

**BLM IDAHO POST-FIRE RECOVERY PLAN
EMERGENCY STABILIZATION AND BURNED AREA REHABILITATION
2012 PLAN**

HOT WELL FIRE

**BLM/TWIN FALLS DISTRICT/BURLEY FIELD OFFICE
IDAHO STATE OFFICE**

FIRE BACKGROUND INFORMATION

Fire Name	Hot Well
Fire Number	G40U
District/Field Office	Twin Falls/Burley
Admin Number	LLIDT02000
State	Idaho
County(s)	Cassia
Ignition Date/Cause	8/6/2012/Lightning
Date Contained	8/14/2012
Jurisdiction	<i>Acres</i>
BLM	1990
State	315
Private	751
Other	0
Total Acres	3,056
Total Costs	\$395,000
Costs to LF2200000	\$381,000
Costs to LF3200000	\$14,000

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 THE FIRE

The Hot Well fire started as a lightning strike in the North Cotterel Allotment on August 6, 2012. The fire burned a total of 3,056 acres in Cassia County approximately seven miles south east of Declo, ID. Of those burned acres, 1,990 acres occurred on lands managed by the BLM. The fire affected two grazing allotments, the North Cotterel and Bridger Canyon. The elevation ranges from 4,500 to 6,000 feet. A large portion of the burned area is inaccessible because of the steep slopes and cliff areas. The burned area's topography is characterized as moderate to steep mountain slopes, hills and ridges with low terraces and bedrock outcrops. In some areas of the burn, slopes range from 30 – 60 percent, but can reach 80 percent. The majority of the fire is on a west and south aspects.

The fire burned within mixed vegetation from late seral sagebrush steppe communities to phase 3 juniper. The juniper is encroaching both in the rocky outcropping shallow stony loam soil where it is relatively scarce to dense stands of juniper in the deeper loamy soils. The burned area is in preliminary priority habitat for sage grouse and is also mule deer habitat. Most of the burn is not treatable by rangeland drilling because of the burned standing and juniper skeletons. The fire intensity was high because of the high density juniper cover, extremely low fuel moisture and above average hot and dry weather conditions. The bulk of the burn area is highly vulnerable to the expansion of cheatgrass and noxious weeds because of the high severity of the fire. Past fires on the same mountain ranges demonstrate the potential conditions if rehabilitated and not rehabilitated.

The area burned by the Hot Well fire is a high priority for stabilization and rehabilitation because of the Greater Sage-grouse (*Centrocercus urophasianus*). The majority of the burned area was mapped as sage-grouse Preliminary Priority Habitat (PPH) in 2012. The PPH comprises areas that have been identified as having the highest conservation value to maintain sustainable Sage-grouse populations. To best minimize habitat loss in PPH, the Instruction Memorandum No. 2012-043 states that ES and BAR treatments are to be utilized to: 1). Maintain and enhance unburned intact sagebrush habitat when at risk from adjacent threats; 2). Stabilize soils; 3). Re-establish hydrologic function; 4). Maintain and enhance biological integrity; 5). Promote plant resiliency; 6). Limit expansion or dominance of invasive species; and 7). Re-establish native species.

LAND USE PLAN CONSISTENCY

The following treatments are proposed under this Emergency Stabilization (ES) and Burned Area Rehabilitation (BAR) plan.

Emergency Stabilization

S2 Ground Seeding

S3 Aerial Seeding

S5 Noxious Weeds

S6 Soil Stabilization

S7 Fence/Gate

S12 Closures (Livestock)

Burned Area Rehabilitation

R5 Noxious Weeds

R7 Fence/Gate

R12 Closures (Livestock)

The applicable land use plan for the Emergency Stabilization (ES) and Burned Area Rehabilitation (BAR) project area is the Cassia Resource Management Plan (RMP) 1985. The RMP was amended in 2008 by the Fire, Fuels and Related Vegetation Management Direction Plan Amendment (FMDA). The treatments outlined in this plan are also consistent with the treatment analyzed in the Burley/Shoshone Field Office Normal Fire Rehabilitation Plan and Environmental Assessment (#ID-077-2004-008).

