negative effects to wilderness character through tool selection, materials selection, and transport and design features.

2.3 Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources (NEPA Section 102(2) (E)).

Specialist: Holly Orr, District Planning and Environmental Coordinator

Signature and Date: Holly Orr 02/20/15

Rationale: There are no highly controversial environmental effects or unresolved conflicts concerning alternative uses of available resources. The rehabilitation work for aerial seeding, ground seeding, erosion control devices, cottonwood seeding, existing road repair, and waterbars is authorized under emergency stabilization under planned actions in response to wildfires. These actions are all in response to the 2014 Bone Creek Basin Fire.

2.4 Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.

Specialist: Holly Orr, District Planning and Environmental Coordinator

Signature and Date: Holly Orr 02/20/15

Rationale: There are no highly uncertain and potentially significant environmental effects or involved unique or unknown environmental risks. The rehabilitation work for aerial seeding, ground seeding, erosion control devices, cottonwood seeding, existing road repair, and waterbars is authorized under emergency stabilization under planned actions in response to wildfires. These actions are all in response to the 2014 Bone Creek Basin Fire.

2.5 Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.

Specialist: Holly Orr, District Planning and Environmental Coordinator

Signature and Date: Holly Orr 02/20/15

Rationale: Implementation would not set precedence for future actions or represent a decision in principle about future actions with potentially significant environmental effects. The rehabilitation work for aerial seeding, ground seeding, erosion control devices, cottonwood seeding, existing road repair, and waterbars is authorized under emergency stabilization under planned actions in response to wildfires. These actions are all in response to the 2014 Bone Creek Basin Fire.

2.6 Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.

Specialist: Holly Orr, District Planning and Environmental Coordinator

Signature and Date: Holly Orr 02/20/15

Rationale: Implementation does not have any known direct relationship to other actions with individually insignificant but cumulatively significant environmental effects. The rehabilitation work for aerial seeding, ground seeding, erosion control devices, cottonwood seeding, existing road repair, and waterbars is authorized under emergency stabilization under planned actions in response to wildfires. These actions are all in response to the 2014 Bone Creek Basin Fire.

2.7 Have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as

determined by either the bureau or offi

Specialist: Scott Thomas, District Archeologist

Signature and Date: Scott C. Thomas 3/12/15

Rationale: If they are present, National Register eligible sites would be protected through avoidance.

2.8 Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species.

Endangered or Threatened Species (T&E)-Fauna

Specialist: Andy Daniels, Wildlife Biologist

Signature and Date: Andrew J Daniels 3/12/15

Rationale: There are no known T&E fauna species or designated Critical Habitat within the proposed project area, and as such there would be no effect to Endangered or Threatened wildlife species or their habitats as a result of this action. There would be no effect to Greater Sage-Grouse or their habitat, and the wet meadows would be maintained as a result of this action.

Endangered or Threatened Species-Aquatic

Specialist: Jarod Lemos, Natural Resource Specialist (Riparian and Fisheries)

Signature and Date: J Lemos 3/12/15

Rationale: Carlson Creek watershed has no documented Aquatic T&E species present, so the proposed actions would not affect this resource.

Endangered or Threatened Species-Flora

Specialist: Caryn Burri, Natural Resource Specialist (Botany)

Signature and Date: 3.12.15

Rationale: There are no documented T&E species or Special Status plant species or designated critical habitat within the proposed project area.

2.9 Violate a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment.

Specialist: Holly Orr, District Planning and Environmental Coordinator

Signature and Date: Holly Orr 02/20/15

Rationale: Implementation would not violate any known law or regulation imposed for the protection of the environment. The rehabilitation work for aerial seeding, ground seeding, erosion control devices, cottonwood seeding, existing road repair, and waterbars is authorized under emergency stabilization under planned actions in response to wildfires. These actions are all in response to the 2014 Bone Creek Basin Fire.

2.10 Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).

Specialist: Holly Orr, District Planning and Environmental Coordinator

Signature and Date: Holly Orr 2/20/15

Rationale: Implementation would not have a disproportionately high or adverse effect on low income or minority populations as such populations do not exist within the project area.

2.11 Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).

Specialist: Scott Thomas, District Archeologist

Signature and Date: Scott C. Thomas 3/12/12

Rationale: Access to and integrity of Indian sacred sites would not be affected because no Indian sacred sites are known to occur in the project area or immediate vicinity.

2.12 Contribute to the introduction, continued existence, or spread of noxious weeds or nonnative invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112).

Specialist: Lesley Richman, Natural Resource Specialist (Weeds)

Signature and Date: Lesley Richman 3/12/2015

Rationale: Noxious weeds are known to be present in this area at this time. Monitoring for weeds would occur for three years post-

fire. Any weeds found would be treated using the most appropriate methods. The proposed seeding would help moderate adverse effects from noxious weeds. All equipment will be washed before coming on site.

D. Signatures

Additional review (As determined by the Authorized Officer):

Specialist: Cam Swisher, Natural Resources Staff Administrator

Signature: Cam Swisher Date: 3-16-15

RMP conformance and CX review confirmation:

Specialist: Holly Orr, District Planning and Environmental Coordinator

Signature: Holly Orr Date: 03/13/15

Management Determination: Based upon review of this proposal, I have determined the Proposed Action is in conformance with the LUP, qualifies as a categorical exclusion, and does not require further NEPA analysis.

Authorized Officer: Rhonda Karges, Andrews/Steens Field Manager

Signature: Rhonda Karges Date: 3/16/15

E. Contact Person

For additional information concerning this categorical exclusion review, contact the Planning and Environmental Coordinator, BLM, Burns District Office, 28910 Highway 20 West, Hines, Oregon 97738, (541) 541-4400.

Decision

It is my decision to implement the Proposed Action as described above and in conformance with the MRDG (attached).

Authority

Authority for this decision is found in 43 Code of Federal Regulations (CFR) 4190.1 Effect of wildfire management decision. "(a) Notwithstanding the provisions of 43 CFR 4.21(a)(1), when BLM determines that vegetation, soil or other resources on the public lands are at substantial risk of wildfire due to drought, fuels buildup, or other reasons, or at immediate risk of erosion or other damage due to wildfire, BLM may make a rangeland wildfire management decision effective immediately…Wildfire management includes but is not limited to: … (2) projects to stabilize and rehabilitate lands affected by wildfire." Under authority granted by this regulation, projects to stabilize and rehabilitate lands such as seeding, planting, erosion control, road maintenance/protection, and fence maintenance/construction will occur.

Appeal Procedure

This decision may be appealed to the Interior Board of Land Appeals (IBLA), Office of the Secretary, in accordance with regulations contained in 43 CFR 4 and Form 1842-1. If an appeal is filed, your notice of appeal should be filed with Rhonda Karges, Field Manager, Andrews/Steens Resource Area, Burns District Office, 28910 Highway 20 West, Hines, Oregon 97738, within 30 days following receipt of the final decision. The appellant has the burden of showing the decision appealed is in error.

A copy of the appeal, statement of reasons, and all other supporting documents should also be sent to the Regional Solicitor, Pacific Northwest Region, U.S. Department of the Interior, 805 SW Broadway, Suite 600, Portland, Oregon 97205. If the notice of appeal did not include a statement of reasons for the appeal, it must be sent to the IBLA, Office of Hearings and Appeals, 801 North Quincy Street, Arlington, Virginia 22203. It is suggested appeals be sent certified mail, return receipt requested.

Standards for Obtaining a Stay—except as otherwise provided by law or other pertinent regulation, a petition for a stay of decision pending appeal shall show sufficient justification based on the following standards (43 CFR 4.21(b)):

(1) The relative harm to the parties if the stay is granted or denied,
(2) The likelihood of the appellant's success on the merits,
(3) The likelihood of immediate and irreparable harm if the stay is not granted, and
(4) Whether the public interest favors granting the stay.

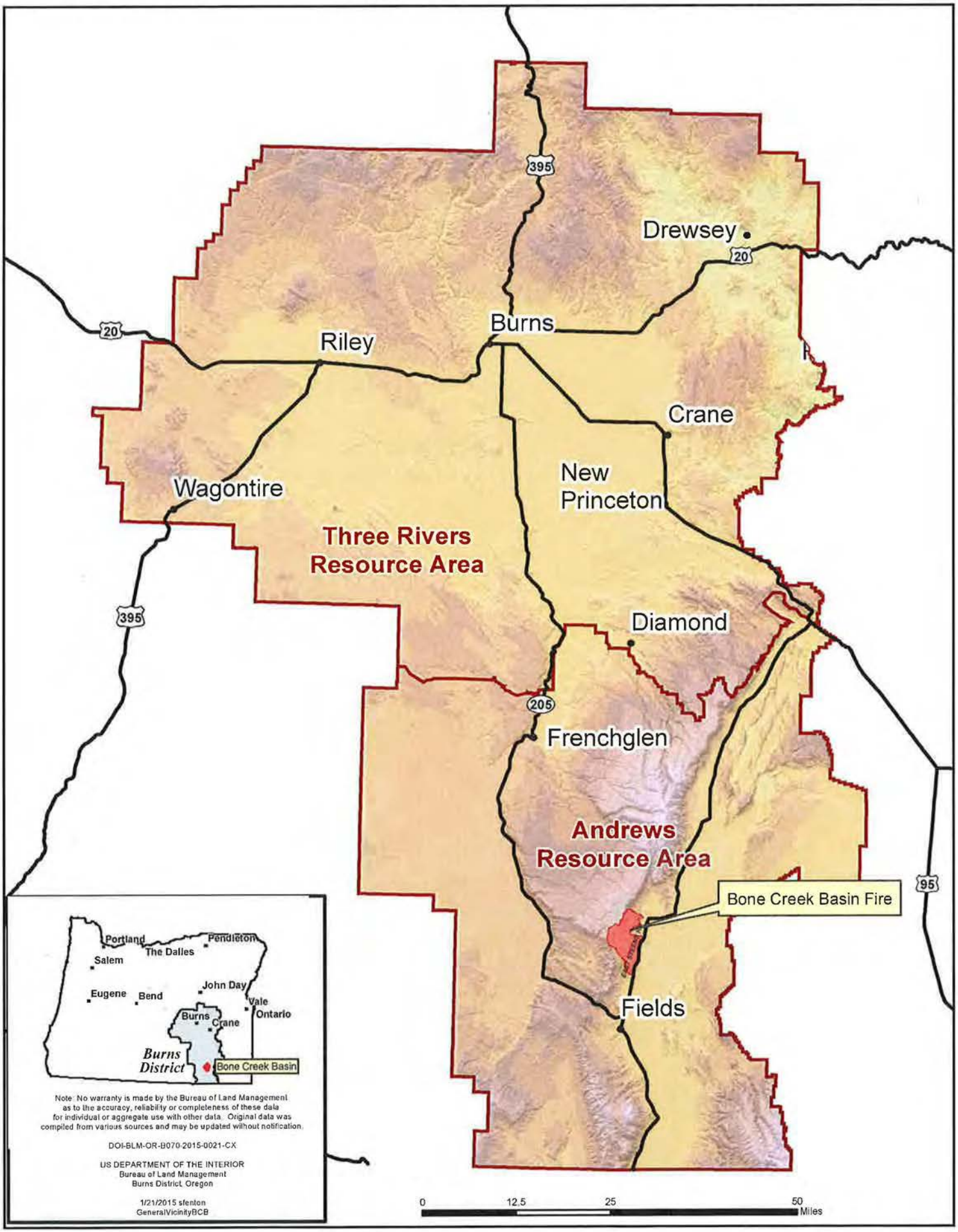
As noted above, the petition for stay must be filed in the office of the authorized officer.

A notice of appeal and/or request for stay electronically transmitted (e.g. email, facsimile, or social media) will not be accepted. A notice of appeal and/or request for stay must be on paper.

