

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

**PLAN TEMPLATE 2010**

**JACKS FIRE (G1MK)**

**BLM Boise District Office**

**IDAHO STATE OFFICE**

**FIRE BACKGROUND INFORMATION**

Fire Name	Jacks
Fire Number	G1MK
District/Field Office	Boise District Office
Admin Number	LLIDB00000
State	IDAHO
County(s)	OWYHEE
Ignition Date/Cause	07/09/2012 Lightning
Date Contained	07/16/2012
Jurisdiction	<i>Acres</i>
State	2081
Private	426
BLM	47340
Total Acres	49847
Total Costs	\$1,123,000
Costs to LF20000ES (2822)	\$935,000
Costs to LF32000BR (2881)	\$188,000

**Status of Plan Submission** (check one box below)

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

## **PART 1 - PLAN SUMMARY**

### **BACKGROUND INFORMATION ON FIRE.**

The Jacks Fire started on the afternoon of July 9th, 2012, during a lightning storm that also ignited many other fires, most of which threatened life and property near Murphy, Boise, and Mountain Home, Idaho. The Jacks Fire started in the Little Jacks Creek Wilderness Area and was unmanned until Tuesday, July 10th at about 1430. Resource Advisor TJ Clifford was the first one on the scene, arriving on Monday, July 9th at about 2100 to report and monitor. Arnie Pike, the Field Office Manager approved the use of aerial bucket drops, aerial retardant, chainsaws within the wilderness. Meagan Conry, as Acting District Manager, limited motorized vehicle use to administrative routes only within wilderness.

The fire burned actively until July 13th when the weather changed to cool, moist conditions slowing the fire enough to allow firefighters to successfully contain it at canyon rims in the Big Jacks Creek Wilderness. The fire was contained at about 49,847 acres on July 16th at 1730. The fire burned between OX Prong on the northwest to the rim of the main Big Jacks Canyon on the east down to the Wickahoney confluence on the southeast and Sagebrush Basin on the Southwest. This burn encompassed about 21,188 acres of the Big Jacks wilderness, 8,832 acres of the Little Jacks wilderness, and about 2,081 acres of State in-holdings within these wilderness areas. The fire burned mostly within preliminary priority habitat for sage grouse, a candidate species for listing under the Endangered Species Act. The burned area consists of canyonlands, tables, and plateaus. It is some of the most rugged topography in the area.

Elevation ranges between 4,000 and 6,000 feet and this area contained some of the highest quality sagebrush community types within the boundaries of the Bruneau Field Office. The sagebrush community consisted of strong vegetation structure and composition made up of a diversity of Wyoming, Mountain, and Basin big sagebrush and Low sagebrush types with intermixed rabbitbrush. A healthy grass component included bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, and bottlebrush squirreltail. Cheatgrass was also present within this healthy vegetative community, but higher concentrations were found on the edge along the gas pipeline and some of the other travel routes through the area. The cheatgrass was not yet a dominant component due to the healthy vegetation communities and a lack of historic fire activity and the area's higher elevation.

This high-quality habitat supported strong wildlife diversity that included the greater sage-grouse and one of the strongest known populations of California bighorn sheep in the northwest. This is also potential habitat for other species such as the yellow-billed cuckoo (Type 1; likely migratory habitat only), the Columbia spotted frog (Type 1) and the pygmy rabbit (Type 2), all of which have been observed within 5 miles of the burn perimeter. Other special status species (Type 3) that are known to be in the vicinity include the spotted bat and prairie falcon, as well as the potential for roughly 10 other Type 3 special status wildlife species. Redband trout (Type 2) occupy Big Jacks, Little Jacks, Cottonwood, and Duncan creeks, all are watersheds which compose some of the highest quality habitat for redband

trout on Idaho BLM lands.

The fire burned greater sage-grouse habitat and lies just north of the densest concentration of sage-grouse leks and one of the largest populations of sage-grouse in southwestern Idaho. There are 10 documented leks within the fire perimeter and another 19 documented leks within 3 miles. Greater sage-grouse is a candidate species for listing under the Endangered Species Act. Candidate status was assigned because although listing was warranted, higher priority was given to other species. Additionally, the west central portion of the fire includes winter range for antelope, and mule deer also utilize the area.

While some vegetative recovery is expected due to the number of acres that were burned in the moderate to low severity classes, it is not expected that the sagebrush will return to pre-fire conditions for at least 30 years. The Aroga moth has affected a large majority of this area and surrounding areas, with most shrubs showing signs of their impact. Drought in the area had already stressed sagebrush prior to the burn, leaving it extremely dry with shriveled leaves. The Aroga moth was expected to significantly thin the sagebrush density even without the fire. Therefore, the combination of fire, insect, and drought in southwest Idaho has and will continue to greatly reduce the available habitat for the greater sage-grouse.

An interdisciplinary team was gathered to list a set of site-specific issues in order to focus a set of treatments that would mitigate concerns related to these issues. Those issues that were retained after further evaluation are planned for mitigation through treatment.

## **LAND USE PLAN CONSISTENCY**

### **S3 - Aerial Seeding**

Seed mixtures comprised of native shrubs and stabilizing mixes of native grasses would be aerial broadcast seeded. Aerial seeding of shrubs is proposed as an ES treatment to augment the development of vegetative structure across the burned landscape to further reduce sediment movement from wind and water erosion, which will aid in restoring habitat for sage-grouse and several other BLM sensitive wildlife species associated with the sagebrush steppe. The area was also important habitat for bighorn sheep and is utilized by mule deer and antelope.

These proposed actions meet the MFP objectives to:

- Provide for protection and conservation of rare and endangered species within the planning unit;
- Maintain and/or enhance unique or special habitats to retain and/or improve their character and value for wildlife, research, and human enjoyment. Protect habitats supporting nongame wildlife with high public and/or biological interest;
- Maintain stability of 408,300 acres classified as moderate, high, and critical erosion hazard by reducing or minimizing wind and water erosion;
- Protect and/or improve endangered species habitat within the BPU;
- Manage 520,000 acres of sage-grouse range in the BPU to improve nesting, brood rearing, and winter habitats by: improving all poor and fair big sagebrush, meadow, and riparian ecological sites to good ecological condition;
- Manage sensitive species habitat in the BPU to maintain or increase existing and potential

populations;

- Manage 1,079,000 acres of pronghorn habitat in the BPU, within IMP guidelines where applicable, to provide sufficient forage, water, cover, and space;
- Manage mule deer spring, summer, and fall, and winter range, and pronghorn habitat in the BPU to obtain good ecological condition, and to provide adequate food, cover, and water.

### **S5 - Noxious Weeds**

These proposed actions meet the MFP objectives to:

Provide for protection and conservation of rare and endangered species within the planning unit;

- Maintain and/or enhance unique or special habitats to retain and/or improve their character and value for wildlife, research, and human enjoyment. Protect habitats supporting nongame wildlife with high public and/or biological interest;
- Maintain stability of 408,300 acres classified as moderate, high, and critical erosion hazard by reducing or minimizing wind and water erosion;
- Protect and/or improve endangered species habitat within the BPU.

Inventory and treatment of new and existing populations of noxious weeds would occur within the project area. This is in conformance with BLM policy requiring the BLM control the spread of noxious weeds on public lands and eradicate them where possible and economically feasible.

### **S6 - Soil Stabilization (Other than seedling, planting)**

Fencing of treatment areas is consistent with BLM Handbook H 1742-1, Burned Area Emergency Stabilization and Rehabilitation, which states; “livestock will be excluded from the treatment area until monitoring results, documented in writing; show rehabilitation objectives have been met”. In case of treatment failure, other factors may need to be considered, such as natural recovery of untreated areas, and need or reason to continue closure.

### **S7 - Fence/Gate/Cattleguard**

Fencing of treatment areas is consistent with BLM Handbook H 1742-1, Burned Area Emergency Stabilization and Rehabilitation, which states; “livestock will be excluded from the treatment area until monitoring results, documented in writing; show rehabilitation objectives have been met”. In case of treatment failure, other factors may need to be considered, such as natural recovery of untreated areas, and need or reason to continue closure.

In the Sugar Loaf pasture of Northwest Allotment (00808), approximately 25,731 acres burned in the Jacks fire. Approximately 99% of the pasture has burned and the entire pasture will be closed to livestock use for recovery and seeding establishment. There were about 3,015 acres or 84% of the Hill Pasture that burned and it will also be closed to livestock use.

In the Owens Allotment there were about 12,015 acres burned amounting to 50% of the total allotment and 72% of the pasture. This pasture will be closed to livestock grazing until ESR objectives have been achieved.

These proposed actions meet the MFP objectives to:

Provide for protection and conservation of rare and endangered species within the planning unit;

- Maintain and/or enhance unique or special habitats to retain and/or improve their character and value for wildlife, research, and human enjoyment. Protect habitats supporting nongame wildlife with high public and/or biological interest;
- Maintain stability of 408,300 acres classified as moderate, high, and critical erosion hazard by reducing or minimizing wind and water erosion;
- Protect and/or improve endangered species habitat within the BPU;
- Manage 520,000 acres of sage-grouse range in the BPU to improve nesting, brood rearing, and winter habitats by: improving all poor and fair big sagebrush, meadow, and riparian ecological sites to good ecological condition;
- Manage sensitive species habitat in the BPU to maintain or increase existing and potential populations;
- Manage 1,079,000 acres of pronghorn habitat in the BPU, within IMP guidelines where applicable, to provide sufficient forage, water, cover, and space;
- Manage mule deer spring, summer, and fall, and winter range, and pronghorn habitat in the BPU to obtain good ecological condition, and to provide adequate food, cover, and water.

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

These proposed actions meet the MFP objectives to:

- Provide for protection and conservation of rare and endangered species within the planning unit;
- Maintain and/or enhance unique or special habitats to retain and/or improve their character and value for wildlife, research, and human enjoyment. Protect habitats supporting nongame wildlife with high public and/or biological interest;
- Maintain stability of 408,300 acres classified as moderate, high, and critical erosion hazard by reducing or minimizing wind and water erosion;
- Protect and/or improve endangered species habitat within the BPU;
- Manage 520,000 acres of sage-grouse range in the BPU to improve nesting, brood rearing, and winter habitats by: improving all poor and fair big sagebrush, meadow, and riparian ecological sites to good ecological condition;
- Manage sensitive species habitat in the BPU to maintain or increase existing and potential populations;
- Manage 1,079,000 acres of pronghorn habitat in the BPU, within IMP guidelines where applicable, to provide sufficient forage, water, cover, and space;

- Manage mule deer spring, summer, and fall, and winter range, and pronghorn habitat in the BPU to obtain good ecological condition, and to provide adequate food, cover, and water.

Wilderness Act of 1964 prohibits motorized/mechanized uses in wilderness areas.

