

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

**PLAN TEMPLATE 2010**

**COLD FIRE (J0V1)**

**BLM Boise District Office**

**IDAHO STATE OFFICE**

**FIRE BACKGROUND INFORMATION**

Fire Name	Cold
Fire Number	LFESJ0V10000 / LFBRJ0V10000
District/Field Office	Boise District Office
Admin Number	LLIDB00000
State	IDAHO
County(s)	ELMORE
Ignition Date/Cause	08/04/2015 Lightning
Date Contained	08/06/2015
Jurisdiction	<i>Acres</i>
BLM	1369
Private	125
Total Acres	1494
Total Costs	\$235,000
Costs to LF2200000 (2822)	\$225,000
Costs to LF3200000 (2881)	\$10,000

**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.**

The Cold fire J0V1- was ignited by lightning at approximately 2017 on August 4, 2015. The fire burned 1,369 acres of public land administered by the Bureau of Land Management (BLM), and 125 acres of private land. The fire burned wholly within the boundaries of the Four Rivers Field Office (FRFO). Approximately 500 acres of the area that burned in the Cold fire has burned at least once since 1987. The area that was burned in 1987 had recovered sufficiently to support big sagebrush, perennial grasses, and forbs.

The fire burned in portions of the East Hammett #5 Allotment (4%) and North Cold Springs Allotment, Rice Pasture (43%).

Within the burned area, two main ecological sites are delineated using digital soil survey data (SSURGO, 2008). Approximately 1,238 acres represent the Loamy 12-16" ecological site with mountain big sagebrush/bluebunch wheatgrass–Thurber's needlegrass and approximately 256 acres represent the Loamy 8-12" ecological site with Wyoming big sagebrush/bluebunch wheatgrass–Thurber needlegrass. Small unmapped inclusions of Shallow Stony Loam occur throughout the burned area. Pre-fire herbaceous understory vegetation varied; from a diverse understory of bluebunch wheatgrass, Thurber's needlegrass, Sandberg bluegrass, bottlebrush squirreltail and various forbs with inclusions of cheatgrass and medusahead, to areas dominated by cheatgrass and/or medusahead. The fire intensity varied across the landscape, resulting in a mix of effects, with few isolated remnant islands of low sagebrush scattered throughout the burned area.

In the southern portion of the burned area, there are approximately 90 acres of habitat for slickspot peppergrass, a species proposed for listing as threatened under the Endangered Species Act of 1973. The nearest occupied habitat however, is located over 5.5 miles from the southern boundary of the fire. Habitat is defined as land containing slickspots but presence of slickspot peppergrass has not been confirmed during surveys. Occupied habitat is defined as a 0.5 mile buffer surrounding the element occurrence (EO) to protect pollinator habitat. An EO is the actual location of the species, individual EOs are separated by at least 0.6 miles (1km).

The greater sage-grouse landscape within the burned area is part of the Idaho Desert Conservation Area, and sage-grouse habitats in the burned area are designated as Important

Habitat Management Area and General Habitat Management Area (GHMA -formerly Preliminary General Habitat PGH), as identified in the Great Basin Region, Idaho-SW Montana Sub-region Environmental Impact Statement (EIS). The burned area is not within sage-grouse focal area habitat (as established by Fire and Invasives Assessment Team – FIAT). The nearest active leks are located approximately 10.5 miles east of the burned area; the burned area and surrounding habitat generally provide winter habitat for sage-grouse.

The entire burned area supported critical winter range for mule deer and elk, and provided year-round habitat for pronghorn antelope. The mule deer population that inhabits the burned area and surrounding habitat of the Bennett Front are part of the Smokey Bennett Population Management (PMU) Unit 6 and Game Management Unit (GMU) 45. The Bennett Front provides nearly all of the winter range in this PMU and GMU 45 is the most sought after mule deer hunting permit in Idaho.

## **LAND USE PLAN CONSISTENCY**

### **S2 - Ground Seeding ES Issue 5**

The 1987 Jarbidge RMP, Wildlife Management section, states “Wildlife habitat will be managed to maintain or increase wildlife numbers over the long term, and the total acres of unsatisfactory crucial habitat will be reduced over the long term.” Under the Resource Management Guidelines section the plan states, “Minimize soil erosion by maintaining good, perennial vegetation cover on all sites. Manage native perennial range to attain good ecological condition. Rehabilitated or manipulated sites are considered to be in good condition from a watershed standpoint when at least 75% (by weight) of the sites potential for production is composed of perennial vegetation”. The same section also states, “Protect and enhance endangered, threatened and sensitive species habitats in order to maintain or enhance existing and potential populations within the planning area”. It goes on to say, “Seed mixtures for range improvement projects and fire rehabilitation projects will include a mixture of grasses, forbs and shrubs that benefit sage grouse. Rehabilitation of areas, particularly large areas, that have a high potential for fires or have a high frequency of fires, will utilize irregular buffer strips with seed mixtures that are fire resistant and/or meet watershed protection, wildlife and riparian objectives. These buffer strips will receive first priority for seeding prior to reseeding rest of burned area”.

### **S3 - Aerial Seeding ES Issue 3**

The 1987 Jarbidge RMP, Wildlife Management section, states “Wildlife habitat will be managed to maintain or increase wildlife numbers over the long term, and the total acres of unsatisfactory crucial habitat will be reduced over the long term.” Under the Resource Management Guidelines section the plan states, “Minimize soil erosion by maintaining good, perennial vegetation cover on all sites. Manage native perennial range to attain good ecological condition. Rehabilitated or manipulated sites are considered to be in good

condition from a watershed standpoint when at least 75% (by weight) of the sites potential for production is composed of perennial vegetation”. The same section also states, “Protect and enhance endangered, threatened and sensitive species habitats in order to maintain or enhance existing and potential populations within the planning area”. It goes on by saying, “Seed mixtures for range improvement projects and fire rehabilitation projects will include a mixture of grasses, forbs and shrubs that benefit sage grouse. Rehabilitation of areas, particularly large areas, that have a high potential for fires or have a high frequency of fires, will utilize irregular buffer strips with seed mixtures that are fire resistant and/or meet watershed protection, wildlife and riparian objectives. These buffer strips will receive first priority for seeding prior to reseeding rest of burned area”.