Authorized Officer: Rhonda Karges, Andrews/Steens Resource Area Field Manager

Signature: Rhonda Karges Date: 3/16/15

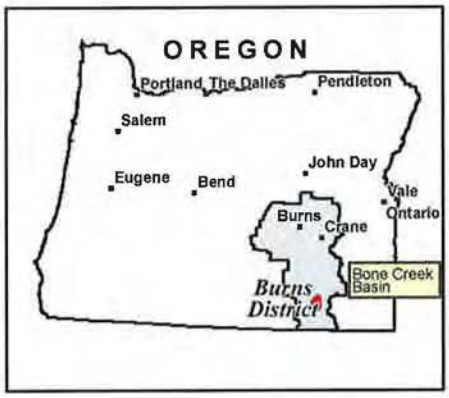
Bone Creek Basin Emergency Stabilization and Rehabilitation CX



RANGE ALLOTMENTS

Bone Creek Basin Emergency Stabilization and Rehabilitation CX

- Fire Perimeter
- Allotments
- Pastures
- Paved Road
- Non-Paved Improved Road
- Natural/Unknown Road Surface
- Steens Mtn Wilderness
- Bureau of Land Management
- Private/Unknown



1 Miles

Note: No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual or aggregate use with other data. Original data was compiled from various sources and may be updated without notification.

DOI-BLM-OR-B070-2015-0021-CX

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Burns District, Oregon

1/21/2015 sfenton
AllotmentsBCB

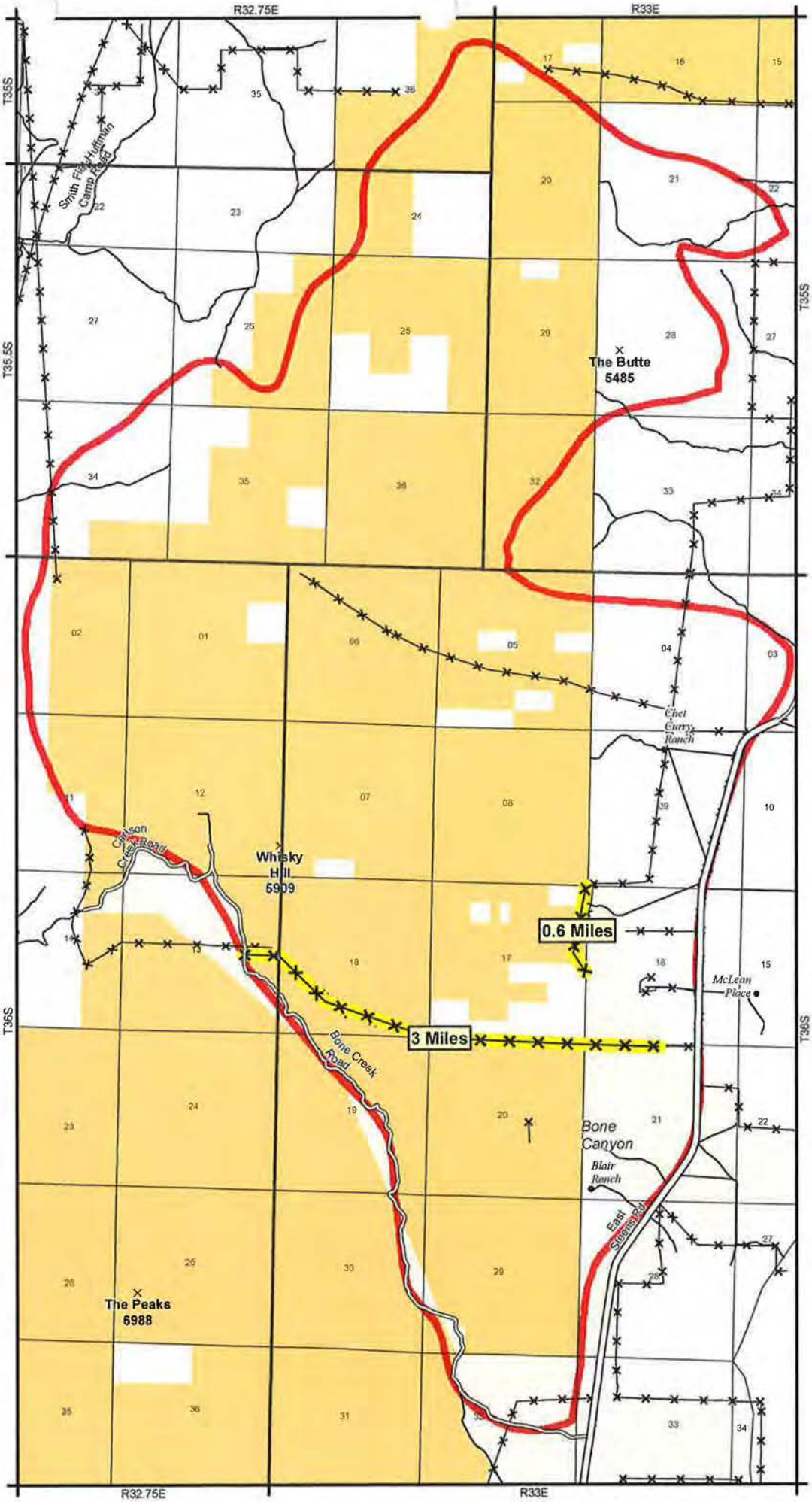
R32.75E R33E

T35S T35.5S T36S

DEEP CREEK #3
STONEHOUSE #3
SERRANO POINT ALLOT.
Smith Flat-Huffman Camp Road
SPRINGS #4
ROARING SPRINGS FFR
The Butte 5485
RANCH #1
JUNIPER CREEK #2
CARLSON CREEK ALLOT.
Chet Curry Ranch
MIRANDA CR #2
CARLSON CREEK #1
KUENY RANCH FFR
Carlson Creek Road
Whisky Hill 5909
RANCH #1
McLean Place
Bone Creek Road
Bone Canyon
Blair Ranch
SCOUBES CREEK
East Steens Rd
SKULL LAKE #1
ALVORD PEAK ALLOT.
BONE CREEK
FIELDS
The Peaks 6988
TULE SPRINGS
SCHOUVERS PLACE SDG #3

FENCE RECONSTRUCTION AND REPAIR

Bone Creek Basin Emergency Stabilization and Rehabilitation CX



Fire Perimeter

Repair Fence

Existing Fence

Paved Road

Non-Paved Improved Road

Natural/Unknown Road Surface

Steens Mtn Wilderness

Bureau of Land Management

Private/Unknown

1

Miles

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US DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Burns District, Oregon

1/21/2015 sfenton
RIMPSBCB

SAGE-GROUSE PRELIMINARY HABITAT

Bone Creek Basin Emergency Stabilization and Rehabilitation CX

DOI-BLM-OR-B070-2015-0021-CX

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Burns District, Oregon

1/21/2015 sfenton
SageGrouseHabBCB

VEGETATION TREATMENT

Bone Creek Basin Emergency Stabilization and Rehabilitation CX

- Fire Perimeter
- Paved Road
- Non-Paved Improved Road
- Natural/Unknown Road Surface
- Aerial Seeding-Native Grasses
- Bitterbrush Restoration and Aerial Seeding
- Riparian Restoration
- Aerial Seeding-Crested Wheatgrass
- Steens Mtn Wilderness
- Bureau of Land Management
- Private/Unknown

1

Miles

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US DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Burns District, Oregon

1/21/2015 sfenton
VegTreatmentBCB

R32.75E R33E T35S T35.5S T36S T37S

451 Acres
645 Acres
2188 Acres
2360 Acres
379 Acres
217 Acres
79 Acres
339 Acres
324 Acres
102 Acres

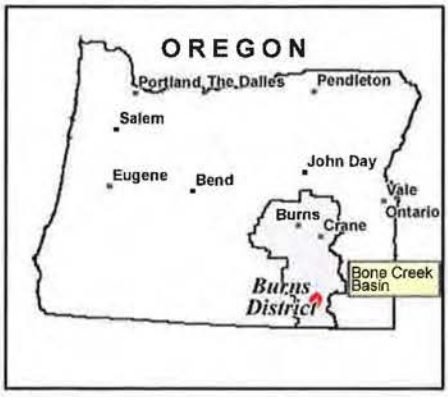
The Butte 5485
Whisky Hill 5996
The Peaks 6988

Huffman Camp Road
Smith Flat
Carlson Creek Road
Bone Creek Road
Chet Curry Ranch
Kueny Ranch
McLean Place
Bone Canyon
Blair Ranch
Calderwood Place
Egli Stearns Rd

SPOT ROAD MAINTENANCE

Bone Creek Basin Emergency Stabilization and Rehabilitation CX

- Carlson Creek Permittee Administrative Access Road
- Fire Perimeter
- Allotments
- Pastures
- Paved Road
- Non-Paved Improved Road
- Natural/Unknown Road Surface
- Steens Mtn Wilderness
- Bureau of Land Management
- Private/Unknown



1
Miles

R32.75E
R33E
T35S
T35.5S
T36S
DEEP CREEK #3
STONEHOUSE #3
SERRANO POINT ALLOT.
Smith Flat Huffman Camp Road
SPRINGS #4
ROARING SPRINGS FFR
The Butte 5485
RANCH #1
JUNIPER CREEK #2
CARLSON CREEK ALLOT.
Chet Curry Ranch
MIRANDA CR #2
CARLSON CREEK #1
Carlson Creek Rd
Carlson Creek Road
KUENY RANCH FFR
Whisky Hill 5909
RANCH #1
McLean Place
Bone Creek Road
Bone Canyon
Blair Ranch
SCOUBES CREEK
East Steens Rd
SKULL LAKE #1
ALVORD PEAK ALLOT.
BONE CREEK
FIELDS
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TULE SPRINGS
SCHOUVERS PLACE SDG #3

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US DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Burns District, Oregon

3/20/2015 sfenton
CarlsonCreekRdBCB

ARTHUR CARHART NATIONAL WILDERNESS TRAINING CENTER

MINIMUM REQUIREMENTS DECISION GUIDE

WORKBOOK

"...except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act..."

-- The Wilderness Act of 1964

Project Title: Bone Creek Basin Fire Rehabilitation

MRDG STEP 1

Determine if Administrative Action is Necessary

Description of the Situation

What is the situation that may prompt administrative action?

In September 2014 the Bone Creek Basin Fire burned grazing allotments and the boundary fences between them ,in the Bone Creek and Carlson Creek basins located on the east face of the Steens Mountain Wilderness and outside the no livestock grazing area. The wildfire destroyed wooden posts, gates, corners and drainage crossing barriers made of wood on the allotment boundary fence. Grandfathered uses allow grazing to take place in these areas. The fence needs repairing to provide livestock grazing for permittees and to preserve wilderness character. The allotment boundary fence is accessed from Bone Creek Road. Bone Creek Road is bounded on both sides by wilderness. The wilderness boundary follows aloquit parts along the township range and section lines in many areas along the road, however the road has a thirty foot from centerline buffer to the wilderness boundary even in those areas along the road where aliquot parts do not describe the boundary adequately. The allotment boundary fence intersects the road in T 35 S, R 32.75 E, Sec 13, SENE.
The Bone Creek fence is managed under an "Assignment of Range Improvements," as part of the permittees responsibilities, for the Carlson Creek Allotment and Fields Allotment. Which includes fences and other infrastructure maintenance.

Options Outside of Wilderness

Can action be taken outside of wilderness that adequately addresses the situation?

☐ YES

☑ NO **EXPLAIN & COMPLETE STEP 1 OF THE MRDG**

Explain:

Grandfathered uses for permittees in the Steens Act of 2000 and the Steens Mountain CMPA RMP, allow grazing to continue in the portion of the wilderness outside the no livestock grazing area. The Bone Creek Basin fire destroyed the fences which allowed the area to be managed for livestock grazing. The fences are within the wilderness. Therefore the action must take place within the wilderness.

Criteria for Determining Necessity

Is action necessary to meet any of the criteria below?

A. Valid Existing Rights or Special Provisions of Wilderness Legislation

*Is action necessary to satisfy valid existing rights or a special provision in wilderness legislation (the Wilderness Act of 1964 or subsequent wilderness laws) that **requires** action? Cite law and section.*

☑ YES ☐ NO

Explain:

Wilderness Act of 1964:
Grazing is specifically permitted in wilderness under Section 4(d)(4)(2) of the Act. "the grazing of livestock, where established prior to September 3, 1964, shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the Secretary of Agriculture."

Steens Act of 2000:
Section 1.b: 11) To promote viable and sustainable grazing and recreation operations on private and public lands.
(12) To conserve, protect, and manage for healthy watersheds and the long-term ecological integrity of Steens Mountain.
Section 102.(b) (2) to promote grazing, recreation, historic, and other uses that are sustainable;

B. Requirements of Other Legislation

Is action necessary to meet the requirements of other federal laws ? Cite law and section.