### **S13 - Monitoring**

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

These proposed actions meet the MFP objectives to:

- Provide for protection and conservation of rare and endangered species within the planning unit;
- Maintain and/or enhance unique or special habitats to retain and/or improve their character and value for wildlife, research, and human enjoyment. Protect habitats supporting nongame wildlife with high public and/or biological interest;
- Maintain stability of 408,300 acres classified as moderate, high, and critical erosion hazard by reducing or minimizing wind and water erosion;
- Protect and/or improve endangered species habitat within the BPU;

Inventory and treatment of new and existing populations of noxious weeds would occur within the project area. This is in conformance with BLM policy requiring the BLM control the spread of noxious weeds on public lands and eradicate them where possible and economically feasible.

#### **R7 - Fence/Gate/Cattleguard**

Fencing of treatment areas is consistent with BLM Handbook H 1742-1, Burned Area Emergency Stabilization and Rehabilitation, which states; “livestock will be excluded from the treatment area until monitoring results, documented in writing; show rehabilitation objectives have been met”. In case of treatment failure, other factors may need to be considered, such as natural recovery of untreated areas, and need or reason to continue closure.

#### **R12 - Closures (area, OHV, livestock)**

Motorized/mechanized use is prohibited within wilderness (Wilderness Act 1964)

**COST SUMMARY TABLES**

**Emergency Stabilization (LF20000ES)**

Action/ Spec #	Planned Action	Unit (Acres, WMs, Number)	# Units	Unit Cost (If Appl.)	FY 2012	FY 2013	FY 2014	FY 2015	Totals by Spec.
S1	Planning (Project Management)	WMS	3	\$15,000.00	\$ 0	\$15,000	\$15,000	\$15,000	\$45,000
S2	Ground Seeding								
S3	Aerial Seeding	Acres	17,773	\$ 27.34	\$369,000	\$117,000	\$ 0	\$ 0	\$486,000
S4	Seedling Planting								
S5	Noxious Weeds	Acres	48,894	\$ 0.76	\$ 0	\$37,000	\$ 0	\$ 0	\$37,000
S6	Soil Stabilization (Other than seedling, planting)	Acres	3	\$10,333.33	\$6,000	\$25,000	\$ 0	\$ 0	\$31,000
S7	Fence/Gate/Cattleguard	Miles	10	\$12,600.00	\$ 0	\$117,000	\$ 0	\$9,000	\$126,000
S8	Road/Trail Water Diversion								
S9	Cultural Protection (Stabilization/Patrol)								
S10	Tree Hazard Removal								
S11	Facilities								
S12	Closures (area, OHV, livestock)	Acres	49,847	\$ 0.50	\$ 0	\$25,000	\$ 0	\$ 0	\$25,000
S13	Monitoring	Acres	49,847	\$ 3.71	\$ 0	\$70,000	\$60,000	\$55,000	\$185,000
S14	Other Treatments								
	<b>TOTAL COSTS (LF20000ES)</b>				<b>\$375,000</b>	<b>\$406,000</b>	<b>\$75,000</b>	<b>\$79,000</b>	<b>\$935,000</b>
	OTHER FUND CODE TOTALS:								
	TOTAL COSTS (???)								
	TOTAL COSTS (???)								
	TOTAL COSTS (???)								

**Burned Area Rehabilitation (LF32000BR)**

Action/ Spec #	Planned Action	Unit (Acres, WMs, Number)	# Units	Unit Cost (If Appl.)	FY 2012	FY 2013	FY 2014	FY 2015	Totals by Spec.
R1	Planning (Project Mgmt)				\$ 0	\$ 0	\$3,000	\$3,000	\$6,000
R2	Ground Seeding								
R3	Aerial Seeding								
R4	Seedling Planting								
R5	Noxious Weeds	Acres	48,894	\$ 1.41	\$ 0	\$ 0	\$37,000	\$32,000	\$69,000
R6	Soil Stabilization (Other than seedling, planting)								
R7	Fence/Gate/Cattleguard	Miles	8	\$8,875.00	\$ 0	\$51,000	\$20,000	\$ 0	\$71,000
R8	Road/Trail Water Diversion								
R9	Cultural Protection (Stabilization/Patrol)								
R10	Tree Hazard Removal								
R11	Facilities								
R12	Closures (area, OHV, livestock)	Acres	48,894	\$ 0.86	\$ 0	\$ 0	\$23,000	\$19,000	\$42,000
R13	Monitoring								
R14	Additional Treatments								
	<b>TOTAL COSTS (LF32000BR)</b>				<b>\$0</b>	<b>\$51,000</b>	<b>\$83,000</b>	<b>\$54,000</b>	<b>\$188,000</b>
OTHER FUND CODE TOTALS:									
	TOTAL COSTS (???)								
	TOTAL COSTS (???)								
	TOTAL COSTS (???)								

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

### **EMERGENCY STABILIZATION ISSUES**

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

Increased runoff and erosion is expected and thunderstorm activity with high-intensity, short-duration precipitation will result in flash flooding at any road/drainage crossings within or downstream of the burned area.

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

The Jacks Fire has burned through Tigert Spring, an important spring in the Little Jacks Wilderness. This spring is one of the few sources of water outside of the canyon system in the area and also thought to be a homestead. The loss of soil and riparian vegetation and associated post-fire erosion threatens to change the water table and dry up this spring. The adjacent hillslopes were burned at moderate to high severity, and soil loss and erosion is likely. The spring has gullied in the past but is stabilized with riparian vegetation. Increased soil loss and erosion threatens to re-initiate the gully and lower the water table to an unacceptable level. It is also expected that the riparian vegetation that stabilized the gully formation and maintained the season-long water availability will be lost if heavily grazed by wildlife and livestock (after rest).

The fire consumed the protective vegetation and root mass and created a water repellent surface that will increase the runoff from the adjacent hillsides. This increased runoff will also increase erosion and soil loss within the entire burned area. Tigert Spring will not respond well naturally to the expected increases in erosion and may impede the recovery of riparian vegetation by gully, further reducing available water for the riparian area.

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

There are a number of acres within the burned area that consisted of a pre-fire vegetative cover of big sagebrush, mountain mahogany, and/or aspen. These sites did not have a heavy understory of grasses. These sites were located on the steeper concave slopes just below cliffs and in valley bottoms. Because of the heavier pre-fire vegetation and the fire behavior at these locations, they also coincide with the highest burn severity. These soils have been evaluated on-site and determined to have a low likelihood of vegetative recovery in the next 2-3 years. Most of the soil horizon and fine roots have been consumed, including the grass root crowns. Only shrub stubs remain and the largest stems of the aspen and mountain mahogany. These areas exhibit a weak to medium water repellency at the soil surface. These sites are expected to experience a high rate of soil loss during the next few years.

The fire has burned through areas with a cheatgrass component, especially along travel

corridors. This invasive species poses a serious threat to the functioning structure and composition of vegetation identified as habitat critical to the survival of the greater sage-grouse, a candidate species. This habitat was especially intact in the adjacent burned wilderness areas of Big and Little Jacks that are known not just for spectacular canyons but also for the healthy ecosystems unaffected by invasive species. In normal years, the fire may have been less severe because of the moisture in the shrub component. However, this year two factors are thought to have contributed to the larger, more severe fire. First, a record low amount of precipitation during the winter and spring months resulted in an early drying trend and drought conditions. Second, the drought-stressed shrubs were then attacked by an insect infestation (Aroga moth) that left a majority of the shrubs extremely dry even compared to normal drought conditions. These factors, combined with the weather conditions at the time of the fire (extreme daytime temperatures over 100 degrees Fahrenheit and relative humidity below 6 percent) may have caused a much more contiguous burn pattern.

According to the Idaho Sage-grouse Conservation Plan, the burned area is within the Owyhee Sage-grouse Planning area, Management Zone IV. Over 95% of the burned area is considered Preliminary Priority Habitat and provides critical nesting, wintering, and lekking habitat. Invasive species and wildfires pose the greatest risk to this portion of their range. This habitat included at least 10 documented leks within the burned area and another 19 documented leks within three miles of the burned area.

The sagebrush is expected to take at least 30 years to recover under natural conditions which significantly threaten the population of sage-grouse. If these areas convert to a cheatgrass dominated understory, the fire return interval might be 10 times as frequent as the historical fire patterns. Past experience has proven that cheatgrass immediately adjacent to and within an area is likely to out-compete native vegetation after fires.

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

No specific treatments to mitigate impacts of the fire to critical heritage resources have been identified. However, significant heritage resources have been identified in the Jack's Fire burn area. Any treatments that would result in increased vegetative cover and BLM presence in the burned area would also serve to protect cultural resources in the burned area.

Further identification efforts would consider effects to significant heritage resources in the area of potential effect (APE) for the proposed treatments prior to implementation as per BLM policy.

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

Several noxious weed species previously identified in the burned area include whitetop, scotch thistle, and Canada thistle. The likelihood of noxious weeds increasing within the burned area is very high because of exposed soil and the proximity of weed species. The control of noxious weeds will help to ensure the successful establishment of seeded species as well as increase the vigor of existing plants on site. 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 in the future.

## **BURNED AREA RECOVERY ISSUES**

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

The sagebrush is expected to take at least 30 years to recover under natural conditions which significantly threaten the population of sage-grouse. The sagebrush seeding has been delineated to be much more extensive than the grass seeding within the wilderness due to the recovery timeline.

Regrowth of existing vegetation may not reach a stage that can withstand the pressures of wildlife or livestock pressures. In the first few years, the riparian areas are lush with new growth and very attractive to animals in the area, especially when the rest of the landscape is recovering at a slower rate. The purpose of the exclosure fence is to ensure that regrowth proceeds successfully.

### **2 - Weed Treatments**

Several noxious weed species previously identified in the burned area include whitetop, scotch thistle, and Canada thistle. The likelihood of noxious weeds increasing within the burned area is very high because of exposed soil and the proximity of weed species. The control of noxious weeds will help to ensure the successful establishment of seeded species as well as increase the vigor of existing plants on site. 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 in the future.

### **3 - Tree Planting**

N/A

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

Fence material was damaged during the fire and became ineffective. Wooden material may be partially or fully consumed, and steel wire may lose tensile strength if exposed to intense heat. Obvious failure of material integrity will be replaced and/or repaired. Replacement or repair of damaged fence material will result in the ability to direct the use of public land by permitted livestock.

Signs such as carsonite posts and associated stickers that identify the wilderness boundary and the regulation prohibiting motorized/mechanized use in wilderness were burned in the fire.

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

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

#### ***S6 Soil Stabilization (Other than seedling, planting)***

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

Manually spread native grass seed (Mix #1) on the approximately 3 acres that have been severely burned upslope from Tigert Spring (see treatment map). The seed would then be manually raked into the soil surface and covered with a layer of certified weed-free straw that has a depth of 1 inch or 70 percent ground cover. This depth and effective coverage of straw can be achieved with an estimated 1 ton of agricultural straw per acre (the equivalent distribution of wood straw is about 3-4 tons per acre). This treatment must be implemented after the effective growing season and prior to the first snowfall.

Other treatments in this plan and associated with the recovery of Tigert Spring include resting the pasture from livestock grazing and monitoring riparian recovery. A temporary exclosure fence may also be needed if monitoring identifies that riparian vegetation is not recovering and/or treatment objectives are not being met because of wildlife or if riparian vegetation has not recovered when livestock grazing resumes in the remainder of the pasture.

