

Dream Tags Charitable Fund Open Request for Proposal

The Community Foundation of Western Nevada is accepting proposals for grants from the Dream Tags Charitable Fund. Proposals will be considered by the Advisory Board on Dream Tags and grant recommendations must be approved by the Board of Trustees of the Community Foundation.

The Dream Tags Charitable Fund provides funding to engage Nevadans in wildlife conservation by focusing donated funds to restore resilience in at-risk Nevada habitats with strategic collaborative projects for sustained impact that supports the preservation, protection, management, or restoration of wildlife and its habitat. To be considered for funding, project proposals must demonstrate measurable impact in accordance with this purpose.

Applicants must be registered 501(c)(3) nonprofit agencies, nonprofit educational institutions, or governmental entities. Projects must be performed in Nevada. Grants are typically paid on a reimbursable basis for actual expenditures. Funding will not be provided for work performed prior to grant approval.

Please submit 1 pdf copy¹ via email of your proposal. Proposals are encouraged for the following:

- A. Projects that improve, protect, or restore habitat
- B. Projects that embrace unique opportunities for advancing the mission of wildlife conservation in Nevada
- C. Projects that address emergent needs
- D. Other projects that meet the evaluation criteria

Applicants must provide a minimum 25 percent match for funds requested. Guidelines for requests of matching funds are provided in the following application form.

Applications may be sent to the Community Foundation of Western Nevada by email to tturner@cfwnv.org at any time during the year to be considered for funding. For questions or additional information, contact Tracy at the Community Foundation office. The application is also available online at www.nvdreamtag.org.

The application may be reproduced, retyped, or sections increased or reduced in length but must follow the same order. Please use the following checklist to ensure your application is complete:

- D Proposal, including Cover Sheet and narrative, is a maximum of 5 pages on 8 1/2" x 11" paper in readable font (i.e. Times New Roman 12 pt.)
- D Budget is page 6
- D Pages are numbered
- D You are submitting 1 pdf copy
- D You have emailed the pdf to tturner@cfwnv.org and received confirmation of receipt

If you/your organization are submitting more than one project for consideration, be prepared to prioritize the projects.

¹ Note: Put your application, budget, and any photos into ONE pdf file. Submit your required attachments via email clearly labeled with your organization's name in the file name. Send your files to tturner@cfwnv.org.

Dream Tags Charitable Fund
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Cover Sheet

Organization Name: Nevada Department of Wildlife			
Organization Type: _____ 501(c)(3) EIN# _____ Governmental entity? Yes			
Address: 6980 Sierra Center Parkway, Suite 120, Reno Nevada 89511			
Project Name: 2016 wildfire habitat restoration projects			
Amount requested: \$125,000		Website: www.ndow.org	
Project start date 11/2016		Project completion date 03/2017	
This funding will be used to supplement seed mixes the federal agencies are putting on high priority wildlife habitat burned in 2016 wildfires.			
Key People:	Director:	Tony Wasley	
	Board Chair:		
	Project Contact:	Name:	Dr. Lee Turner
		Position:	Habitat Ecologist
		Phone:	775-688-1542
		Fax:	775-688-1595
		Email:	leeturner@ndow.org
Organization Mission: The NDOW manages, protects, and restores Nevada's wildlife and its habitat, and promotes safe boating on Nevada waters.			
Project is on (check all that apply) <input checked="" type="checkbox"/> Public <input checked="" type="checkbox"/> Private land.			
Are government permits or decision documents needed for the project? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If so, are those permits and decision documents already secured? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If permits and decision documents are needed but not yet secured, in #4 of the Narrative Requirements provide a list of permits and documents needed and a schedule for securing them.			
Has your organization received other grants from the Dream Tags Fund? Yes <input checked="" type="checkbox"/> (<i>See Attachment A</i>)	If yes,		
	Date awarded:		
	Project # & title:		
	Amount of Award:		
	Date awarded:		
	Project # & title:		
	Amount of Award:		

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DESCRIPTION OF PROJECT UNDER CONSIDERATION

Indicate the description that best fits the project you are proposing. Mark no more than three categories:

☒ A. Projects that improve, protect, or restore habitat

☐ B. Projects that embrace unique opportunities for advancing the mission of wildlife conservation in Nevada

☒ C. Projects that address emergent needs

☐ D. Other projects that meet the evaluation criteria

NARRATIVE REQUIREMENTS

Provide answers for all sections below; use the numbers and topics (in bold) to label each section in your response. Your application is limited to 5 narrative pages, including the cover sheet. Your budget is page 6. All projects are required to have measurable outcomes:

1. **Specific project goals and measurable outcomes.** How do these tie to the project description?
The monies from this funding request will be used to purchase seeds, apply seed and conduct other seed bed preparation during the rehabilitation of the 2016 fires across high priority sage grouse and mule deer habitat across the state of Nevada (Figure 1). The seeding and other activities will augment the amount and diversity of species that will be applied to key burned habitats on public and private lands across Nevada with a focus on the Overland fire that burned in late summer 2016 (Figure 2).

The primary goal will be to work with Nevada BLM to supplement fire rehabilitation efforts. The Ely, Elko and Carson City BLM districts have been funded for rehabilitation work on portions of the Little Den, Hot Pot, Izzenhood and Overland fires and NDOW is seeking funding provide assistance in two main ways. First, NDOW can add important species to seed mixes. Second, NDOW can seed and provide additional restoration activities on areas the BLM may not have received funding for. Seeding and other treatment efforts will be focused on high priority sage grouse and critical mule deer habitat.

2. **Project location.**
Primarily the funding from this request will be used on the Overland Fire that burned approximately 7,700 acres in summer 2016 (Figure 2). The activities proposed within this funding request could be applied across Nevada Department of Wildlife's (NDOW) eastern and western regions depending on how funding needs become clearer (Figure 1).

3. **Project description.**
NDOW will work with the BLM to apply seeds to the Overland Fire. The Ely BLM applied for Emergency Stabilization and Rehabilitation (ES&R) funds and was granted \$980,000.00 toward fire rehabilitation on the Overland Fire (Appendix B). The funding granted to Ely BLM covered approximately 5,200 acres of the 7,700 acres burned (Figure 2). The BLM funding covers chaining 2200 acres of formerly phase II PJ that had already been analyzed for treatment. The BLM funding covers purchasing and applying seeds for the 2,200 acres chained plus an additional 3,000 burned acres within the Overland Fire footprint. BLM has requested that NDOW secure funding to purchase seeds, apply seeds and conduct seed bed preparation to the remaining 2,500 burned acres (Figure 2).

The Overland Pass project site is in the heart of migration corridor for the largest remaining mule deer herd in the state. Given the extent of recent wildfires, mining and other disturbance this herd faces, seeding following fires is critically important. In addition, the Overland Pass area is the focus of large

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habitat treatments. In fall 2016, 9,000 acres of PJ were treated and approximately 25,000 acres are cleared or very near cleared for treatments (Figure 2). The Overland Fire burned partially through one area that was slated for PJ treatment and also burned outside the analyzed treatment area.

4. Permitting.
All national environmental policy act (NEPA) activities fall under BLM's emergency stabilization and rehabilitation (ES&R) program and all necessary compliance with NEPA is complete.
5. If future phases of the project will be needed, identify anticipated sources of funding.
The work at the Overland Pass site is ongoing. In late September 2016, approximately 9,000 acres of phase I and phase II PJ were treated along the west side of the Ruby Mountains. The map portrays the 9,000 acre treatment with a gold outline (Figure 2). The Dream Tag funds supplied to NDOW in proposal **DT NDOW #7 Overland Pass/Big Wash Sage Grouse and Mule Deer Habitat Improvement Project** have been spent and NDOW is expecting an invoice from the contractor and will be submitting a project completion report in November 2016. Additional acreage has been cleared for work and will begin in 2017.
6. Principals involved in leading or coordinating the project or activity.
Dr. Lee Turner, NDOW Habitat Ecologist
Alan Jenne, Habitat Division Chief
Steve Foree, Supervising Habitat Biologist Eastern Region
7. Number of staff positions involved in project: Fulltime_____Part-time_____("Fulltime" means 100% of their staff position will be dedicated to this project; "part-time" means only a portion of their staff position will be dedicated to this project)
Regional Supervising Habitat Biologists will be the NDOW staff dedicated to facilitating the purchase of this seed and seedbed preparation within the statewide rehabilitation efforts. Other NDOW personnel will be involved in the application of the seed through either aerial or drill seeding efforts. No salary money is being requested through this Dream Tag proposal as all NDOW salaries are generated by other sources.
7. Number of volunteers involved in project and an estimated number of volunteer hours.
The number of volunteers that may be involved in the 2016 fire rehabilitation effort is unknown at this time and NDOW is reaching out to various groups to secure volunteers.
10. Time Line of Project. List key dates and include project milestones. Note: Be realistic in your estimate of dates and milestones. List any factors that may cause a delay in implementing and/or completing the project.²
 - November 2016-February 2017 – Seedbed preparation including aerial herbicide application occurs first. Seeds will be purchased and applied across the 7,700 acres followed by the 2,200 acres of chaining. Seed application is done prior to chaining to aid in seed to soil contact.
10. Success.
Monitoring will be necessary to document recovery and will help in evaluating treatment techniques, allowing for adaptive changes of future restoration efforts. On public lands BLM recovery criteria will be used to evaluate success. In the Ely District this means:
 - A minimum of three seeded perennial grasses per square meter rooted firmly in the soil, with consideration to site selection factors such as soils, topography, native release of desirable species, and the potential for seedling establishment.

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- A qualitative assessment of soil and site stability, and hydrologic function, that results in ratings of none to slight departure from that expected from the same kind of ecological site considered to be in stable condition.
- Bitterbrush (native release or artificially planted) and Sagebrush
- For the bitterbrush sites the objective is, a minimum of 50% of live plants sampled directly within the burn area will have third year's woody stem leader growth as measured on established or new monitoring transects.
- Private lands will be monitored through the establishment of long term photo points to track community establishment through time.

NDOW conducts habitat project effectiveness monitoring focused on the vegetation change at various habitat project sites across Nevada. Figure 2 shows the locations of monitoring plots established by the NDOW crews in 2011 and 2012 in the areas that were scheduled to be treated in the Overland Pass habitat projects. Some of the plots fall within the Overland Fire footprint providing an excellent opportunity to track recovery following a fire. This grant request will not be used to fund monitoring as funding for monitoring has been secured.

11. Grant match.

Currently NDOW has approximately \$450,000 from Private donations, Habitat Conservation Fee and NGO donations committed for fire rehabilitation with additional support being sought from a multitude of sources including sportsman's and conservation organizations to private contributions. NDOW is submitting a Ruby Pipeline mitigation fund proposal for \$300,000 that will be focused on fire rehabilitation in Elko County. It should also be noted that the land management agencies will also be providing the majority of the fire rehabilitation funds and that this proposal simply captures the NDOW related expenditures and efforts.

NDOW submitted and was granted a Dream Tag project earlier this fall. This second request is coming due to budget shortfalls and the high wildlife priority of acres burned in 2016.

12. Project budget (see Sample Budget Template on page 5 of this RFP). Provide detail on line-item expenditures and show which costs are to be paid for by the Dream Tags Charitable Fund grant, which expenses will be paid by other sources of funding, and which will be paid for with in-kind services.

Ⓢ Note: Project budget must be on its own on page 6.

Grants from the Dream Tags Charitable Fund are typically paid on a reimbursable basis for actual expenditures only. Craft your budget in such a way that requests for reimbursement correspond to the original budget.

² Funding will not be provided for work performed prior to grant approval.

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Grant Match

Match amount to be provided:	Over \$450,000					
Match details:	<p>Please provide the form of your matching funds. If match is made up of both cash and in-kind, fill in both sections.</p> <p>Match is:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; padding: 5px;">Cash</td> <td style="padding: 5px;">\$ 450,000</td> </tr> <tr> <td style="padding: 5px;">In-kind</td> <td style="padding: 5px;">\$</td> </tr> </table> <p style="font-size: small;">Note: Provide an itemized breakdown of volunteer match in your budget with rationale.</p> <p>For the cash portion of your match, is the funding already being held by the applicant for this project? Yes XXX</p>		Cash	\$ 450,000	In-kind	\$
Cash	\$ 450,000					
In-kind	\$					
Description of matching funds/in-kind donations:	<p>Matching funds will be comprised of Question 1 fire rehabilitation funds, Habitat Conservation Fee, Ruby Pipeline Mitigation Fund and NGO donations. NDOW submitted and was granted Dream Tag funding earlier this year for fire rehabilitation.</p>					

REQUIRED ATTACHMENTS

Submit the following attachments via email. Clearly label each file with your organization's name.