☐ YES ☑ NO

Explain:

C. Wilderness Character

Is action necessary to preserve one or more of the qualities of wilderness character including: Untrammeled, Undeveloped, Natural, Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation, or Other Features of Value?

UNTRAMMELED

☐ YES ☑ NO

Explain:

No action is nescessary to preserve the untrammeled character. The untrammeled character is affected when events try to bind, control or manipulate ecological processes. Wildfire, an ecological process, destroyed portions of the fence. Rebuilding the fence would not bind, control or manipulate ecological processes occuring on the Bone Creek allotment in the wilderness.

UNDEVELOPED

☐ YES ☑ NO

Explain:

No action is nescessary to preserve the undeveloped character. The Wilderness Act states that wilderness is an area "of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation," "where man himself is a visitor who does not remain," and "with the imprint of man's work substantially unnoticeable."
This quality is impaired by structures and installations, and by the use of motor vehicles, motorized equipment, or mechanical transport that increases people's ability to occupy or modify the environment.

Rebuilding the fence would not affect the undeveloped character because the fence existed at the time of wilderness designation. If the fence were not rebuilt, it would enhance the undeveloped character.

NATURAL

☐ YES ☑ NO

Explain:

The Wilderness Act states that wilderness is "protected and managed so as to preserve its natural conditions." In short, wilderness ecological systems should be as free as possible from the effects of modern civilization. However the allotment boundary fence maintenance is a nescessary part of managing livestock grazing on the land to ensure that watersheds, waterbodies, water quality, and soils are maintained in a natural condition.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

☐ YES ☑ NO

Explain:

Wilderness provides opportunities for people to experience: natural sights and sounds; remote, isolated, unfrequented, or secluded places; and freedom, risk, and the physical and emotional challenges of self-discovery and self-reliance. Those opportunities are still available. This quality is impaired by settings that reduce these opportunities, such as visitor encounters or signs of modern civilization. The fence was in place upon designation as wilderness. Rebuilding the burned over parts would not change the opportunities.

OTHER FEATURES OF VALUE

☐ YES ☑ NO

Explain:

Recreational opportunities abounded in the pre-fire conditions of the Bone Creek watershed. The Bone Creek Road provides access into the Bone Creek and Carlson Creek watershed basins. Hunting, hiking, camping are the primary recreation opportunities. These activities would not be affected by rebuilding the fence.

Step 1 Decision

Is administrative action necessary in wilderness?

Decision Criteria	Summary Responses
A. Existing Rights or Special Provisions	**Action IS necessary to meet this criterion.**
B. Requirements of Other Legislation	**Action IS NOT necessary to meet this criterion.**
C. Wilderness Character	
Untrammeled	**Action IS NOT necessary to meet this criterion.**
Undeveloped	**Action IS NOT necessary to meet this criterion.**
Natural	**Action IS NOT necessary to meet this criterion.**
Outstanding Opportunities	**Action IS NOT necessary to meet this criterion.**
Other Features of Value	**Action IS NOT necessary to meet this criterion.**

Is administrative action necessary in wilderness?

☑ YES

EXPLAIN & PROCEED TO STEP 2 OF THE MRDG

☐ NO

Explain:

Grandfathered grazing allotments in the Bone Creek and Carlson Creek Basins require fences to manage livestock grazing pastures located within this portion of the wilderness. The fences suffered damage as a result of the Bone Creek Basin Fire in 2014. Repairing the fences is nescessary to meet the needs of the grazing permittee and maintain rangeland health standards.

Project Title: Bone Creek Basin Fire Rehabilitation

MRDG STEP 2

Determine the Minimum Activity

Other Direction

*Is there "special provisions" language in legislation (or other Congressional direction) that explicitly **allows** consideration of a use otherwise prohibited by Section 4(c)?*

AND/OR

Has the issue been addressed in agency policy, management plans, species recovery plans, or agreements with other agencies or partners?

☑ YES

☐ NO

DESCRIBE DOCUMENTS & DIRECTION BELOW

Describe Documents & Direction:

Steens Act, Public Law 106-399, Oct. 30, 2000
SEC. 113. LAND USE AUTHORITIES: (e) GRAZING.— (1) CONTINUATION OF EXISTING LAW.—Except as otherwise provided in this section and title VI, the laws, regulations, and executive orders otherwise applicable to the Bureau of Land Management in issuing and administering grazing leases and permits on lands under its jurisdiction shall apply in regard to the Federal lands included in the Cooperative Management and Protection Area.
(4) FENCING AND WATER SYSTEMS.—The Secretary shall also construct fencing and develop water systems as necessary to allow reasonable and efficient livestock use of the forage resources referred to in paragraph (3).

Steens Mountain Wilderness and Wild and Scenic rivers Plan, Appendix P - Steens Mountain Cooperative Management and Protection Area Resource Management Plan, dated August 2005 Permitted use elements for Steens Mountain Wilderness (page 51):

Management Objective
Implement administrative solutions and rangeland projects to provide proper management for livestock grazing while meeting resource objectives and requirements for S&Gs.

Management Direction
Existing grazing management projects will be maintained if they continue to support livestock grazing. Projects not functioning to support grazing, wildlife, or wild horses will be abandoned and the sites rehabilitated (e.g., removal of fencing in the No Livestock Grazing Area).

BLM Manual 6340 Management of Designated Wilderness: 1.6, C.8.d.i:
Structures and installations used for livestock management existing at the time of designation may be maintained. Maintenance may be done by the occasional use of motorized equipment where:
A. practical non-motorized alternatives do not exist; and
B. the motorized use is expressly authorized in the grazing permit and advanced written permission for each maintenance activity is granted by the BLM; and
C. the motorized use was allowed prior to wilderness designation.

Components of the Action
What are the discrete components or phases of the action?

Component X	*Example: Transportation of personnel to the project site*
Component 1	**Personel and materials are transported to each work site on the fence alignment**
Component 2	**Site specific repairs are made along the existing fence alignment**
Component 3	
Component 4	
Component 5	
Component 6	
Component 7	
Component 8	
Component 9	

Proceed to the alternatives.

Refer to the **MRDG Instructions** regarding alternatives and the effects to each of the comparison criteria.

Project Title: Bone Creek Basin Fire Rehabilitation

MRDG Step 2: Alternatives

Alternative 1: No Action - Fence does not get repaired

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

In the no action alternative, the fence would not be rebuilt. Management of the two grazing allotments without the fence in working condition would cause problems to arise such as the mingling of livestock between allotments, or livestock crossing the damaged fence and using the burned area along the banks of Bone Creek, creating additional stream damage.

Component Activities

How will each of the components of the action be performed under this alternative?

Component of the Action		Activity for this Alternative
X	*Example: Transportation of personnel to the project site*	*Example: Personnel will travel by horseback*
1	Personel and materials are transported to each work site on the fence alignment	**No personnel or materials would be transported to the work site.**
2	Site specific repairs are made along the existing fence alignment	**No repairs are made along the fence alignment.**
3		
4		
5		
6		
7		
8		
9		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	No personnel or materials would be transported to the work site.	☐	☐	☑
2	No repairs are made along the fence alignment.	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Untrammeled Total Rating			**0**	

Explain:

The untrammeled character is affected by events that seek to bind, control or manipulate the ecological processes in the wilderness. This alternative would have no affect to the untrammeled character because no actions would take place. However, other wilderness characteristics, such as naturalness, could be affected.

UNDEVELOPED

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	No personnel or materials would be transported to the work site.	☐	☐	☑
2	No repairs are made along the fence alignment.	☑	☐	☐
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		1	0	NE
Undeveloped Total Rating			**1**	

Explain:

This quality of wilderness is impaired by the presence of structures or installations and by the use of motorized equipment or mechanical transport that increases peoples ability to occupy or modify the environment. Letting the fence fall into disrepair enhances the undeveloped character by allowing the imprint of mans work to become less noticeable.

NATURAL

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	No personnel or materials would be transported to the work site.	☐	☐	☑
2	No repairs are made along the fence alignment.	☐	☑	☐
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	1	NE
Natural Total Rating			**-1**	

Explain:

Wilderness is protected and managed so as to preserve its natural conditions. Wilderness ecological systems should be as free as possible from the effects of modern civilization. The no action alternative would not rebuild the allotment boundary fence. The unrepaired fence would allow passage of livestock into Bone Creek through the unrepaired fence. Trampling of the banks of the creek could result from livestock congregating on creek banks that are bare of vegetation from fire damage. Managing the allotments would not be possible without a working boundary fence. Naturalness would be diminished.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	No personnel or materials would be transported to the work site.	☐	☐	☑
2	No repairs are made along the fence alignment.	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Solitude or Primitive & Unconfined Recreation Total Rating			**0**	

Explain:

Wilderness provides opportunities for people to experience: natural sights and sounds; remote, isolated, unfrequented, or secluded places; and freedom, risk, and the physical and emotional challenges of self-discovery and self-reliance. This quality is impaired by settings that reduce these opportunities, such as visitor encounters or signs of modern civilization. In the no action alternative there would be no action taking place so there would be no visitor encounters. Signs of modern civilization such as the fence would still exist, to a lesser degree than before the fire damage, yet still in evidence. Wilderness does not have to provide outstanding opportunities for solitude or a primitive type of unconfined recreation on every acre of a given wilderness. Where present, however, the preservation of these opportunities is important to the preservation of wilderness character as a whole.

OTHER FEATURES OF VALUE

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	No personnel or materials would be transported to the work site.	☐	☐	☑
2	No repairs are made along the fence alignment.	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Other Features of Value Total Rating			**0**	

Explain:

Other unique features for which the wilderness was designated such as the No Livestock Grazing Area, the Redband Trout Reserve, and designation of wild and scenic rivers, are not present in Bone Creek Basin. The fault block geology noted as another unique feature of the Steens Mountain Wilderness is evident in the topography of Bone Creek Basin, however, the no action alternative has no affect to these unique feature.

Other Criteria

What is the effect of each component activity on other comparison criteria? What mitigation measures will be taken?

MAINTAINING TRADITIONAL SKILLS

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☑	☐	☐
1	No personnel or materials would be transported to the work site.	☐	☐	☑
2	No repairs are made along the fence alignment.	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Maintaining Traditional Skills Total Rating			**0**	

Explain:

The no action alternative provides no opportunities to maintain traditional skills.

SPECIAL PROVISIONS

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	No personnel or materials would be transported to the work site.	☐	☑	☐
2	No repairs are made along the fence alignment.	☐	☑	☐
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	2	NE
Special Provisions Total Rating			**-2**	

Explain:

Special provisions in the Wilderness Act and the Steens Act allow the repair or replacement of structures and installations used for livestock management existing at the time of designation. The no action alternative would not fulfull the provisions in the Acts

ECONOMICS & TIME CONSTRAINTS

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	No personnel or materials would be transported to the work site.	☐	☐	☑
2	No repairs are made along the fence alignment.	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Economics & Time Contraints Total Rating			**0**	

Explain:

The no action alternative would not require any expense by the BLM

Safety of Visitors & Workers

What is the effect of each component activity on the safety of visitors and workers? What mitigation measures will be taken?

SAFETY OF VISITORS & WORKERS

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	No personnel or materials would be transported to the work site.	☐	☐	☑
2	No repairs are made along the fence alignment.	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Safety of Visitors & Workers Total Rating			**0**	

Explain:

The no action alternative would have no safety concerns because there are no actions.

Summary Ratings for Alternative 1

Wilderness Character	
Untrammeled	0
Undeveloped	1
Natural	-1
Solitude or Primitive & Unconfined Recreation	0
Other Features of Value	0
Wilderness Character Summary Rating	**0**

Other Criteria	
Maintaining Traditional Skills	0
Special Provisions	-2
Economics & Time Constraints	0
Other Criteria Summary Rating	**-2**

Safety	
Safety of Visitors & Workers	0
Safety Summary Rating	**0**

Project Title: Bone Creek Basin Fire Rehabilitation

MRDG Step 2: Alternatives

Alternative 2: Repair and replace features on fence alignment using motorized transport

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

All terrain vehicles would be used to transport personnel and materials to the work sites along the fence alignment. Personnel would install steel posts in the ground using a post-pounder. Rock Cribs would be used as corners or in places where strength is needed along the alignment to support the fence. Stones used to fill the rock cribs would be selected from the nearby landscape. Selected and carried to the crib by hand. The ATV would stay next to the fence alignment as much as terrain allows to keep the footprint of the disturbance minimal.