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

The Jacks Fire has burned through Tigert Spring, an important spring in the Little Jacks Wilderness. This spring is one of the few sources of water outside of the canyon system in the area and also thought to be a homestead. The loss of soil and riparian vegetation and associated post-fire erosion threatens to change the water table and dry up this spring. The adjacent hillslopes were burned at moderate to high severity, and soil loss and erosion is likely. The spring has gullied in the past but is stabilized with riparian vegetation. Increased soil loss and erosion threatens to re-initiate the gully and lower the water table to an unacceptable level. It is also expected that the riparian vegetation that stabilized the gully formation and maintained the season-long water availability will be lost if heavily grazed by wildlife and livestock (after rest).

The fire consumed the protective vegetation and root mass and created a water repellent surface that will increase the runoff from the adjacent hillsides. This increased runoff will also increase erosion and soil loss within the entire burned area. Tigert Spring will not respond well naturally to the expected increases in erosion and may impede the recovery of riparian vegetation by gullyng, further reducing available water for the riparian area.

The purpose of this treatment is to mitigate or prevent soil loss from the hillsides and implement a set of treatments that will accelerate recovery of the site to near-normal conditions that respond to precipitation more positively.

The treatment should be 80% effective if implemented prior to snowfall in the fall of 2012.

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

The treatment is cost-effective because it focuses only on the area that is expected to contribute to the degradation of an important spring. Any one of the methods would aid riparian recovery; however, applied as a set, it is expected that the treatment will be beneficial and result in full recovery of the riparian area.

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

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

#### A. Treatment/Activity Description

Seed would be broadcast using an end-product contract and most likely applied by either a helicopter or a fixed-wing aircraft. Aerial seeding would occur in late fall immediately before, or after, the first snow. Excellent results have been observed when seed is applied on a thin layer of snow.

The treatment is designed for the areas with moderate and high soil burn severity and in ecological sites of clayey, loamy, and shallow claypan. These conditions seemed to correspond with a moderate to high fire intensity even though the soil burn severity may be low to moderate.

This treatment will be combined with closure and fencing to rest the seeded area, and entire burned area until monitoring objectives have been met and are predicted to be sustainable. This is estimated to take a minimum of two full growing seasons. This will give the seeded species and residual plants at least two seasons to grow, set seed and begin to re-establish. If objectives have been met, the area could be grazed as soon as late season 2014 after seed set.

#### **Non-wilderness Grass-seeding (483 Acres):**

A selected seed mixture (Mix #2) of stabilizing species would be distributed across the polygons identified on the treatment map using aerial broadcast seeding. These polygons encompass hillslopes that experienced the high intensity burn with the dense pre-fire vegetation, little understory and are most prone to failure.

#### **Wilderness Grass-seeding (17 Acres):**

Same as Non-wilderness seeding and identified on treatment map.

#### **Non-wilderness Sagebrush-seeding (9,631 Acres):**

A selected seed mixture (Mix #3) consisting of native shrubs would be distributed across the polygons identified on the treatment map and encompassing hillslopes that have been burned at a moderate to high severity. An estimated 90% coverage is expected within each treatment polygon, unless stripping must be utilized. Stripping may be utilized as a technique to reduce the amount of seeds necessary to cover the site only if native seeds are in short supply.

- The low sagebrush should be part of the overall mix, however, if separated should be applied on the ecological sites of shallow claypan and clayey.

**Wilderness sagebrush-seeding (LJ 4,301 + BJ 3,341 = 7,642 Acres):**

The aerial broadcast seeding in wilderness (Mix #3) would be applied with the same specification as non-wilderness sagebrush-seeding with the following exceptions:

- Strip seeding will not be allowed in wilderness.
- The goal of seeding within wilderness is to mimic natural recovery. Application within treatment polygons may be allowed to capitalize on seeding burned areas that are expected to provide the best chance at successful recovery. These areas should include high severity, wetter north-facing slopes, and/or burned valley bottoms. An application that achieves 70% coverage is expected within each treatment polygon.
- The seed mixture of native species will be the same inside and outside the wilderness, however, actions within the wilderness will implemented based on a minimum requirements analysis.

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

The grass seeding is designed to treat sites that burned with high intensity, had dense stands of sagebrush with little understory and are not expected to recover stabilizing grasses naturally for at least 3 years. The primary concern is the loss of soil and soil productivity due to a lack of root structure that would hold the soil on-site. Secondly, these sites are on the steepest slopes and drain into the Big Jacks Wilderness and wild and scenic river affecting the water quality for fisheries, an outstandingly remarkable value. The grass seeding would accelerate the stabilization of the soil on-site and minimize soil loss and associated erosion.

The sagebrush is expected to take at least 30 years to recover under natural conditions which significantly threaten the population of sage-grouse. The sagebrush seeding has been delineated to be much more extensive than the grass seeding within the wilderness due to the recovery timeline. The seed mixture of native species will be the same inside and outside the wilderness, however, actions within the wilderness will implemented based on a minimum requirements analysis. These wilderness areas are recommended for treatment because similar threats to ecosystem integrity exist across the wilderness boundary. The same vegetation types, burn severity and threats exist in the wilderness as outside the wilderness.

This treatment is intended to prevent an alteration of the fire regime by preventing cheatgrass from getting a foot-hold in those areas not expected to recover grasses naturally in the near future. If these areas convert to a cheatgrass dominated understory, the fire return interval might be 10 times as frequent as the historical fire patterns. This treatment is also intended to prevent the complete loss of a healthy, functioning vegetation structure and composition within the adjacent wilderness that supports greater sage-grouse (candidate species) and other important species like the California bighorn sheep. Past experience has proven that cheatgrass immediately adjacent to and within an area is likely to outcompete

native vegetation after fires. This treatment is designed to successfully preserve the important national wilderness characteristics and the model ecosystems that they represent. This treatment should be 70% effective in meeting the objective of accelerating sagebrush recovery if applied as designed.

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

The burn removed an area of mature sagebrush within Preliminary Priority and Key sage-grouse habitat. These are the Bureau's highest priority areas for re-establishment of shrubs, grasses, and forb species. Benefits to critical resources would outweigh the cost of the treatment. Treatments attempted after the first year of the fire disturbance would be much higher in cost and the success rate would be minimal at best. The treatment would augment the restoration of suitable habitat conditions for sage-grouse.

Grass seeding is treating the highest priority areas and will be the most cost effective to address soil stabilizing issue.

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

#### A. Treatment/Activity Description

**Further investigation is necessary prior to implementing this treatment. Consult with the Bruneau Field Office Manager:**

In the Owens Allotment, approximately 2.00 miles of protection fence with a 50 foot standard wood let-down section will be constructed to protect the burned area from livestock grazing and allow livestock grazing in the unburned portion of the allotment. This fence will effectively rest the Turner pasture (#10). The temporary protection fencing will tie-in to existing structures and be built to BLM specification (see below) for bighorn sheep habitat and be marked to minimize sage-grouse and other collisions. The temporary fencing will be removed following the livestock closure period.

#### **Turner Pasture (#10) fence specifications (let-down and temporary):**

All length of fence will be 4 strand wire, 16.5' T-post spacing, smooth bottom. Construction of fence will include use of white-top T-posts and marked with wildlife collision markers, white in color at 3 foot spacing. Six markers will be placed on top wire strand at 3' intervals. Four markers will be placed on the second wire strand with 5' spacing between these markers.

Eight miles of temporary standard wood let-down fence will be constructed in Northwest allotment (southwest corner of burn, Pasture #16W) to protect the burned area from livestock grazing while enabling livestock use in the remaining (48,000 acre) unburned area of the pasture. The let-down fence will only be raised for a two month duration from July through August. Bruneau Field Office Staff will be responsible for raising and lowering the fence during periods of use and non-use. This period of use is outside of the sage-grouse lekking and nesting period when birds are especially susceptible to collisions.

#### **Pasture 16W fence specifications (let-down and temporary):**

All length of fence will be 3 strand wire, 22' T-post spacing, smooth bottom with spacing 18" bottom, 26" middle, 38" top wire. Construction of fence will include use

spacing 18” bottom, 26” middle, 38” top wire. Construction of fence will include use of white-top T-posts and marked with 5 wildlife collision markers, white in color. Six markers will be placed on top wire strand at 3’ intervals. Field office staff is responsible for raising and lowering the fence.

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

The objective of this treatment is to protect the burned area and seeding treatment to allow for seeding establishment as well as provide critical rest to existing native vegetation from livestock grazing. Construction of 2 miles of protection fence, 8 miles of temporary letdown fence, and repair of 12 miles of existing fence damaged by the fire will effectively protect the burned area from livestock grazing while allowing the remaining unburned portions of the pastures to be available for livestock grazing. Two of the pastures in the Northwest Allotment within the fire perimeter had high percentages of burned versus unburned acres therefore the entire pastures will be closed and do not require protective fencing. This treatment is expected to be 80% effective as long as design criteria are used to emphasize full vegetative recovery before livestock turn-back.

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

Most of the burned area is protected by existing fences. This treatment would protect the burned area by encouraging vegetative recovery and soil stabilization. It would also allow livestock grazing in the remaining unburned portions of the pastures during the closure period.

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

A. Treatment/Activity Description

**Livestock Closure:**

Rest livestock grazing activities in portions of pastures that have been burned by the Jacks fire until monitoring data shows that ES and BAR objectives have been met and predicted to be sustainable.

**OHV Patrols:**

This treatment will ensure compliance with wilderness travel rules and the Omnibus Public Lands Management Act of 2009 which prohibits motorized/mechanized tools within the wilderness. A short barrier fence (40 feet) would be constructed at any visible routes leading into the wilderness in or near the perimeter of the Jacks Fire (as shown on the treatment map). This fence would be funded by the wilderness program. The treatment would fund the presence of a park ranger that travels through the burned area 2-3 times per week during the two most common visitor periods in the spring and in the fall. There are about 2.5 months between March and May and another 2.5 or 3 months for hunting in the fall between August and November. These patrols would be designed to travel through the area two or three times per week during higher use periods. All visitors would be contacted

and tracks of motorized use would be documented and GPSed. The park ranger would coordinate with BLM Law Enforcement when visitors were not in compliance with rules and regulations. These patrols would continue for the second and third years or until vegetative regrowth sufficiently covers the routes. If it is determined that illegal use appears to be on an increasing trend to an unacceptable level, then the area would be closed until vegetation is established.

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

**Livestock Closure:**

The purpose of this treatment is to rest the burned area from livestock grazing to provide the opportunity for recovery of on-site vegetation and new seeding establishment. Establishment of resilient, competitive, perennial plant communities would inhibit the expansion of annual invasive vegetation and noxious weeds and stabilize soil resources.

**OHV Patrols:**

There are a number of routes within and around the boundary of the Jacks fire. These routes are also within and on the boundary of the two wilderness areas – Big and Little Jacks. Some of the routes are legally used by the public to access the wilderness and they are called cherrystems. Other routes are not legal for the public to use and are only for administrative use specific to rangeland management operations and approved by the district manager. The burn has made it much easier for cross-country travel both on and off of established routes. The risk of cross-country travel into wilderness is high and should be prevented if possible. This risk also poses a secondary threat to cultural resources in general as well as the specific cultural site that was burned near Tigert Springs. The purpose of this treatment is to minimize prohibited travel into the wilderness and secondarily to deter or detect looting or vandalism of documented and undocumented cultural sites.