### **S5 - Noxious Weeds ES Issue 5**

The control of noxious weeds is consistent with Jarbidge RMP, Management Unit Area 3 - Lower Bennett Objectives, “Improve lands in poor ecological condition.” In addition under the Resource Management Guidelines the plan states, “BLM districts will work with their respective County governments to monitor the location and spread of noxious weeds and to maintain up-to-date inventory records. BLM will control the spread of noxious weeds on public lands where possible, where economically feasible, and to the extent that funds are prioritized for that purpose”. The control of noxious weeds is in compliance with State and county laws.

### **S7 - Fence/Gate/Cattleguard ES Issue 5**

The Jarbidge RMP Resource Management Guidelines states, “All grazing licenses issued that include areas recently burned and/or seeded areas will include a statement concerning the amount of rest needed in the seedings or burn area. Normally two years of rest will be necessary to protect these areas. This rested area may include remnant stands of desirable species that survived the fire”. Existing pasture and allotment fences would be repaired to ensure that livestock remain within their area of authorized use and off the burned area until resource objectives are met. In addition temporary fence would be constructed to protect treatment areas and allow grazing to continue on unburned portions of pastures. The NFRP states that gates, cattleguards, fences, and other control features would be repaired and/or constructed as needed to protect treatments during the recovery period or the seeding establishment period (NFRP, p. 17). The BLM ESR Handbook allows for repair or reconstruction of existing BLM approved fences, as well as temporary protection fence to reconstruction of existing BLM approved fences, as well as temporary protection fence to protect new seedings and natural recovery areas (H-1742-1, p. 31).

### **S12 - Closures (area, OHV, livestock) ES Issue 5**

The Jarbidge RMP Resource Management Guidelines states, “All grazing licenses issued that include areas recently burned and/or seeded areas will include a statement concerning the amount of rest needed in the seedings or burn area. Normally two years of rest will be necessary to protect these areas. This rested area may include remnant stands of desirable species that survived the fire”. Existing pasture and allotment fences would be repaired to

ensure that livestock remain within their area of authorized use and off the burned area until resource objectives are met. In addition temporary fence would be constructed to protect treatment areas and allow grazing to continue on unburned portions of pastures. The NFRP states that gates, cattleguards, fences, and other control features would be repaired and/or constructed as needed to protect treatments during the recovery period or the seeding establishment period (NFRP, p. 17). The BLM ESR Handbook allows for repair or reconstruction of existing BLM approved fences, as well as temporary protection fence to protect new seedings and natural recovery areas (H-1742-1, p. 31).

### **S13 - Monitoring ES Issue 5**

Although the Jarbidge RMP does not have objectives of management guidelines specific to monitoring the project is in conformance with the Management Plan.

### **R4 - Seedling Planting BAR Issue 1**

The 1987 Jarbidge RMP, Wildlife Management section, states “Wildlife habitat will be managed to maintain or increase wildlife numbers over the long term, and the total acres of unsatisfactory crucial habitat will be reduced over the long term.” Under the Resource Management Guidelines section the plan states, “Minimize soil erosion by maintaining good, perennial vegetation cover on all sites. Manage native perennial range to attain good ecological condition. Rehabilitated or manipulated sites are considered to be in good condition from a watershed standpoint when at least 75% (by weight) of the sites potential for production is composed of perennial vegetation”. The same section also states, “Protect and enhance endangered, threatened and sensitive species habitats in order to maintain or enhance existing and potential populations within the planning area”. It goes on by saying, “Seed mixtures for range improvement projects and fire rehabilitation projects will include a mixture of grasses, forbs and shrubs that benefit sage grouse. Rehabilitation of areas, particularly large areas, that have a high potential for fires or have a high frequency of fires, will utilize irregular buffer strips with seed mixtures that are fire resistant and/or meet watershed protection, wildlife and riparian objectives. These buffer strips will receive first priority for seeding prior to reseeding rest of burned area”.

### **R5 - Noxious Weeds BAR Issue 2**

The control of noxious weeds is consistent with Jarbidge RMP, Management Unit Area 3 - Lower Bennett Objectives, “Improve lands in poor ecological condition.” In addition under the Resource Management Guidelines the plan states, “BLM districts will work with their respective County governments to monitor the location and spread of noxious weeds and to maintain up-to-date inventory records. BLM will control the spread of noxious weeds on public lands where possible, where economically feasible, and to the extent that funds are prioritized for that purpose”. The control of noxious weeds is in compliance with State and county laws.

# COST SUMMARY TABLES

## Emergency Stabilization (LF2200000)

Action/ Spec #	ES Issue #	Planned Action	Unit (Acres, WMs, Number)	# Units	Unit Cost (If Appl.)	FY 2015	FY 2016	FY 2017	FY 2018	Totals by Spec.
S1		Planning (Project Management)		0		\$0.00	\$15,000.00	\$15,000.00	\$15,000.00	\$45,000.00
S2	5	Ground Seeding	Acres	677	\$136.50	\$60,000.00	\$32,000.00	\$0.00	\$0.00	\$92,000.00
S3	3	Aerial Seeding	Acres	1,369	\$20.33	\$0.00	\$28,000.00	\$0.00	\$0.00	\$28,000.00
S4										
S5	5	Noxious Weeds	Acres	1,369	\$3.65	\$0.00	\$5,000.00	\$0.00	\$0.00	\$5,000.00
S6										
S7	5	Fence/Gate/Cattleguard	Miles	5	\$5,800.00	\$0.00	\$24,000.00	\$0.00	\$5,000.00	\$29,000.00
S8										
S9										
S10										
S11										
S12	5	Closures (area, OHV, livestock)	Acres	937	\$2.13	\$0.00	\$1,000.00	\$0.00	\$1,000.00	\$2,000.00
S13	5	Monitoring	Acres	1,369	\$17.53	\$0.00	\$8,000.00	\$8,000.00	\$8,000.00	\$24,000.00
S14										
<b>TOTAL COSTS (LF2200000)</b>						<b>\$60,000</b>	<b>\$113,000</b>	<b>\$23,000</b>	<b>\$29,000</b>	<b>\$225,000</b>
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 2015	FY 2016	FY 2017	FY 2018	Totals by Spec.
R1										
R2										
R3										
R4										
R5	2	Noxious Weeds	Acres	1,369	\$7.30	\$0.00	\$0.00	\$5,000.00	\$5,000.00	\$10,000.00
R6										
R7										
R8										
R9										
R10										
R11										
R12										
R13										
R14										
<b>TOTAL COSTS (LF3200000)</b>						<b>\$0</b>	<b>\$0</b>	<b>\$5,000</b>	<b>\$5,000</b>	<b>\$10,000</b>
<b>OTHER FUND CODE TOTALS:</b>										
TOTAL COSTS (???)										
TOTAL COSTS (???)										
TOTAL COSTS (???)										