Nonprofits submit:

- ☐ Last audited financial statements if your organization has been audited
- ☐ List of Board of Directors
- ☐ Copy of agency's IRS 501(c)(3) Tax Determination Letter
- ☐ Copy of the agency's most recent IRS Form 990

Governmental entities submit:

- ☐ Departmental budget in lieu of audited financial statements

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SAMPLE BUDGET TEMPLATE

Budget Item Description*	ORIGINAL PROJECT BUDGET			Total	REIMBURSEMENT	
	DT \$	Other Funding Name**	Match \$		Expenditures to	Expenditures to date (other
Design/Engineering	\$xx,xxx	Agency X	-	\$xx,xxx	\$xx,xxx	
Permitting	\$xx,xxx	Agency X	\$x,xxx	\$x,xxx		\$x,xxx
Labor--paid	\$x,xxx	Agency X	\$x,xxx	\$x,xxx	\$x,xxx	
Labor—		Own people	\$xx,xxx	\$xx,xxx	\$x,xxx	
Construction	\$xx,xxx	Agency Y	\$xx,xxx	\$xx,xxx		
Materials	\$		\$	\$		
Contracting for seed application	\$125,000	NDOW, Private Donation, Habitat Conservation Fee and Ruby Pipeline and Dream Tag	\$450,000	\$575,000		
Overhead	\$xx,xxx	Own agency	\$xx,xxx	\$xx,xxx		
TOTAL	\$125,000		\$450,000	\$575,000	\$0	\$0

*These are sample descriptions.

**Explain status of other funding if not in hand.

***Provide an itemized breakdown by skillset per hour.

If project is to be implemented in phases, please separate budget into each phase.

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GRANTEE REQUIREMENTS

To be eligible for funding, grantees must adhere to the following requirements:

Monies are to be used and/or disbursed exclusively for the charitable uses and purposes.

The Dream Tags Fund shall be used exclusively to provide support for the preservation, protection, management or restoration of Nevada's wildlife and its habitat.

The Charitable Beneficiaries may include 501(c)(3) organizations and governmental entities. Any grants to governmental entities must be made exclusively for public benefit purposes.

All grantees will be required to sign a grant agreement stipulating their agreement with all of the terms, conditions, and reporting requirements.

To maintain eligibility to receive grant funds, each Charitable Beneficiary must comply at all times with the following requirements:

1. Charitable Beneficiaries must be exempt from federal income taxation under Section 501(c)(3) of the Code;
2. Charitable Beneficiaries shall use all Fund distributions toward projects that are appropriate and legal public expenditures;
3. Charitable Beneficiaries must provide financial details and/or reports of their organizations upon request;
4. Charitable Beneficiaries must not use any Fund distributions for political contributions or political advocacy;
5. Charitable Beneficiaries must implement the projects, activities, and/or programs for which they received Fund distributions as agreed upon in the grant acceptance agreement, or must return all such distributions to the Community Foundation forthwith;
6. Charitable Beneficiaries must provide the Community Foundation with quarterly reports detailing the activities of their projects and/or programs; and
7. Charitable Beneficiaries must sign an agreement regarding their compliance with the qualifications hereof.

PROJECT EVALUATION CRITERIA

Each proposal will be evaluated on criteria that include but are not limited to:

Measurable outcomes in accordance with the exclusive goal of the Dream Tags Charitable Fund. Monitoring and reporting to learn from the project and track project accomplishments. Closeness of project focus to areas of funding emphasis (on-the-ground habitat improvements). Readiness of sponsoring organization to undertake and complete project.

Opportunities to partner with others to leverage funds and accomplish larger outcomes.

Consistency with established Dream Tags Charitable Fund operations (timeline, match, etc.).

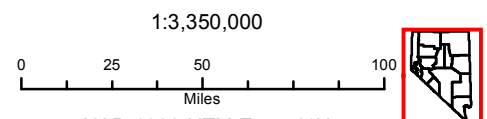
Impact on preservation, protection, management, or restoration of Nevada's wildlife and its habitat. Absence of negative or unintended consequences.

Solutions to known problems as identified through past research and monitoring.



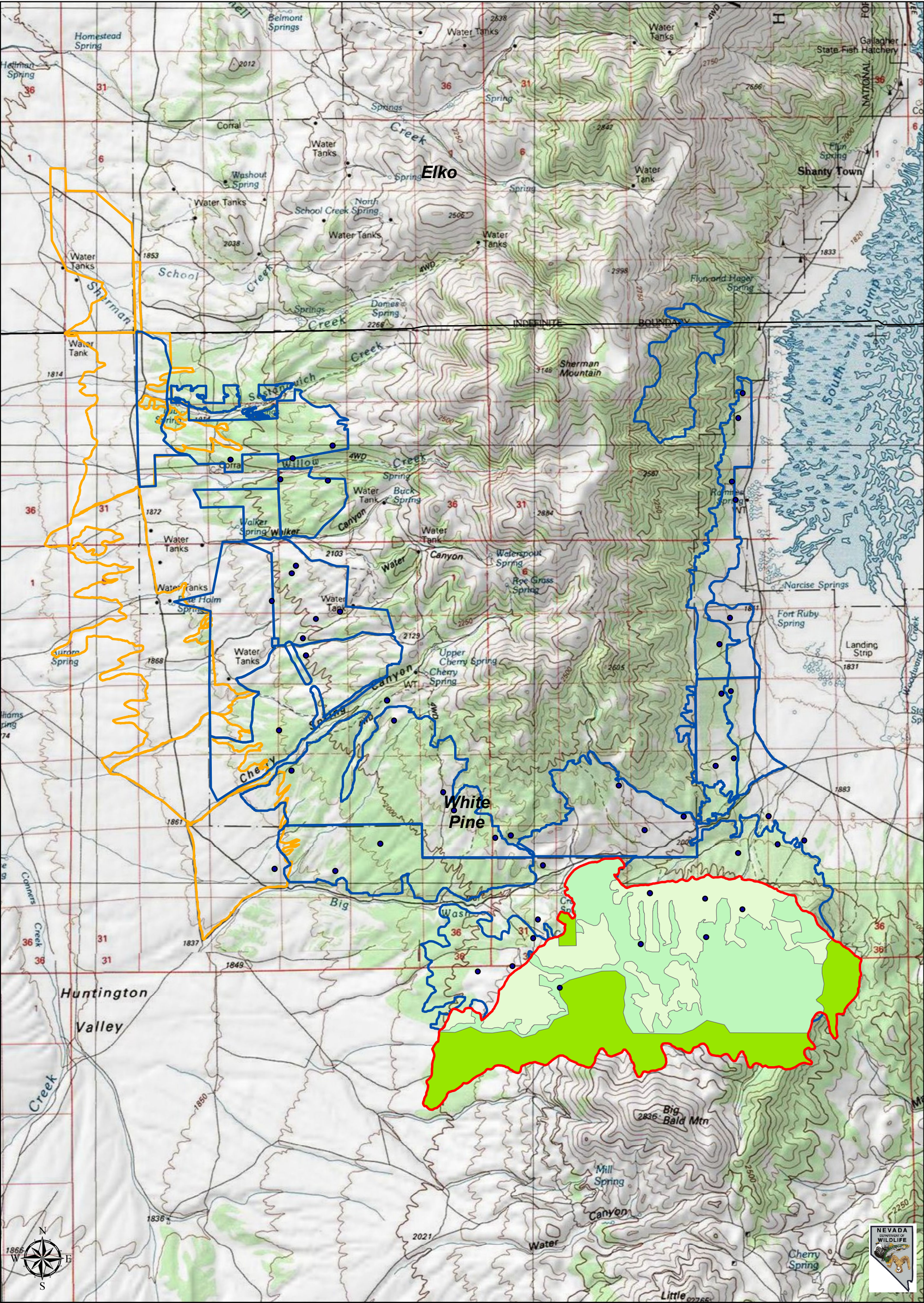
**2016 Dream Tag
Fire Emergency Seeding
Locations**

 Nevada Counties



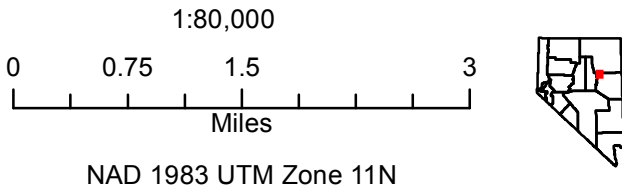
NAD 1983 UTM Zone 11N

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Overland Pass Habitat Projects
Overland Fire 2016

- NDOW Vegetation Monitoring Plots
- Overland Fire Perimeter
- Burned Area Chaining
- BLM Funded Aerial Seeding
- NDOW Funded Aerial Seeding
- Overland Pass Habitat Treatment Units
- 2016 Completed Pinyon-Juniper Thinning
- Nevada Counties



NAD 1983 UTM Zone 11N

ATTACHMENT A.

Dream Tag funding received by the Nevada Department of Wildlife

Date Awarded: September 21, 2012

Project # and Title: DT #3: Duck Creek Valley Sage Grouse/Wildlife Habitat Improvement Project

Amount of Award: \$12,500.00

Date Awarded: September 21, 2012

Project # and Title: DT #4: Southern Eureka County Mule Deer and Sage Grouse Habitat Enhancement Project

Amount of Award: \$12,000.00

Date Awarded: September 21, 2012

Project # and Title: DT #7: Overland Pass/Big Wash Sage Grouse and Mule Deer Habitat Improvement

Amount of Award: \$12,500.00

Date Awarded: September 21, 2012

Project # and Title: DT #11: Rock Springs Meadow Fencing and Sage Grouse Habitat Improvement Project

Amount of Award: \$4,900.00

Date Awarded: September 21, 2012

Project # and Title: DT #8: Paradise Valley Medusahead Grass Control Project for Habitat Protection and Improvement

Amount of Award:\$4,500.00

Date Awarded: August 26, 2013

Project # and Title: DT #27: Seeds for 2012-2013 wildfire habitat restoration projects

Amount of Award:\$150,000.00

Date Awarded: August 22, 2012

Project # and Title: DT #2: 2012 Wildfire Reclamation Seed Supply

Amount of Award:\$50,000.00

Date Awarded: December 11, 2015

Project # and Title: DT#40 Seeds for 2015 Wildfire Habitat Restoration Projects

Amount of Award: \$75,000

Date Awarded: August 2016

Project # and Title: DT #41: Seeds for 2016 Wildfire Habitat Restoration Projects

Amount of Award: \$100,000

ATTACHMENT B.

Ely BLM Emergency Stabilization and Burned Area Rehabilitation Plan

BLM NEVADA POST-FIRE RECOVERY PLAN
EMERGENCY STABILIZATION AND BURNED AREA
REHABILITATION

PLAN TEMPLATE 2010

OVERLAND FIRE (KK9A)

BLM Ely District Office

NEVADA STATE OFFICE

FIRE BACKGROUND INFORMATION

Fire Name	Overland
Fire Number	LFESKK9A0000 / LFBRKK9A0000
District/Field Office	Ely District Office
Admin Number	LLNVL00000
State	NEVADA
County(s)	WHITE PINE
Ignition Date/Cause	08/08/2016 Lightning
Date Contained	08/16/2016
Jurisdiction	<i>Acres</i>
BLM	7628
Private	62
Total Acres	7690
Total Costs	\$989,000
Costs to LF2200000 (2822)	\$804,000
Costs to LF3200000 (2881)	\$185,000

Status of Plan Submission (check one box below)

	Initial Submission of Complete Plan
X	Updating or Revising the Initial Submission
	Amendment

PART 1 - PLAN SUMMARY

BACKGROUND INFORMATION ON FIRE.

On August 8, 2016, the Overland fire ignited from a lightning strike. The fire burned a total of 7,628 acres within the Bureau of Land Management (BLM) Ely District, Bristlecone Field Office, and approximately 62 acres of private land, approximately 3 miles north of the Bald Mountain Mine or 5 miles South of Ruby Lake National Wildlife Refuge. Additionally, the entire fire burned within the Warm Springs allotment (#00606). Approximately 3,767 acres of the burned area is part of the proposed Overland Pass Habitat Improvement project. The burned area ranges in elevation from 6,500 feet to 8,400 feet. The fire was contained on August 16, 2016.

The Overland fire burned into two areas that had previously been affected by wildfire. Seven acres of the 2009 "Big Bald" fire re-burned on the southern boundary of the fire. In addition, 404 acres of the "Chrome" fire to the east was burned. This area was successfully re-vegetated in 2004, and greater sage-grouse (*Centrocercus urophasianus*) were observed by fireline resources as well as the resource advisors assigned to the fire. The majority of the Chrome Fire burned area was not classified as greater sage-grouse habitat prior to the fire in 2004 but is now utilized by greater sage-grouse. Following treatment, the Nevada Department of Wildlife (NDOW) expects large portions of the Overland burned area to also be utilized by greater sage-grouse. NDOW is in the process of re-mapping greater sage-grouse habitat, and both the Chrome and Overland burned areas are expected to be mapped as potential greater sage-grouse habitat. An overall goal of the Overland Pass Habitat Improvement project is to establish additional habitat useable by greater sage-grouse, and provide further connectivity between the summer use habitat on Bald Mountain and the winter/spring habitat in Ruby Valley to the east, and Newark Valley to the west.

Approximately 81 acres of mapped greater sage-grouse General Habitat Management Area (GHMA) and 544 acres of Other Habitat Management Area (OHMA) are located on the southern end of the burned area. Within the burned area, the NDOW has classified greater sage-grouse habitat as follows: 5,586 acres of winter habitat, 5,655 acres of nesting habitat, and 5,333 acres of brood-rearing habitat. The entire burned area is year-round elk (*Cervus elaphus*) habitat and contains 6,979 acres of crucial winter, 412 acres of year round, and 298 acres of limited use mule deer (*Odocoileus hemionus*) habitat, as well as 4,264 acres of year-round pronghorn antelope (*Antilocapra americana*) habitat. The NDOW has significant concerns for mule deer habitat loss associated with the Overland Fire and plans to partner with BLM and contribute to the seeding treatment where possible. According to the NDOW, the burned area is situated within seasonal migration corridors for the Ruby deer herd - Nevada's largest deer herd. Past studies suggest that winter range (in both extent and quantity) is the limiting factor to the Ruby deer herd.