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

**Livestock Closure:**

This treatment conforms to the current land use plan. Although other treatments such as protection fence, temporary fence, and fence repair will be charged to the ESR/BAR programs; there are no additional costs associated with the livestock closure that would be borne by the ESR program. Without the treatment, the ability of the vegetation to become established or recover would be reduced.

**OHV Patrols:**

During and immediately after the Jacks Fire, visitors had already started to use off-highway vehicles in the wilderness. This use is expected to increase during hunting season. The sagebrush provided a cover and an obstacle that discouraged off-highway travel. Now that obstacle is removed, thereby, making the presence of BLM personnel the most cost-effective method to encourage legal behavior in and near the wilderness areas.

## ***S13 Monitoring***

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

See attached Monitoring Plan for full monitoring plan design.

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

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

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

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

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

The 48,894 acres of BLM land within the burned area would be inventoried for the presence of noxious weeds and appropriate treatments would be applied based on the species encountered. Herbicides on the BLM list of approved chemicals would be applied by ATV/UTV or backpack sprayer. BLM policy, appropriate procedures described in the chemical manufacturer's label, and applicable regulations would be adhered to. Initial inventory of weeds would occur both fall 2012 and spring 2013. Inventory would then continue over the next two years under the BAR program.

Noxious weed inventory and treatment within the burned area would occur for three years following the fire to directly treat new occurrences. All actions would be in accordance with the Boise District Normal Fire Emergency Stabilization and Rehabilitation Plan EA #ID-090-2004-050, May, 2005, and the Noxious and Invasive Weed Treatment Program consultation with the US Fish and Wildlife Service (OALS #1-4-05-I-759). Noxious species identified in the burned area include whitetop, scotch thistle, and Canada thistle.

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

First-year inventory and treatment of noxious weed species meets the ES criteria of maintaining the habitat in the highest priority areas. Several noxious weed species previously identified in the burned area include whitetop, scotch thistle, and Canada thistle. Immediate identification and treatment of these noxious weed species is necessary to control their impact in the area. Noxious weed detection and treatment will help limit the expansion of noxious weeds within the burned area.

Continued inventory and treatment of noxious weeds in the second and third year meets the BAR criteria of actions necessary to regenerate and maintain identified critical sagebrush steppe and sage-grouse habitat. Several well-used roads border and transect the burned area, which could serve as significant sources of future weed transportation and introduction. Continued inventory and treatment of weeds will control their invasion and assist with the establishment of desirable native vegetation.

The likelihood of noxious weeds increasing within the burned area is very high because of

exposed soil and the proximity of weed species. The control of noxious weeds will help to ensure the successful establishment of seeded species as well as increase the vigor of existing plants on site. 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 in the future.

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

Early detection and rapid response for weed treatments is much more cost effective than addressing a noxious weed infestation that is much larger and harder to control later. Field work is combined with other weed treatments in the area for cost efficiency. Surveying and treating weed infestations will occur before they become established. Current policy states that treatment should occur where there is threat that those species may quickly invade or hamper reestablishment of native vegetation.

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

### ***R12 Closures (area, OHV, livestock)***

#### A. Treatment/Activity Description

##### **Livestock Closure:**

The area burned by the Jacks Fire would be rested from livestock grazing until monitoring data shows that ES and BAR objectives have been met and are predicted to be sustainable.

##### **OHV Closure & Patrols:**

The treatment would construct barrier fence using a 40 foot, 3-wire design at all illegal and/or administrative routes into the Big or Little Jacks Wilderness areas that travel to within visual site distance from the burn perimeter. Signs would be installed at each of the locations shown on the treatment map. The signs have already been designed; therefore, it will be necessary only to submit a purchase order.

The treatment would fund the presence of a park ranger that travels through the burned area 2-3 times per week during the two most common visitor periods in the spring and in the fall. There are about 2.5 months between March and May and another 2.5 or 3 months for hunting in the fall between August and November. These patrols would be designed to travel through the area two or three times per week during higher use periods. All visitors would be contacted and tracks of motorized use would be documented and GPSed. The park ranger would coordinate with BLM Law Enforcement when visitors were not in compliance with rules and regulations. These patrols would continue for the second and third years or until vegetative regrowth sufficiently covers the routes.

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

##### **Livestock Closure:**

The purpose of this treatment is to rest the burned area from livestock grazing to provide the opportunity for recovery of on-site vegetation and new seeding establishment. Establishment of resilient, competitive, perennial plant communities would inhibit the expansion of annual invasive vegetation and noxious weeds and stabilize soil resources.

### **OHV Closure & Patrols:**

There are a number of routes within and around the boundary of the Jacks fire. These routes are also within and on the boundary of the two wilderness areas – Big and Little Jacks. Some of the routes are legally used by the public to access the wilderness, and they are called cherrystems. Other routes are not legal for the public to use and are only for administrative use specific to rangeland management operations and approved by the district manager. The burn has made it much easier for cross-country travel both on and off of established routes. The risk of cross-country travel into wilderness is high and should be prevented if possible. This risk also poses a secondary threat to cultural resources in general as well as the specific unevaluated cultural site that was burned near Tigert Spring. The purpose of this treatment is to minimize prohibited travel into the wilderness and secondarily to deter or detect looting or vandalism of documented and undocumented and unknown cultural sites. This fence would utilize signs to communicate the message of prohibited uses within wilderness. The sign would be posted at those routes that are not legal cherrystems but are obvious travel routes into the wilderness to make a clear distinction between the legal and the illegal routes.

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

#### **Livestock Closure:**

This treatment conforms to the current land use plan. There are no costs associated with the livestock closure that would be borne by the ESR program. Without the treatment, the ability of the vegetation to become established or recover would be reduced.

#### **OHV Closure & Patrols:**

During and immediately after the Jacks fire, visitors had already started to use off-highway vehicles in the wilderness. This use is expected to increase during hunting season. The sagebrush provided a cover and an obstacle that discouraged off-highway travel. Now that obstacle is removed, thereby, making the presence of BLM personnel the most cost-effective method to encourage legal behavior in and near the wilderness areas.

## **Issue 2 - Weed Treatments**

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

#### A. Treatment/Activity Description

The 49,847 acres of BLM land within the burned area would be inventoried for the presence of noxious weeds and appropriate treatments would be applied based on the species encountered. Herbicides on the BLM list of approved chemicals would be applied by ATV/UTV or backpack sprayer. BLM policy, appropriate procedures described in the

chemical manufacturer's label, and applicable regulations would be adhered to. Inventory of weeds would occur beginning fall 2013 and continue over the next two years under the BAR program.

Noxious weed inventory and treatment within the burned area would occur for three years following the fire to directly treat new occurrences. All actions would be in accordance with the Boise District Normal Fire Emergency Stabilization and Rehabilitation Plan EA #ID-090-2004-050, May, 2005, and the Noxious and Invasive Weed Treatment Program consultation with the US Fish and Wildlife Service (OALS #1-4-05-I-759). Noxious species identified in the burned area include whitetop, scotch thistle, and Canada thistle.

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

First-year inventory and treatment of noxious weed species meets the ES criteria of maintaining the habitat in the highest priority areas. Several noxious weed species previously identified in the burned area include whitetop, Scotch thistle, Canada thistle. Immediate identification and treatment of these noxious weed species is necessary to control their impact in the area. Noxious weed detection and treatment will help limit the expansion of noxious weeds within the burned area.

Continued inventory and treatment of noxious weeds in the second and third year meets the BAR criteria of actions necessary to regenerate and maintain identified critical sagebrush steppe and sage-grouse habitat. Several well-used roads border and transect the burned area, which could serve as significant sources of future weed transportation and introduction. Continued inventory and treatment of weeds will control their invasion and assist with the establishment of desirable native vegetation.

The likelihood of noxious weeds increasing within the burned area is very high because of exposed soil and the proximity of weed species. The control of noxious weeds will help to ensure the successful establishment of seeded species as well as increase the vigor of existing plants on site. 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 in the future.

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

Early detection and rapid response for weed treatments is much more cost effective than addressing a noxious weed infestation that is much larger and harder to control later. Field work is combined with other weed treatments in the area for cost efficiency. Surveying and treating weed infestations will occur before they become established. Current policy states that treatment should occur where there is threat that those species may quickly invade or hamper reestablishment of native vegetation.

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

## ***R7 Fence/Gate/Cattleguard***

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

#### **Fence:**

Eight miles of internal allotment/pasture fencing were damaged during the Jacks fire. Repair of this fencing is needed to ensure livestock remain in permitted allotments and pastures. This fencing would be repaired prior to the re-introduction of livestock into burned areas of affected pastures or allotments following the livestock closure.

A 3 - 5 acre exlosure will be identified, located, and constructed in year 2 or 3 to determine long-term treatment effectiveness.

#### **Signs:**

There were 20 Carsonite posts marking the wilderness boundary along all travel routes were burned with the Jacks Fire. These posts provide a reminder and a clearly marked boundary that can be used to enforce the regulations prohibiting motorized/mechanized use within wilderness. They must be replaced as soon as possible.

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

#### **Fence:**

Fence material was damaged during the fire and became ineffective. Wooden material may be partially or fully consumed, and steel wire may lose tensile strength if exposed to intense heat. Obvious failure of material integrity will be replaced and/or repaired. Replacement or repair of damaged fence material will result in the ability to direct the use of public land by permitted livestock.

#### **Signs:**

These carsonite posts and associated stickers that identify the wilderness boundary and the regulation prohibiting motorized/mechanized use in wilderness were burned in the fire.

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

This treatment is reasonable and cost effective because it would utilize existing fences, gates, and structures to the greatest extent possible. It is cost effective because fire-damaged wooden structures would be replaced with steel where possible, thus increasing longevity of the structures and resistance to future wildfire events.

The carsonite posts would be replaced in-kind and have been quite successful in clearly marking the boundary to-date.