## **PART 2 - POST-FIRE RECOVERY ISSUES**

### **EMERGENCY STABILIZATION ISSUES**

#### **1 - Human Life and Safety**

N/A

#### **2 - Soil/Water Stabilization**

N/A

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

The Cold Fire burned a total of 1,307 acres of sage-grouse preliminary general habitat (PGH). The landscape within the burned area and surrounding area was known to provide winter habitat for sage-grouse prior to the fire. The majority of this acreage supported mature sagebrush and was intact habitat prior to the fire. The loss of this cover and food source will have adverse impacts to the local Greater sage-grouse for years to come. Cheatgrass, medusahead, and noxious weeds are known to exist across the burned area. The seeding of a mixture of Wyoming sagebrush across the burned area will aid in a faster recovery of vegetation structure necessary for sage-grouse as well as other sagebrush-obligate wildlife species. This seeding will also help to prevent the dominance of cheatgrass, medusahead rye, and noxious weeds within the fire perimeter.

#### **4 - Critical Heritage Resources**

N/A

#### **5 - Invasive Plants and Weeds**

##### ***Invasive Annual Grasses***

The fire removed shrubs and damaged perennial grasses within the burned area, resulting in open areas and unoccupied soil. Cheatgrass and medusa head rye, which are currently a minor component on site, are expected to expand due to reduced competition as a result of the fire. Drill seeding deep rooted perennial grasses will help limit the resources available for invasive annual grasses and prevent them from becoming the dominant or co-dominant species on site. Failure to keep this area from becoming dominated by invasives would result in the loss of important big game and sage-grouse habitat.

##### ***Noxious Weeds***

Squarrose knapweed (*Centaurea triumfetti*), Russian knapweed (*Acroptilon repens*), diffuse

knapweed (*Centaurea diffusa*), and rush skeletonweed (*Chondrilla juncea*) are the primary weeds of concern with high potential to increase within the burned area and surrounding rangeland. These weeds were documented near the fire perimeter during the fire reconnaissance and in field visits prior to the fire. The current infestations are small enough that treatment within the next three years will have a high likelihood of success. Without a noxious weed control effort, these weeds could significantly increase, which would negatively affect sage-grouse habitat. If treatment is not implemented the impact to natural resources could be significant. All 1,369 acres of the burned BLM land will be inventoried and treated as needed for noxious weeds in FY16 and continued under BAR for FY17-FY18. The objective of this treatment is to identify and control known infestations of noxious weeds and prevent the increase of new infestations using spot herbicide spraying and biological control. This will be proposed under the BAR to suppress the expansion of these weeds. Weed control would be conducted the first year under ES.

## **BURNED AREA RECOVERY ISSUES**

### **1 - Lands Unlikely to Recover Naturally**

The area is critical winter habitat for mule deer and elk. The shrub component of the vegetation community is integral for these species. Re-establishing the shrub component of these vegetation communities is important for the long-term maintenance of populations of these species in this area.

### **2 - Weed Treatments**

Squarrose knapweed (*Centaurea triumfetti*), Russian knapweed (*Acroptilon repens*), diffuse knapweed (*Centaurea diffusa*), and rush skeletonweed (*Chondrilla juncea*) are the primary weeds of concern with high potential to increase within the burned area and surrounding rangeland. These weeds were documented near the fire perimeter during the fire reconnaissance and in field visits prior to the fire. The current infestations are small enough that treatment within the next three years will have a high likelihood of success. Without a noxious weed control effort, these weeds could significantly increase, which would negatively affect sage-grouse habitat. If treatment is not implemented the impact to natural resources could be significant. All 1,369 acres of the burned BLM land will be inventoried and treated as needed for noxious weeds in FY16 and continued under BAR for FY17-FY18. The objective of this treatment is to identify and control known infestations of noxious weeds and prevent the increase of new infestations using spot herbicide spraying and biological control. This will be proposed under the BAR to suppress the expansion of these weeds. Weed control would be conducted the first year under ES.

### **3 - Tree Planting**

N/A

### **4 - Repair/Replace Fire Damage to Minor Facilities**

N/A

## **PART 3 - DESCRIPTION OF TREATMENTS**

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

#### ***S3 Aerial Seeding***

##### **A. Treatment/Activity Description**

Approximately 1,369 acres will be broadcast seeded with sagebrush using aerial application methods. The seeding area will receive 100% coverage (not stripped) and be seeded at approximately 1 lb/acre bulk. Full coverage of sagebrush is appropriate due to the smaller size of the fire and the lack of sagebrush seed source resulting from previous fires. Seeding will be completed in early winter, Dec. – Jan. However if funding or seed is not available to complete this treatment in the above timeframe the seeding will occur as soon as possible but prior to March 1, 2016. Timing of seeding would be coordinated to occur immediately before or after a snowfall event. Excellent results have been observed under these circumstances.

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

The fire removed sagebrush on land that is habitat for sage-grouse, mule deer and elk. These species rely on sagebrush for food and cover. Natural recruitment of sagebrush, to the point of providing functioning sage-grouse habitat, would take decades under ideal conditions. However, natural recruitment may take even longer due to the limited seed source near the fire. This treatment will aid in the re-establishment of the pre-fire shrub community that matches the structural component and species composition that existed before the fire. Consequently it is critical to accelerate the recovery process by broadcast seeding sagebrush to maintain the area as sage-grouse habitat.

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

This is a reasonable treatment for the issue identified on site, loss of sage-grouse habitat. Aerially seeding sagebrush is a common and accepted method of re-establishing sagebrush and has been successful on similar nearby ESR plans such as the Cold (2007) fire and the Blair (2005) fire. The estimated costs outlined in the cost tables are typical for the Boise District and are reasonable considering the alternative is continued loss of sage-grouse habitat.

### **Issue 5 - Invasive Plants and Weeds**

#### ***S2 Ground Seeding***

##### **A. Treatment/Activity Description**

Approximately 677 acres will be drill seeded with standard rangeland drills without depth bands. These will be pulled either utilizing dozers or tractors and drills will be arranged in a three drill-cart configuration. The seeding area will be divided into 2 different seed mixes. Seed mix #1 (192 acres) will consist of bluebunch wheatgrass and bottlebrush squirreltail. This will be used in the northwest corner of the fire where intensity was higher, pre-fire condition was slightly better, and competition from annual grasses is expected to be limited. The rest of the drill seeding area will be seeded with seed mix #2 (455 acres). This seed mix will consist of native and non-native seed in alternating drills. Bluebunch wheatgrass and bottlebrush squirreltail will be seeded in the center drill while Siberian wheatgrass will be seeded in the 2 outside drills. The intensity of the fire in this area was lower and the presence of cheatgrass was slightly higher which will result in increased completion. This is why non-native grasses are being used in conjunction with natives in this area.