Tools used to repair fence. The tools listed below are industry standard tools used by all fence builders when building barbed wire fence. Regardless of how the materials are brought to the work site, the same tools to install the fence would be used.
Wire Stretcher - non-motorized device that uses clamps and levers to pull the wire tight.
Wire Pliers - non-motorized device that is used to grip and cut 12 guage fence wire.
Post Pounder - non-motorized device consisting of a heavy metal tube with handles on either side. The tube is slipped over the post end and the tube, which has one closed end, is used to pound the post into the ground.

Materials used to repair fence. The materials listed below are industry standard barbed wire fencing supplies.
Smooth fencing wire 12.5 guage Class III 80 rods/roll (one rod is 16.5 feet)
Barbed fencing wire 12.5 guage Class III 80 rods/roll 2 point
steel fence clips
Welded wire for rock cribs
Steel posts for the fence and the rock cribs

Motorized Transport:
All terrain vehicle to carry materials along the fence alignment.

Component Activities

How will each of the components of the action be performed under this alternative?

Component of the Action		Activity for this Alternative
X	*Example: Transportation of personnel to the project site*	*Example: Personnel will travel by horseback*
1	Personel and materials are transported to each work site on the fence alignment	**Transport would use.All Terrain Vehicles**
2	Site specific repairs are made along the existing fence alignment	**Repairs are made using standard fencing tools**
3		
4		
5		
6		
7		
8		
9		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport would use All Terrain Vehicles	☐	☐	☑
2	Repairs are made using standard fencing tools	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Untrammeled Total Rating			**0**	

Explain:

The untrammeled character is affected by things that bind, control or manipulate the ecological conditions in the environment. The fence already exists on the ground, repairing the fence does not increase or decrease the untrammeled character.

UNDEVELOPED

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport would use All Terrain Vehicles	☐	☑	☐
2	Repairs are made using standard fencing tools	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	1	NE
Undeveloped Total Rating			**-1**	

Explain:

The undeveloped character is affected by the presence of structures or installations and by the use of motor vehicles. The fence has been in place since before wilderness designation and repairing it does not affect the undeveloped character present. The motor vehicle used to move materials along the fence line would diminish the undeveloped character, however, the impairment is brief, lasting for the duration of the work, which is approximately three weeks.

NATURAL

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport would use All Terrain Vehicles	☐	☑	☐
2	Repairs are made using standard fencing tools	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	1	NE
Natural Total Rating			**-1**	

Explain:

Naturalness is affected by human activities on the ecological system within the wilderness. Moving materials along the fence alignment using the ATV would leave some surface disturbance from the vehicle tire tracks, and where site specific repairs are completed, such as at a corner, where vehicle tracks would combine with the disturbance created by the worker, as they install a rock crib. The surface disturbance would be located in the same disturbance area caused by livestock as they walk along the fence line, creating trails, or "cow paths". The disturbance is difficult to measure, visually it would be parallel tire tracks left in the soil crust. Where the soil is soft the track would leave a deeper more visually apparent track. Where the track runs through hard ground or rock, there would be a less visually apparent track. Weathering would remove most of the tracks and soil disturbances over the course of a year.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport would use All Terrain Vehicles	☐	☑	☐
2	Repairs are made using standard fencing tools	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	1	NE
Solitude or Primitive & Unconfined Recreation Total Rating			**-1**	

Explain:

Solitude or a Primitive and Unconfined type of Recreation is affected by signs of modern civilization or visitor encounters. Prior to the fire, Bone Creek was a popular recreation area for hunters. It has been estimated that work on the fence will take approximately three weeks. During the time that work is taking place, Outstanding opportunities for Solitude would be diminished by the presence of workers and their tools doing work in the wilderness. The diminished opportunities would exist until work was completed on the fence.

OTHER FEATURES OF VALUE

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport would use All Terrain Vehicles	☐	☐	☑
2	Repairs are made using standard fencing tools	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Other Features of Value Total Rating			**0**	

Explain:

Other unique features for which the wilderness was designated such as the No Livestock Grazing Area, the Redband Trout Reserve, and designation of wild and scenic rivers, are not present in Bone Creek Basin. The fault block geology noted as another unique feature of the Steens Mountain Wilderness is evident in the topography of Bone Creek Basin, however, the motorized alternative has no affect to these unique feature.

Other Criteria

What is the effect of each component activity on other comparison criteria? What mitigation measures will be taken?

MAINTAINING TRADITIONAL SKILLS

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☑	☐	☐
1	Transport would use All Terrain Vehicles	☐	☑	☐
2	Repairs are made using standard fencing tools	☑	☐	☐
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		1	1	NE
Maintaining Traditional Skills Total Rating			**0**	

Explain:

Maintaining traditional skills is enhanced when the project accomplishes the work using primitive tools. Repairing the fence is difficult manual labor using simple tools in a skillful manner to produce a fence that will prevent livestock from passing through. The skill of building fences is a skill taught and learned in a traditional way. Repairing the fence enhances traditional skills.

SPECIAL PROVISIONS

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport would use All Terrain Vehicles	☐	☐	☑
2	Repairs are made using standard fencing tools	☑	☐	☐
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		1	0	NE
Special Provisions Total Rating		**1**		

Explain:

The prohibition against motorized transport in the wilderness is stated in the phrase "...there shall be no temporary road, no use of motor vehicles, ..." in section 4(c) of the Wilderness Act. Using an ATV to transport materials is an impairment to the undeveloped character of the wilderness. However, there are special provisions that allow for the use of a prohibited item under special circumstances.

Special provisions in the Wilderness Act and the Steens Act provide for the repair or replacement of structures and installations used for livestock management existing at the time of designation.

The motorized transport alternative would fulfull these provisions in the Acts. Motorized transport of materials is permitted because:
1) practical alternatives do not exist. (see Primitive Transport alternative)
2) motorized use is expressly authorized in the grazing permit.(Authorization #3602146 dated 3/18/2013)
3) motorized use was allowed prior to wilderness designation.

ECONOMICS & TIME CONSTRAINTS

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport would use All Terrain Vehicles	☐	☐	☑
2	Repairs are made using standard fencing tools	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Economics & Time Contraints Total Rating			**0**	

Explain:

Repairs to the Bone Creek Fence are not constrained by economics or time.

Repair of the Bone Creek Fence will take approximately three weeks. The length of time specified includes possible weather delays which may prevent work from taking place. The intent is to complete the fence repairs between December 2014 and May 2015. Dependent on when the contract is issued. Cost is estimated to be approximately $5000

Safety of Visitors & Workers

What is the effect of each component activity on the safety of visitors and workers? What mitigation measures will be taken?

SAFETY OF VISITORS & WORKERS

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport would use All Terrain Vehicles	☐	☐	☑
2	Repairs are made using standard fencing tools	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Safety of Visitors & Workers Total Rating			**0**	

Explain:

Standard safety protocols for ATV's shall be followed. The fence repair is not constrained by safety issues.

Summary Ratings for Alternative 2	

Wilderness Character	
Untrammeled	**0**
Undeveloped	**-1**
Natural	**-1**
Solitude or Primitive & Unconfined Recreation	**-1**
Other Features of Value	**0**
Wilderness Character Summary Rating	**-3**

Other Criteria	
Maintaining Traditional Skills	**0**
Special Provisions	**1**
Economics & Time Constraints	**0**
Other Criteria Summary Rating	**1**

Safety	
Safety of Visitors & Workers	**0**
Safety Summary Rating	**0**

Project Title: Bone Creek Basin Fire Rehabilitation

MRDG Step 2: Alternatives

Alternative 3: Repair and replace features on fence alignment using primitive transport

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

Pack animals would be used to transport personnel and materials to the work sites along the fence alignment. Personnel would install steel posts in the ground using a post-pounder. Rock Cribs would be used as corners or in places where strength is needed along the alignment to support the fence. Wood and wire panels would be built and suspended from the fence in some drainage crossings to prevent livestock from getting through the narrow steep drainages found near the creek. Stones used to fill the rock cribs would be selected from the nearby landscape and carried to the crib by hand.

Tools used to repair fence. The tools listed below are industry standard tools used by all fence builders when building barbed wire fence. Regardless of how the materials are brought to the work site, the same tools to install the fence would be used.
Wire Stretcher - non-motorized device that uses clamps and levers to pull the wire tight.
Wire Pliers - non-motorized device that is used to grip and cut 12 guage fence wire.
Post Pounder - non-motorized device consisting of a heavy metal tube with handles on either side. The tube is slipped over the post end and the tube, which has one closed end, is used to pound the post into the ground.

Materials used to repair fence. The materials listed below are industry standard barbed wire fencing supplies.
Smooth fencing wire 12.5 guage Class III 80 rods/roll (one rod is 16.5 feet)
Barbed fencing wire 12.5 guage Class III 80 rods/roll 2 point
steel fence clips
Welded wire for rock cribs
Steel posts for the fence and the rock cribs

Primitive transport:
Pack animals used to move materials along the fence alignment.

Component Activities

How will each of the components of the action be performed under this alternative?

Component of the Action		Activity for this Alternative
X	*Example: Transportation of personnel to the project site*	*Example: Personnel will travel by horseback*
1	Personel and materials are transported to each work site on the fence alignment	**Transport of materials along fence line by Pack Animals**
2	Site specific repairs are made along the existing fence alignment	**Repairs are made using standard fencing tools**
3		
4		
5		
6		
7		
8		
9		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport of materials along fence line by Pack Animals	☐	☐	☑
2	Repairs are made using standard fencing tools	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Untrammeled Total Rating			**0**	

Explain:

Effects to the untrammeled character are the same as Alternative 2, the Motorized Transport Alternative.

UNDEVELOPED

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport of materials along fence line by Pack Animals	☐	☐	☑
2	Repairs are made using standard fencing tools	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Undeveloped Total Rating			**0**	

Explain:

The undeveloped character is affected by the presence of structures or installations and by the use of motor vehicles. The fence has been on the ground since before wilderness designation and repairing it does not affect the undeveloped character present. The use of pack animals to haul materials does not affect the undeveloped character because the pack animals do not change the affect created by the structure of the fence itself. The imprint of mans work is unchanged before, or after, the fire.

NATURAL

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport of materials along fence line by Pack Animals	☐	☐	☑
2	Repairs are made using standard fencing tools	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Natural Total Rating			**0**	

Explain:

Naturalness is affected by human activities on the ecological system within the wilderness. Transporting materials using the pack animals or repairing the fence has no affect on naturalness. The pack animals would follow the existing trails or "cow paths" which run parrallel to the fence line. No new surface disturbance would be created such as the wheel tracks mentioned in Alternative 2, the Motorized Transport Alternative. Some disturbance would be created where rock cribs would be built. The vegetation has been burned off and laborers working on the fence would leave marks in the ash residue on the ground indicating where they walked and where they lifted stones for the rock cribs. However, no soil would be moved.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport of materials along fence line by Pack Animals	☐	☑	☐
2	Repairs are made using standard fencing tools	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	1	NE
Solitude or Primitive & Unconfined Recreation Total Rating			**-1**	

Explain:

Affects to solitude or primtive and unconfined types of recreation are the same as Alternative 2, the Motorized Transport Alternative

OTHER FEATURES OF VALUE

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport of materials along fence line by Pack Animals	☐	☑	☐
2	Repairs are made using standard fencing tools	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	1	NE
Other Features of Value Total Rating			**-1**	

Explain:

Affects to other features of value are the same as Alternative 2, the Motorized Transport Alternative

Other Criteria

What is the effect of each component activity on other comparison criteria? What mitigation measures will be taken?

MAINTAINING TRADITIONAL SKILLS

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☑	☐	☐
1	Transport of materials along fence line by Pack Animals	☑	☐	☐
2	Repairs are made using standard fencing tools	☑	☐	☐
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		2	0	NE
Maintaining Traditional Skills Total Rating			**2**	

Explain:

Maintaining traditional skills is enhanced when the project accomplishes the work using primitive tools. Repairing the fence is difficult manual labor using simple tools in a skillful manner to produce a fence that will prevent livestock from passing through. The skill of building fences is a skill taught and learned in a traditional way. Repairing the fence enhances traditional skills.
Using pack animals to transport materials along the fence alignment during repair activities is an historic cultural activity associated with animal husbandry and grandfathered use of the Carlson Creek and Fields, grazing allotments. Use of the pack animals enhances the practice of historic traditional activities.