## **PART 4 DETAILED TREATMENT COST TABLE**

**PART 5 - SEED LISTS**

**DRILL SEED**

											Total Cost
TOTALS:		0	0	0	0			0.0		\$ 0.00	\$ 0.00

**AERIAL SEED**

Species	Scientific Name	% PLS	PLS Seeds / sq. ft.	PLS Seeds / ac.	Seeds / lb (bulk)	Total Seeds / Acre (Bulk)	Aerial Seedings (Acre)	Lbs / Acre	Total Lbs.	Cost / Lb	Total Cost
Basin Big Sagebrush, Basin	Artemisia tridentata tridentata	16.0%	1.62	70,567	2,358,000	441,045	9,361.0	0.0	280.8	\$ 16.00	\$29,955.20
Mountain Big Sagebrush, Mountain	Artemisia tridentata vaseyana	16.0%	3.62	157,687	1,973,117	985,545	9,361.0	0.1	748.9	\$ 16.00	\$74,888.00
Low Sagebrush	Artemisia arbuscula	16.0%	1.12	48,787	972,000	304,920	9,361.0	0.1	468.1	\$ 16.00	\$44,932.80
Wyoming Big Sagebrush, Wyoming	Artemisia tridentata wyomingensis	16.0%	4.59	199,940	2,500,000	1,249,628	9,361.0	0.1	748.9	\$ 16.00	\$74,888.00
Idaho Fescue, Nezpar	Festuca idahoensis	81.0%	33.47	1,457,953	450,000	1,799,942	500.0	3.2	1,620.0	\$ 7.00	\$14,000.00
Sandberg bluegrass, Malhuer	Poa secunda spp. secunda	72.0%	25.96	1,130,818	1,046,960	1,570,580	500.0	1.1	540.0	\$ 2.60	\$1,950.00
Wyoming Big Sagebrush, Wyoming	Artemisia tridentata wyomingensis	16.0%	4.59	199,940	2,500,000	1,249,628	5,350.0	0.1	428.0	\$ 16.00	\$42,800.00
Basin Big Sagebrush, Basin	Artemisia tridentata tridentata	16.0%	1.62	70,567	2,358,000	441,045	5,350.0	0.0	160.5	\$ 16.00	\$17,120.00
Mountain Big Sagebrush, Mountain	Artemisia tridentata vaseyana	16.0%	3.62	157,687	1,973,117	985,545	5,350.0	0.1	428.0	\$ 16.00	\$42,800.00
Low Sagebrush	Artemisia arbuscula	16.0%	1.12	48,787	972,000	304,920	5,350.0	0.1	267.5	\$ 16.00	\$25,680.00
Sandberg Bluegrass, Mountain Home	Poa secunda	72.0%	17.31	754,024	1,046,960	1,047,255	3.0	0.7	2.2	\$ 5.00	\$ 15.00
Bluebunch Wheatgrass, Anatone	Pseudoroegneria spicata spp. spicata	76.5%	26.49	1,153,904	125,680	1,508,372	3.0	9.2	27.5	\$ 5.00	\$ 180.00
Idaho fescue, Joseph	Festuca idahoensis	81.0%	33.47	1,457,953	450,000	1,799,942	3.0	3.2	9.7	\$ 7.50	\$ 90.00
TOTALS:			158.6	6,908,616	18,725,834	13,688,366		17.9		\$ 155.10	\$369,299.00

**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 proposed native plants in the seed mix are adapted to the soils and precipitation zones within the project area and have a high chance for success of becoming established.

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

Yes  No  Rationale:

The selected species are commonly used and almost always readily available.

**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 current market rate for seed is reasonable compared to the benefit to the habitat. Seed purchased by the BLM is tested and insured to be of high quality and free of noxious weeds. This is also the first preference for seeding wilderness areas unless there is an approved plan for assisted succession.

**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:

These species have been used nearby successfully establishing in surrounding areas with similar soil types, precipitation zones, and invasive competition. It is important to seed prior to the first growing season following wildfire disturbance to ensure the highest chance of success.

**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:

Current permitted livestock use is conducive to maintenance of these species. The proposed protective fence throughout the burned area will allow the BLM to manage livestock use until seeded plants are ready to withstand grazing pressure.

**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:

**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:

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

Yes  No  Rationale:

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

<b>Non-native Plants</b>	<b>Native Plants</b>
	Basin Big Sagebrush, Basin ( <i>Artemisia tridentata tridentata</i> )
	Bluebunch Wheatgrass, Anatone ( <i>Pseudoroegneria spicata</i> spp. <i>spicata</i> )
	Idaho Fescue, Nezpar ( <i>Festuca idahoensis</i> )
	Idaho fescue, Joseph ( <i>Festuca idahoensis</i> )
	Low Sagebrush ( <i>Artemisia arbuscula</i> )
	Mountain Big Sagebrush, Mountain ( <i>Artemisia tridentata vaseyana</i> )
	Sandberg Bluegrass, Mountain Home ( <i>Poa secunda</i> )
	Sandberg bluegrass, Malhuer ( <i>Poa secunda</i> spp. <i>secunda</i> )
	Wyoming Big Sagebrush, Wyoming ( <i>Artemisia tridentata wyomingensis</i> )

**PART 7 - COST-RISK ANALYSIS**

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

Action/ Spec #	Planned ES Action (LF20000ES)	Unit (acres, WMs, Number)	# Units	Total Cost	% Probability of Success
S3	Aerial Seeding	Acres	17773	\$486,000.00	70%
S5	Noxious Weeds	Acres	48894	\$37,000.00	50%
S6	Soil Stabilization (Other than seedling, planting)	Acres	3	\$30,000.00	90%
S7	Fence/Gate/Cattleguard	Miles	10	\$126,000.00	80%
S12	Closures (area, OHV, livestock)	Each	49847	\$25,000.00	80%
S13	Monitoring	Acres	49847	\$185,000.00	100%
				<b>\$889,000.00</b>	

Action/ Spec #	Planned BAR Action (LF32000BR)	Unit (acres, WMs, Number)	# Units	Total Cost	% Probability of Success
R5	Noxious Weeds	Acres	48894	\$68,000.00	60%
R7	Fence/Gate/Cattleguard	Miles	8	\$71,000.00	90%
R12	Closures (area, OHV, livestock)	Each	48894	\$41,000.00	60%
				<b>\$180,000.00</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 proposed actions should reduce the potential loss of sage-grouse habitat. Treatment of the upland vegetation was designed to minimize impact to natural resources. As with any treatments that are weather dependent, there is always a chance of limited success, especially with seeding treatments, but the risks to natural resources are far greater without treatment than as a result of the proposed action treatments.

No Action Yes  No  Rationale for Answer:

Failure to act quickly will result in the loss of the first year treatment window, and the area would likely experience a large increase of invasive annual grasses and noxious weeds. The remaining stands of native shrubs within and surrounding the burn will take decades to naturally establish within the burned area. Without swift action, it would be expected that the burned area would transition into an annual grass dominated site within a large stand of mature shrubs, which would increase the chance of future fires and the loss of remaining shrubs. This area is identified as habitat for sage-grouse. With the loss of shrubs and forbs, the area would become unsuitable habitat for sage grouse and the populations in the area would decline.

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:

In an area occupied by a shrub dominated plant community prior to the wildfire, the probability of success is high when seeding occurs within the first fall/winter season. Seeded species are able to establish in the ash mound areas of burned shrubs where there is little to no competition from annual grasses. The area is in sage-grouse habitat and costs associated with restoring this area back to suitable habitat are reasonable and acceptable.

No Action Yes  No  Rationale for Answer:

There would be no costs associated with the No Action, but no benefits would be realized, and further degradation of ecosystem components would occur.

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 treatments are anticipated to be cost effective, and will reduce vulnerability of the site to expansion of invasive annuals by restoring ecosystem components lost by the fire. The seeding will increase shrub cover and diversity helping to restore the area back to suitable habitat for sage grouse. The cost/risk is reasonable considering the benefits to the long-term health of the ecosystem and important habitat for sage-grouse.

### 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**

### **S3 - Aerial Seeding**

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

The objective is to establish sagebrush and perennial grasses that will aid the recovery of ecosystem health, reduce the expansion of invasive grasses and weeds on the site, as well as prevent erosion to susceptible areas and restore sagegrouse habitat.

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

Aerial seeding implementation treatment will be monitored during contract administration to ensure contract specifications for the seeding treatment are met. A Contracting Officer's Representative will be at the landing site with the contractor, and a Project Inspector will be on the on-site to measure seed distribution.

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

Sagebrush: Monitoring for shrub seeding will be conducted using photo plots and landscape monitoring shrub hoop method. Long transect lines will be walked and when a suitable area is encountered a 10 m<sup>2</sup> plot (1.73 meter radius circle) will be used when counting and recording shrub density. The treatment will be considered successful when:

- aerially seeded sagebrush attains a density of 1/10m<sup>2</sup> in suitable areas.

Grass: Grass will be seeded in deeper loose soils in previously pocketed areas of dense stands of sagebrush below canyon rims. The objective of the seeding is to establish perennial grasses on site which will reduce soil movement and inhibit the expansion of invasive species. The treatment will be considered a success when:

- densities of seeded species reach 2.5 plants/meter squared

- 80% of canopy gaps are < 50cm

Data will be gathered using meter frames, line point intercept transects and canopy gap data.

### **S5 - Noxious Weeds**

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

Objective is to identify all existing and new infestations of noxious weeds. New infestations will be treated, and the objective is to eliminate them from the treatment area. Existing noxious weeds will be treated to contain the infestation and prevent them from expanding on site.

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

Locations of noxious weed populations (by species), treatment type, and the amount of herbicide used would be documented using GPS and GIS.

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

Size and location of noxious weed populations and needed treatments would be compared between years 1, 2, and 3 to determine treatment effectiveness. If noxious weed populations remain in the burned area beyond the third year, responsibility would be transferred to the Boise District Noxious Weed Program for ongoing inventory, treatment, and monitoring using funding sources other than ES&BAR.

**S6 - Soil Stabilization (Other than seedling, planting)**

**Identify the objective of the treatment:**

The objective is to reduce soil erosion in and around tigert springs area.

**Describe how implementation will be monitored:**

Implementation is monitored through contract administration. 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:**

Monitoring would be conducted annually for 3 years to determine if soil has moved from the stabilized slope on to the tigert springs area. Photos of each treatment would be taken from the same location each year.

**S7 - Fence/Gate/Cattleguard**

**Identify the objective of the treatment:**

The objective of this treatment is to construct about 10 miles of temporary protection fence. All temporary fences would be constructed according to BLM fence standards for wildlife.

**Describe how implementation will be monitored:**

Fence construction would be monitored through contract administration. Construction would be documented in a project file “as built” and filed in the project file. Construction would be completed within the first year of the fire.

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

FO, wilderness, and OPS staff will inspect the area for effectiveness of livestock closures, and for wildlife impacts to temporary fences. Fences will be inspected until closure period is completed.

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

**Identify the objective of the treatment:**

1. Exclusion of livestock is critical for the recovery of burned vegetation. The burned area would be closed to promote recovery of burned vegetation and to facilitate the establishment of seeded species until monitoring results, documented in writing, show that ES&BAR objective have been met, as specified in the BLM ES&BAR Handbook (H-1732-1) and consistent with the 2005 Boise District Office and Jarbidge Field Office Normal Fire Emergency Stabilization and Rehabilitation Plan (#ID-090-2004-050).
2. Patrols to ensure compliance with wilderness travel rules within the burned area during vegetation recovery to ensure that off-road travel and travel on administrative access roads does not occur. Objective is to ensure compliance to ensure overland travel and vegetative damage does not occur.

**Describe how implementation will be monitored:**

1. Resumption of livestock grazing would ultimately depend on monitoring and meeting of objectives. The monitoring for grazing availability and recommendations for opening the burned area to livestock would be the responsibility of an interdisciplinary team. Implementation is monitored through rangeland management administration. Post-fire grazing agreements would be issued closing the burned area to livestock grazing.
2. Treatment will be conducted by District staff, local land owners and law enforcement. Signs will be posted in area informing of fire recovery.