In addition to the grass drill seeding, prostrate kochia (seed mix #3 – 30 acres) will be seeded along the powerline road on the south boundary of the fire and will be 200' wide. This will help protect the drill seeding from future risks of wildfire and invasion by exotic annuals. The proposed kochia seeding area is over 4 miles from LEPA Occupied Habitat and over 6 miles from LEPA Proposed Critical Habitat.

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

The fire removed shrubs and damaged perennial grasses within the burned area, resulting in open areas and unoccupied soil. Cheatgrass, which is currently a minor component on site, is expected to expand due to reduced competition as a result of the fire. Drill seeding deep rooted perennial grasses will help limit the resources available for cheatgrass and prevent it from becoming the dominant or co-dominant species on site. Failure to keep this area from becoming dominated

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

Drill seed of grasses has occurred in the recent past, in adjacent areas, and been very successful. Examples of recent, nearby, successful drill seedings include the Stout (2012) fire which was immediately adjacent to the northwest and the Cold (2007) fire which was 1 mile to the southeast. The goal of the drill seeding is to establish a stand of competitive perennial grasses that will limit the expansion of annual invasive grasses which is consistent with ESR policy. The cost of drill seeding varies by year and location but generally averages \$50-\$75 per acre. Also, the grass species selected are expected to be available in high quantities at low prices.

### ***S5 Noxious Weeds***

#### A. Treatment/Activity Description

Diffuse knapweed, Squarrose knapweed, Russian knapweed, and rush skeletonweed have been identified near the burned area. Inventories for these species (and others on the Idaho noxious weed list) will occur throughout the burned area, with emphasis on corridors such as roads, fences, range improvements, and other disturbed areas. If these or other noxious weed species are found, they will be inventoried, treated, monitored and retreated as necessary; infestations may also be treated with biological control agents if warranted. Treated infestations will be monitored over a three year period documenting treatment effectiveness and expansion. Noxious weeds populations still persisting within the burned fire perimeter after the three year period will be transitioned to the District Noxious weed program for future inventorying and treatments. All actions would be in accordance with the Boise District Noxious Weed Environmental Assessment #ID100-2005-EA-265.

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

Noxious weed infestations are present in the area and are expected to expand due to the removal of existing plant cover as a result of the wildfire. The opportunistic nature of noxious weeds will allow them to take advantage of reduced competition from native plants. Inventory and treatment immediately after the wildfire event will aid in preventing expansion of existing and reducing new infestation of noxious weeds in the area. Control of noxious weeds is imperative to creating a diverse mixture of plant species that will provide suitable conditions for quality habitat for sage-grouse and other wildlife species in the future.

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

Weed treatments immediately after a wildfire that prevent existing populations from expanding and prevent spot infestations from becoming established is more cost effective than a later treatment of a larger infestation. If weed populations are left unchecked to expand and invade, any attempts at future treatments would be more costly and have a reduced chance for effectiveness. Furthermore, field work would be combined with other weed treatments in the area for cost efficiency.

***S7 Fence/Gate/Cattleguard***

A. Treatment/Activity Description

Approximately 3 miles of existing allotment boundary fence will be repaired. The fence is needed to rest the burned area from grazing during recovery and establishment of seedings.

In addition, 2 miles of new, temporary fence will be constructed along the powerline road in order to protect the drill seeding from grazing until it is well established. This fence will be built to BLM specifications for mule deer, pronghorn, and sage-grouse.

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

The fire burned existing livestock management fencing which served as divisions for grazing allotments and pastures. These fences are essential for managing livestock movement between pastures and separating livestock by ownership. The new, temporary fence is needed to protect the drill seeding from grazing.

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

This treatment is reasonable and cost effective because it minimizes the amount of fencing necessary by utilizing existing fencing to exclude livestock from the burned areas while allowing unburned areas to be available to livestock grazing.

***S12 Closures (area, OHV, livestock)***

A. Treatment/Activity Description

The burned (and seeded) areas within the Rice pasture (#2) of the North Cold Springs allotment will be rested from livestock grazing through late summer (9/30) 2017. At that point the burned areas will be available for fall (10/1-12/31) grazing only, if allowed by the terms and conditions of the permit. The burned area will then be rested again for winter-spring (1/1 – 6/30) 2018 at which point it will be returned to normal use.

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

Rest from livestock grazing will aid successful establishment of the ground seeding treatment. Successful re-establishment of perennial grasses is critical for preventing expansion of invasive annuals.

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

Implementation of a closure is a reasonable method for attaining vegetation objectives in comparison to implementation of other aspects of the ES plan.

***S13 Monitoring***

A. Treatment/Activity Description

See Monitoring Section.

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

See Monitoring Section.

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

See Monitoring Section.

## **Issue 1 - Lands Unlikely to Recover Naturally**

### ***R4 Seedling Planting***

#### **A. Treatment/Activity Description**

Antelope bitterbrush and/or sagebrush seedlings may be planted, or antelope bitterbrush seed may be seed cached, within the fire perimeter. The seedling planting would consist of planting bare-root or containerized stock using hand tools such as shovels, planting bars, hoedads. Seed caching would consist of burying 5-6 seeds in hole 2-3" deep throughout the fire. This mimics seed caches established by rodents, which is the primary mechanism for naturally establishing bitterbrush. If these treatments occurs they will be coordinated by the Four Rivers Field Office Wildlife Specialist and be accomplished using volunteer help. No ESR funds will be used for this treatment and consequently no monitoring will be completed for this treatment.

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

Antelope bitterbrush and big sagebrush were killed by the Cold fire. The loss of these shrubs results in this area no longer being suitable for mule deer winter range. Planting seedlings and/or seed caching will help re-establish these species within the fire perimeter at a faster rate than natural recovery.

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

Seedling planting and seed caching are common and proven techniques for re-establishing shrubs post fire. The Land Use Plan Consistency section above has already established the treatment to be within policy. It is cost effective because no ESR funds are being requested for the treatment.