The burned area occurs entirely within the Triple B Herd Management Area (HMA). Several horses were observed in the area of the fire during and after suppression activities. The resource advisors noted heavy horse use in the area of Cracker Johnson Spring 1. At the time of the fire, the BLM was gathering horses from the Triple B HMA in an area north of the fire perimeter.

The burned area would be closed to livestock grazing for two growing seasons or until rehabilitation objectives have been met (see ES Issue 1, Treatment S12 - Closure, and Part 8 - Monitoring Plan). Temporary closure of the 7,690 acre burned area would result in approximately a 2% reduction of area available for grazing in the Warm Springs allotment.

Monitoring data collected prior to the fire indicate that the site was dominated by pinyon pine (*Pinus monophylla*) and Utah juniper (*Juniperus osteosperma*). Post-fire site assessments indicate understory forb, grass and shrub cover pre-fire was limited. Given that vegetation cover has been removed across the majority of the burned area by the fire, unutilized resources (e.g. nitrogen, phosphorus, and water) are likely available within the burned area, providing any noxious (and invasive) weed propagules present within or introduced to the burned area a window of opportunity to become established (Davis et al. 2000).

The fire burned across mountains, hills and fan remnants, derived from alluvium, colluvium and residuum weathered from quartzite, limestone, dolomite, rhyolite, calcite, calcareous shale and welded tuff (NRCS, 2003; USDA unpublished 2015). The majority of the burned area (98.6%) falls within six soil map units (100, 291, 510, 670, 763 and 1372) represented by eleven dominant ecological sites (NRCS, 2016) (see attached site description summary table). Post-fire reconnaissance and Burned Area Reflectance Classification (BARC) imagery indicate the fire burned predominantly at moderate intensity. In areas of moderate intensity, surface vegetation, needles and most needle-cast was consumed, apart from unburned stringers and islands. In areas of low to moderate burn intensity, shrub skeletons remain intact. In areas of high intensity, shrub/small tree skeletons have been consumed to ground level.

The dominant pre-fire vegetation in the Overland fire area was pinyon-juniper woodland with some areas of sagebrush steppe in drainage bottoms. Skeletons, adjacent unburned areas and ecological site descriptions indicate pre-burn vegetation was primarily Pinyon and Juniper with limited understory, but additional observed species included: black sagebrush (*Artemisia nova*), mountain sagebrush (*Artemisia tridentata vaseyana*) and Wyoming sagebrush (*Artemisia tridentata tridentata*); bluebunch wheatgrass (*Pseudoroegneria spicata*), Indian ricegrass (*Achnatherum hymenoides*), needlegrasses (*Achnatherum spp.*), bluegrasses/muttongrass (*Poa spp.*), basin wildrye (*Leymus cinereus*), bottlebrush squirreltail (*Elymus elymoides*), and needleandthreadgrass (*Hesperostipa comata*); arrowleaf balsamroot (*Balsamorhiza sagittata*), tapertip hawksbeard (*Crepis acuminata*), lava aster (*Ionactis alpina*), lupine (*Lupinus spp.*), phlox (*Phlox spp.*), eriogonum (*Eriogonum spp.*), and goldenweed (*Pyrrocoma spp.*); and, antelope bitterbrush (*Purshia tridentata*), snowberry (*Symphoricarpos albus*) and Utah serviceberry (*Amelanchier utahensis*).

Reviews of recent and historic wildfires in the area indicate that following fire, natural regeneration of native perennial grasses and forbs in the area has been limited. As ecological condition declines, state and transition models indicate non-native annual species such as cheatgrass (*Bromus tectorum*), annual mustards (*Brassicaceae spp.*), Russian thistle (*Salsola kali*), and halogeton (*Halogeton glomeratus*) are likely to spread to the burned area in the absence of reseeding (NRCS, 2003; USDA 2015). Significant soil erosion and unacceptable loss of greater sage-grouse, elk, mule deer and pronghorn habitat would also be expected. Approximately half of the burned area classified as exhibiting low resistance and resilience (in the 3A-3B categories of the sagebrush habitat matrix), advising immediate rehabilitation of the site. An additional 30% of the burned falls into the moderate category (2A-2B), advising rehabilitation due to significant likelihood of non-native annual grass invasion prior to natural recovery (USDA FS RMRS-GTR-326. 2014. Pgs 20-25). Additional factors, including slope in the 2A-2B categories recommend additional seeding. In addition, the 2015 ecological site descriptions for Overland state that any amount of introduced non-natives causes an immediate decrease in resilience on the site, and that non-natives - once established - will not easily be removed from the system and have the potential to significantly alter disturbance regimes from their historic range of variation. Due to the potential pressure of invasive species and the history of cattle grazing in the area, resilient non-native perennial grass species are recommended as one component of the seeding mixes. The seed mixes shown below utilize ecologically adapted species that will meet multiple resource objectives such as: erosion control, annual invasive grass competition/control, wildlife habitat and greater sage-grouse brood, nesting and winter habitat.

The fire lies primarily within Visual Resources Management (VRM) Class III (5,562 acres); Class II (958 acres) and Class IV (1,104 acres) VRM are also present in the burned area. Under Class IV objectives, the characteristic landscape change can be high. The Class III VRM objective is to partially retain the existing character of the landscape, with the level of change to the characteristic landscape being moderate. The Class II VRM objective is to retain the existing character of the landscape, with the change of the characteristic of the landscape being low. (Ely District Approved Resource Management Plan (2008), as amended). The objectives of proposed rehabilitation treatments further include reducing long-term visual impacts, by decreasing the amount of disturbed area and blending the disturbed area into the natural environment while still providing for project operations.

The Overland Pass Habitat Improvement Project Environmental Assessment (DOI-BLM-NV-L010-2011-0036-EA) previously analyzed a large portion of the burned area. The treatments proposed in this document are based upon the existing proposed action which was analyzed in the Overland Pass Environmental Assessment.

CLIMATE CHANGE

A primary objective of Emergency Stabilization and Rehabilitation (ES&R) is to “restore structure and function to fire damaged ecosystems.” Carbon sequestration is one of many ecological functions provided by healthy diverse plant communities.

Left untreated, the burned area will likely become dominated by cheatgrass and other highly flammable invasive annuals. The minimal root systems of these annuals accumulate little if any organic matter into the soil profile. Additionally, their flammability substantially increases fire frequency, thereby moving carbon from the soil profile into the atmosphere. Conversely, re-establishing perennial vegetation within the burned area will have a positive benefit to climate change by the ability of these plants to sequester carbon. Deep rooted grasses in particular contribute substantial organic material into the soil profile from their extensive root systems, recycling approximately ½ of their root mass annually, thereby moving carbon from the atmosphere into the soil profile (providing long term carbon storage).

Re-establishing resilient perennial vegetation would also reduce fire frequency, reducing carbon emissions that would result if the site was allowed to become converted to a highly flammable exotic annual community.

The proposed seeding treatments herein would be expected to have a long-term direct effect of decreased carbon emissions and increased soil carbon sequestration by potentially reducing high-intensity wildfires, slowing the rate of carbon turnover, and providing long-term below ground carbon storage.

CLIMATE INFORMATION

Average annual precipitation for the Overland Fire ranges from 9-22 inches, and mean annual air temperature for the site is 37 to 50 degrees F, according to soils and ecological site data (NRCS, 2003; NRCS, 2015; NRCS 2016). PRISM 30 year precipitation normals for 1981-2010 (which allow for spatial scale and pattern of orographic processes) returned similar annual average precipitation values ranging from 12-21 inches (BLM 2016) across the burned area. Similarly, annual rainfall recorded at the Eureka Airport climate station, located approximately 35 miles SW of the burned area at an elevation of 5948 feet (550-2450 feet lower than the burned area), averaged 9.18 inches between 2002 and 2015 (Meso West 2016). The Eureka Airport station occurs at a lower elevation than the burned area and is separated from the eastern side of the fire by a ridgeline, but it provides the most complete climate station data available to the burned area.

Average growing season across the Overland Fire ranges from 40 to 120 days (NRCS, 2003;

NRCS, 2015). Minimum and maximum daily temperatures recorded at the Eureka Airport station, range from minimum temperatures of -23 (Jan) to 68 (Jun) degrees F to maximum temperatures of 1 (Feb) to 102 (July) degrees over the period of record (1997-present) (MesoWest 2016). Daily wind speeds range from 0 to 47.18 mph and average 7 mph; median wind speed is 5.75 mph. Daily wind gusts range from 6.91 to 104.71 mph and average 25.34 mph (MesoWest 2016). Proposed weather and soils instrumentation for the Overland Fire will help more accurately assess site specific climatic conditions, including rainfall, wind speed, air and soil temperature and dust flux. The topography of the burned area and soil parent material suggest the Overland Fire could have major dust potential. Extensive dust flux observed during field reconnaissance makes dust monitoring of particular significance on this fire.

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Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture). Web Soil Survey. Available online at: <http://websoilsurvey.nrcs.usda.gov>. Accessed 20 August 2016.

MesoWest, University of Utah. Available online at: <http://mesowest.utah.edu/cgi-bin/droman/mesomap.cgi?state=NV&rawsflag=3>. Accessed 10 Aug 2016.

LAND USE PLAN CONSISTENCY

S2 - Ground Seeding ES Issue 3

FM-3 (4): Emergency stabilization and rehabilitation- design and implement to achieve vegetation, habitat, soil stability, and watershed objectives in accordance with the Programmatic Emergency Stabilization and Rehabilitation Plan. (Page 107)

FM-5: In addition to fire, implement mechanical, biological, and chemical treatments along with other tools and techniques to achieve vegetation, fuels, and other resource objectives. (Page 108)

VEG-1: Emphasize treatment areas that have the best potential to maintain desired conditions or respond and return to the desired range of conditions and mosaic upon the landscape, using all available current or future tools and techniques. (Page 26)

VEG-4: Design management strategies to achieve plant composition within the desired range of conditions for vegetation communities, and emphasize plant and animal community health at the mid scale (watershed level). (Page 26).

S3 - Aerial Seeding ES Issue 3

FM-3 (4): Emergency stabilization and rehabilitation- design and implement to achieve vegetation, habitat, soil stability, and watershed objectives in accordance with the Programmatic Emergency Stabilization and Rehabilitation Plan. (Page 107)

FM-5: In addition to fire, implement mechanical, biological, and chemical treatments along

with other tools and techniques to achieve vegetation, fuels, and other resource objectives. (Page 108)

VEG-1: Emphasize treatment areas that have the best potential to maintain desired conditions or respond and return to the desired range of conditions and mosaic upon the landscape, using all available current or future tools and techniques. (Page 26)

VEG-4: Design management strategies to achieve plant composition within the desired range of conditions for vegetation communities, and emphasize plant and animal community health at the mid scale (watershed level). (Page 26)

VEG-7: Determine seed mixes on a site-specific basis dependent on the probability of successful establishment. Use native and adapted species that compete with annual invasive species or meet other objectives. (Page 27)

S12 - Closures (area, OHV, livestock) ES Issue 3

MD LG 1: When livestock management practices are determined to be incompatible with meeting or making progress towards achievable habitat objectives following appropriate consultation, cooperation and coordination, implement changes in grazing management through grazing authorization modifications, or allotment management plan implementation. Potential modifications include, but are not limited to, changes in:

- Season or timing of use;
- Numbers of livestock;
- Distribution of livestock use;
- Duration and/or level of use;
- Kind of livestock (e.g., cattle, sheep, horses, or goats) (Briske et al. 2011);
- Grazing schedules (including rest or deferment);
- Class of livestock;
- Grazing schedules (including rest or deferment)
- Making allotment unavailable to grazing

*Not in priority order

(Page 2-23, Nevada and Northeastern California Greater Sage-Grouse Approved RMP Amendment, September 2015)

MD LG 2: The BLM will prioritize (1) the review of grazing permits/leases, in particular to determine if modification is necessary prior to renewal, and (2) the processing of grazing permits/leases in SFA followed by PHMAs outside of the SFA. In setting workload priorities, precedence will be given to existing permits/leases in these areas not meeting land health standards, with focus on those containing riparian areas, including wet meadows. The BLM may use other criteria for prioritization to respond to urgent natural resource concerns (e.g., fire) and legal obligations. (Page 2-24, Nevada and Northeastern California Greater Sage-Grouse Approved RMP Amendment, September 2015).

S13 - Monitoring ES Issue 3

See Part 8 - Monitoring Plan.

R2 - Ground Seeding BAR Issue 1

FM-3 (4): Emergency stabilization and rehabilitation- design and implement to achieve vegetation, habitat, soil stability, and watershed objectives in accordance with the Programmatic Emergency Stabilization and Rehabilitation Plan. (Page 107)

FM-5: In addition to fire, implement mechanical, biological, and chemical treatments along with other tools and techniques to achieve vegetation, fuels, and other resource objectives. (Page 108)

VEG-1: Emphasize treatment areas that have the best potential to maintain desired conditions or respond and return to the desired range of conditions and mosaic upon the landscape, using all available current or future tools and techniques. (Page 26)

VEG-4: Design management strategies to achieve plant composition within the desired range of conditions for vegetation communities, and emphasize plant and animal community health at the mid scale (watershed level). (Page 26).