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

1. The aerial seed treatment area and natural recovery areas would be considered recovered and available for grazing when:
  - The amount of bare mineral soil (lacking cover of plants, litter, or biological soil crusts) is within 10% of what would be expected for early seral stages of the ecological sites found within the treated areas, and greater than 95% of canopy gaps are less than 50cm.
  - Desirable herbaceous perennial plants are producing seed, and
  - Seeded perennial vegetation have developed extensive root and shoot systems to provide for soil stabilization and are sustainable under livestock grazing. Monitoring

methods will include line-point, gap analysis, photo plots, and site observations.

- Ground seeding and aerial seeding effectiveness objectives have been met, or the treatment has been determined to be a failure and objectives are unlikely to be met.

Natural recovery areas would be considered recovered and available for grazing when:

- Recovered herbaceous vegetation is providing sufficient ground cover to protect the site from accelerated erosion and expansion/conversion to annual grasses and noxious weeds. The amount of bare mineral soil (lacking cover of plants, litter, or biological soil crust) is within 10% of what would be expected for early seral stages of the ecological sites found within the burned area. Recommended study methods include line-point intercept or step point cover methods and photo points.
- A qualitative visual assessment of the following would also be considered:
  - Plant vigor (perennial plants)
  - Precipitation information during the non-growing (winter) and growing (spring through early summer) seasons
  - Competition with invasive annual plants and noxious weed species
  - Seed production
- An evaluation of collected monitoring data would be completed documenting that reintroducing grazing to the area would not cause a downward trend in vegetation recovery.

2. Effectiveness will be determined by amount of disturbance observed in the area. If disturbance continues in area, additional closure actions will be taken to deter any further disturbance.

### **S13 - Monitoring**

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

see individual treatments above

#### **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**

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

Objective is to identify all existing and new infestations of noxious weeds. New infestations will be treated, and the objective is to eliminate them from the treatment area. Existing noxious weeds will be treated to contain the infestation and prevent them from expanding on site.

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

Locations of noxious weed populations (by species), treatment type, and the amount of herbicide used would be documented using GPS and GIS.

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

Size and location of noxious weed populations and needed treatments would be compared between years 1, 2, and 3 to determine treatment effectiveness. If noxious weed populations remain in the burned area beyond the third year, responsibility would be transferred to the Boise District District Noxious Weed Program for ongoing inventory, treatment, and monitoring using funding sources other than ES&BAR.

## **R7 - Fence/Gate/Cattleguard**

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

The objective of this treatment is to repair or replace about 8 miles of interior livestock management fence damaged or destroyed by the fire. Damaged wood corners and braces would be replaced with galvanized steel posts. Damaged wire would also be repaired. All permanent management fences that are repaired or replaced would be constructed according to BLM fence standards for wildlife.

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

Repair and replacement of damaged fence would be monitored through contract administration. Repairs would be documented in a project file "as built" and filed in the project file. Repairs would be completed within the first year of the fire.

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

FO, wilderness, and OPS staff will inspect the area for soundness of fence. Fence will be

considered effective when after livestock resume grazing in the area allotment and pasture grazing systems are functional.

## **R12 - Closures (area, OHV, livestock)**

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

1. Exclusion of livestock is critical for the recovery of burned vegetation. The burned area would be closed to promote recovery of burned vegetation and to facilitate the establishment of seeded species until monitoring results, documented in writing, show that ES&BAR objective have been met, as specified in the BLM ES&BAR Handbook (H-1732-1) and consistent with the 2005 Boise District Office and Jarbidge Field Office Normal Fire Emergency Stabilization and Rehabilitation Plan (#ID-090-2004-050).
2. Patrols to ensure compliance with wilderness travel rules within the burned area during vegetation recovery to ensure that off-road travel and travel on administrative access roads does not occur. Objective is to ensure compliance to ensure overland travel and vegetative damage does not occur.

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

1. Resumption of livestock grazing would ultimately depend on monitoring and meeting of objectives. The monitoring for grazing availability and recommendations for opening the burned area to livestock would be the responsibility of an interdisciplinary team. Implementation is monitored through rangeland management administration. Post-fire grazing agreements would be issued closing the burned area to livestock grazing.
2. Treatment will be conducted by District staff, local land owners and law enforcement. Signs will be posted in area informing of fire recovery.

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

1. The aerial seed treatment area and natural recovery areas would be considered recovered and available for grazing when:
  - The amount of bare mineral soil (lacking cover of plants, litter, or biological soil crusts) is within 10% of what would be expected for early seral stages of the ecological sites found within the treated areas, and greater than 95% of canopy gaps are less than 50cm.
  - Desirable herbaceous perennial plants are producing seed, and
  - Desirable perennial vegetation have developed extensive root and shoot systems to provide for soil stabilization and are sustainable under livestock grazing. Monitoring methods will include line-point, gap analysis, photo plots, and site observations.

Natural recovery areas would be considered recovered and available for grazing when:

- Recovered herbaceous vegetation is providing sufficient ground cover to protect the site from accelerated erosion and expansion/conversion to annual grasses and noxious weeds. The amount of bare mineral soil (lacking cover of plants, litter, or biological soil crust) is

within 10% of what would be expected for early seral stages of the ecological sites found within the burned area. Recommended study methods include line-point intercept or step point cover methods and photo points.

- A qualitative visual assessment of the following would also be considered:
    - o Plant vigor (perennial plants)
    - o Precipitation information during the non-growing (winter) and growing (spring through early summer) seasons
    - o Competition with invasive annual plants and noxious weed species
    - o Seed production
  
  - An evaluation of collected monitoring data would be completed documenting that reintroducing grazing to the area would not cause a downward trend in vegetation recovery.
2. Effectiveness will be determined by amount of disturbance observed in the area. If disturbance continues in area, additional closure actions will be taken to deter any further disturbance.

## **PART 9 - MAPS**

1. - Burned Area Reflectance Classification
2. - A Plan Map Allotments, Sage-grouse, Wilderness
3. - A Plan Map S5\_R5 Noxious Weeds
4. - G1MK\_Jacks\_FirePerimter
5. - A Plan Map S7\_R7 New Protective and Repair Fence
6. - A Plan Map S3 Broadcast Seeding v2

## **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	TJ Clifford (BLM Boise District)	Initialed	07/23/2012
Operations	Cindy Fritz (BLM Boise District)	Initialed	07/23/2012
Operations	Rob Bennett (BLM Boise District)	Initialed	07/23/2012
Botanist	Holly Beck (BLM BDO)		07/23/2012
Other Technical Specialists	Kavi Koleini (BLM BDO)		07/23/2012
Cultural Resources/Archeologist	Lois Palmgren (BLM BDO)		07/23/2012
Rangeland Mgt. Specialist	Jon Haupt (BLM BDO)	Initialed	07/23/2012
Rangeland Mgt. Specialist	Mike Boltz (BLM BDO)		07/23/2012
Wildlife Biologist	Bruce Schoeberl (BLM BDO)		07/23/2012
GIS Specialist	Alex Webb (BLM BDO)		07/23/2012
Resource Advisor(s) on Fire	TJ Clifford, Kavi Koleini, Holly Beck, Bruce Schoeberl (BLM BDO)		07/23/2012
Hydrologist/Fisheries Biologist	Dave Mays (BLM BDO)	Initialed	07/23/2012

### **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.

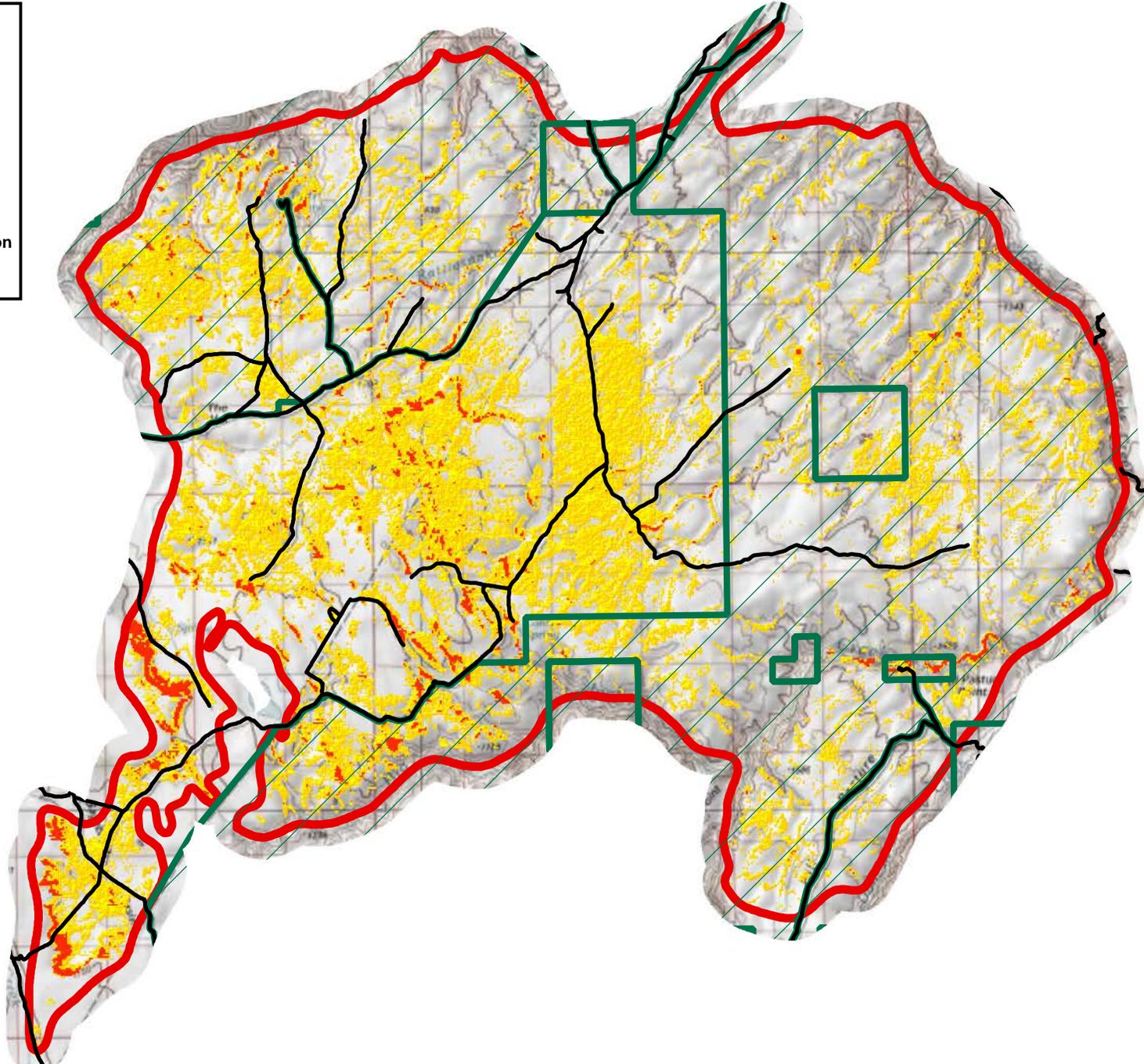
Boise District BLM  
G1MK Jacks Fire ES&R  
Burned Area Reflectance Classification