## **Issue 2 - Weed Treatments**

### ***R5 Noxious Weeds***

#### **A. Treatment/Activity Description**

Diffuse knapweed, Squarrose knapweed, Russian knapweed, and rush skeletonweed have been identified near the burned area. Inventories for these species (and others on the Idaho noxious weed list) will occur throughout the burned area, with emphasis on corridors such as roads, fences, range improvements, and other disturbed areas. If these or other noxious weed species are found, they will be inventoried, treated, monitored and retreated as necessary; infestations may also be treated with biological control agents if warranted. Treated infestations will be monitored over a three year period documenting treatment effectiveness and expansion. Noxious weeds populations still persisting within the burned fire perimeter

after the three year period will be transitioned to the District Noxious weed program for future inventorying and treatments. All actions would be in accordance with the Boise District Noxious Weed Environmental Assessment #ID100-2005-EA-265.

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

Noxious weed infestations are present in the area and are expected to expand due to the removal of existing plant cover as a result of the wildfire. The opportunistic nature of noxious weeds will allow them to take advantage of reduced competition from native plants. Inventory and treatment immediately after the wildfire event will aid in preventing expansion of existing and reducing new infestation of noxious weeds in the area. Control of noxious weeds is imperative to creating a diverse mixture of plant species that will provide suitable conditions for quality habitat for sage-grouse and other wildlife species in the future.

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

Weed treatments immediately after a wildfire that prevent existing populations from expanding and prevent spot infestations from becoming established is more cost effective than a later treatment of a larger infestation. If weed populations are left unchecked to expand and invade, any attempts at future treatments would be more costly and have a reduced chance for effectiveness. Furthermore, field work would be combined with other weed treatments in the area for cost efficiency.

## PART 4 - DETAILED TREATMENT COST TABLE

Action / Spec #	Action Description	Unit Type	# Units	Unit Cost	FY15	FY16	FY17	FY18	Total Cost
<b>S1</b>	<b>Planning (Project Management)</b>								
1	Planning	Total	3	\$15,000.00	\$0.00	\$15,000.00	\$15,000.00	\$15,000.00	\$45,000.00
	<b>Total</b>			<b>\$15,000.00</b>	<b>\$0.00</b>	<b>\$15,000.00</b>	<b>\$15,000.00</b>	<b>\$15,000.00</b>	<b>\$45,000.00</b>
<b>S2</b>	<b>Ground Seeding ES Issue 5</b>								
1	Cultural Clearance Contract	Total	677	\$22.40	\$15,164.80	\$0.00	\$0.00	\$0.00	\$15,164.80
2	Seed Materials Purchase	LBS (Pounds)	5,250	\$4.61	\$24,202.50	\$0.00	\$0.00	\$0.00	\$24,202.50
3	Seed Materials Purchase	LBS (Pounds)	2,350	\$7.68	\$18,045.00	\$0.00	\$0.00	\$0.00	\$18,045.00
4	Seed Material Purchase	LBS (Pounds)	250	\$6.34	\$0.00	\$1,585.00	\$0.00	\$0.00	\$1,585.00
5	Seed Materials Purchase	LBS (Pounds)	9,250	\$0.25	\$2,250.00	\$62.50	\$0.00	\$0.00	\$2,312.50
6	Seed Materials Purchase	LBS (Pounds)	4,250	\$0.15	\$637.50	\$0.00	\$0.00	\$0.00	\$637.50
7	Drill Seeding	Acres	677	\$45.00	\$0.00	\$30,465.00	\$0.00	\$0.00	\$30,465.00
	<b>Total</b>			<b>\$86.43</b>	<b>\$60,000.00</b>	<b>\$32,000.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$92,000.00</b>
<b>S3</b>	<b>Aerial Seeding ES Issue 3</b>								
1	Seed Materials Purchase	LBS (Pounds)	1,400	\$7.17	\$0.00	\$10,038.00	\$0.00	\$0.00	\$10,038.00
2	Aerial Seeding	Acres	1,369	\$13.00	\$0.00	\$17,797.00	\$0.00	\$0.00	\$17,797.00
	<b>Total</b>			<b>\$20.17</b>	<b>\$0.00</b>	<b>\$28,000.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$28,000.00</b>
<b>S5</b>	<b>Noxious Weeds ES Issue 5</b>								
1	Noxious Weeds	Acres	1,369	\$3.65	\$0.00	\$4,996.85	\$0.00	\$0.00	\$4,996.85
	<b>Total</b>			<b>\$3.65</b>	<b>\$0.00</b>	<b>\$5,000.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$5,000.00</b>
<b>S7</b>	<b>Fence/Gate/Cattleguard ES Issue 5</b>								
1	Fence Repair and Construct	Each	6	\$5,000.00	\$0.00	\$24,000.00	\$0.00	\$5,000.00	\$29,000.00
	<b>Total</b>			<b>\$5,000.00</b>	<b>\$0.00</b>	<b>\$24,000.00</b>	<b>\$0.00</b>	<b>\$5,000.00</b>	<b>\$29,000.00</b>
<b>S12</b>	<b>Closures (area, OHV, livestock) ES Issue 5</b>								
1	Closure - Livestock	Each	2	\$1,000.00	\$0.00	\$1,000.00	\$0.00	\$1,000.00	\$2,000.00
	<b>Total</b>			<b>\$1,000.00</b>	<b>\$0.00</b>	<b>\$1,000.00</b>	<b>\$0.00</b>	<b>\$1,000.00</b>	<b>\$2,000.00</b>
<b>S13</b>	<b>Monitoring ES Issue 5</b>								
1	Monitoring	Each	3	\$8,000.00	\$0.00	\$8,000.00	\$8,000.00	\$8,000.00	\$24,000.00
	<b>Total</b>			<b>\$8,000.00</b>	<b>\$0.00</b>	<b>\$8,000.00</b>	<b>\$8,000.00</b>	<b>\$8,000.00</b>	<b>\$24,000.00</b>
<b>ES</b>	<b>Grand Total</b>			<b>\$29,110.25</b>	<b>\$60,000.00</b>	<b>\$113,000.00</b>	<b>\$23,000.00</b>	<b>\$29,000.00</b>	<b>\$225,000.00</b>
Action / Spec #	Action Description	Unit Type	# Units	Unit Cost	FY15	FY16	FY17	FY18	Total Cost
<b>R5</b>	<b>Noxious Weeds BAR Issue 2</b>								
1	Noxious Weed Control	Acres	2,738	\$3.65	\$0.00	\$0.00	\$4,996.85	\$4,996.85	\$9,993.70
	<b>Total</b>			<b>\$3.65</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$5,000.00</b>	<b>\$5,000.00</b>	<b>\$10,000.00</b>
<b>BAR</b>	<b>Grand Total</b>			<b>\$3.65</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$5,000.00</b>	<b>\$5,000.00</b>	<b>\$10,000.00</b>