R5 - Noxious Weeds BAR Issue 2

Objective VEG 5: Reduce the amount of Greater Sage-Grouse habitat loss due to wide-spread wildfires and invasion by nonnative species.

Objective VEG 6: Control invasive species infestations in GRSG habitat already compromised by invasion.

MD VEG 16: Prevent the establishment of invasive species into uninvaded areas in PHMAs and GHMAs through properly managed grazing and by conducting systematic and strategic detection surveys, collecting data, mapping these areas, and engaging in early response to contain and eradicate invasion if it occurs.

MD VEG 17: Control the spread and introduction of noxious weeds listed by the Nevada Department of Agriculture and California Department of Food and Agriculture (NAC 555.010, Classes A through C, inclusive and 3 CCR 4500, Noxious Weed Species Pest Rating A, B, C, and Q) and undesirable nonnative plant species (Gelbard and Belnap 2003; Bergquist et al. 2007). Work with federal, state, local, and tribal groups, such as Weed Control Districts, Cooperative Weed Management Areas, and Conservation Districts, in detecting and treating nonnative species.

R7 - Fence/Gate/Cattleguard BAR Issue 4

FM-3 (4): Emergency stabilization and rehabilitation- design and implement to achieve vegetation, habitat, soil stability, and watershed objectives in accordance with the Programmatic Emergency Stabilization and Rehabilitation Plan. (Page 107).

FM-5: In addition to fire, implement mechanical, biological, and chemical treatments along with other tools and techniques to achieve vegetation, fuels, and other resource objectives. (Page 108).

R13 - Monitoring BAR Issue 4

See Part 8 - Monitoring Plan.

COST SUMMARY TABLES

Emergency Stabilization (LF2200000)

Action/ Spec #	ES Issue #	Planned Action	Unit (Acres, WMs, Number)	# Units	Unit Cost (If Appl.)	FY 2016	FY 2017	FY 2018	FY 2019	Totals by Spec.
S1		Planning (Project Management)		0		\$3,000.00	\$14,000.00	\$7,000.00	\$7,000.00	\$31,000.00
S2	3	Ground Seeding	Acres	2,193	\$112.18	\$0.00	\$246,000.00	\$0.00	\$0.00	\$246,000.00
S3	3	Aerial Seeding	Acres	4,800	\$95.50	\$0.00	\$458,000.00	\$0.00	\$0.00	\$458,000.00
S4										
S5										
S6										
S7										
S8										
S9										
S10										
S11										
S12	3	Closures (area, OHV, livestock)	#	1	\$7,000.00	\$0.00	\$3,000.00	\$2,000.00	\$3,000.00	\$8,000.00
S13	3	Monitoring	Acres	7,628	\$8.00	\$0.00	\$26,000.00	\$18,000.00	\$17,000.00	\$61,000.00
S14										
TOTAL COSTS (LF2200000)						\$3,000	\$747,000	\$27,000	\$27,000	\$804,000
OTHER FUND CODE TOTALS:										
TOTAL COSTS (???)										
TOTAL COSTS (???)										
TOTAL COSTS (???)										

Burned Area Rehabilitation (LF3200000)

Action/ Spec #	BAR Issue #	Planned Action	Unit (Acres, WMs, Number)	# Units	Unit Cost (If Appl.)	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Totals by Spec.
R1		Planning (Project Mgmt)		0		\$0.00	\$0.00	\$0.00	\$0.00	\$5,000.00	\$5,000.00	\$10,000.00
R2	1	Ground Seeding	Acres	2,000	\$41.30	\$0.00	\$83,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$83,000.00
R3												
R4												
R5	2	Noxious Weeds	Acres	7,628	\$3.41	\$0.00	\$6,000.00	\$6,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$27,000.00
R6												
R7	4	Fence/Gate/Cattleguard	Miles	4	\$2,500.00	\$0.00	\$10,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10,000.00
R8												
R9												
R10												
R11												
R12												
R13	4	Monitoring	Acres	7,628	\$7.21	\$0.00	\$13,000.00	\$11,000.00	\$10,000.00	\$11,000.00	\$10,000.00	\$55,000.00
R14												
TOTAL COSTS (LF3200000)						\$0	\$112,000	\$17,000	\$15,000	\$21,000	\$20,000	\$185,000
OTHER FUND CODE TOTALS:												
TOTAL COSTS (???)												
TOTAL COSTS (???)												
TOTAL COSTS (???)												

PART 2 - POST-FIRE RECOVERY ISSUES

EMERGENCY STABILIZATION ISSUES

1 - Human Life and Safety

The burned area is adjacent to Kinross Bald Mountain Mine which employs many people from White Pine, Eureka and Elko Counties. There is potential for large-scale soil movement onto the access roads to the mine, which are heavily traveled by employees and equipment. There are also concerns for major dust events, given the soil characteristics, topography and proximity to the Ruby Valley historical lake bed.

Flooding and mass sediment movement off the fire could close ranch and mine access roads, endangering workers and resulting in significant lost production to local landowners, ranchers and Bald Mountain Mine. Treatments proposed under ES Issue 3 would reduce erosion and help mitigate noxious and invasive weed establishment.

2 - Soil/Water Stabilization

The Overland Fire burned on the east side of the southern Ruby Mountain Range, upslope of mines, and access roads to ranches and Ruby Lake National Wildlife Refuge. Stabilization is needed to mitigate the possibility of debris flows and sediment damage, particularly to access roads in the area, and lessen wind and water erosion that may cause permanent habitat damage. The fire burned across soils that possess a significant wind erosion hazard and high runoff potential. Because perennial vegetation cover is an important component to control erosion, the burned area is at risk for loss of topsoil unless a perennial plant community can be established rapidly. Re-establishment of this community will be slow without treatment. With the present lack of plant cover due to the fire, the burned area is at a higher risk for experiencing accelerated soil erosion. Chaining trees and seeding desirable vegetation (see treatments proposed under ES Issue 3) will not only reduce threats downslope, but will also improve the watershed condition and initiate a trend towards meeting public land and health standards for soil and water for the area.

The Overland Fire burned across very shallow to very deep, well-drained, predominantly gravelly-, very gravelly-, very gravelly silt-, very gravelly fine sandy-, very stony-, very cobbly-loams across six map units (NRCS 2016). Soil depths to a restricted layer range from 6 to 60+ inches. In areas of moderate fire intensity, the fire consumed all surface vegetation, needles and needle cast leaving soils vulnerable to accelerated erosion from wind and water. Slopes within the fire perimeter range from 0.002% to 115%, but slope gradients of 8 to 36% are most typical (GIS data analysis). Infiltration rates on the site range from very slow (Hydrologic Group D) to moderate (Hydrologic Group B), when unprotected by vegetation, and surface runoff across the burned area is rated high to very high (NRCS 2016).

Soils within the fire perimeter are rated moderately to highly susceptible to damage from fire, particularly from water erosion and heat transfer by rock fragments (NRCS 2016). Some soils across the burned area exhibit varying amounts of gravels, cobbles, rock fragments, stones and/or coarse fragments on the surface and throughout the soil profile, ranging from 10% to 85% surface cover and 5% to 85% subsurface volume (NRCS, 2003; NRCS unpublished, 2015). Surface cover can help attenuate erosion (NRCS unpublished, 2015). However, where high vegetation mortality and relatively steep slopes exist, increased sheet and rill erosion can be

expected post-fire, especially in the presence of high intensity/long duration precipitation events and rain-on-snow events.

Field reviews within the burned area and experience following the 2012 Pinto Fire and 2015 Diamond Fires suggest increased sediment and dust flux on- and off-site can be expected from burned slopes and intermittent drainages, along with attendant effects to downslope/downwind values, vegetation, and water and air quality, until watershed cover reestablishes and slopes and channels re-stabilize. Proposed treatments would not eliminate these threats, but would likely reduce the threats to acceptable levels by decreasing runoff distances and increasing vegetation.

Post-fire erosion and increased sedimentation pose particular concerns for damage to roads as well as for loss of both topsoil and underlying horizons within the burned area that could make it more difficult for plant recruitment and establishment necessary for rehabilitation of priority greater sage-grouse and crucial elk, mule deer and pronghorn antelope habitat. Soil parent materials on the Overland Fire, derived largely from colluvium and alluvium, weathered from limestone, dolomite, quartzite, rhyolite, calcite, calcareous shale and welded tuff with depths up to 60 inches, indicate the availability of unconsolidated material available for transport by wind and water from mountains, hills and fan remnants post-fire.

Because of the high potential for water erosion in particular, reestablishing perennial grass, forb and shrub cover quickly is necessary to stabilize burned area soils. Proposed seeding and chaining treatments will help reestablish perennial cover, protect riparian areas/spring sources, mitigate accelerated soil loss and damage to roads and water quality/quantity, minimize establishment and expansion of undesirable, invasive annuals and noxious weeds, and support plant recruitment and establishment necessary for rehabilitation of crucial wildlife habitat and popular hunting and recreation areas.

3 - Habitat for Federal/State Listed, Proposed, or Candidate Species

The fire burned almost entirely in low (1A-1C) and moderate (2A-2C) resistance and resilience regimes. Ground and aerial seeding treatment areas have been focused primarily in low resistance and resilience areas (80% of the proposed chaining and 68% of the aerial applications). Additional treatment acres are proposed in areas modeled for moderate resistance/resilience (20% of the aerial polygon and 28% of the proposed chaining). No chaining is proposed in high resistance/resilience areas and only 5% of the proposed aerial treatment due to high burn severity, steep drainage topography and proximity of roads as vectors for invasive species spread.

The burned area contains approximately 81 acres of greater sage-grouse GHMA and 544 acres of OHMA. There are five greater sage-grouse leks located immediately northeast of the burned area. In addition to identified habitat, the eastern portion of the fire burned into the 2004 Chrome fire. During the fire, greater sage-grouse were spotted on multiple occasions within the Chrome fire burned area. The Chrome fire was successfully rehabilitated post-fire, using seeding and chaining methods also proposed in the Overland plan, resulting in additional, as yet unidentified, greater sage-grouse habitat. The NDOW is in the process of re-mapping greater sage-grouse habitat in the Chrome fire area, an area which has been recently identified as potential sage-grouse habitat. Similar results can be expected from the treatments proposed for the Overland Fire.

According to IM # FA IM-2012-017, from 05/14/2012, "Conservation of sagebrush habitat is the Bureau of Land Management's (BLM) number one conservation commitment". Additionally, IM # WO IM-2014-114 prioritizes emergency stabilization actions within and adjacent to greater sage-grouse habitat. The BLM's goal is to limit the damage from unwanted wildfires in sagebrush habitat by thorough planning before a fire, prompt action during a fire, and effective rehabilitation following a fire. Consequently, following the priority for firefighter

and public safety, offices will place a high priority and take appropriate action to minimize the size and adverse effects of unwanted wildfires in greater sage-grouse habitat. In addition, offices will place a high priority on planning and implementing fuels treatments that will reduce the start and spread of unwanted wildfires in greater sage-grouse habitat."

Greater sage-grouse rely heavily on the cover provided by shrubs, especially sagebrush, in nesting habitat. In general, greater sage-grouse nests are found under shrubs having larger canopies and more ground and lateral cover, as well as in stands with more shrub canopy cover. Grass height and cover are also important components of greater sage-grouse nest sites (Connelly et al. 2000). During winter, greater sage-grouse feed almost exclusively on leaves of sagebrush (Connelly et al. 2000). The seeding (see S2 and S3) is necessary to benefit greater sage-grouse habitat by reintroducing native perennial grass, forb and shrub species to the site.

Various sources within the publication *Restoring Western Rangelands* support this activity, including:

"Simply removing the trees does not ensure that the resulting vegetation mixture will be dominated by more desirable herbaceous and woody plants. Removing woody plants often results in increased cheatgrass densities. The vegetation resulting from disturbing western juniper woodlands may be considered as a greater environmental degradation than tree invasion."

"Communities of woody plants without the ability to resprout following top removal, such as big sagebrush and Utah juniper, are often destroyed by fire."

Juniper-pinyon sites that have been void of understory species for many years will most likely lack a sufficient seedbank (Naillon and others 1999; Poulsen and others 1999). On these sites, natural seeding will not occur"

"Using high seeding rates and planting techniques that may be less than optimal may be justified in certain situations. For example, aerial seeding of big sagebrush, winterfat, and rubber rabbitbrush followed by chaining or harrowing may not produce as many seedlings as using a modified ground seeder. However, satisfactory stands can be achieved, and savings in seeding costs more than compensate for losses of seed by broadcast seeding."

RMRS-GTR 136-v1,2 Chapters 12,17,19,21 (Monsen, Stephen B.; Stevens, Richard; Shaw, Nancy L., comps. 2004. Restoring western rangelands and wildlands. Gen. Tech. Rep. RMRS-GTR-136-vol-1. Fort Collins, CO; U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. Pages 1-294 plus index.

4 - Critical Heritage Resources

Prominent historic trails, such as Chorpenning's Mail, Central Overland, California (Hastings Cutoff), the Pony Express, and Wells Fargo trails, occur in the area of the fire. It is believed that trail operations were generally restricted to one trail and utilized from the 1850's-1880's. The trans-continental Overland Telegraph line also followed this trail. It is believed that there was no stopping point in the vicinity of the fire, given the absence of camp sites or structures within the burned area related to the trails. Within three miles of the burned area are Fort Ruby and the Ruby Station. Other probable trail routes in the area would be associated with wood cutters. This leads to the most common cultural sites (on a very limited scale) consisting of small dispersed camp dump type sites (modern and historic) associated with recreation and

wood cutting. Glass pieces remaining from insulators used on the telegraph line were discovered along the trail by the Resource Advisor assigned to the fire. Although the burned area is located adjacent to (within five miles) the Bald Mountain Mining District, there are no known associated trail routes, mining activities or features within the burned area.