Ground Seeding/S2: Objectives and management actions from the FMDA state (page 17) that objective 1 is to make progress towards desired future conditions (DFC) in low-elevation, perennial grass and invasive annual grass areas. Strategically place treatments on a landscape scale to reduce the likelihood of fire spreading into important sagebrush steppe habitat. In addition, management actions for objective 2 states that following a wildland fire the use of chemical, mechanical, and seeding treatments will be used to stabilize sites and prevent dominance of invasive annual vegetation and noxious weeds in order to maintain, protect and enhance Sage-grouse habitat. Therefore, the planning for ground seeding treatments and activities that meet these objectives are in conformance with the MFP as amended by the FMDA.

Aerial Seeding/S3: Objective 2 of the FMDA's objective and management actions is to maintain, protect, and expand sage grouse source habitats. Following wildland fire, use seeding treatments with appropriate plant materials to attempt to stabilize sites and prevent dominance of invasive, annual vegetation, and noxious weeds. Therefore aerial seeding meets this objective and is in conformance with the RMP as amended by the FMDA.

Noxious Weeds/S5/R5: Management actions for objective 1 states (page 17) that to achieve DFC chemical, mechanical and seeding treatments will be used. Also, management actions for objective 2 states that following wildland fire, wildland fire use and prescribed fire treatments, use of chemical, mechanical, and seeding treatments with appropriate plant material to attempt to stabilize sites and prevent dominance of invasive, annual vegetation, and noxious weeds. Therefore, the planning for weed treatments and activities that meet these objectives are in conformance with the MFP as amended by the FMDA.

Soil Stabilization/S6: Using soil erosion structures will implement the FMDA action to maintain, protect and enhance key ecological components in plant and animal communities. Therefore, soil stabilization meets this action and is in conformance with the RMP as amended by the FMDA.

Fence/Gate /S7/R7: Existing pasture and allotment fences will be repaired to ensure that livestock remain within their area of authorized use and off the burned areas until resource objectives are met. Also, temporary fence will be installed to ensure the investment of the seeding treatment will be protected. The FMDA states on page 31 that all treatment areas would be rested from livestock grazing until project-specific monitoring identified in site-specific

project plans and/or NEPA documents show that resource objectives have been met. Resumption of grazing would be determined on a case-by-case basis. Therefore, fence treatments that ensure livestock will remain in authorized areas of use are in conformance with the MFP as amended by the FMDA.

Closures (livestock)/S12/R12: The management restrictions, conservation measures, and guidelines for livestock grazing on page 31 of the FMDA states that all burned areas would be rested from livestock grazing until project/site-specific monitoring identified in site-specific project plans and/or resource objectives have been met. The resumption of grazing would be determined on case-by-case basis. Therefore, resting the burned area under the rehabilitation plan from grazing would ensure that the area recovers and is in conformance with the RMP as amended by the FMDA.

COST SUMMARY TABLES

Emergency Stabilization (LF2200000):

Action/ Spec. #	Planned Action	Unit	# Units	Unit Cost	FY12	FY13	FY14	FY15	Total Cost
S1	Planning (Project Mangt)	WM's	3		\$0	\$15,000	\$15,000	\$15,000	\$45,000
S2	Ground Seeding	Acres	858	\$40.79	\$35,000	\$0	\$0	\$0	\$35,000
S3	Aerial Seeding/Chaining	Acres	1,990	\$115.08	\$165,000	\$64,000	\$0	\$0	\$229,000
S5	Noxious Weeds	Acres	1,990	\$2.51	\$0	\$5,000	\$0	\$0	\$5,000
S6	Soil Stabilization	Acres	100	\$490.00	\$0	\$49,000	\$0	\$0	\$49,000
S12	Closures	No.	1	\$0.00	\$0	\$0	\$0	\$0	\$0
S13	Monitoring	Acres	1,990	\$9.05	\$0	\$6,000	\$6,000	\$6,000	\$18,000
TOTAL COSTS					\$200,000	\$139,000	\$21,000	\$21,000	\$381,000