<b>Project</b>	<b>Grand Total</b>			<b>\$29,113.90</b>	<b>\$60,000.00</b>	<b>\$113,000.00</b>	<b>\$28,000.00</b>	<b>\$34,000.00</b>	<b>\$235,000.00</b>
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## PART 5 - SEED LISTS

### DRILL SEED

#### Drill Mix 1 - Native

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
Bottlebrush Squirreltail, Toe Jam Creek	Elymus elymoides ssp. Californicus	0.6750	6.17	268,765	192,000	398,171	192.0	1.4	268.8	400.0	\$ 9.72	\$3,888.00
Bluebunch Wheatgrass, Anatone	Pseudoroegneria spicata spp. spicata	0.7650	22.42	976,615	125,680	1,276,621	192.0	7.8	1,491.8	1,950.0	\$ 7.26	\$14,157.00
TOTALS:			28.59	1,245,380	317,680	1,674,792		9.2	1,760.6	2,350.0	\$ 16.98	\$18,045.00

#### Drill Mix 2 - Native and Non-native

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
Bluebunch Wheatgrass, Anatone	Pseudoroegneria spicata spp. spicata	0.7650	7.53	328,007	125,680	428,767	455.0	2.6	1,187.6	1,550.0	\$ 7.26	\$11,253.00
Siberian Wheatgrass, Vavilov II	Agropyron fragile	0.8075	28.09	1,223,600	206,000	1,515,295	455.0	5.9	2,702.7	3,350.0	\$ 2.85	\$9,547.50
Bottlebrush Squirreltail, Toe Jam Creek	Elymus elymoides ssp. Californicus	0.6750	2.29	99,752	192,000	147,781	455.0	0.5	236.6	350.0	\$ 9.72	\$3,402.00
TOTALS:			37.91	1,651,360	523,680	2,091,843		9.1	4,126.9	5,250.0	\$ 19.83	\$24,202.50

#### Ground Broadcast Mix - Kochia

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
Forage Kochia, Immigrant	Bassia Prostrata	0.5400	41.52	1,808,611	502,400	3,349,280	30.0	3.6	108.0	200.0	\$ 6.34	\$1,268.00
TOTALS:			41.52	1,808,611	502,400	3,349,280		3.6	108.0	200.0	\$ 6.34	\$1,268.00

**AERIAL SEED**

**Aerial Mix 1 - Sagebrush**

Species	Scientific Name	PLS	PLS Seeds / sq. ft.	PLS Seeds / ac.	Seeds / lb (bulk)	Total Seeds / Acre (Bulk)	Aerial Seedlings (Acre)	PLS Lbs / Acre	Total PLS Lbs	Total Bulk Lbs	Cost / Lb	Total Cost
Wyoming Big Sagebrush, Wyoming	Artemisia tridentata wyomingensis	0.1600	9.18	399,881	2,500,000	2,499,255	1,369.0	0.2	219.0	1,400.0	\$ 7.17	\$10,038.00
TOTALS:			9.18	399,881	2,500,000	2,499,255		0.2	219.0	1,400.0	\$ 7.17	\$10,038.00

**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:

The native species, bluebunch wheatgrass and bottlebrush squirreltail proposed for the Cold ground seeding were common in pre-burn vegetation monitoring, are adapted to the ecological sites within the seeding area, and have been seeded successfully in similar ecological site conditions.

Bluebunch wheatgrass and bottlebrush squirreltail are drought tolerant, have extensive root systems, good seedling vigor, and are adapted to the stabilization of disturbed soils. Once established, these species will be very competitive with invasive annuals.

These species have been utilized in similar ecological sites within the Four Rivers Field Office. Similar seedings have proven successful from past ESR treatments in the Boise District and are documented in monitoring reports: Pony 2013, Stout 2012, South Trail 2010, Trimby 2002.

Wyoming big sagebrush is adapted to the ecological sites conditions within the seeding area, was common in pre-burn vegetation monitoring, is drought tolerant, and has been seeded successfully in similar ecological sites.

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

Yes  No  Rationale:

The seeds in the proposed mix are generally available in large enough quantities for the project. These are common species found throughout the west and available from most seed vendors. Further, the Boise Regional Seed Warehouse also keeps a supply of the proposed species to be seeded.

#### **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:

All species in the mixtures are commonly planted species and the costs for native seed are considered reasonable and acceptable. Furthermore, the native species proposed for use have been increasingly utilized in recent years for stabilization, rehabilitation, and restoration. The demand has resulted in increased production and decreased price. The costs are considered reasonable given Land Use Plan and ESR Plan objectives.

**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:

Given the ecosite of the fire, it is expected that the seeded native species will survive on the selected sites. Also, native species are preferable for reseeded in sage-grouse habitat, and in some cases such as sagebrush, no non-native shrubs are available to replicate appropriate habitat. Native and non-native species are being seeded in separated drills in order to prevent competition between the seeded species. On site competition from invasive annuals is presently low enough that native species should be able to establish and once established should compete well with invasive annuals in the future. Where invasive competition is higher, non-native species are being used as well in order to increase the odds of establishment and increase the ability to compete with invasives

The native taxa proposed for seeding have exhibited the ability to establish and persist in similar ecological sites within the Four Rivers Field Office, specifically within the Pony, Stout, South Trail Fire ESR plans. See citations for monitoring reports above.

**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:

The burned (and seeded) areas within the Rice pasture of the North Cold Springs allotment will be rested from livestock grazing through late summer (9/30) 2017. At that point the burned areas will be available for fall (10/1-12/31) grazing only, if allowed by the terms and conditions of the permit. The burned area will then be rested again for winter-spring (1/1 – 6/30) 2018 at which point it will be returned to normal use.

**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 non-native grasses is necessary to provide quickly establishing, non-invasive, competitive species to help limit cheatgrass and medusahead expansion. Siberian wheatgrass has been planted on similar sites throughout the Boise District, and on sites adjacent to this fire (Stout ESR 2012 and Cold ESR 2007). Siberian wheatgrass is being planted only where there is a higher risk of competition from invasive annuals. Kochia has also been planted in adjacent areas (Stout ESR 2012). Furthermore, the proposed kochia planting area is over 4 miles from the nearest LEPA Occupied Habitat and over 6 miles from the nearest LEPA Proposed Critical Habitat. This is far greater than the minimum distance requirement of 1.5 miles from LEPA Occupied Habitat that is required in the BO.