5 - Invasive Plants and Weeds

See BAR Issue 2.

BURNED AREA RECOVERY ISSUES

1 - Lands Unlikely to Recover Naturally

See ES Issue 3

2 - Weed Treatments

Noxious weed species were observed by the resource advisor near the burn area including bull thistle (*Cirsium vulgare*), hoary cress (*Cardaria draba*), and musk thistle (*Carduus nutans*). Spotted knapweed (*Centaurea biebersteinii*), Canada thistle (*Cirsium arvense*), black henbane (*Hyoscyamus niger*), Russian knapweed (*Acroptilon repens*), and Scotch thistle (*Onopordum acanthium*) had previously been recorded on BLM-administered lands in the vicinity of the burned area. The noxious weed medusahead (*Taeniatherum caput-medusae*) is known to exist on Forest Service land to the north of the burned area, but is not yet present in White Pine County. Should medusahead become established within the burned area, adverse direct, indirect and cumulative effects to rangeland health would be expected within the burned area and White Pine County. Hoary cress, spotted knapweed, Russian knapweed, medusahead, Scotch thistle, and musk thistle are all included on the Nevada State Noxious Weed Species List (NAC 555.010).

Cheatgrass presence was varied within the fire perimeter pre-fire. However, previously burned areas and other disturbances adjacent to the burned area contain moderate cheatgrass infestations. Halogeton and Russian thistle were both present near disturbed sites within the burned area. Unseeded portions of recent wildfires in similar settings have experienced dramatic post-fire increases in cheatgrass density. Increased cheatgrass expansion is a concern. Following fire, natural regeneration of native perennial grasses, forbs and shrubs in the area has been limited, irrespective of the pre-fire condition.

3 - Tree Planting

N/A

4 - Repair/Replace Fire Damage to Minor Facilities

Approximately 4 miles of existing fence burned during the fire. A portion of this was utilized for controlling the movement of livestock and will need to be replaced. Other sections of the fence were in a state of disrepair before the fire. These fences pose a risk for wildlife and livestock, and could potentially cause damage to equipment during ES and BAR treatment implementation.

PART 3 - DESCRIPTION OF TREATMENTS

Issue 3 - Habitat for Federal/State Listed, Proposed, or Candidate Species

S2 Ground Seeding

A. Treatment/Activity Description

The proposed treatment is to chain approximately 2,193 acres of the burned area to incorporate aerially applied seed (see Issue 3, Treatment S3). As soon as possible after the S3 aerial seeding treatment is implemented, a one way chaining will be completed. Rocky areas and steep slopes that are unsuitable for chaining (slopes greater than 30%) will be seeded but not chained. Antelope bitterbrush will be applied using a dribbler attached to the bulldozer during the chaining treatment. Any identified cultural resources and unseeded control plots will be avoided by the chaining equipment. Chaining will occur after the seeding treatment to incorporate seeded species into the soil. This treatment will be implemented as soon as sagebrush seed is available. The Chrome fire (2004) chaining treatment was implemented using very similar techniques and was highly successful.

The area will be chained using two bulldozers, pulling a smooth anchor chain in a "J" formation. In accordance with the State Protocol Agreement between The Bureau of Land Management, Nevada and The Nevada State Historic Preservation Office for Implementing the National Historic Preservation Act (December 2014), a Cultural Resource Needs Assessment (CRINA) was prepared by a qualified BLM archaeologist during the Overland Pass Habitat Improvement Project. The CRINA will determine the levels of inventory for the proposed seeding, chaining and staging areas in accordance with the aforementioned Protocol. The Pony Express National Scenic and Historic Trail is less than one mile from the fire boundary. A visual assessment will be completed to determine visual integrity and retention of Visual Resource Inventory Class II and III standards as it relates to the proposed treatments.

B. How does the treatment relate to damage or changes caused by the fire?

The purpose of the treatment is to protect identified greater sage-grouse habitat and enhance adjacent habitat destroyed by the fire. The treatment will reduce soil erosion and recover habitat function by establishing plants where there is little or no seed source available post-fire. The perennial species proposed will provide a fibrous root mass that will stabilize soils and sequester carbon. The fire is also susceptible to invasion by cheatgrass, halogeton, common kochia and Russian thistle post-fire. The treatment would provide for earlier establishment of desired species and competition against invasive species dominance.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

Chaining, in conjunction with aerial seeding and other proposed treatments, is the most successful and cost-effective way to rapidly stabilize soils and provide long-term recovery of greater sage-grouse habitat. This information has been gathered through past field observations and monitoring data collected from the Whiterock Fire (2012), Lages Fire (2013) and Sampson Fire (2013).

Recovery of sagebrush and pinyon-juniper habitat with little understory will take years, and the most likely colonizer will be non-native annual grasses and forbs, leading to degradation of

greater sage-grouse and big game, wildlife habitat, poor production for livestock, and decreased opportunities for hunting and recreation. Re-treating the area once non-native annual grasses are established will require site preparation to remove the duff layer (harrowing @ \$60/acre), application of herbicide to control grasses (Imazapic @\$60/acre) and re-seeding, likely at higher rates to increase competition with non-natives (conservative estimate of seed mix at \$100/acre) for a total potential treatment cost of \$220/acre. Once annual grasses are established, more than one treatment may be necessary, so the conservative figure of \$220/acre may double or triple.

S3 Aerial Seeding

A. Treatment/Activity Description

Treatment Description: The proposed treatment is to aerially seed approximately 4,800 acres with a mixture of grass, forb and shrub seeds within the Overland Fire burned area, followed by a one-way chaining to maximize seed to soil contact on slopes less than 30% (see Issue 3, Treatment S2). Prior to the fire, the vegetation was primarily sagebrush (black, mountain and Wyoming) and pinyon-juniper, with a variable density perennial grass and forb understory. Seeding will occur in the fall/winter, as soon as sagebrush seed is available. As mentioned earlier, the NDOW has significant concerns for mule deer habitat loss associated with the Overland Fire and plans to partner with the BLM by contributing to the seeding treatment where possible. Additionally, the NDOW may contribute a second seed mix with basin big sage and a heavier forb component for some of the drainages that have potential to be greater sage-grouse brood rearing habitat.

B. How does the treatment relate to damage or changes caused by the fire?

Treatment Purpose: The Overland Fire burned on the eastern side slopes and toe slopes at the southern end of the Ruby Range adjacent to Bald Mountain. Soils in the burned area are susceptible to erosion by wind and water. The burned area is part of a recreation area that includes Ruby Lake National Wildlife Refuge and is popular for hunting and fishing.

Seeding, in conjunction with chaining is the most successful and cost-effective way to rapidly stabilize soils and provide long-term recovery of greater sage-grouse and big-game wildlife habitat. The fire consumed all surface vegetation, removing habitat for greater sage-grouse and other wildlife. Site stabilization is critical for the re-vegetation of habitat, and vegetation re-establishment will be slow without supplemental seeding. Establishing a desirable perennial plant community would improve the watershed condition and help mitigate erosion risk and soil loss concerns.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

Given the above description of the crucial nature of habitat on the piedmont for greater sage-grouse, elk, antelope and mule deer, treatments on the Overland fire are a high priority for habitat protection. Burned areas in the same valley from the 1980s and 1990s depict a clear story of the post-fire values at risk. The 2004 Chrome fire and the 2015 Blue Jay fire were seeded and chained and have rehabilitated from overgrown pinyon-juniper woodland with no understory to greater sage-grouse habitat that also meets a multiple use objective. Fires that were not treated are largely dominated by cheatgrass. Aerial seeding followed by chaining has a high probability of success, and the proposed species have been selected based on ecological site descriptions and their success in other treatments in surrounding areas.

Seeding is addressed in the Ely District Programmatic Emergency Stabilization and Rehabilitation Plan (Appendix G, Ely RMP):

"Seeding may be necessary in order to stabilize soils or reestablish a desirable perennial plant community within a reasonable time frame. Seeding may also be used to prevent spread of non-native invasive weeds within the fire area by providing competing vegetation. If seeding is determined as a suitable treatment, the following steps should be evaluated and initiated as needed.

a. Site preparation.

- Herbicide use prior to seeding

Where invasive, non-native plant species become established prior to seeding, herbicides may be used to reduce their cover and density. Reducing invasive species allows for better establishment of seeded species by reducing competition. Direct treatment of invasive species is allowable as part of emergency stabilization plans when action is determined necessary and when standard, validated, treatments are used.

b. Seed Mixes.

- Native and introduced species

Seed mixes should be created on a site-specific basis taking into account the pre-fire vegetation community, probability of success, wildlife needs, the presence or absence of invasive species, and site characteristics on a watershed scale. A mixture of native and introduced species may be used for site stabilization or rehabilitation. This mixture is most useful when rapid establishment is necessary for site (soil) stabilization as it is often the perennial grasses that will become established first. For emergency stabilization seed mixes, only species that will be effective within three years should be used."

S12 Closures (area, OHV, livestock)

A. Treatment/Activity Description

The Overland Fire burned in the Warm Springs Allotment. The burned area will be closed to livestock grazing until monitoring data indicates that vegetation recovery objectives have been met (see Monitoring Plan). A recovery objective of three or more permanently established desirable perennial plants per square meter will be measured in the seeded areas. The objective must be met before livestock grazing can resume.

The Warm Springs allotment is owned by Bald Mountain Mine and is not actively used for livestock grazing. Livestock will be kept out of the burned area using existing fences and water manipulation. The allotment Rangeland Management Specialist will coordinate with the permittee on a yearly basis to ensure livestock closure is effective until vegetation recovery objectives have been met.

B. How does the treatment relate to damage or changes caused by the fire?

The wildfire either killed or stressed the native plants that were on-site prior to the disturbance. Rest from additional disturbance in the form of livestock grazing and recreation is needed to ensure a healthy recovery for the remaining live plants on-site and to protect the investment of seeded/planted species by allowing them time to germinate and/or establish and thrive. Livestock grazing actions that will either benefit or cause no harm to vegetation objectives would also ensure healthy recovery of the area.

On an annual basis, an interdisciplinary team and affected parties may visit the burned area and evaluate the site. The interdisciplinary team will determine if recovery objectives are met, and if recovery objectives are not met, management will determine appropriate actions for future management of the area. The livestock closure should ultimately aid in the stabilization of soils and preventing a permanent-type conversion to an invasive annual grassland community by allowing naturally regenerating and seeded species to become established permanently.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

Closure of the burned area to livestock during the recovery period would protect the seeding investment and increase the likelihood of recovery. The livestock closure is consistent with ES&R policy which states, "Livestock are to be excluded from burned areas until monitoring results, documented in writing, show emergency stabilization and rehabilitation objectives have been met. Before livestock grazing can resume, monitoring must show that objectives have been met. In the case of treatment failure, other factors may need to be considered." (pages 35-36, H-1742-1, Burned Area ES&R Handbook).

S13 Monitoring

A. Treatment/Activity Description

See Part 8 - Monitoring Plan.

B. How does the treatment relate to damage or changes caused by the fire?

See Part 8 - Monitoring Plan.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

See Part 8 - Monitoring Plan.

Issue 1 - Lands Unlikely to Recover Naturally

R2 Ground Seeding

A. Treatment/Activity Description

The proposed treatment is to chain approximately 2,193 acres of the burned area to incorporate aerially applied seed (see Issue 3, Treatment S3). As soon as possible after the S3 aerial seeding treatment is implemented, a one way chaining will be completed. Rocky areas and steep slopes that are unsuitable for chaining (slopes greater than 30%) will be seeded but not chained. Antelope bitterbrush will be applied using a dribbler attached to the bulldozer during the chaining treatment. Any identified cultural resources and unseeded control plots will be avoided by the chaining equipment. Chaining will occur after the seeding treatment to incorporate seeded species into the soil. This treatment will be implemented as soon as sagebrush seed is available. The Chrome fire (2004) chaining treatment was implemented using very similar techniques and was highly successful.

The area will be chained using two bulldozers, pulling a smooth anchor chain in a "J" formation. In accordance with the State Protocol Agreement between The Bureau of Land

Management, Nevada and The Nevada State Historic Preservation Office for Implementing the National Historic Preservation Act (December 2014), a Cultural Resource Needs Assessment (CRINA) was prepared by a qualified BLM archaeologist during the Overland Pass Habitat Improvement Project. The CRINA will determine the levels of inventory for the proposed seeding, chaining and staging areas in accordance with the aforementioned Protocol. The Pony Express National Scenic and Historic Trail is less than one mile from the fire boundary. A visual assessment will be completed to determine visual integrity and retention of Visual Resource Inventory Class II and III standards as it relates to the proposed treatments.