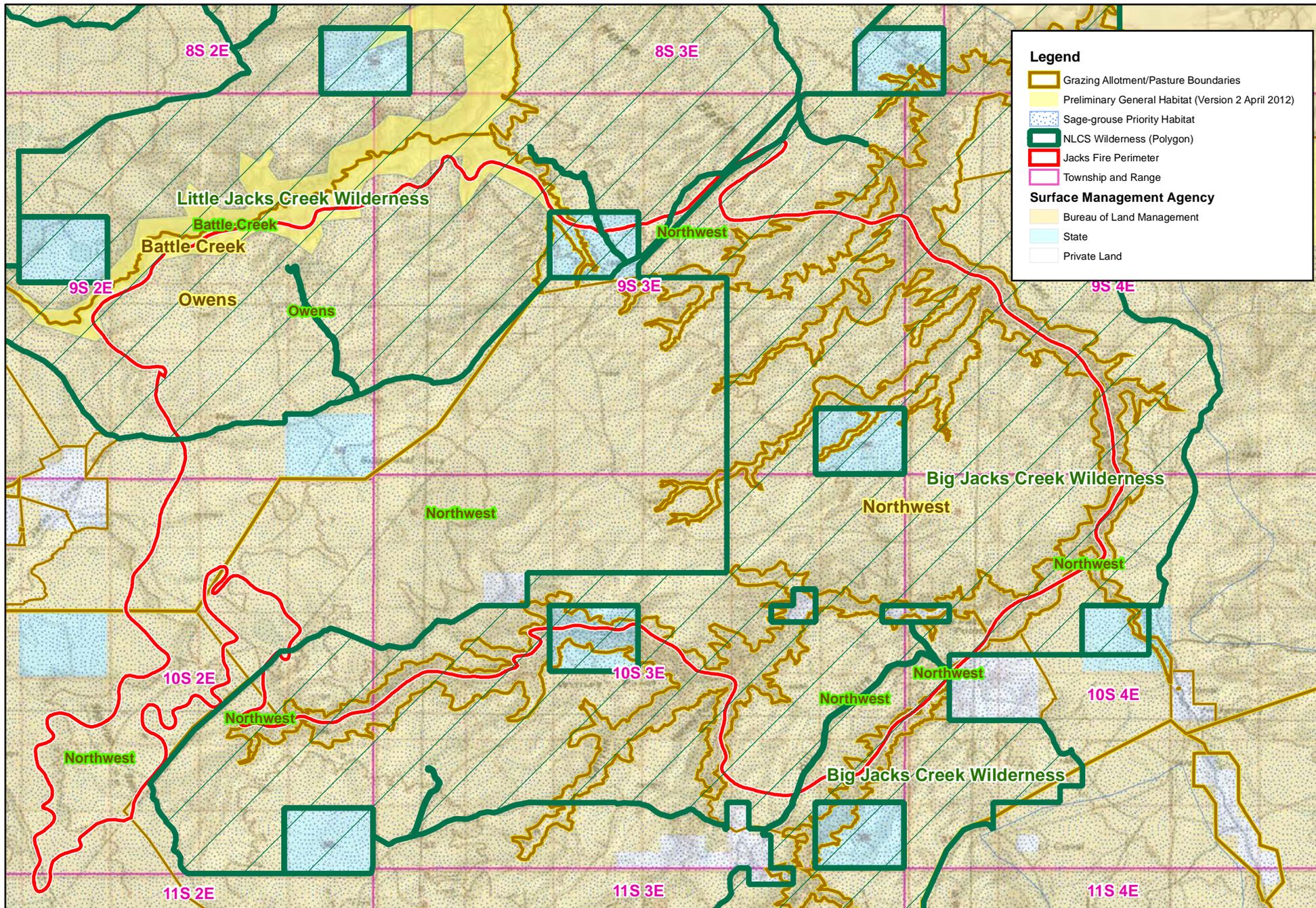
**Legend**

-  Roads
-  NLCS Wilderness
-  Fire Perimeter
- Burn Severity**
-  Moderate Severity
-  High Severity

\* Unvalidated Classification  
of Burn Severity



# Boise District BLM G1MK Jacks Fire ES&R Allotments, Sage-grouse Habitat and Wilderness



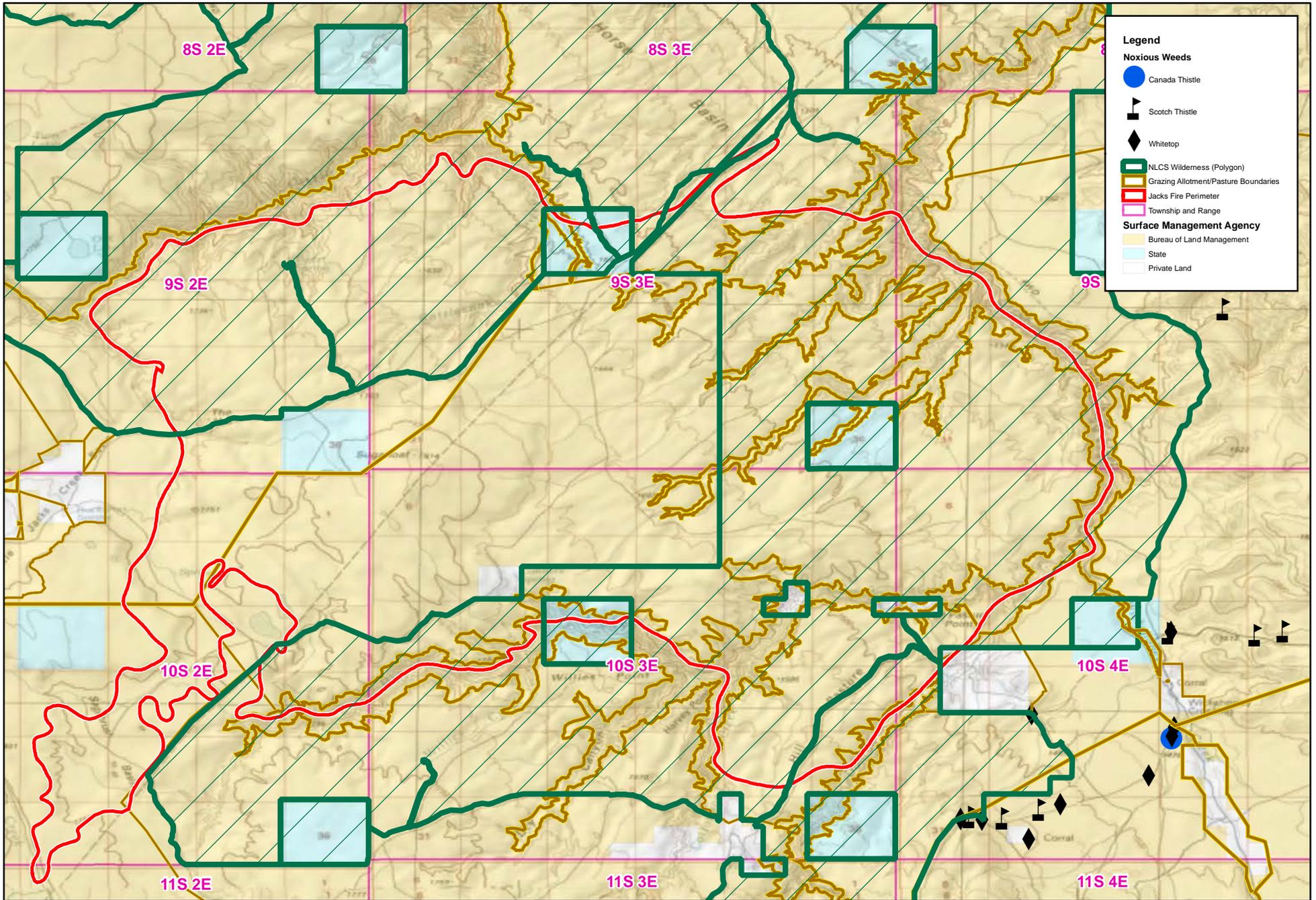
**Legend**

- Grazing Allotment/Pasture Boundaries
- Preliminary General Habitat (Version 2 April 2012)
- Sage-grouse Priority Habitat
- NLCS Wilderness (Polygon)
- Jacks Fire Perimeter
- Township and Range

**Surface Management Agency**

- Bureau of Land Management
- State
- Private Land

**Boise District BLM  
G1MK Jacks Fire ES&R  
S5/R5 Noxious Weeds**



**Legend**

**Noxious Weeds**

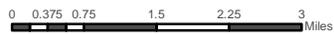
- Canada Thistle
- ▴ Scotch Thistle
- ◆ Whitetop