SPECIAL PROVISIONS

Component Activity for this Alternative		Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport of materials along fence line by Pack Animals	☑	☐	☐
2	Repairs are made using standard fencing tools	☑	☐	☐
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		2	0	NE
Special Provisions Total Rating			**2**	

Explain:

Special provisions in the Wilderness Act and the Steens Act allow the repair or replacement of structures and installations used for livestock management existing at the time of designation. Transport of materials along the fence alignment with pack animals is considered a primitive method of transport. Primitive methods or tools are part of the wilderness ethos. Fullfilling the special provisions through primitive means, minimizes impairment to wilderness character, by using the tool (pack animals) which causes the least impact.

ECONOMICS & TIME CONSTRAINTS

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport of materials along fence line by Pack Animals	☐	☐	☑
2	Repairs are made using standard fencing tools	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Economics & Time Contraints Total Rating			**0**	

Explain:

Effects to economics and time constraints are the same as for Alternative 2, Motorized Transport Alternative.

Repairing a barbed wire fence is done using simple tools and materials, no matter how the materials are transported to the work site. The primitive method of transporting materials requires a pack animal or pack team. Costs associated with the project are approximately the same. Materials and tools would be the same as the motorized alternataive. Horses or mules or alpacas used as primitive transport still must be fed and cared for and transported to the work site. They would be transported to the work site using a trailer, much like an ATV would be transported to the field. They require special harness and pack saddles which an ATV would not. They have uncertain dispositions and require an individual trained in using them. The care and use of pack animals requires more time and effort from the pack leader then the same use of ATVs.

Safety of Visitors & Workers

What is the effect of each component activity on the safety of visitors and workers? What mitigation measures will be taken?

SAFETY OF VISITORS & WORKERS

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Transport of materials along fence line by Pack Animals	☐	☐	☑
2	Repairs are made using standard fencing tools	☐	☐	☑
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Safety of Visitors & Workers Total Rating			**0**	

Explain:

Safety concerns for this alternative are typical of work outdoors in rough terrain. No special concerns were indicated.

Summary Ratings for Alternative 3

Wilderness Character	
Untrammeled	**0**
Undeveloped	**0**
Natural	**0**
Solitude or Primitive & Unconfined Recreation	**-1**
Other Features of Value	**-1**
Wilderness Character Summary Rating	**-2**

Other Criteria	
Maintaining Traditional Skills	**2**
Special Provisions	**2**
Economics & Time Constraints	**0**
Other Criteria Summary Rating	**4**

Safety	
Safety of Visitors & Workers	**0**
Safety Summary Rating	**0**

Project Title: Bone Creek Basin Fire Rehabilitation

MRDG STEP 2: Alternatives Not Analyzed

Alternatives Not Analyzed

What alternatives were considered but not analyzed? Why were they not analyzed?

Project Title: Bone Creek Basin Fire Rehabilitation

MRDG Step 2: Alternative Comparison

Alternative 1: No Action - Fence does not get repaired

Alternative 2: Repair and replace features on fence alignment using motorized transport

Alternative 3: Repair and replace features on fence alignment using primitive transport

Alternative 4:

Wilderness Character	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Untrammeled	0	0	0	0	0	0	0	0
Undeveloped	1	0	0	1	0	0	0	0
Natural	0	1	0	1	0	0	0	0
Solitude or Primitive & Unconfined Rec.	0	0	0	1	0	1	0	0
Other Features of Value	0	0	0	0	0	1	0	0
Totals	1	1	0	3	0	2	0	0
Wilderness Character Rating	**0**		**-3**		**-2**		**0**	

Other Criteria	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Maintaining Traditional Skills	0	0	1	1	2	0	0	0
Special Provisions	0	2	1	0	2	0	0	0
Economics & Time Constraints	0	0	0	0	0	0	0	0
Totals	0	2	2	1	4	0	0	0
Other Criteria Rating	**-2**		**1**		**4**		**0**	

Safety	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Safety of Visitors & Workers	0	0	0	0	0	0	0	0
Safety Rating	**0**		**0**		**0**		**0**	

Alternative 5:

Alternative 6:

Alternative 7:

Alternative 8:

Wilderness Character	Alternative 5		Alternative 6		Alternative 7		Alternative 8	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Untrammeled	0	0	0	0	0	0	0	0
Undeveloped	0	0	0	0	0	0	0	0
Natural	0	0	0	0	0	0	0	0
Solitude or Primitive & Unconfined Rec.	0	0	0	0	0	0	0	0
Other Features of Value	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0
Wilderness Character Rating	**0**		**0**		**0**		**0**	

Other Criteria	Alternative 5		Alternative 6		Alternative 7		Alternative 8	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Maintaining Traditional Skills	0	0	0	0	0	0	0	0
Special Provisions	0	0	0	0	0	0	0	0
Economics & Time Constraints	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0
Other Criteria Rating	**0**		**0**		**0**		**0**	

Safety	Alternative 5		Alternative 6		Alternative 7		Alternative 8	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Safety of Visitors & Workers	0	0	0	0	0	0	0	0
Safety Rating	**0**		**0**		**0**		**0**	

Project Title: Bone Creek Basin Fire Rehabilitation

MRDG Step 2: Decision

Refer to the **MRDG Instructions** before identifying the selected alternative and explaining the rationale for the selection.

Selected Alternative

Alternative 1:	☐	No Action - Fence does not get repaired
Alternative 2:	☐	Repair and replace features on fence alignment using motorized transport
Alternative 3:	☐	Repair and replace features on fence alignment using primitive transport
Alternative 4:	☐	
Alternative 5:	☐	
Alternative 6:	☐	
Alternative 7:	☐	
Alternative 8:	☐	

Explain Rationale for Selection:

The selected alternative is Alternative 2: Repair and replace features on the fence alignment using motorized transport.

Repairing the fence damage caused by the Bone Creek Basin Fire is a result of the grandfathered grazing uses established in the Steens Act of 2000 and the Wilderness Act of 1964. BLM fulfills its multiple land use mandate by repairing the fence.

The motorized transport alternative was selected because the section of fence being repaired is located in grazing allotments within the wilderness, with historic motorized use on permitted roads by grazing allotment permittees as authorized in the travel management plan dated 2007 and the grazing permit, authorization #3602146 dated 3/18/2013. Bone Creek Road, which is bounded on both sides by wilderness intersects the fence at its westernmost end. The fence was built prior to wildeness designation using motorized transport to haul materials along the alignment. Included in the grazing permit are permissions to use motorized transport for "...minor maintenance (no ground disturbance) of range improvements..."

Comparing the alternatives using the decision matrix it can be seen that alternative 1, the no action generates a negative rating. The negative rating comes from the alternatives inability to fulfill BLMs duty as described in the wilderness act and the steens act to provide for livestock grazing and from the alternatives inability to protect naturalness in Bone Creek.
Alternative 3, the primitive method, has many positive aspects to it, however the difficulty of securing a pack team, and someone to lead that team, who can also build barbed wire fence, is a challenge.

If more space is needed, continue on the next page...

Explain Rationale for Selection, Continued:

The primitive transport alternative was not selected because of the difficulty of securing the primitive transport option. Ranchers use ATV's to manage their herds now. Trained pack animals with the appropriate harness, as well as an individual trained in operating a pack team, is not readily available.

Describe Monitoring & Reporting Requirements:

Approval of Prohibited Uses

Which of the prohibited uses found in Section 4(c) of the Wilderness Act are approved in the selected alternative and for what quantity?

	Prohibited Use	Quantity
☑	Mechanical Transport	ATVs to transport materials along fence alignment.
☐	Motorized Equipment	
☐	Motor Vehicles	
☐	Motorboats	
☐	Landing of Aircraft	
☐	Temporary Roads	
☐	Structures	
☐	Installations	

Record and report any authorizations of Wilderness Act Section 4(c) prohibited uses according to agency policies or guidance.

Refer to agency policies for the following review and decision authorities:

	Name	Position	Date
Prepared	Tom Wilcox	ORP - Wilderness Specialist	3/2/2015
Recommended	Gerry Magee	OR/WA Wilderness Lead	
Recommended			
Approved	Rhonda Karges	Andrews Field Manager	3/2/15

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MINIMUM REQUIREMENTS DECISION GUIDE

WORKBOOK

"...except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act..."

-- The Wilderness Act of 1964

Project Title: Carlson Creek Basin Fire Rehabilitation

MRDG STEP 1

Determine if Administrative Action is Necessary

Description of the Situation

What is the situation that may prompt administrative action?

In September 2014 the Bone Creek Basin fire burned over grazing allotments in the Bone Creek and Carlson Creek basins located on the East face of the Steens Mountain Wilderness and outside of the no livestock grazing area. The fire destroyed vegetation in and around the creeks and meadows. Carlson Creek basin is part of the Carlson Creek grazing allotment. An access route designated in the 2007 Travel Mangement Plan EA has been, and still is, being used by the allotment permittee to transport salt blocks and perform light boundary fence maintenance activities. The access route, known as Carlson Creek Road, has four existing culverts at various places along the route. Three of the culverts are located at ephemeral tributaries and one culvert carries water from another ephemeral tributary that empties into Carlson Creek. The three culverts on ephemeral tributaries are plugged up or smashed or washed out of the ground.

Carlson Creek lost much of the vegetation on the creek banks. Head-cutting can be seen beginning to erode the creek bed. Should the creek continue to head-cut, the meadows in the upper basin elevations could be lost as the water table is lowered.

Carlson Creek basin is described by the Oregon Department of Fish and Wildlife as core area for sage grouse habitat. The upper basin where the meadows are located is described as Preliminary Priority Habitat in Hagen's "Greater Sage-Grouse Conservation Assessment and Strategy for Oregon" dated 22 April 2011.

A plan to address the issues described above would include: Removing the three non-functional culverts and replacing them at the ephemeral stream crossings with rolling dips, armored with cobblestones. A cutbank along the road has sloughed into the roadway. Narrowing the way to less then that of a full size pickup. The earth would be scraped back along the road to widen the road and allow a truck to pass through during rehabilitation efforts. Once the road is repaired, additional stones would be placed in strategic locations along the road and near the locations where head-cutting is taking place in the creek bed. The stones would be carried to the head-cuts and placed to eliminate the head-cutting problem. Burnt juniper trees would be cut and placed in the stream-channel to collect sediment or in combination with stones to more effectively address head-cuts. A ripairian specialist would be on site to direct the work. Additional work that would be conducted in the wilderness seperately from the road and creek issues, would be planting of cottonwood seedlings in the riparian areas, planting of bitterbrush seedlings on the hillsides, and aerial seeding native grasses throughout the basin. The proposed actions are estimated to take about three weeks to perform. the three weeks of work would take place at intervals of a few days each and occur over a period of about three months.

Options Outside of Wilderness

Can action be taken outside of wilderness that adequately addresses the situation?

☐ YES

☑ NO **EXPLAIN & COMPLETE STEP 1 OF THE MRDG**

Explain:

The Bone Creek Basin Fire burned approximately 14,000 acres, most of it in wilderness, Carlson Creek Basin was burned over during the fire, removing all existing vegetation from both the uplands and riparian zones. Carlson Creek Basin is entirely within the wilderness, and has a grandfathered grazing use associated with the area as well. To rehabilitate the burn to a desirable and sustainable ecological state, action is nescessary in the wilderness.

Criteria for Determining Necessity

Is action necessary to meet any of the criteria below?

A. Valid Existing Rights or Special Provisions of Wilderness Legislation

*Is action necessary to satisfy valid existing rights or a special provision in wilderness legislation (the Wilderness Act of 1964 or subsequent wilderness laws) that **requires** action? Cite law and section.*

☑ YES ☐ NO

Explain:

Wilderness Act of 1964
USE OF WILDERNESS AREAS Section 4.(b) Except as otherwise provided in this Act, each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area and shall so administer such area for such other purposes for which it may have been established as also to preserve its wilderness character.