B. How does the treatment relate to damage or changes caused by the fire?

The purpose of the treatment is to protect identified greater sage-grouse habitat and enhance adjacent habitat destroyed by the fire. The treatment will reduce soil erosion and recover habitat function by establishing plants where there is little or no seed source available post-fire. The perennial species proposed will provide a fibrous root mass that will stabilize soils and sequester carbon. The fire is also susceptible to invasion by cheatgrass, halogeton, common kochia and Russian thistle post-fire. The treatment would provide for earlier establishment of desired species and competition against invasive species dominance.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

Chaining, in conjunction with aerial seeding and other proposed treatments, is the most successful and cost-effective way to rapidly stabilize soils and provide long-term recovery of greater sage-grouse habitat. This information has been gathered through past field observations and monitoring data collected from the Whiterock Fire (2012), Lages Fire (2013) and Sampson Fire (2013).

Recovery of sagebrush and pinyon-juniper habitat with little understory will take years, and the most likely colonizer will be non-native annual grasses and forbs, leading to degradation of greater sage-grouse and big game, wildlife habitat, poor production for livestock, and decreased opportunities for hunting and recreation. Re-treating the area once non-native annual grasses are established will require site preparation to remove the duff layer (harrowing @ \$60/acre), application of herbicide to control grasses (Imazapic @\$60/acre) and re-seeding, likely at higher rates to increase competition with non-natives (conservative estimate of seed mix at \$100/acre) for a total potential treatment cost of \$220/acre. Once annual grasses are established, more than one treatment may be necessary, so the conservative figure of \$220/acre may double or triple.

Issue 2 - Weed Treatments

R5 Noxious Weeds

A. Treatment/Activity Description

Hoary cress, Russian knapweed, spotted knapweed, black henbane, musk thistle, Scotch thistle and Canada thistle were recorded in or near the burned area prior to the fire, and plants have established themselves in nearby burned areas. The existing noxious weed species will be treated with chemical, mechanical or manual treatments. Any herbicide used will be approved for use on BLM lands.

The burned area would be surveyed for newly introduced noxious weed populations. Identified populations would be mapped using Ely District Office weed mapping protocols. These data

would be immediately provided to the ES&R and Noxious Weed Coordinators. If single plants are found in the area, and hand removal would successfully eliminate the population, then crews will remove the plants by hand. If multiple plants are found to be establishing, the ES&R and the Noxious Weed Coordinators will be notified immediately. If necessary, a plan amendment requesting additional funding will be written to address the new weed establishment. If establishing populations are too large for hand removal, herbicides may be used. If the use of herbicides is deemed necessary, only herbicides approved for BLM will be used.

B. How does the treatment relate to damage or changes caused by the fire?

Thistles are extremely opportunistic to disturbance, and seed already in the soil is resistant to fire. The burned area is susceptible to rapid expansion and colonization by thistles if the area is not treated.

The fire removed vegetation and has now opened the area to colonization from non-native and noxious species. The goal of this treatment is to prevent the permanent establishment of any newly developing noxious weed populations in the burned area. The treatment is proposed, because the cost of permitting noxious weeds to spread to unmanageable populations is not economically or ecologically responsible. Given that noxious species are already present within the burn, the chance of establishment is high. The treatment is justified since it is inexpensive and will ensure that any newly established noxious weed populations are discovered, mapped, and described so that they can be effectively treated as soon as possible.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

The ESR Handbook states, "ES&R funds can be used to control non-native invasive plants within burned areas when it can be documented that those plants may quickly invade or hamper reestablishment of native vegetation or adversely affect the establishment or maintenance of a seeding." (Page 34, H-1742-1, Burned Area ES&R Handbook).

The cost of inventory and treatment is very low compared to contending with noxious/invasive weed establishment. The action consists of unobtrusive data collection and will help to locate, describe and map any noxious/invasive weed populations within the burned area, making it easier to treat them quickly before they grow to sizes that are very costly or impossible to treat.

Issue 4 - Repair/Replace Fire Damage to Minor Facilities

R7 Fence/Gate/Cattleguard

A. Treatment/Activity Description

Approximately 4 miles of affected fences lie predominantly on the western side of the burned area. All affected fences would be assessed and repaired or removed. Removal and/or repair would be coordinated through the allotment's assigned Rangeland Management Specialist.

B. How does the treatment relate to damage or changes caused by the fire?

Downed fence material can be hazardous to livestock and wildlife, and could potentially

damage heavy equipment during implementation of the chaining (see S2 - Ground Seeding). If the fences were being utilized prior to the fire, they would likely be repaired, while unutilized or unmaintained fences would be removed.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

Existing fences which are repaired would aid in protecting the burned area and would also continue to function as they did prior to the fire.

R13 Monitoring

A. Treatment/Activity Description

See Part 8 - Monitoring Plan.

B. How does the treatment relate to damage or changes caused by the fire?

See Part 8 - Monitoring Plan.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

See Part 8 - Monitoring Plan.

PART 4 - DETAILED TREATMENT COST TABLE

Action / Spec #	Action Description	Unit Type	# Units	Unit Cost	FY16	FY17	FY18	FY19	FY20	FY21	Total Cost
S1	Planning (Project Management)										
1	Planning/Project Managemnt	WM'S	3	\$9,000.00	\$2,500.00	\$9,000.00	\$7,000.00	\$7,000.00			\$25,500.00
2	NVSO/WO Planning	WM'S	1	\$0.00	\$0.00	\$5,000.00	\$0.00	\$0.00			\$5,000.00
	Total			\$9,000.00	\$3,000.00	\$14,000.00	\$7,000.00	\$7,000.00			\$31,000.00
S2	Ground Seeding ES Issue 3										
1	Project Management	Total	1	\$0.00	\$0.00	\$9,000.00	\$0.00	\$0.00			\$9,000.00
2	Seeding Prep	Total	1	\$0.00	\$0.00	\$18,000.00	\$0.00	\$0.00			\$18,000.00
3	Cultural Clearance	Acres	2,000	\$0.00	\$0.00	\$20,000.00	\$0.00	\$0.00			\$20,000.00
4	Chaining	Acres	2,000	\$99.50	\$0.00	\$199,000.00	\$0.00	\$0.00			\$199,000.00
	Total			\$99.50	\$0.00	\$246,000.00	\$0.00	\$0.00			\$246,000.00
S3	Aerial Seeding ES Issue 3										
1	Project Management/Planning	WM'S	1	\$0.00	\$0.00	\$4,500.00	\$0.00	\$0.00			\$4,500.00
2	Seed Material Cost	LBS (Pounds)	61,000	\$5.94	\$0.00	\$362,133.00	\$0.00	\$0.00			\$362,133.00
3	RSW Handling	LBS (Pounds)	61,000	\$0.25	\$0.00	\$15,250.00	\$0.00	\$0.00			\$15,250.00
4	Seeding Prep	Total	1	\$0.00	\$0.00	\$33,324.00	\$0.00	\$0.00			\$33,324.00
5	Aerial Application	Acres	4,800	\$0.00	\$0.00	\$43,200.00	\$0.00	\$0.00			\$43,200.00
	Total			\$6.19	\$0.00	\$458,000.00	\$0.00	\$0.00			\$458,000.00
S12	Closures (area, OHV, livestock) ES Issue 3										
1	Manage Closure	WM'S	1	\$0.00	\$0.00	\$2,500.00	\$2,000.00	\$2,500.00			\$7,000.00
	Total			\$0.00	\$0.00	\$3,000.00	\$2,000.00	\$3,000.00			\$8,000.00
S13	Monitoring ES Issue 3										
1	Monitoring Implementation	Total	22,884	\$0.00	\$0.00	\$18,000.00	\$13,000.00	\$12,000.00			\$43,000.00
2	Monitoring Equipment	Total	1	\$0.00	\$0.00	\$8,000.00	\$5,000.00	\$5,000.00			\$18,000.00
	Total			\$0.00	\$0.00	\$26,000.00	\$18,000.00	\$17,000.00			\$61,000.00
ES	Grand Total	ES		\$9,105.69	\$3,000.00	\$747,000.00	\$27,000.00	\$27,000.00			\$804,000.00
Action / Spec #	Action Description	Unit Type	# Units	Unit Cost	FY16	FY17	FY18	FY19	FY20	FY21	Total Cost
R1	Planning (Project Mgmt)										
1	NVSO/WO Planning	WM'S	1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,500.00	\$4,500.00	\$9,000.00
2	Planning/Project Managemnt	WM'S	3	\$9,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Total			\$9,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,000.00	\$5,000.00	\$10,000.00
R2	Ground Seeding BAR Issue 1										
1	RSW Handling Fee	Total	2,000	\$0.25	\$0.00	\$500.00	\$0.00	\$0.00	\$0.00	\$0.00	\$500.00

2	Seeding Prep	Total	1	\$0.00	\$0.00	\$12,200.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12,200.00
3	Seed Material Cost	LBS (Pounds)	2,000	\$24.45	\$0.00	\$48,900.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48,900.00
4	Project Management	Total	1	\$0.00	\$0.00	\$9,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$9,000.00
5	Dribbler Seeding Seeding	Acres	2,000	\$0.00	\$0.00	\$12,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12,000.00
	Total			\$24.70	\$0.00	\$83,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$83,000.00
R5	Noxious Weeds BAR Issue 2										
1	Treatment/Inventory	Acres	5,862	\$5.00	\$0.00	\$3,500.00	\$3,500.00	\$3,000.00	\$3,000.00	\$3,000.00	\$16,000.00
2	Project Management	WM'S	1	\$9,000.00	\$0.00	\$2,000.00	\$2,000.00	\$2,000.00	\$2,000.00	\$2,000.00	\$10,000.00
	Total			\$9,005.00	\$0.00	\$6,000.00	\$6,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$27,000.00
R7	Fence/Gate/Cattleguard BAR Issue 4										
1	Fence Removal	Miles	4	\$2,500.00	\$0.00	\$10,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10,000.00
	Total			\$2,500.00	\$0.00	\$10,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10,000.00
R13	Monitoring BAR Issue 4										
1	Monitoring Equipment	Total	1	\$0.00	\$0.00	\$4,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$2,000.00	\$15,000.00
2	Monitoring Implementation	Total	22,884	\$0.00	\$0.00	\$9,000.00	\$8,000.00	\$7,000.00	\$8,000.00	\$8,000.00	\$40,000.00
	Total			\$0.00	\$0.00	\$13,000.00	\$11,000.00	\$10,000.00	\$11,000.00	\$10,000.00	\$55,000.00
BAR	Grand Total			\$20,529.70	\$0.00	\$112,000.00	\$17,000.00	\$15,000.00	\$21,000.00	\$20,000.00	\$185,000.00
Project	Grand Total			\$29,635.39	\$3,000.00	\$859,000.00	\$44,000.00	\$42,000.00	\$21,000.00	\$20,000.00	\$989,000.00

PART 5 - SEED LISTS

DRILL SEED

Overland Dribbler

Species	Scientific Name	PLS	PLS Seeds / sq. ft.	PLS Seeds / ac.	Seeds / lb (bulk)	Total Seeds / Acre (Bulk)	Drill Seedings (Acre)	PLS Lbs / Acre	Total PLS Lbs	Total Bulk Lbs	Cost / Lb	Total Cost
Antelope Bitterbrush	Purshia tridentata	0.7650	0.34	14,810	19,000	19,360	2,000.0	0.8	1,540.0	2,000.0	\$ 24.45	\$48,900.00
TOTALS:			0.34	14,810	19,000	19,360		0.8	1,540.0	2,000.0	\$ 24.45	\$48,900.00

AERIAL SEED

Overland Stabilization

Species	Scientific Name	PLS	PLS Seeds / sq. ft.	PLS Seeds / ac.	Seeds / lb (bulk)	Total Seeds / Acre (Bulk)	Aerial Seedings (Acre)	PLS Lbs / Acre	Total PLS Lbs	Total Bulk Lbs	Cost / Lb	Total Cost
Great Basin Wildrye, Tetra	Leymus cinereus	0.7650	3.04	132,422	144,000	173,101	4,800.0	0.9	4,416.0	5,750.0	\$ 12.44	\$71,530.00
Indian Ricegrass, Nezpar	Achnatherum hymenoides (Roemer & J.A. Schultes) Ba	0.7600	4.37	190,357	235,000	250,470	4,800.0	0.8	3,888.0	5,100.0	\$ 4.61	\$23,511.00
Meadow Brome, Cache	Bromus biebersteinii	0.7700	1.94	84,506	71,000	109,749	4,800.0	1.2	5,712.0	7,450.0	\$ 5.00	\$37,250.00
Mountain Big Sagebrush, Mountain	Artemisia tridentata vaseyana	0.1600	7.25	315,810	1,973,117	1,973,813	4,800.0	0.2	768.0	4,800.0	\$ 6.59	\$31,632.00
Sainfoin, Eski (Certified)	Onobrychis viciifolia	0.8075	0.55	23,958	30,240	29,669	4,800.0	0.8	3,792.0	4,700.0	\$ 2.33	\$10,951.00
Upright Prairie Coneflower (Red Mexican Hat), Stillwater	Ratibida columnifera	0.7200	4.23	184,259	737,104	255,915	4,800.0	0.3	1,200.0	1,700.0	\$ 11.66	\$19,822.00
Blue flax, Appar	Linum perenne	0.7600	5.15	224,334	295,000	295,176	4,800.0	0.8	3,648.0	4,800.0	\$ 4.36	\$20,928.00
Siberian Wheatgrass, Stabilizer (Certified)	Agropyron fragile	0.8075	5.72	249,163	206,000	308,561	4,800.0	1.2	5,808.0	7,200.0	\$ 3.28	\$23,616.00
Sandberg bluegrass, Reliable (Selected)	Poa secunda spp. secunda	0.7200	17.31	754,024	1,046,960	1,047,255	4,800.0	0.7	3,456.0	4,800.0	\$ 5.45	\$26,160.00