Burned Area Rehabilitation (LF3200000):

Action/ Spec. #	Planned Action	Unit	# Units	Unit Cost	FY13	FY14	FY15	Total Cost
R1	Planning (Project Mangt)	WM's	1		\$0	\$2,000	\$2,000	\$4,000
R5	Noxious Weeds	Acres	1,990	\$2.51	\$0	\$5,000	\$5,000	\$10,000
TOTAL COSTS					\$0	\$7,000	\$7,000	\$14,000

PART 2 – POST-FIRE RECOVERY ISSUES AND TREATMENTS

Issues relate to resource problems caused by the wildfire and include both the immediate wildfire effects as well as effects predicted to occur as a result of the wildfire. Determining the appropriate funding code must be based on the scope of the issue, purpose of the treatment, and the availability of funds.

EMERGENCY STABILIZATION ISSUES AND TREATMENTS

Emergency Stabilization Objectives: “Determine the need for and to prescribe and implement emergency treatments to minimize threats to life or property or to stabilize and prevent unacceptable degradation to natural and cultural resources resulting from the effects of a fire.” 620DM3.4

Emergency Stabilization Priorities: 1). Human Life and Safety, and 2). Property and unique biological (designated Critical Habitat for Federal and State listed, proposed or candidate threatened and endangered species) and significant heritage sites. 620DM3.7

ES Issue 1 - Human Life and Safety. N/A

ES Issue 2 - Soil/Water Stabilization. The scope of this issue includes: Placing structures to slow soil and water movement, stabilizing soil to prevent loss or degradation or productivity, increasing road drainage frequency and/or capacity to handle additional post-fire runoff, installing protective fences or barriers to protect treated or recovering areas.

Fire Intensity and Vegetation

The majority of the fire was characterized by moderate to high fire intensity. This was due to a combination of topography and terrain, extremely low fuel moisture and hot and dry weather conditions. Vegetation in the fire area was primarily a Juniper, sagebrush and Sandberg bluegrass mix. Areas with a dense overstory of juniper vegetation had slightly higher fire intensities. Also, the fire burned in topography classified as rolling hills with a drainage located in the middle of the area. These higher intensity burn areas removed most of the plant cover and have exposed soils to accelerated soil erosion. These areas are a major concern due to wind and water erosion, the expansion of cheatgrass and noxious weeds.

Soil Stabilization

A large portion of the fire is on moderate to steep mountain slopes, hills and ridges. The elevation ranges from approximately 4500 to 6000 feet. Straw wattles and/or wood straw will be employed in identified drainages to slow soil and water movement and to prevent degradation and capacity to handle additional post-fire runoff. Structures will be used on slopes greater than 30 percent with no persistent vegetation or rock occurring naturally. The straw wattles or wood straw will be primarily used in ephemeral drainages.

Treatment/Activity: S6 Soil Stabilization

A. Treatment/Activity Description. *Weed-free straw wattles and/or wood straw will be constructed within side drainages leading into the perennial tributaries of Marsh Creek. All material would be biodegradable and weed-free. Straw wattles would be secured with wooden stakes and on-site rocks.*

B. How does the treatment relate to damage or changes caused by the fire? *The Hot Well fire burned at a high intensity with high severity on steep slopes (some with deeper soils) such that there is a high likelihood for a release of sediments which could affect Marsh Creek. The straw bale check dams will dissipate the energy of runoff leading into perennial streams and will reduce the amount of sediment.*

C. Why is the treatment/activity reasonable, within policy, and cost effective? *Straw wattles and/or wood straw are relatively inexpensive compared to other soil erosion treatment methods and highly effective at reducing the effects of runoff on sedimentation.*

Closures (Livestock)

A portion of the North Cotterel Allotment was affected by the fire. Appropriate rest will be applied to the burned portion of the allotment from livestock under the ES plan. This will allow newly seeded species to become established. Closure on the seeded area would be implemented by the Range program to ensure that the area meets objectives for the resumption of livestock grazing.