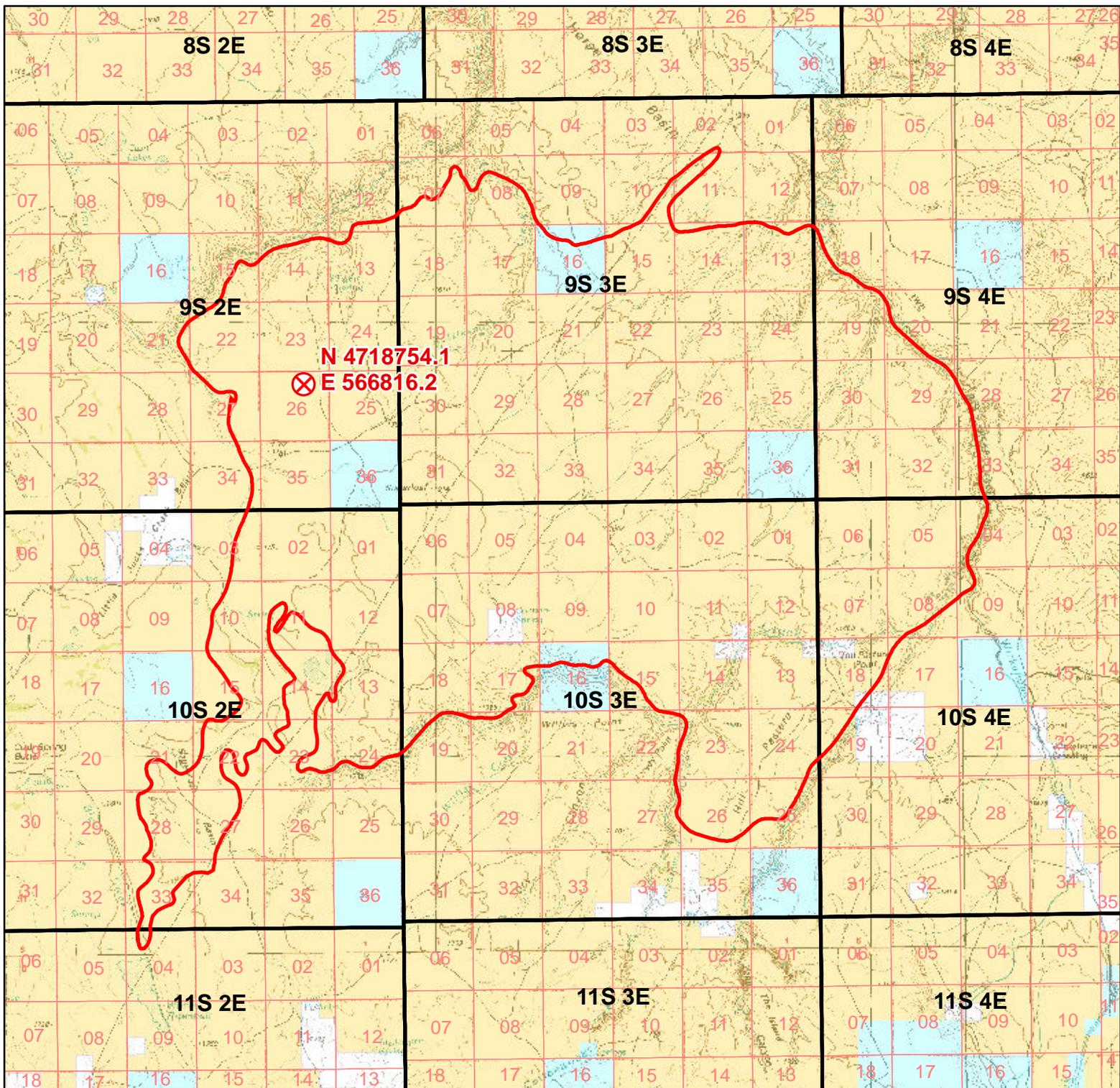
**Surface Management Agency**

- Bureau of Land Management
- State
- Private Land

**Other Features:**

- NLCS Wilderness (Polygon)
- Grazing Allotment/Pasture Boundaries
- Jacks Fire Perimeter
- Township and Range





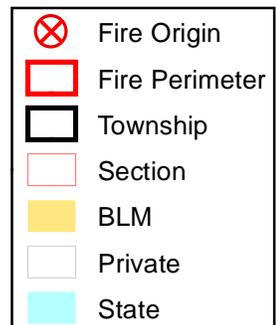
Fire Origin:  
T09S R02E, Sec 26

**Total acres: 48,894**  
BLM 46,467 acres  
PRIVATE 426 acres  
STATE 2,001 acres

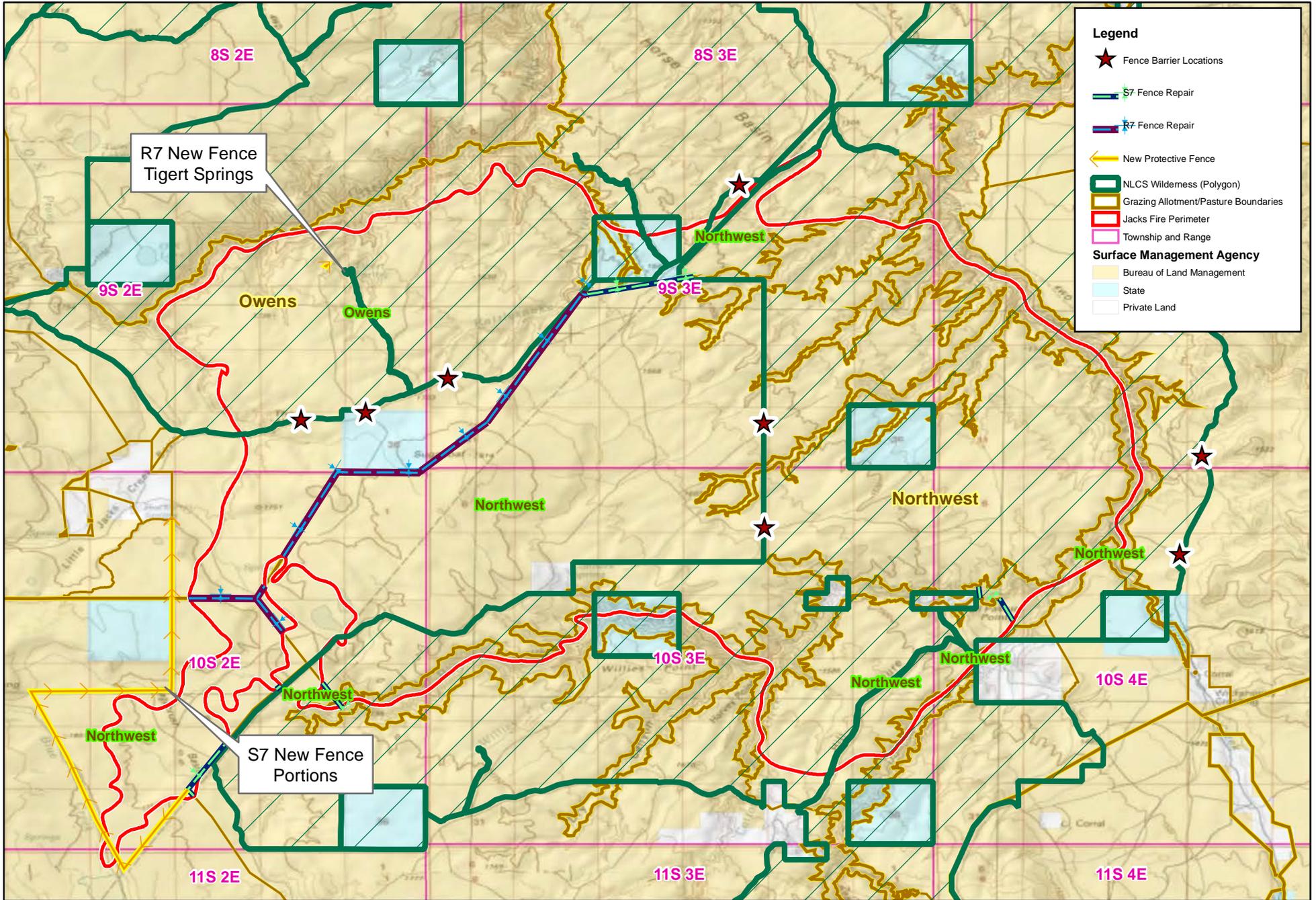
## Boise District 2012 Bruneau Field Office Fire: G1MK Jacks

No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.  
Map projection: UTM 11, NAD 1983, meters

Map Date: July 17, 2012



Boise District BLM  
 G1MK Jacks Fire ES&R  
 S7/R7 New Protective and Repair Fence



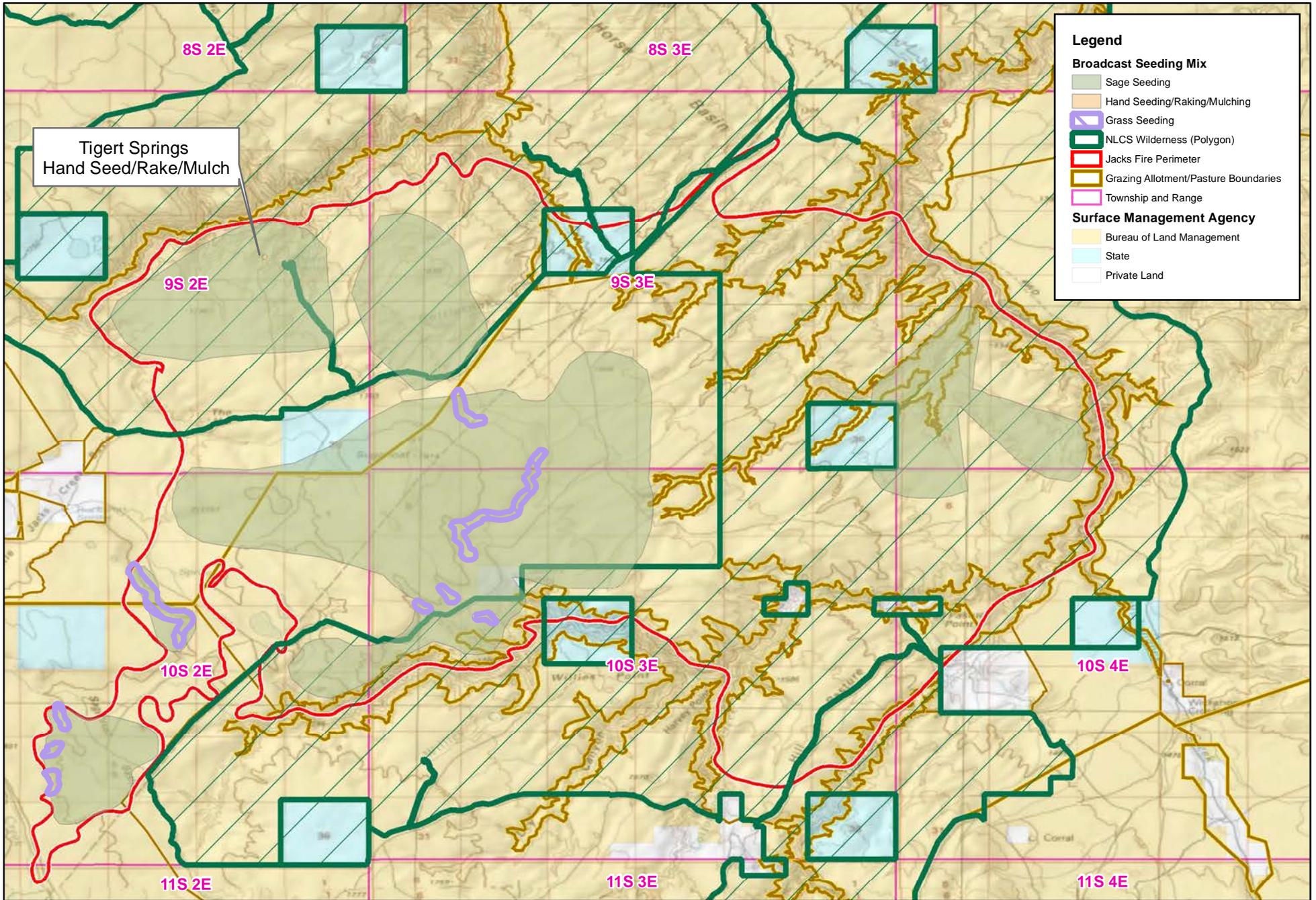
**Legend**

- ★ Fence Barrier Locations
- S7 Fence Repair
- R7 Fence Repair
- ← New Protective Fence
- ▭ NLCS Wilderness (Polygon)
- ▭ Grazing Allotment/Pasture Boundaries
- ▭ Jacks Fire Perimeter
- ▭ Township and Range

**Surface Management Agency**

- ▭ Bureau of Land Management
- ▭ State
- ▭ Private Land

**Boise District BLM  
G1MK Jacks Fire ES&R  
S3 Broadcast Seeding**



**Legend**

**Broadcast Seeding Mix**

- Sage Seeding
- Hand Seeding/Raking/Mulch
- Grass Seeding
- NLCS Wilderness (Polygon)
- Jacks Fire Perimeter
- Grazing Allotment/Pasture Boundaries
- Township and Range

**Surface Management Agency**

- Bureau of Land Management
- State
- Private Land