Slender Wheatgrass, First Strike	Elymus trachycaulus	0.8500	3.94	171,626	135,000	201,913	4,800.0	1.3	6,096.0	7,200.0	\$ 3.49	\$25,128.00
Small Burnet, Delar	Sanguisorba minor	0.7600	0.85	37,026	48,745	48,718	4,800.0	0.8	3,648.0	4,800.0	\$ 1.86	\$8,928.00
Western Yarrow, Eagle	Achillea millefolium var. occidentalis	0.8100	12.53	545,807	3,411,818	673,836	4,800.0	0.2	768.0	950.0	\$ 33.26	\$31,597.00
Rocky Mountain Beeplant	Cleome serrulata	0.7600	0.46	20,038	74,400	26,365	4,800.0	0.3	1,296.0	1,750.0	\$ 17.76	\$31,080.00
TOTALS:			67.34	2,933,330	8,408,384	5,394,542		9.3	44,496.0	61,000.0	\$ 112.09	\$362,133.00

SEEDLINGS

Seedling Species	Scientific Name	Acres of Seedlings planted.	# of Seedlings per Acre	Total # of Seedlings	Cost / Seedling	Total Cost
TOTALS:		0.0	0	0		\$ 0.00

PART 6 - NATIVE/NON-NATIVE PLANT WORKSHEET

A. Proposed Native Plants in Seed Mixtures (Both ES & BAR Treatments)

1. Are the native plants proposed for seeding adapted to the ecological sites in the burned area?

Yes ☒ No ☐ Rationale:

Species selected for the Overland Fire seed mixes were done so with consideration towards time and ease of establishment, persistence, soil stabilization, competition, ability to tolerate drought, and successful establishment from aerial seeding. Each of the species selected meets one or more of these objectives. Monitoring reports from previous fires in the Ely District, the USDA-NRCS Plants Database (www.plants.usda.gov), the USDA Forest Service Fire Effects Information System (www.fs.fed.us/database/feis) and site appropriate USDA-NRCS ecological site descriptions were consulted in the selection of the species.

Basin wildrye (*Leymus cinereus*), Sandberg's bluegrass (*Poa secunda*), Indian ricegrass (*Achnatherum hymenoides*), mountain big sagebrush (*Artemisia tridentata vaseyana*) and antelope bitterbrush (*Purshia tridentata*) are all primary plant species on the ecological site descriptions for this fire and were observed during field reconnaissance. Slender wheatgrass (*Elymus trachycaulus*), prairie coneflower (*Ratibida columnifera*), Rocky Mountain beeplant (*Cleome serrulata*) and western yarrow (*Achillea millefolium*), while not noted on the ecological site descriptions for this site, are known to have established successfully on nearby burns (Chrome Fire, 2004; Pinto Fire, 2012), are appropriate to the soils on the site and are noted for their abilities to minimize erosion or weed invasion/reestablishment.

Basin wildrye's drought tolerance and fibrous root system make it well adapted to stabilizing disturbed soils. It does well as a pioneer plant and once established can tolerate long periods of drought. Indian ricegrass is used frequently to stabilize sites susceptible to wind erosion. Its' fibrous root system also slows runoff and increases infiltration. The Ely District has had good success with aerial seedling establishment of Indian ricegrass. Sandberg bluegrass is a pioneer (early colonizing species) on rangeland disturbances. Plants of the Sandberg bluegrass complex have extensive, deep penetrating, coarse, fibrous roots that make them quite drought tolerant and resistant to grazing and trampling.

Mountain big sagebrush has a wide range of adaptation and establishes easily by drill or broadcast when planted correctly. Seedlings are compatible with grasses, forbs and other shrubs and plants spread readily by seed. Antelope bitterbrush is an important native browse shrub in the intermountain Western United States. It provides high quality, important spring and winter browse for antelope, deer, and elk. Slender wheatgrass is noted for its' good seedling vigor and establishment qualities. Seedlings are vigorous and provide good initial plant cover in seed mixtures. Plants tend to be short-lived, thus giving other plants a chance to become established.

Rocky Mountain beeplant is a native forb that performs well in disturbed areas, helping to reduce erosion. It has been observed growing in disturbed areas in Newark Valley near the Pinto Fire. Prairie coneflower is considered a desirable spring browse plant for big game animals, and the seed is preferred by several species of upland birds and small mammals. It does well on a variety of soil types, including loams and rocky to gravelly-sandy textures.

2. Is seed or seedlings of native plants available in sufficient quantity for the proposed project?

Yes ☒ No ☐ Rationale:

The proposed seeds are generally available in large enough quantities for the project. However, given recent fires in similar community types in other districts, seed availability cannot be guaranteed, and we are prepared to make substitutions.

3. Is the cost and/or quality of the native seed reasonable given the project size and approved field unit management and Plan objectives?

Yes ☒ No ☐ Rationale:

The costs for native seed are considered reasonable and acceptable given RMP and ESR plan objectives. Successful seeding will mitigate diminishment of rangeland health, including identified greater sage-grouse habitat, crucial winter mule deer habitat and elk and pronghorn habitat, as well as important ecosystem services such as carbon sequestration, and long-term impacts to visual resources.

4. Will the native plants establish and survive given the environmental conditions and the current or future competition from other species in the seed mix or from exotic plants?

Yes ☒ No ☐ Rationale:

The native plants were chosen for this site according to the NRCS Rangeland Ecological Site descriptions for the area, as well as from site observations and previous treatment experiences. Depending on climate and soil conditions, some species may establish earlier or more vigorously than others. Time and ease of establishment, persistence, soil stabilization, climatic adaptability, competition with other species and greater sage-grouse and big-game suitability were considered in the selection of species for the seed mixes. Experience and seeding recommendations suggest that late fall aerial application will provide the best results for most of the species selected. However, prolonged drought conditions could diminish or delay successful establishment of the seeding. According to Monson et al (2004), "There is no substitute (manipulation, management) for proper species selection....The factor that most often leads to project failure is the use of un-adapted species (pg. 122)."

5. Will the existing or proposed land management practices (e.g. wildlife populations, recreation use, livestock, etc.) maintain the seeded native plants in the seed mixture when the burned area is re-opened?

Yes ☒ No ☐ Rationale:

A review of livestock grazing activities on the affected allotment is already in progress. Rangeland Management Specialists and the ESR team are working to implement a grazing plan that will maintain the seeded species once the burn is re-opened. Closure of a burned area to livestock grazing is generally achieved using temporary fencing; however due to topography, cultural, and logistical concerns, a temporary fence is not being considered for this fire. Instead, livestock will be kept out of the burned area using water and mineral placement away from the burned area, herding, and previously existing fences. Wildlife species such as elk and mule deer could potentially negatively impact the success of the proposed seeding treatments, but impacts are expected to be minimal. Negative impacts from wild horses would be expected to be much greater than the impacts caused by other wildlife.

B. Proposed Non-native Plants in Seed Mixtures (Both ES & BAR Treatments)

1. Is the use of non-native plants necessary to meet objectives, e.g., consistent with applicable approved field unit management plans?

Yes ☒ No ☐ Rationale:

The use of the non-native forbs blue flax (*Linum perenne*) , Eski sainfoin (*Onobrychis viciifolia*) and small burnet (*Sanguisorba minor*), and the non-native grasses Siberian wheatgrass (*Agropyron fragile*) and meadow brome (*Bromus biebersteinii*) are necessary to provide quickly establishing non-invasive species to help stabilize soils and avoid dominance by invasive species such as cheatgrass (*Bromus tectorum*). The non-native forb small burnet is being used as wildlife forage, and will also establish strong root systems quickly, thereby mitigating erosion and soil loss issues. Appar blue flax has been seeded on previous burns in the area (Chrome Fire, 2004; Blue Jay Fire, 2015). It has established well, appears to compete well with cheatgrass and is avoided by horses, which will indirectly aid in soil stabilization. Siberian wheatgrass is a long-lived, cool season, drought tolerant, and winter hardy grass with extensive root systems. It is well adapted to stabilization of disturbed soils. Siberian wheatgrass retains its greenness into late summer. Meadow brome plants provide good ground cover in the first and second seasons. Spring greenup is rapid, and plants provide excellent early spring and summer herbage for game and livestock.

These species have a strong history in reclamation and erosion control, they stay green with relatively high moisture during fire season, and so are considered fire resistant, normally germinate in the first growing season and have excellent drought tolerance.

2. Will non-native plants meet the objective(s) for which they are planted without unacceptably diminishing diversity and disrupting ecological processes (nutrient cycling, water infiltration, energy flow, etc.) in the plant community?

Yes ☒ No ☐ Rationale:

The non-native plants chosen will serve to protect the area from soil erosion and diminish the opportunities for much more aggressive invasive species to dominate the habitat. The non-native species will help to reduce the use of resources by invasive species such as cheatgrass. Time and ease of establishment, persistence, soil stabilization, climatic adaptability, and competition with native species were considered in the selection of these species and the mix rates designated. Previous use of these species suggests they can be planted without unacceptably diminishing diversity or disrupting normal ecological process.

3. Will non-native plants stay on the site they are seeded and not significantly displace or interbreed with native plants?

Yes ☒ No ☐ Rationale:

The non-native species proposed are not expected to significantly displace or interbreed with native species, based on previous use; however the possibility always exists that out-crossing may occur and that seeded species may spread from the site in which they were seeded.

C. Proposed Seed Species - Native & Non-Natives (Both ES & BAR Treatments)

Non-native Plants	Native Plants
Blue flax, Appar (<i>Linum perenne</i>)	Antelope Bitterbrush (<i>Purshia tridentata</i>)
Sainfoin, Eski (Certified) (<i>Onobrychis viciifolia</i>)	Great Basin Wildrye, Tetra (<i>Leymus cinereus</i>)
Siberian Wheatgrass, Stabilizer (Certified) (<i>Agropyron fragile</i>)	Indian Ricegrass, Nezpar (<i>Achnatherum hymenoides</i> (Roemer & J.A. Schultes) Ba)
Small Burnet, Delar (<i>Sanguisorba minor</i>)	Meadow Brome, Cache (<i>Bromus biebersteinni</i>)
	Mountain Big Sagebrush, Mountain (<i>Artemisia tridentata vaseyana</i>)
	Rocky Mountain Beeplant (<i>Cleome serrulata</i>)
	Sandberg bluegrass, Reliable (Selected) (<i>Poa secunda</i> spp. <i>secunda</i>)
	Slender Wheatgrass, First Strike (<i>Elymus trachycaulus</i>)
	Upright Prairie Coneflower (Red Mexican Hat), Stillwater (<i>Ratibida columnifera</i>)
	Western Yarrow, Eagle (<i>Achillea millefolium</i> var. <i>occidentalis</i>)

PART 7 - COST-RISK ANALYSIS

A. Probability of Treatments Successfully Meeting Objectives

Action/ Spec #	ES Issue #	Planned ES Action (LF2200000)	Unit (acres, WMs, Number)	# Units	Total Cost	% Probability of Success
S2	3	Ground Seeding	Acres	2193	\$246,000.00	80%
S3	3	Aerial Seeding	Acres	4800	\$458,000.00	75%
S12	3	Closures (area, OHV, livestock)	#	1	\$8,000.00	90%
S13	3	Monitoring	Acres	7628	\$61,000.00	95%
					\$773,000.00	
Action/ Spec #	BAR Issue #	Planned BAR Action (LF3200000)	Unit (acres, WMs, Number)	# Units	Total Cost	% Probability of Success
R2	1	Ground Seeding	Acres	2000	\$83,000.00	75%
R5	2	Noxious Weeds	Acres	7628	\$27,000.00	80%
R7	4	Fence/Gate/Cattleguard	Miles	4	\$10,000.00	90%
R13	4	Monitoring	Acres	7628	\$55,000.00	95%
					\$175,000.00	

B. Cost Risk Summary

1. Are the risks to natural resources and private property acceptable as a result of the fire if the following actions are taken?

Proposed Action Yes ☒ No ☐ Rationale for Answer:

The aerial seeding, chaining, weed treatments and livestock closure will minimize soil erosion, provide competition against initial noxious and invasive species establishment and will minimize the opportunity for invasive species to dominate the area. The closure will allow the burned area rest from grazing while naturally regenerating and seeded species begin to establish. This will provide an advantage to native species that will maintain the integrity of the ecosystem for mule deer, elk, pronghorn antelope and greater sage-grouse habitat. The treatments will also reduce long-term visual impacts.

No Action Yes ☐ No ☒ Rationale for Answer:

If we lose the one year treatment window, the site would more than likely see accelerated erosion and a large increase in invasive annual grasses and forbs and other noxious and invasive weeds. The likelihood of the remaining stands of native shrubs, grasses and forbs adjacent to the burn naturally seeding the area prior to the occupation of invasive species is very low. Without treatment, state and transition models (NRCS, 2015) suggest the area could begin to evolve into an invasive annual dominated site with reduced soil productivity and species diversity, further diminishing wildlife habitat and likely increasing the fire recurrence to an unnatural state.