Treatment/Activity: S12 Closures (Livestock)

A. Treatment/Activity Description. *The burned portions of the allotments affected by the Hot Well Fire would be rested from livestock grazing until monitoring shows that ES treatment objectives have been met or it is determined to be a failure.*

B. How does the treatment relate to damages or changes caused by the fire? *The fire burned most of the existing vegetation within the burn perimeter so the remnant vegetation and soil surface are highly susceptible to further damage if livestock were allowed to continue grazing within the burn area. The purpose of this treatment is to rest the burn area from livestock grazing to provide the opportunity for existing vegetation resources and seeding efforts to stabilize the burn*

area. Establishment of a perennial plant community would reduce or inhibit the expansion of annual vegetation and stabilize soil resources.

C. Why is the treatment/activity reasonable, within policy, and cost effective? No cost under ES is associated with closures. It is a reasonable method for attaining vegetation objectives, as compared to implementation of other aspects of the ES plan.

Temporary Fence

Approximately one mile of temporary fence will need to be constructed to ensure livestock are kept out of the burned area. This will ensure that objectives are being met and allow livestock to graze the portion of the pasture that was not burned. Materials and labor will be covered by the Twin Falls District. All temporary fences will be marked to minimize or eliminated potential collision risk to sage-grouse.

Treatment/Activity: S7 Fence/Gate

A. Treatment/Activity Description. Approximately one mile of protected fence would be constructed on the north end of the burn to help protect the seeded portion of the burn area from disturbance. This will also allow grazing on the North Cotterel Allotment unburned portion. The fence would be constructed to BLM fence standards.

B. How does the treatment relate to damages or changes caused by the fire? The temporary fence associated with the livestock management of the affected allotments. Construction of temporary fence would maintain the future integrity of the existing livestock grazing systems.

C. Why is the treatment/activity reasonable, within policy, and cost effective? This treatment will be accomplished by using staff and materials from the Twin Falls District. The staff will use materials from past salvaged fences or left over materials and would utilize existing fences, gates, and cattle guards to the greatest extent possible, while maintaining a large area available for grazing.

ES Issue 3 - Habitat for Federal/State Listed, Proposed, or Candidate Species. Seeding or planting to prevent permanent impairment of designated Critical Habitat for Federal and State listed, proposed or candidate threatened and endangered species.

Wildlife Habitat

The Hot Well fire negatively affected preliminary priority sage-grouse habitat (Candidate Species) habitat and mule deer winter range where it burned intact sagebrush steppe habitat. Sage grouse and mule deer are dependent on sagebrush plant communities for their year round habitat needs. Productive sage grouse nesting habitat should have 15-25% sagebrush canopy cover with a structurally diverse perennial herbaceous understory. Winter habitat must have abundant sagebrush, the sage grouse's only winter food, exposed above all possible snow depths. Due to the wildfire, current conditions are not optimum for sage grouse forage, nesting security cover, or winter habitat. However, the burn could improve sage-grouse habitat by clearing Utah

juniper off the loamy basin and mountain big sagebrush ecological sites and clearing juniper around the creeks where sage grouse are known to inhabit during the summer (suggesting late brood rearing habitat). Sage-grouse are known to avoid juniper year round. The certainty of the potential benefit of the fire to sage grouse depends on the ability of the site to recover. Although the clearing of the juniper by the fire may help sage grouse, the site is susceptible to invasive plant and noxious weed invasion and is not expected to recover enough naturally to provide adequate perennial cover for sage grouse. A major concern in this area is the invasion of cheatgrass. Cheatgrass poses a significant threat to sage grouse and sage grouse habitat. Although the higher density juniper encroached areas had less cheatgrass, there was little understory beneath the juniper before the fire. After the fire, these sites are expected to be nearly void of any perennial vegetation because of the pre-burn condition and the severity of the fire. The competitive influence exerted by invasive annuals (cheatgrass) enables them to dominate vast areas for many years (Idaho Sage-grouse Advisory Committee 2006). Therefore, it is imperative to treat the site for the improvement of sage-grouse habitat.