The Wilderness Act, Section 4(d)(4)(2) states: "the grazing of livestock, where established prior to the effective date of this Act, shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the BLM."

B. Requirements of Other Legislation

Is action necessary to meet the requirements of other federal laws? Cite law and section.

☑ YES ☐ NO

Explain:

Steens Mountain Cooperative Management and Protection Act of 2000.
SECTION 1. SHORT TITLE; PURPOSES;
(11) To promote viable and sustainable grazing and recreation operations on private and public lands.
(12) To conserve, protect, and manage for healthy watersheds and the long-term ecological integrity of Steens Mountain.

SEC. 102. PURPOSE AND OBJECTIVES OF COOPERATIVE MANAGEMENT AND PROTECTION AREA.
(a) PURPOSE.—The purpose of the Cooperative Management and Protection Area is to conserve, protect, and manage the long-term ecological integrity of Steens Mountain for future and present generations.
(b) OBJECTIVES.—
(4) to ensure the conservation, protection, and improved management of the ecological, social, and economic environment of the Cooperative Management and Protection Area, including geological, biological, wildlife, riparian, and scenic resources.

C. Wilderness Character

Is action necessary to preserve one or more of the qualities of wilderness character including: Untrammeled, Undeveloped, Natural, Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation, or Other Features of Value?

UNTRAMMELED

☐ YES ☑ NO

Explain:

The untrammeled character of the wilderness is not affected by wildland fire. Fire is a part of the landscape regime. Action is not nescessary to preserve the untrammeled character.

UNDEVELOPED

☐ YES ☑ NO

Explain:

The undeveloped character of the wilderness is not affected by wildland fire. Fire is a natural part of the landscape regime. Action is not nescessary to preserve the undeveloped character.

NATURAL

☑ YES ☐ NO

Explain:

Native plant communities in Carlson Creek Basin were reduced in population size and density as a result of the wildland fire. There is a potential for invasive plants to move in and dominate the area because of loss of competition from desirable perennial grasses and resource availability caused by the fire. Action is needed to preserve naturalness.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

☑ YES ☐ NO

Explain:

The fire reduced the vegetative screening in Carlson Creek Basin. Cottonwoods, junipers, willows burned and diminished the perceptions of solitude in the basin. Action is needed to preserve solitude.

OTHER FEATURES OF VALUE

☑ YES ☐ NO

Explain:

Sage Grouse Habitat: Carlson Creek Basin is designated Preliminary Priority Habitat and is important because of the meadows and riparian habitat which support brood rearing. Action is needed to support wildlife habitat for sage grouse and other species that inhabit the basin.

Step 1 Decision

Is administrative action necessary in wilderness?

Decision Criteria	Summary Responses
A. Existing Rights or Special Provisions	Action IS necessary to meet this criterion.
B. Requirements of Other Legislation	Action IS necessary to meet this criterion.
C. Wilderness Character	
Untrammeled	Action IS NOT necessary to meet this criterion.
Undeveloped	Action IS NOT necessary to meet this criterion.
Natural	Action IS necessary to meet this criterion.
Outstanding Opportunities	Action IS necessary to meet this criterion.
Other Features of Value	Action IS necessary to meet this criterion.

Is administrative action necessary in wilderness?

☑ YES

EXPLAIN & PROCEED TO STEP 2 OF THE MRDG

☐ NO

Explain:

Action is nescessary in the wilderness because BLM must preserve wilderness characteristics after wildland fire, manage riparian areas to preserve wildlife habitat and provide safe access for grazing allotment permittees on Carlson Creek Road.

Project Title: Carlson Creek Basin Fire Rehabilitation

MRDG STEP 2

Determine the Minimum Activity

Other Direction

*Is there "special provisions" language in legislation (or other Congressional direction) that explicitly **allows** consideration of a use otherwise prohibited by Section 4(c)?*

AND/OR

Has the issue been addressed in agency policy, management plans, species recovery plans, or agreements with other agencies or partners?

☑ YES

☐ NO

DESCRIBE DOCUMENTS & DIRECTION BELOW

Describe Documents & Direction:

BLM Manual 6340 1.6.C.15.f.ii.A&B

Restoration for the preservation of wilderness character.

Restoration of site specific disturbances.Restoration of pre-designation human impacts, authorized disturbances, or violations normally includes treatments to restore the appearance of site specific areas and to promote regrowth of native vegetation on the disturbed site.

Restoration of native vegetative communities and control of non-native vegetation. Non-native vegetation that interferes with ecosystem function, or illegally cultivated plants (e.g. marijuana), may be controlled using the method or combination of methods known to be effective while causing the least damage to non-target species. Reseeding or planting of native species may be done following weed treatment where natural seeding is not adequate and to prevent non-native vegetation from becoming reestablished.

BLM Manual 6340 1.6.C.8.d.i

Structures and installations used for livestock management existing at the time of designation may be maintained. Maintenance may be done by the occasional use of motorized equipment where:

A. practical non-motorized alternatives do not exist; and
B. the motorized use is expressly authorized in the grazing permit and advanced written permission for each maintenance activity is granted by the BLM; and
C. the motorized use was allowed prior to wilderness designation.

Components of the Action
What are the discrete components or phases of the action?

Component X	*Example: Transportation of personnel to the project site*
Component 1	**Remove culverts, replace with armored dips.**
Component 2	**Repair road at cut-bank.**
Component 3	**Place stones in head-cuts.**
Component 4	**Cut Juniper trees and place debris in head-cuts.**
Component 5	**Plant Cottonwood seedlings and place protective sleeves over them.**
Component 6	**Plant Bitterbrush seedlings and seeds.**
Component 7	**Aerial seed 4,200 acres.**
Component 8	
Component 9	

Proceed to the alternatives.

Refer to the MRDG Instructions regarding alternatives and the effects to each of the comparison criteria.

Project Title: Carlson Creek Basin Fire Rehabilitation

MRDG Step 2: Alternatives

Alternative 1: Motorized/mechanized

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

Remove the three non-functional culverts and replace them at the ephemeral tributary crossing with a rolling dip armored with cobblestones. This work would be done using a backhoe to pull the culverts from the ground and drag them down the existing road where they would be hauled off to an approved disposal site. The crossings where the culverts were pulled from, would be reshaped with the backhoe, then armored with a layer of cobbles and gravel to prevent the road washing out at the ephemeral tributarycrossing. 110 cubic yards of material is estimated for the rolling dips and the head-cut treatments.

Site specific road widening. The cut bank in the road profile at a specific location on the Carlson Creek road has sloughed. A backhoe would scrape the earth out of the way, spreading the overburden along the length of the road. The road would be made large enough to pass a truck, approximately eight feet wide.

Additional stones would be placed in strategic locations for head cut treatments once the road is repaired. Stones would be cached along the road and near the locations where head-cutting is taking place in the creek channel. Estimated distance from the stone caches to the head-cut sites is, 10 yards to a maximum of 30 yards. The stones would be carried to the head-cuts from the cache sites by hand, and placed in a way to eliminate the head-cutting problem.

Burnt juniper trees would be cut and placed in the head-cuts where that method would work more effectively, or in combination with stones, as the site conditions dictate. A riparian specialist would be on site to direct the work. Chainsaws would be used to fall the trees into manageable pieces for insertion into head-cut structures.

Planting of 250 cottonwood seedlings would take place in the meadows.The cottonwood seedlings would have plastic sleeves placed over the seedlings to protect them from wildlife during the first two years after planting. After they are established the sleeves would be removed.

Planting of 400 bitterbrush seedlings would occur on the hillsides by poking a hole in the topsoil with a hand tool and placing a seedling in the hole, then carefully packing the soil around the roots.

Planting 300 acres of bitterbrush seeds on the hillsides would be done by poking a hole in the topsoil with a hand tool, placing 3-4 seeds in the hole, then carefully brush soil over the seeds.

Aerial seeding native grasses throughout the basin. 4,200 acres

Component Activities

How will each of the components of the action be performed under this alternative?

Component of the Action		Activity for this Alternative
X	*Example: Transportation of personnel to the project site*	*Example: Personnel will travel by horseback*
1	Remove culverts, replace with armored dips.	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials
2	Repair road at cut-bank.	Use backhoe to distribute overburden along Carlson Creek road, widen road.
3	Place stones in head-cuts.	Place stones in head-cuts by hand.
4	Cut Juniper trees and place debris in head-cuts.	Use chainsaws to cut dead juniper trees and place the debris in head-cuts by hand.
5	Plant Cottonwood seedlings and place protective sleeves over them.	Plant seedlings by hand, place protective cover on seedling.
6	Plant Bitterbrush seedlings and seeds.	Plant seedlings and seeds by hand.
7	Aerial seed 4,200 acres.	Use aircraft to spread seed over Carlson Creek basin.
8		
9		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☐	☑
2	Use backhoe to distribute overburden along Carlson Creek road, widen road.	☐	☑	☐
3	Place stones in head-cuts by hand.	☐	☑	☐
4	Use chainsaws to cut dead juniper trees and place the debris in head-cuts by hand.	☐	☑	☐
5	Plant seedlings by hand, place protective cover on seedling.	☐	☑	☐
6	Plant seedlings and seeds by hand.	☐	☑	☐
7	Use aircraft to spread seed over Carlson Creek basin.	☐	☑	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	6	NE
Untrammeled Total Rating			**-6**	

Explain:

This quality is impaired by human activities or actions that control or manipulate the components or processes of ecological systems inside wilderness. However, in some cases, restoration management activities may be needed to restore vegetation and to preserve or enhance the area's wilderness character, despite the impacts of such activities on the Untrammeled quality of wilderness character. Helping the area recover from wildland fire damage through vegetation restoration and watershed protections diminishes the untrammeled character of the wilderness, while at the same time preserving naturalness through the restorations and protections which provide habitat for the Greater Sage Grouse, a candidate species for the threatened and endangered species list.

UNDEVELOPED

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☐	☑
2	Use backhoe to distribute overburden along Carlson Creek road, widen road.	☐	☑	☐
3	Place stones in head-cuts by hand.	☐	☐	☑
4	Use chainsaws to cut dead juniper trees and place the debris in head-cuts by hand.	☐	☑	☐
5	Plant seedlings by hand, place protective cover on seedling.	☐	☑	☐
6	Plant seedlings and seeds by hand.	☐	☐	☑
7	Use aircraft to spread seed over Carlson Creek basin.	☐	☐	☑
8		☐	☐	☐
9		☐	☐	☐
Totals		0	3	NE
Undeveloped Total Rating			**-3**	

Explain:

This quality is impaired by the presence of structures or installations, and by the use of motor vehicles, motorized equipment, or mechanical transport. Removal of the culverts with the backhoe and using a dump truck to haul rocks into the site diminishes the undeveloped character. Reshaping the empheral crossings and armoring them with stones would have a lesser effect to the undeveloped character then the culverts being removed. The geometry and materials of the culvert, a metal tube, has a more developed presence than the armored crossing. One development would be traded for another, wilderness character would be preserved.
Using the backhoe to move the overburden, or using chainsaws to cut trees or leaving protective covers on the seedlings are all actions that diminish the undeveloped character. However they are also actions that affect other wilderness characteristics, such as naturalness. The motorized tool uses are temporary, lasting for two to three weeks. The plastic sleeves on the seedlings would stay on for two years. The short term effect to the undeveloped character is weighed against the long term effect to naturalness and its associated wildlife habitat.