Alternative(s) Yes ☐ No ☒ Rationale for Answer:

2. Is the probability of success of the proposed action, alternatives or no action acceptable given their costs?

Proposed Action Yes ☒ No ☐ Rationale for Answer:

Current and prior monitoring data (from the 2014 Cottonwood fire, 2013 North Creek fire, 2012 North Schell, Range and Whiterock fires, 2009 Ryegrass fire, 2004 Chrome fire and 2015 Blue Jay fire), species information presented in the USDA-NRCS Plants Database (www.plants.usda.gov) and the USDA Forest Service Fire Effects Information System (www.fs.fed.us/database/feis), show that the proposed species can be successfully seeded in the soil types and precipitation regimes present in the burned area. Previous monitoring data indicate successful treatment results using similar treatments to those proposed in this plan. Chaining will help incorporate the aerially applied seed into the soil, create microsites for seeded species, help protect soils and reduce the risk of excessive sedimentation into springs

and drainages down-watershed and provide microsites for seedling establishment. The cost of rehabilitating this area into viable sage grouse habitat once again is acceptable when compared to the alternative.

No Action Yes ☐ No ☒ Rationale for Answer:

There would be no monetary costs associated with no action, but no resource benefits would be realized within the burned area and further degradation of the habitat would continue. Ecological costs associated with loss of native communities, further loss of habitat for mule deer, elk, pronghorn, and greater sage-grouse, and threats to down-watershed riparian areas from aggravated soil erosion are too great to warrant no action.

Alternative(s) Yes ☐ No ☒ Rationale for Answer:

3. Which approach will most cost-effectively and successfully attain the objectives and therefore is recommended for implementation from a Cost/Risk Analysis standpoint?

Proposed Action ☒

Alternative(s) ☐

No Action ☐

Comments:

Long-term costs of accelerated soil erosion, noxious weed and invasive annual grass expansion, lost species diversity and habitat, including essential greater sage-grouse habitat, may be very costly given the potential of an increasingly frequent fire regime, lost soil productivity, and long recovery times that could be created in the area. The cost of the proposed risk is reasonable considering the benefits to the long-term health and stability of the area.

C. Risk of Resource Value Loss or Damage

No Action - Treatments not Implemented

Resource Value	N/A	None	Low	Med	High
Unacceptable Loss of Topsoil					X
Weed Invasion					X
Unacceptable Loss of Vegetation Diversity				X	
Unacceptable Loss of Vegetation Structure				X	
Unacceptable Disruption of Ecological Processes					X
Off-site Sediment Damage to Private Property				X	
Off-site Threats to Human Life				X	
Other-loss of Access Road Due to Plugged Culverts				X	

Proposed Action - Treatments Successfully Implemented

Resource Value	N/A	None	Low	Med	High
Unacceptable Loss of Topsoil				X	
Weed Invasion				X	
Unacceptable Loss of Vegetation Diversity			X		
Unacceptable Loss of Vegetation Structure			X		
Unacceptable Disruption of Ecological Processes				X	
Off-site Sediment Damage to Private Property			X		
Off-site Threats to Human Life			X		
Other-loss of Access Road Due to Plugged Culverts				X	

PART 8 - MONITORING PLAN

S2 - Ground Seeding - ES Issue 3

Identify the objective of the treatment:

The chaining treatment will be deemed effective if the following objectives are met. 1) An average of three desirable perennial plants per square-meter will be permanently established in the burned area within three to five growing seasons post-fire. 2) The seeding will result in greater establishment (density and cover) of seeded species when compared to unseeded controls. 3) The seeded area will have lower establishment of invasive annual grasses than the unseeded control areas.

Describe how implementation will be monitored:

Implementation of the chaining treatment will be monitored by a BLM project inspector. For seeding, the project inspector will ensure that only the areas designated for seeding are seeded and at the appropriate rates. The project inspector will regularly measure the treated area to track the progress of seeding.

Describe how effectiveness will be monitored, how it will be measured, and within what time period:

Treatment effectiveness will be monitored using methods adapted from the Monitoring Manual for Grassland, Shrubland and Savanna Ecosystems, Second Edition (Herrick et al., 2015). Monitoring sites will be stratified by soil, topography, vegetation community, treatment and management considerations. Effectiveness will be monitored with three sets of coupled treated and untreated (control) plots per stratified area. Additional coupled plots will be added if deemed necessary for complete coverage of the treated area. At each site, a soil pit will be dug for soil characterization and soil map unit verification. Once verified, three permanent 25 m transects will be established with a marker and photo point. Data will be collected on vegetation composition (both species density and cover), percent bare ground, the size and distribution of plant interspaces, and soil aggregate stability. Shrub density will be measured in 2 meter-wide belts along each 25 m transect. Line-point intercept will be used to determine foliar, bare ground, and basal cover; point measurements will be taken at 0.5m intervals along each transect for a total of 50 points per transect. On each transect, density will be measured with 0.5m² density frames placed at 5m, 10m, 15m, 20m, and 25m. Canopy and basal gap intercept will be used to determine the size and distribution of interspaces between plant canopies and bases; gaps greater than 20cm will be recorded. Soil stability tests will determine soil structural development and erosion resistance at six points (4 meters apart) along each transect. Indications of noxious weeds, wild horse utilization, livestock use, cultural resources, and other phenomena will be noted by monitoring crews; the crews will be given cultural sensitivity training.

One weather station (tipping bucket rain gauge, soil moisture and temperature sensors, anemometer, air-temperature and humidity sensor) and a minimum of one dust trap array will be established at a representative site. Additional soil moisture and temperature sensors will be placed in each of the vegetation treatments, as appropriate (i.e. aerial and drill seeding, chaining, etc.). Data will be downloaded three times yearly in conjunction with vegetation

and/or livestock closure compliance monitoring. In addition, crews will monitor the condition of the weather station and sensors placed within treatments. Any malfunctions or damage to the weather station, sensors, or data loggers will be reported immediately to ES&R staff. Data will be used to determine the timing, rate, and duration of rain events related to soil erosion/sedimentation and to provide insight on vegetation recovery and invasive species establishment. Given the sparse weather station coverage in the Ely District (and Nevada as a whole) and the importance of climate in vegetation establishment, this data provides invaluable information to make better-informed treatment recommendations. The proposed weather station is not capitalized equipment (per direction in BLM Handbook 1742-1).

S3 - Aerial Seeding - ES Issue 3

Identify the objective of the treatment:

The aerial seeding treatment will be deemed effective if the following objectives are met. 1) An average of three desirable perennial plants per square-meter are permanently established in the burned area within three to five growing seasons post-fire. 2) The aerial seeding results in greater abundance (density and cover) of seeded species when compared to unseeded controls. 3) The seeded area has lower establishment of invasive annual grasses than the unseeded control areas.

Describe how implementation will be monitored:

Implementation of the aerial seeding treatments will be monitored by a BLM project inspector. The project inspector will ensure that only the areas designated for seeding are seeded and at the appropriate rates. If possible, seed traps will be placed in treated and control areas to ensure that only the appropriate areas were seeded and that the area was seeded at the appropriate rate.

Describe how effectiveness will be monitored, how it will be measured, and within what time period:

See monitoring protocol for "S-2 Ground Seeding."

S12 - Closures (area, OHV, livestock) - ES Issue 3

Identify the objective of the treatment:

Livestock closures will remain in effect for two to five years or until monitoring data show that the following closure objectives have been met: 1. An average of three desirable, perennial, plants per square-meter will be permanently established in both the seeded and chained area and the aerially seeded area. 2. Re-sprouting vegetation will have good leader growth appropriate to the species and the Ely region (based on available monitoring or production data from wildlife, range, NDOW and/or NRCS), will provide vertical and horizontal cover appropriate for the site, and will show resistance to damage from grazing by pulling or tearing of the vegetation. 3. Newly sprouting vegetation, including seeded species, with young root systems will resist disruption when pulled indicating grazing would not impair established root systems. 4. Native vegetation will show vigor and evidence of reproduction.

Describe how implementation will be monitored:

Livestock closure compliance will be monitored by the ESR Coordinator, and the area Range Management Specialist.

Describe how effectiveness will be monitored, how it will be measured, and within what time period:

Compliance inspectors will monitor for trespassed livestock and horses. Any personnel on the burned area will make note of livestock animals, dung, and tracks within the burned area. If livestock or sign of livestock use is present within the burned area, spatially-referenced photographs will be taken. Personnel will notify the Range Management Specialist for the area and the ESR Coordinator concerning any sign of livestock.

S13 - Monitoring - ES Issue 3

Identify the objective of the treatment:

Describe how implementation will be monitored:

Describe how effectiveness will be monitored, how it will be measured, and within what time period:

R2 - Ground Seeding - BAR Issue 1

Identify the objective of the treatment:

Describe how implementation will be monitored:

Describe how effectiveness will be monitored, how it will be measured, and within what time period:

R5 - Noxious Weeds - BAR Issue 2

Identify the objective of the treatment:

The noxious weed treatment will be deemed effective if the following objective is met: Noxious weed populations will not spread beyond pre-fire conditions.

Describe how implementation will be monitored:

Implementation of the treatment will be monitored by a BLM project inspector. The project inspector will ensure that if herbicide is deemed necessary only the areas designated for herbicide application are sprayed and at the appropriate rates.

Describe how effectiveness will be monitored, how it will be measured, and within what time period:

Effectiveness of the noxious weed treatment will be monitored by vegetation treatment effectiveness crews. If monitoring crews positively identify hoary cress (*Cardaria draba*), Russian knapweed (*Acroptilon repens*), spotted knapweed (*Centaurea biebersteinii*), black henbane (*Hyoscyamus niger*), musk thistle (*Carduus nutans*), Scotch thistle (*Onopordum acanthium*) Canada thistle (*Cirsium arvense*) or medusahead (*Taeniatherum caput-medusae*) within the burn area, they will notify the ESR Coordinator and Weed Coordinator immediately. Populations will be treated with herbicide approved for BLM use. If noxious weed populations appear to be expanding, an amendment to the plan may be necessary to address the issue in order to minimize the spread of these species.

R7 - Fence/Gate/Cattleguard - BAR Issue 4

Identify the objective of the treatment:

The objective of the treatment is to repair/replace/remove any fence that was damaged by the fire. Repairing, replacing and removing fences will minimize the detrimental effects of grazing on seeding treatments, help with Greater Sage-Grouse, elk, mule deer and pronghorn antelope habitat recovery and removed hazards to wildlife, livestock and equipment, while allowing normal grazing operations to continue in unburned portions of the Warm Springs allotment.

Describe how implementation will be monitored:

The fencing treatment will be monitored by a BLM project inspector to ensure that the fence line and gates are constructed appropriately and in the correct location(s).

Describe how effectiveness will be monitored, how it will be measured, and within what time period:

Compliance inspectors monitoring for trespassed livestock will walk the perimeter of the fence to check for fence maintenance or repair needs. Compliance inspectors will notify the ESR Coordinator of any such needs.

R13 - Monitoring - BAR Issue 4

Identify the objective of the treatment:

Describe how implementation will be monitored:

Describe how effectiveness will be monitored, how it will be measured, and within what time period:

PART 9 - MAPS

1. - Overland Land Status
2. - Overland Aerial Seeding & Chaining
3. - Overland HMA
4. - Overland GRSG Habitat
5. - Overland Big Game Habitat
6. - Overland Noxious Weeds
7. Resistance/Resilience with Proposed Seeding - Overland Resistance/Resilience

PART 10 - REVIEW, APPROVALS, and PREPARERS

TEAM MEMBERS

Position	Team Member (Agency/Office)	Initial	Date
Team Leader	Erica Husse (BLM NV-EYDO)	Initialed	08/30/2016
Soil Scientist	Camie Dencker (Other NV-ARS)	Initialed	08/31/2016
Soil Scientist	Beth Newingham (Other NV-ARS)	Initialed	08/31/2016
Soil Scientist	Lara Derasary (BLM NV-EYDO)	Initialed	08/30/2016
Cultural Resources/Archeologist	Kurt Braun (BLM NV-EYDO)	Initialed	08/30/2016
Rangeland Mgt. Specialist	Josh Corbett (BLM NV_EYDO)	Initialed	08/29/2016
Wildlife Biologist	Steve Foree (State NDOW)	Initialed	08/30/2016
Wildlife Biologist	Moira Kolada (State NDOW)	Initialed	08/30/2016
Wildlife Biologist	Nancy Herms (BLM NV-EYDO)	Initialed	08/29/2016
Wild Horse & Burro Specialist	Ruth Thompson (BLM NV-EYDO)	Initialed	08/30/2016
Noxious & Invasive Species Specialist	Chris McVicars (BLM NV-EYDO)	Initialed	08/30/2016
Resource Advisor(s) on Fire	Josh Merkel (BLM NV-EYDO)	Initialed	08/30/2016
Fuels Program Manager	Cody Coombs (BLM NV-EYDO)	Initialed	08/30/2016

PLAN APPROVAL

The Agency Administrator is responsible for developing, implementing, and evaluating emergency stabilizations and rehabilitation plans, treatments and activities. 620 DM 3.5C

FIELD OFFICE MANAGER

DATE

FUNDING APPROVAL

The funding of ES treatments is approved through the appropriate administrative approval level in coordination with the National Office Budget Shop. As funding is available, ES funding requested within a plan that totals below \$100,000 may be approved by the State Director, while ES funding of \$100,000 and above must be approved by the WO. If the ES funding cap is reached, all ES funding will be approved through the National Office in coordination with State ES&R Coordinators to determine highest priority projects. Funding of all BAR treatments is accomplished through a scoring process and is dependent on accurate entries into NFPORS. All funding is approved and allocated on a year-by-year basis.