Ecological Site(s):

Steep South Slopes 12-16" Mountain big sagebrush/Bluebunch Wheatgrass

Shallow Stony 12-20" Little sagebrush/ Bluebunch Wheatgrass

Loamy 12-16" Basin big sagebrush/ Bluebunch Wheatgrass

Loamy 11-13" Wyoming big sagebrush/ Bluebunch Wheatgrass

Soil-vegetation correlation information indicates that 30% of the burn area is located primarily in the Steep South Slopes soil complex which is primarily 12-16" Mountain big sagebrush/Bluebunch wheatgrass ecological site (based on observation). The Shallow Stony soil complex is comprised of 25% of the burned area (12-20" Little sagebrush/ Bluebunch wheatgrass). The other 40% is comprised primarily of Loamy 12-16" and 11-13" Wyoming Sagebrush/Bluebunch wheatgrass ecological sites. The potential natural plant communities on these sites would be comprised of Mountain big sagebrush and principal understory plants dominated by Bluebunch wheatgrass. The majority of the burned area is capable of deep rooted grass species with the exception of the rocky outcroppings. This is demonstrated by data and photos collected from past Stabilization and Rehabilitation projects north of the burned area on the same soil type. This data validates that the area is capable of sustaining the proposed grass seed species. Forbs were considered in the seed mix, but because of the cost of the fire it is anticipated there will be a viable seed source from the surrounding unburned area and in small islands of unburned vegetation within the fire perimeter. The Emergency Stabilization and Rehabilitation Seed Mixture Development Instruction Memorandum No. ID200-2008-003 was used in process of developing the proposed seed mix.

Juniper was present within a majority of the burned area. This encroaching shrub caused a loss of important native shrubs and perennial grass species found prior to the fire. The encroached areas have been void of the native perennial grass and shrub species and because of this it has made these areas highly susceptible to cheatgrass and noxious weeds. Portions of the burned area are located on south and west facing slopes and adjacent to sites where cheatgrass was common. Re-

vegetation with desirable, competitive species would provide effective competition against annual vegetation and noxious weeds in the long term and provide a greater chance for native species to recover.

The following is a list of common pre-burn vegetation. The list was developed using field surveys of unburned islands of vegetation and range management trend monitoring plot data. This list is for vegetation determined to be in the burn areas not previously treated.

Common Pre-burn Vegetation in order of dominance:

- Utah Juniper, *Juniperus osteosperma*
- Sandberg bluegrass, *Poa secunda*
- Bluebunch Wheatgrass, *Pseudoroegneria spicata*
- Mountain big sagebrush, *Artemisia tridentata ssp. vaseyana*
- Cheatgrass, *Bromus tectorum*
- Wyoming Big Sagebrush, *Artemisia tridentata ssp. Wyomingensis*
- Black Sagebrush, *Artemisia nova*
- Antelope bitterbrush, *Purshia tridentata*
- Arrowleaf balsamroot, *Balsamorhiza sagittata*
- Phlox, *Phlox hoodii*

Treatment/Activity: S2 Ground Seeding

A. Treatment/Activity Description. *Approximately 850 acres within the burned area were identified as ES to be seeded with Antelope Bitterbrush shrub species. Because of the rough ground and inaccessibility for drills, the seed will be applied using a seed dribbler attached to a dozer. The seed will fall in front of the dozer track which will then get run over by the track to make a good seed to soil contact.*

Identified areas totaling approximately 850 acres will be chained following the aerial seeding to cover the seed in portions of the burn area. The chain will be pulled by two tractor dozers. This will aid in a better soil to seed contact and help cover the seed for future growth. Also, the chaining will help remove the juniper skeletons which will benefit in the process of decomposition of the burned material. The majority of the burn area is not accessible by a rangeland drill due to the amount of dead standing juniper skeletons and steepness of the terrain. This is proposed to be accomplished in late FY12 or early FY13. Appropriate cultural resource inventories/surveys will be complete prior to implementing these specific projects.