NATURAL

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☐	☑
2	Use backhoe to distribute overburden along Carlson Creek road, widen road.	☐	☐	☑
3	Place stones in head-cuts by hand.	☑	☐	☐
4	Use chainsaws to cut dead juniper trees and place the debris in head-cuts by hand.	☐	☐	☑
5	Plant seedlings by hand, place protective cover on seedling.	☑	☐	☐
6	Plant seedlings and seeds by hand.	☑	☐	☐
7	Use aircraft to spread seed over Carlson Creek basin.	☑	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		4	0	NE
Natural Total Rating			**4**	

Explain:

This quality may be affected by intended or unintended effects of human activities on the ecological systems inside the wilderness. The Wilderness Act states that wilderness is "protected and managed so as to preserve its natural conditions." Management must foster a natural distribution of native wildlife, fish, and plants by ensuring that ecosystems and ecological processes continue to function naturally. Restoring native plants and trees, reducing sediment transfer on the access road, protecting the meadows from head-cutting, and spreading native seeds are all actions that would preserve the naturalness character of the wilderness.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☑	☐
2	Use backhoe to distribute overburden along Carlson Creek road, widen road.	☐	☑	☐
3	Place stones in head-cuts by hand.	☐	☑	☐
4	Use chainsaws to cut dead juniper trees and place the debris in head-cuts by hand.	☐	☑	☐
5	Plant seedlings by hand, place protective cover on seedling.	☐	☑	☐
6	Plant seedlings and seeds by hand.	☐	☑	☐
7	Use aircraft to spread seed over Carlson Creek basin.	☐	☑	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	7	NE
Solitude or Primitive & Unconfined Recreation Total Rating			**-7**	

Explain:

Wilderness provides opportunities for people to experience: natural sights and sounds; remote, isolated, unfrequented, or secluded places; and freedom, risk, and the physical and emotional challenges of self-discovery and self-reliance. This quality is impaired by settings that reduce these opportunities, such as visitor encounters, signs of modern civilization, recreation facilities, and management restrictions on visitor behavior. Work crews would use the access road to move up and down Carlson Creek while doing work. the sounds of a work party would be heard for long distances in the quiet wilderness setting. The proposed actions would diminish opportunities for solitude throughout Carlson Creek basin for the two to three weeks, the work may take. After the work of rehabilitation is complete, outstanding opportunities for solitude would return to Carlson Creek basin. The temporary impairment to solitude would protect and preserve the naturalness character of the wilderness.

OTHER FEATURES OF VALUE

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☑	☐	☐
2	Use backhoe to distribute overburden along Carlson Creek road, widen road.	☑	☐	☐
3	Place stones in head-cuts by hand.	☑	☐	☐
4	Use chainsaws to cut dead juniper trees and place the debris in head-cuts by hand.	☑	☐	☐
5	Plant seedlings by hand, place protective cover on seedling.	☑	☐	☐
6	Plant seedlings and seeds by hand.	☑	☐	☐
7	Use aircraft to spread seed over Carlson Creek basin.	☑	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		7	0	NE
Other Features of Value Total Rating			**7**	

Explain:

Sage Grouse Habitat: The proposed actions would protect Preliminary Priority Habitat by restoring the vegetative community.

Other Criteria

What is the effect of each component activity on other comparison criteria? What mitigation measures will be taken?

MAINTAINING TRADITIONAL SKILLS

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☑	☐	☐
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☑	☐
2	Use backhoe to distribute overburden along Carlson Creek road, widen road.	☐	☑	☐
3	Place stones in head-cuts by hand.	☑	☐	☐
4	Use chainsaws to cut dead juniper trees and place the debris in head-cuts by hand.	☐	☐	☑
5	Plant seedlings by hand, place protective cover on seedling.	☑	☐	☐
6	Plant seedlings and seeds by hand.	☑	☐	☐
7	Use aircraft to spread seed over Carlson Creek basin.	☐	☑	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		3	3	NE
Maintaining Traditional Skills Total Rating			**0**	

Explain:

The proposed action provides opportunities to practice traditional skills. Examples of those actions are: The careful planting of seeds and seedlings to give them the best start. Building baffles in the creek bed out of rocks and trees to prevent head-cutting and protect the meadows. Those actions contribute to the traditional skill component of wilderness character.

Actions that would not contribute to the traditional skill component are the following: The chainsaw work done initially to take down the juniper trees. Using a backhoe to move the overburden along the road, and to make the rolling dips, Using a truck that hauls in rock and boulders for the road and creek work. These actions would diminish the traditional skill component of wilderness character.

SPECIAL PROVISIONS

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☐	☑
2	Use backhoe to distribute overburden along Carlson Creek road, widen road.	☐	☐	☑
3	Place stones in head-cuts by hand.	☐	☐	☑
4	Use chainsaws to cut dead juniper trees and place the debris in head-cuts by hand.	☐	☐	☑
5	Plant seedlings by hand, place protective cover on seedling.	☐	☐	☑
6	Plant seedlings and seeds by hand.	☐	☐	☑
7	Use aircraft to spread seed over Carlson Creek basin.	☐	☐	☑
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Special Provisions Total Rating			**0**	

Explain:

There are no special provisions in the Wilderness Act or the Steens Act that are affected by the alternatives.

ECONOMICS & TIME CONSTRAINTS

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☐	☐
2	Use backhoe to distribute overburden along Carlson Creek road, widen road.	☐	☐	☐
3	Place stones in head-cuts by hand.	☐	☐	☐
4	Use chainsaws to cut dead juniper trees and place the debris in head-cuts by hand.	☐	☐	☐
5	Plant seedlings by hand, place protective cover on seedling.	☐	☐	☐
6	Plant seedlings and seeds by hand.	☐	☐	☐
7	Use aircraft to spread seed over Carlson Creek basin.	☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Economics & Time Contraints Total Rating			**0**	

Explain:

In order for Carlson Creek basin to recover from the effects of the wildland fire, rehabilitation efforts need to begin as soon as materials, equipment, and labor are brought together. The project lead proposes to begin in March 2015 with the road work, in April the seed would be planted, in May the seedlings would be planted and the creek head-cuts repaired. Estimated costs for the project would be $1.2 million, with about half ($625,000) consisting of the aerial seeding component alone.

Safety of Visitors & Workers

What is the effect of each component activity on the safety of visitors and workers? What mitigation measures will be taken?

SAFETY OF VISITORS & WORKERS

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☐	☐
2	Use backhoe to distribute overburden along Carlson Creek road, widen road.	☐	☐	☐
3	Place stones in head-cuts by hand.	☐	☐	☐
4	Use chainsaws to cut dead juniper trees and place the debris in head-cuts by hand.	☑	☐	☐
5	Plant seedlings by hand, place protective cover on seedling.	☐	☐	☐
6	Plant seedlings and seeds by hand.	☐	☐	☐
7	Use aircraft to spread seed over Carlson Creek basin.	☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		1	0	NE
Safety of Visitors & Workers Total Rating			**1**	

Explain:

Personnel operating motor vehicles such as the backhoe or dump truck are BLM trained and certified at their tasks, safety risks associated with their job are manageable.
It has been estimated that up to 50 juniper trees may be cut down to use as baffle material in the creek. Using chainsaws to cut juniper trees can be hazardous. For this task, trained, certified wildland firefighters would be used. The firefighters would use proper personal protection equipment. The other tasks associated with the proposed actions are tasks with risks that can be managed with on-site safety briefings and personal protective equipment.
Cutting trees close to the ground to reduce the visual impact of the stump is a benefit of using chain saws.The linear motion of a cross-cut saw could put the sawyers hands at risk when cutting stumps low to the ground. The linear motion of the saw through the cut brings the sawyers hand close to ground obstructions and makes the work more difficult to accomplish, increasing the risk of abrasions and cuts.
The trees would be cut so the stump would not exceed 12" in height above the soil surface. The stumps cut surface would also be broken up with angled cuts to break up their profiles and make them look more natural.

Summary Ratings for Alternative 1

Wilderness Character	
Untrammeled	-6
Undeveloped	-3
Natural	4
Solitude or Primitive & Unconfined Recreation	-7
Other Features of Value	7
Wilderness Character Summary Rating	**-5**

Other Criteria	
Maintaining Traditional Skills	0
Special Provisions	0
Economics & Time Constraints	0
Other Criteria Summary Rating	**0**

Safety	
Safety of Visitors & Workers	1
Safety Summary Rating	**1**

Project Title: Carlson Creek Basin Fire Rehabilitation

MRDG Step 2: Alternatives

Alternative 2: The more Primitive Alternative

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

Remove the three non-functional culverts and replace them at the ephemeral tributary crossing with a rolling dip armored with cobblestones. This work would be done using a backhoe to pull the culverts from the ground and drag them down the existing road where they would be hauled off to an approved disposal site. The crossings where the culverts were pulled from, would be reshaped with the backhoe, then armored with a layer of cobbles and gravel to prevent the road washing out at the ephemeral tributarycrossing. 110 cubic yards of material is estimated for the rolling dips and the head-cut treatments.

Site specific road widening. The cut bank in the road profile at a specific location on the Carlson Creek road has sloughed. A backhoe would scrape the earth out of the way, spreading the overburden along the length of the road. The road would be made large enough to pass a truck, approximately eight feet wide.

Additional stones would be placed in strategic locations for head cut treatments once the road is repaired. Stones would be cached along the road and near the locations where head-cutting is taking place in the creek channel. Estimated distance from the stone caches to the head-cut sites is, 10 yards to a maximum of 30 yards. The stones would be carried to the head-cuts from the cache sites by hand, and placed in a way to eliminate the head-cutting problem.

Burnt juniper trees would be cut and placed in the head-cuts where that method would work more effectively, or in combination with stones, as the site conditions dictate. A ripairian specialist would be on site to direct the work. Cross-cut saws would be used to cut the trees into manageable pieces. Up to 50 dead juniper trees may be cut and used to build baffles in the creek bed.

Planting of 250 cottonwood seedlings would take place in the meadows.The cottonwood seedlings would have plastic sleeves placed over the seedlings to protect them from wildlife during the first two years after planting. After they are established the sleeves would be removed.

Planting of 400 bitterbrush seedlings would occur on the hillsides by poking a hole in the topsoil with a hand tool and placing a seedling in the hole, then carefully packing the soil around the roots.

Planting 300 acres of bitterbrush seeds on the hillsides would be done by poking a hole in the topsoil with a hand tool, placing 3-4 seeds in the hole, then carefully brush soil over the seeds.

Aerial seeding native grasses throughout the basin. 4,200 acres

Component Activities

How will each of the components of the action be performed under this alternative?

Component of the Action		Activity for this Alternative
X	*Example: Transportation of personnel to the project site*	*Example: Personnel will travel by horseback*
1	Remove culverts, replace with armored dips.	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials
2	Repair road at cut-bank.	Use backhoe to distribute overburden along carlson creek road, widen road.
3	Place stones in head-cuts.	place stones in head-cuts by hand.
4	Cut Juniper trees and place debris in head-cuts.	Use cross-cut saws to cut dead juniper trees and place the debris in head-cuts by hand.
5	Plant Cottonwood seedlings and place protective sleeves over them.	Plant seedlings by hand, place protective cover on seedling.
6	Plant Bitterbrush seedlings and seeds.	Plant seedlings and seeds, by hand.
7	Aerial seed 4,200 acres.	Use aircraft to spread seed over carlson creek basin.
8		
9		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☐	☑
2	Use backhoe to distribute overburden along carlson creek road, widen road.	☐	☑	☐
3	place stones in head-cuts by hand.	☐	☑	☐
4	Use cross-cut saws to cut dead juniper trees and place the debris in head-cuts by hand.	☐	☑	☐
5	Plant seedlings by hand, place protective cover on seedling.	☐	☑	☐
6	Plant seedlings and seeds, by hand.	☐	☑	☐
7	Use aircraft to spread seed over carlson creek basin.	☐	☑	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	6	NE
Untrammeled Total Rating			**-6**	

Explain:

Effects would be the same as alternative 1 the Motorized alternative.

UNDEVELOPED

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☐	☑
2	Use backhoe to distribute overburden along carlson creek road, widen road.	☐	☑	☐
3	place stones in head-cuts by hand.	☐	☐	☑
4	Use cross-cut saws to cut dead juniper trees and place the debris in head-cuts by hand.	☐	☑	☐
5	Plant seedlings by hand, place protective cover on seedling.	☐	☑	☐
6	Plant seedlings and seeds, by hand.	☐	☐	☑
7	Use aircraft to spread seed over carlson creek basin.	☐	☐	☑
8		☐	☐	☐
9		☐	☐	☐
Totals		0	3	NE
Undeveloped Total Rating			**-3**	

Explain:

Effects would be the same as alternative 1 the Motorized alternative.