**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 proposed treatment area supported a sagebrush community with an herbaceous understory of native perennial grasses and exotic annual grasses. The natural successional processes and interspecific competition which normally occur within a native plant community have been altered by the introduction and establishment of exotic annual grasses such as cheatgrass and medusahead. The proposed non-native plants can effectively compete with these species. Establishing a competitive perennial plant community with a mixture of native and non-native species will promote a greater degree of resiliency and restore more natural successional processes. The surrounding area contains past seedings primarily composed of crested wheatgrass and siberian wheatgrass, as well as some forage kochia. The selected seed mix, which is a mix of native and introduced species, is anticipated to blend in to the surrounding vegetation communities and persist under current management of the area, and serve as a long term functional to equivalent to an all native seed mix for this site.

**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 proposed introduced plant species have been used throughout the Four Rivers Field Office. These seedings have occurred in range sites similar to, and adjacent, those which were burned. Incidental establishment of the proposed species may occur outside of the treatment area by the seasonal movement of various animals, but this occurrence is not common nor has it been observed to result in the long-term displacement of native plant species or communities. Also, the plant community adjacent the proposed treatment area is predominately crested and siberian wheatgrass seeding; the proposed seed mix is unlikely to expand into those areas.

The objective of the proposed seed mix, as a whole, is to stabilize and rehabilitate the burned area, and compete against invasive plant species, while also providing functional, structural habitat for wildlife. If this action is not implemented invasive annual grasses and noxious weeds will expand on site, outcompeting any native vegetation components still present, as well as exponentially increase

the costs of long-term restoration treatments that may occur in the future. This treatment will reduce the cost of future restoration treatments, as well as provide an ecologically functional intermediary vegetation community.

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

<b>Non-native Plants</b>	<b>Native Plants</b>
Forage Kochia, Immigrant ( <i>Bassia Prostrata</i> )	Bluebunch Wheatgrass, Anatone ( <i>Pseudoroegneria spicata</i> spp. <i>spicata</i> )
Siberian Wheatgrass, Vavilov II ( <i>Agropyron fragile</i> )	Bottlebrush Squirreltail, Toe Jam Creek ( <i>Elymus elymoides</i> ssp. <i>Californicus</i> )
	Wyoming Big Sagebrush, Wyoming ( <i>Artemisia tridentata wyomingensis</i> )

**PART 7 - COST-RISK ANALYSIS**

**A. Probability of Treatments Successfully Meeting Objectives**

<b>Action/ Spec #</b>	<b>ES Issue #</b>	<b>Planned ES Action (LF2200000)</b>	<b>Unit (acres, WMs, Number)</b>	<b># Units</b>	<b>Total Cost</b>	<b>% Probability of Success</b>
S2	5	Ground Seeding	Acres	677	\$92,000.00	70%
S3	3	Aerial Seeding	Acres	1369	\$28,000.00	80%
S5	5	Noxious Weeds	Acres	1369	\$5,000.00	95%
S7	5	Fence/Gate/Cattleguard	Miles	5	\$29,000.00	100%
S12	5	Closures (area, OHV, livestock)	Acres	937	\$2,000.00	100%
S13	5	Monitoring	Acres	1369	\$24,000.00	100%
					<b>\$180,000.00</b>	
<b>Action/ Spec #</b>	<b>BAR Issue #</b>	<b>Planned BAR Action (LF3200000)</b>	<b>Unit (acres, WMs, Number)</b>	<b># Units</b>	<b>Total Cost</b>	<b>% Probability of Success</b>
R5	2	Noxious Weeds	Acres	1369	\$10,000.00	95%
					<b>\$10,000.00</b>	

## 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 ground and aerial seeding treatments would establish perennial plant communities which would reduce the potential of spread and dominance of invasive annual grasses as well as re-establish sagebrush which would benefit sage-grouse and other sage obligate species. Noxious weed treatments would protect the burned area and adjacent BLM administered lands against further expansion of noxious weeds. The fences and closures are needed to ensure adequate recovery occurs before recreation and grazing resume.

No Action Yes  No  Rationale for Answer:

Wildlife habitat on adjacent unburned land would be compromised with the expansion of invasive annuals and noxious weeds. This would result in the degradation or loss of habitat for sage-grouse, big game, and other sage obligate species.

Alternative(s) Yes  No  Rationale for Answer:

NA

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:

The probability of seeding success is high. The species selected for seeding are well adapted to the site conditions with some existing on the site prior to the fire. The proposed species were successfully seeded on the Stout, and Cold (2007) fires and are now well established. Early detection and treatment of noxious weed infestations is more effective and less costly than treatment of a larger infestation at a later date.

No Action Yes  No  Rationale for Answer:

The burned area has a high potential for expansion of invasive annuals and noxious weeds and there is a probability that over time these species could move into adjacent unburned areas. Not treating the area would also make it more susceptible to repeated burning. Because of this it is unlikely the burned area would be acceptable as sage-grouse habitat in the future.

Alternative(s) Yes  No  Rationale for Answer:

NA

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:

The proposed action is the most cost effective way to attain plan objectives.

### 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 5**

#### **Identify the objective of the treatment:**

The purpose of this treatment is to establish perennial-dominated plant communities that are critical for sage-grouse PGH, mule deer habitat, and will out-compete noxious weeds and invasive species. The site will be monitored for three consecutive years beginning the year following fire containment. An evaluation of monitoring data, both quantitative and qualitative, will be completed annually.

The ground seeding would be considered successful the third year after treatment implementation if the following objectives are met:

- a. Foliar cover of seeded perennial grasses is greater than or equal to 15%.
  
- a. A qualitative evaluation of the following attributes demonstrates seeded species resilience and resistance:
  - Plant vigor
  - Seed head production
  - Root mass and depth
  - Precipitation during germination and growing season
  
- a. At least 30% of basal gaps of seeded perennial grasses are  $\leq 100\text{cm}$ .
- b. Density of seeded kochia is 1 per  $1\text{m}^2$ .

#### **Describe how implementation will be monitored:**

Implementation of the seeding will be monitored by BLM staff to ensure adherence to seeding boundaries and seeding rates. Any changes from the planned implementation would be noted in the project file.

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

The site will be monitored by District ESR staff annually for three consecutive years

beginning the first year following fire containment. An evaluation of monitoring data and qualitative assessments by ESR monitoring staff and Field Office staff will be completed annually.

- a. Monitoring methods including line point intercept, gap measurements, sagebrush and kochia density plots, photo plots and qualitative site assessments will also be conducted to inform seeding success.
- b. Data collection will occur between April and July of each year.
- c. An ESR Monitoring Report which includes results, conclusions, and recommendations will be submitted by September of each year for three years beginning the year after fire containment. The final report will be submitted following the third year of monitoring.

### **S3 - Aerial Seeding - ES Issue 3**

#### **Identify the objective of the treatment:**

The purpose of this treatment is to promote recovery of ecosystem health, re-establish sagebrush structure and function, reduce the expansion of invasive grasses, noxious weeds, prevent erosion and rehabilitate sage-grouse and big game habitat. The aerial seeding treatment would be considered successful the third year after treatment implementation if the following objective is met:

- a. Density of seeded sagebrush is 1 per 10m<sup>2</sup> (1.73 meter radius plot) in suitable sites.

\*This objective does not need to be met to resume livestock grazing.

#### **Describe how implementation will be monitored:**

Implementation of the seeding will be monitored during contract administration to ensure contract specifications are met. A Contract Officer Representative (COR) will be at the landing site with the contractor, and a Project Inspector (PI) will be on-site to measure seed distribution. Any changes from the planned implementation would be noted in the project file "as built" discussion.

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

The site will be monitored by District ESR staff annually for three consecutive years following fire containment. An evaluation of monitoring data and qualitative assessments by ESR monitoring staff will be completed annually.

- a. Monitoring methods including sagebrush density plots, photos and qualitative site assessments will be conducted to inform seeding success.

## **S5 - Noxious Weeds - ES Issue 5**

### **Identify the objective of the treatment:**

The goal for the first growing season is to conduct an inventory of the burned area. Noxious weeds detected during the inventory would be treated when possible. Any expansion of known populations of noxious weeds would be treated to contain their spread.

The goal for the second and third years is to either eradicate or substantially decrease the size and abundance of noxious weed infestations within the burned area as compared to the first year.

### **Describe how implementation will be monitored:**

Inventory and treatment data will be recorded in the NISIMS database, in Pesticide Application Records, and using GPS/GIS. This data will include information on species, location and size of infestation, chemicals applied, amount of chemicals applied, weather, phenology, etc.

Noxious weed inventory and treatment success will be evaluated through the following objectives:

- a. Decrease the size and abundance of noxious weed infestations within the burned area compared to pre-fire conditions.
  
- a. Continue inventories and treat any new weed infestations within the fire boundary.

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

The burned area will be surveyed by ESR staff annually for three consecutive years beginning the year following fire containment. If noxious weed populations remain in the burned area after this time period, responsibility would be transferred to the Boise District Noxious Weed Program for ongoing inventory, treatment and monitoring using funding sources other than ESR.

## **S7 - Fence/Gate/Cattleguard - ES Issue 5**

### **Identify the objective of the treatment:**

**Identify the objective of the treatment.**

The purpose of this treatment is to: 1) construct approximately 2 miles of temporary protection fence to protect burned areas from livestock; 2) repair or replace approximately 3 miles of existing boundary and interior livestock management fence for treatment protection. This will help to prevent livestock grazing, and ensure natural recovery of the burned area with very limited disturbance. Fence construction/reconstruction would also maintain grazing integrity on affected allotments. The fences would be constructed to BLM fence standards.

**Describe how implementation will be monitored:**

Implementation will be monitored through BLM project inspection. Any changes from the planned implementation would be noted in the project file.

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

Repair and replacement of damaged fences and the construction of temporary protection fence will be monitored through BLM project inspection. Repairs and completion will be documented in the project. Construction of temporary protection fence will be completed prior to fall 2016 turnout.

**S12 - Closures (area, OHV, livestock) - ES Issue 5**

**Identify the objective of the treatment:**

The burned (and seeded) areas within the Rice pasture (#2) of the North Cold Springs allotment will be rested from livestock grazing through late summer (9/30) 2017. At that point the burned areas will be available for fall (10/1-12/31) grazing only, if allowed by the terms and conditions of the permit. The burned area will then be rested again for winter-spring (1/1 – 6/30) 2018 at which point it will be returned to normal use.

**Describe how implementation will be monitored:**

Site would be monitored by Field Office and Operations personnel during the regularly scheduled grazing season to ensure the closure (allotment or pasture closures, protective fences, water sources, and/or mineral/salt placement) is functioning to keep livestock where authorized .

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

See above.

### **S13 - Monitoring - ES Issue 5**

#### **Identify the objective of the treatment:**

See Monitoring Section.

#### **Describe how implementation will be monitored:**

See Monitoring Section.

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

See Monitoring Section.

### **R4 - Seedling Planting - BAR Issue 1**

#### **Identify the objective of the treatment:**

No monitoring will occur because no funding is being requested.

#### **Describe how implementation will be monitored:**

No monitoring will occur because no funding is being requested.

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

No monitoring will occur because no funding is being requested.

### **R5 - Noxious Weeds - BAR Issue 2**

#### **Identify the objective of the treatment:**

See monitoring plant for S5 - Noxious Weeds.

#### **Describe how implementation will be monitored:**

See monitoring plant for S5 - Noxious Weeds.

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

See monitoring plant for S5 - Noxious Weeds.

## **PART 9 - MAPS**

1. - JOV1 Cold Allotments and Pastures Map
2. - JOV1 Cold Ground Seeding Map
3. - JOV1 Cold Fence Map
4. - JOV1 Cold Fire Frequency Map
5. - JOV1 Cold Grazing Closure Map
6. - JOV1 Cold Noxious Weed Map
7. - JOV1 Cold Sage-grouse Map

## **PART 10 - REVIEW, APPROVALS, and PREPARERS**

### **TEAM MEMBERS**

<b>Position</b>	<b>Team Member (Agency/Office)</b>	<b>Initial</b>	<b>Date</b>
Team Leader	Rob Bennett (BLM Boise District - OPS)	Initialed	08/17/2015
Wildlife Biologist	Joseph Weldon (BLM Boise District - Four Rivers)	Initialed	08/17/2015
Other Technical Specialists	Thomas McGinnis (BLM Boise District - Four Rivers)	Initialed	08/17/2015
Other Technical Specialists	Danelle Ostolasa-Mendiola (BLM Boise District - Four Rivers)	Initialed	08/17/2015

### **PLAN APPROVAL**

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

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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.