NATURAL

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☐	☑
2	Use backhoe to distribute overburden along carlson creek road, widen road.	☐	☐	☑
3	place stones in head-cuts by hand.	☑	☐	☐
4	Use cross-cut saws to cut dead juniper trees and place the debris in head-cuts by hand.	☐	☐	☑
5	Plant seedlings by hand, place protective cover on seedling.	☑	☐	☐
6	Plant seedlings and seeds, by hand.	☑	☐	☐
7	Use aircraft to spread seed over carlson creek basin.	☑	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		4	0	NE
Natural Total Rating		**4**		

Explain:

Effects would be the same as alternative 1 the Motorized alternative.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☑	☐
2	Use backhoe to distribute overburden along carlson creek road, widen road.	☐	☑	☐
3	place stones in head-cuts by hand.	☐	☑	☐
4	Use cross-cut saws to cut dead juniper trees and place the debris in head-cuts by hand.	☐	☑	☐
5	Plant seedlings by hand, place protective cover on seedling.	☐	☑	☐
6	Plant seedlings and seeds, by hand.	☐	☑	☐
7	Use aircraft to spread seed over carlson creek basin.	☐	☑	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	7	NE
Solitude or Primitive & Unconfined Recreation Total Rating			**-7**	

Explain:

Effects would be the same as alternative 1 the Motorized alternative.

OTHER FEATURES OF VALUE

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☑	☐	☐
2	Use backhoe to distribute overburden along carlson creek road, widen road.	☑	☐	☐
3	place stones in head-cuts by hand.	☑	☐	☐
4	Use cross-cut saws to cut dead juniper trees and place the debris in head-cuts by hand.	☑	☐	☐
5	Plant seedlings by hand, place protective cover on seedling.	☑	☐	☐
6	Plant seedlings and seeds, by hand.	☑	☐	☐
7	Use aircraft to spread seed over carlson creek basin.	☑	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		7	0	NE
Other Features of Value Total Rating			**7**	

Explain:

Effects would be the same as alternative 1 the Motorized alternative.

Other Criteria

What is the effect of each component activity on other comparison criteria? What mitigation measures will be taken?

MAINTAINING TRADITIONAL SKILLS

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☑	☐	☐
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☑	☐
2	Use backhoe to distribute overburden along carlson creek road, widen road.	☐	☑	☐
3	place stones in head-cuts by hand.	☑	☐	☐
4	Use cross-cut saws to cut dead juniper trees and place the debris in head-cuts by hand.	☑	☐	☐
5	Plant seedlings by hand, place protective cover on seedling.	☑	☐	☐
6	Plant seedlings and seeds, by hand.	☑	☐	☐
7	Use aircraft to spread seed over carlson creek basin.	☐	☑	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		4	3	NE
Maintaining Traditional Skills Total Rating			**1**	

Explain:

Effects would be the same as Alternative 1 the Motorized alternative with the difference between this alternative and the motorized alternative, is use of cross-cut saws instead of chainsaws to cut the juniper trees used as baffles in the creek bed. Cross-cut saws are a non-motorized, non-mechanized tool. Using cross-cut saws would preserve the traditional skill component of wilderness character. Cutting down juniper trees with a cross-cut saw, a sawyer would use back and forth linear motions to move the saw through the cut. This method becomes difficult to execute when cutting the tree close to the ground.

SPECIAL PROVISIONS

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☐	☑
2	Use backhoe to distribute overburden along carlson creek road, widen road.	☐	☐	☑
3	place stones in head-cuts by hand.	☐	☐	☑
4	Use cross-cut saws to cut dead juniper trees and place the debris in head-cuts by hand.	☐	☐	☑
5	Plant seedlings by hand, place protective cover on seedling.	☐	☐	☑
6	Plant seedlings and seeds, by hand.	☐	☐	☑
7	Use aircraft to spread seed over carlson creek basin.	☐	☐	☑
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Special Provisions Total Rating			**0**	

Explain:

Effects would be the same as Alternative 1, Motorized Alternative.

ECONOMICS & TIME CONSTRAINTS

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☐	☐
2	Use backhoe to distribute overburden along carlson creek road, widen road.	☐	☐	☐
3	place stones in head-cuts by hand.	☐	☐	☐
4	Use cross-cut saws to cut dead juniper trees and place the debris in head-cuts by hand.	☐	☐	☐
5	Plant seedlings by hand, place protective cover on seedling.	☐	☐	☐
6	Plant seedlings and seeds, by hand.	☐	☐	☐
7	Use aircraft to spread seed over carlson creek basin.	☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	0	NE
Economics & Time Contraints Total Rating		**0**		

Explain:

Effects would be the same as Alternative 1, Motorized alternative. In addition, the use of cross-cut saws could increase the time to put the proposed actions into affect. Cross-cut saw work is slower and more physically demanding than chainsaws. Cutting up to fifty trees with a cross-cut saw would take longer than using a chainsaw. There is a sense of urgency associated with this project. Using a cross-cut saw would preserve wilderness character and maintain traditional skills; however, it would take longer. As an example of the difference in time to cut a tree using the two tools, a 12" diameter juniper tree can be cut down with a chain saw in approximently five minutes by one person. The same tree using a two-man, cross-cut team with a cross-cut saw, hammer and wedges would take approximately 15 minutes. As the number of trees to cut down increases, the efficiency of the chainsaw becomes larger with respect to the cross-cut saw.

Safety of Visitors & Workers

What is the effect of each component activity on the safety of visitors and workers? What mitigation measures will be taken?

SAFETY OF VISITORS & WORKERS

	Component Activity for this Alternative	Positive	Negative	No Effect
X	*Example: Personnel will travel by horseback*	☐	☐	☑
1	Use backhoe to remove culverts and shape rolling dips, use dump truck to haul in materials	☐	☐	☐
2	Use backhoe to distribute overburden along carlson creek road, widen road.	☐	☐	☐
3	place stones in head-cuts by hand.	☐	☐	☐
4	Use cross-cut saws to cut dead juniper trees and place the debris in head-cuts by hand.	☐	☑	☐
5	Plant seedlings by hand, place protective cover on seedling.	☐	☐	☐
6	Plant seedlings and seeds, by hand.	☐	☐	☐
7	Use aircraft to spread seed over carlson creek basin.	☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
Totals		0	1	NE
Safety of Visitors & Workers Total Rating			**-1**	

Explain:

Effects would be the same as Alternative 1, Motorized alternative, with the added safety issues of cross-cut saws. To an untrained worker cross-cut saws can be as dangerous to use as chainsaws. There are special techniques of use and handling that prevent workplace injuries. BLM does not have a workforce that is familiar with cross-cut saw use. Training regimes focus on the chainsaw as the preferred tool and the work culture is built up around that concept.
The natural growth form of juniper trees has many large, low lying limbs which make it difficult for a sawyer to maneuver close to the ground and can pose a safety risk when felling.
Cutting juniper trees with cross-cut saws places the sawyers hands at risk when using the saw close to the ground. The linear back and forth cutting motion of the saw places the sawyer's hands near the ground moving back and forth. The risk of abrasion and cuts increases due to the awkward position.

Summary Ratings for Alternative 2

Wilderness Character	
Untrammeled	-6
Undeveloped	-3
Natural	4
Solitude or Primitive & Unconfined Recreation	-7
Other Features of Value	7
Wilderness Character Summary Rating	-5

Other Criteria	
Maintaining Traditional Skills	1
Special Provisions	0
Economics & Time Constraints	0
Other Criteria Summary Rating	1

Safety	
Safety of Visitors & Workers	-1
Safety Summary Rating	-1

Project Title: Carlson Creek Basin Fire Rehabilitation

MRDG Step 2: Alternative Comparison

Alternative 1: Motorized/mechanized

Alternative 2: The more Primitive Alternative

Alternative 3:

Alternative 4:

Wilderness Character	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Untrammeled	0	6	0	6	0	0	0	0
Undeveloped	0	3	0	3	0	0	0	0
Natural	4	0	4	0	0	0	0	0
Solitude or Primitive & Unconfined Rec.	0	7	0	7	0	0	0	0
Other Features of Value	7	0	7	0	0	0	0	0
Totals	11	16	11	16	0	0	0	0
Wilderness Character Rating	**-5**		**-5**		**0**		**0**	

Other Criteria	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Maintaining Traditional Skills	3	3	4	3	0	0	0	0
Special Provisions	0	0	0	0	0	0	0	0
Economics & Time Constraints	0	0	0	0	0	0	0	0
Totals	3	3	4	3	0	0	0	0
Other Criteria Rating	**0**		**1**		**0**		**0**	

Safety	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Safety of Visitors & Workers	1	0	0	1	0	0	0	0
Safety Rating	**1**		**-1**		**0**		**0**	

Alternative 5:

Alternative 6:

Alternative 7:

Alternative 8:

Wilderness Character	Alternative 5		Alternative 6		Alternative 7		Alternative 8	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Untrammeled	0	0	0	0	0	0	0	0
Undeveloped	0	0	0	0	0	0	0	0
Natural	0	0	0	0	0	0	0	0
Solitude or Primitive & Unconfined Rec.	0	0	0	0	0	0	0	0
Other Features of Value	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0
Wilderness Character Rating	**0**		**0**		**0**		**0**	

Other Criteria	Alternative 5		Alternative 6		Alternative 7		Alternative 8	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Maintaining Traditional Skills	0	0	0	0	0	0	0	0
Special Provisions	0	0	0	0	0	0	0	0
Economics & Time Constraints	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0
Other Criteria Rating	**0**		**0**		**0**		**0**	

Safety	Alternative 5		Alternative 6		Alternative 7		Alternative 8	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Safety of Visitors & Workers	0	0	0	0	0	0	0	0
Safety Rating	**0**		**0**		**0**		**0**	

Project Title: Carlson Creek Basin Fire Rehabilitation

MRDG Step 2: Decision

Refer to the **MRDG Instructions** before identifying the selected alternative and explaining the rationale for the selection.

Selected Alternative

Alternative 1:	☒	Motorized/mechanized
Alternative 2:	☐	The more Primitive Alternative
Alternative 3:	☐	
Alternative 4:	☐	
Alternative 5:	☐	
Alternative 6:	☐	
Alternative 7:	☐	
Alternative 8:	☐	

Explain Rationale for Selection:

Alternative 1, the motorized/mechanized alternative has been selected over the primitive method. Rehabilitation of the burned over area in Carlson Creek is nescessary for several reasons. BLM is obligated to manage the rangeland health of the public lands as well as to preserve wilderness character which would provide for grazing permittees, Special status species and other wildlife.

Comparison of the alternatives shows them to be very similar in impact. The difference being the use of chain saws over cross-cut saws. The use of cross-cut saws provides a slight edge in the maintenance of traditional skills, however the number of trees to cut down, the limited time to get the work done and having a workforce unfamiliar with the tools operation, points to use of the chainsaw as a method that would reduce the time spent on site and the corresponding effect to wilderness character. Chainsaws can cut the juniper at or close to ground level. Using cross-cut saws would prolong the length of time on site because of its inherent inefficiencies, and may introduce safety issues that would not occur when workers are using tools they are familiar with, particularly when used close to the ground in an unfamiliar manner. There are mitigations that would need to be addressed when using chainsaws. For instance, the smooth cuts of a chainsaw would need to be broken up with random cuts to the stump after the tree goes down. Axes can be used to produce chips and cuts on the stumps to break up their smooth appearance. The stumps would be cut as low to the ground as can be accomplished.
The proposed actions cause short term impairment of wilderness character. However the long term benefits to wilderness character and wildlife habitat outweigh the short term impairment.

If more space is needed, continue on the next page...

Explain Rationale for Selection, Continued:

Describe Monitoring & Reporting Requirements:

Carlson Creek basin will be monitored on a regular basis for the next two years to assess the effects of the plantings and the condition of the creek head-cuts in addition to ongoing rangeland health monitoring.

Approval of Prohibited Uses

Which of the prohibited uses found in Section 4(c) of the Wilderness Act are approved in the selected alternative and for what quantity?

	Prohibited Use	Quantity
☒	Mechanical Transport	personnel transport vehicles on carlson creek road
☒	Motorized Equipment	Chainsaws to cut juniper trees
☒	Motor Vehicles	Backhoe and dump truck on carlson creek road
☐	Motorboats	
☐	Landing of Aircraft	
☐	Temporary Roads	
☐	Structures	
☒	Installations	Plastic sleeves on tree seedlings

Record and report any authorizations of Wilderness Act Section 4(c) prohibited uses according to agency policies or guidance.

Refer to agency policies for the following review and decision authorities:

	Name	Position	Date
Prepared	Thomas Wilcox	Wilderness Specialist	3/19/2015
Recommended			
Recommended			
Approved	Rhonda Karges	Andrews Field Manager	3/19/15