Hot Well Ground Seed Mix 850 Acres	
Species and Variety	Seed Rate Lbs/Acres
Shrub Mix	
1. Antelope bitterbrush	0.5

B. How does the treatment relate to damages or changes caused by the fire? *This treatment will aid in the establishment of a desirable perennial shrub community. This area is identified as mule deer winter range and Key sage-grouse habitat. Mule deer are identified as one of Idaho's*

species of management concerns and the greater sage-grouse are identified by the US Fish and Wildlife Service as a candidate species. Antelope bitterbrush along with other shrub species provides vital habitat components for sage-grouse (Connelly et al. 2004). Sage-grouse nests are typically located under a sagebrush shrub; but can be under other common steppe shrubs such as antelope bitterbrush. The high intensity wildfire removed the majority of existing shrub cover and likely killed the majority of the remnant seed bank making the burn area less likely to support the mule deer and sage-grouse due to lack of cover and forage.

C. Why is the treatment/activity reasonable, within policy, and cost effective? This treatment and activity is reasonable for the type of issues found on the site. Past monitoring and field observations have shown a success rate with the seeding of perennial shrubs and aid in the recovery of a shrub species. The cost of this treatment is relatively less expensive because the use of a dozer in conjunction with the chaining treatment. These treatments will occur simultaneously which helps with reducing the cost of a new and separate method.

Treatment/Activity: S3 Aerial Seeding/Chaining

A. Treatment/Activity Description. The majority of the burned BLM land was identified to be aerial seeded with a mixture of native and native like perennial grass and native shrub species. This is proposed to be accomplished in late FY12 or early FY13.

Hot Well Aerial Seed Mix	
1990 Acres	
Species and Variety	Seed Rate Lbs/Acres
Grass/Shrub Mix	
1. Vavilov II Siberian Wheatgrass	4.00
2. Anatone Bluebunch Wheatgrass	4.00
3. Secar Snake River Wheatgrass	2.00
4. Sandberg Bluegrass	0.30
5. Mountain big sagebrush	0.50

B. How does the treatment relate to damages or changes caused by the fire? This treatment will aid in the establishment of a desirable perennial grass community that more closely matches the structural, species composition, and diversity of the native plant community to help achieve a healthy functioning rangeland. Accelerating the rate of re-establishment of native grasses is important to maintaining the value of the area as sage grouse breeding and mule deer wintering habitat.

C. Why is the treatment/activity reasonable, within policy, and cost effective? The treatment and activities are reasonable for the type of issues found on the site. Contracting costs for aerial application are typical for the Burley Field Office area. The cost of seed can vary from year to year dependent on availability.

ES Issue 4 - Critical Heritage Resources. N/A

ES Issue 5 - Invasive Plants and Weeds. Seeding to prevent establishment of invasive plants,

and direct treatment of invasive plants. Such actions will be specified in the emergency stabilization plan only when immediate action is required and when standard treatments are used that have been validated by monitoring data from previous projects, or when there is documented research establishing the effectiveness of such actions. Using integrated pest management techniques to minimize the establishment of non-native invasive species within the burned area.

When there is an existing approved management plan that addresses non-native invasive species, emergency stabilization treatments may be used to stabilize the invasive species.

Noxious Weeds

All 1990 acres of the burned public land will be inventoried and treated as needed for noxious weeds in FY13. The objective of this treatment is to identify and control the expected noxious weed increase using spot herbicide application on the burned area. Noxious weeds could increase due to the removal of existing plant cover by the wildfire.

Treatment Activity: S5 Noxious Weeds

A. Treatment/Activity Description. *Canada thistle and Scotch thistle are the primary noxious weeds that are found adjacent to the burn area. Noxious weed inventory and control within the burned area would be done in the first year following the fire to directly treat the expected weeds. Areas where weeds have been treated in the past will be inventoried first. The weeds will be treated with the BLM approved chemicals.*

B. How does the treatment relate to damage or changes caused by the fire? *The objective of this treatment is to identify and control the expected noxious weed increase using spot herbicide application of the burn area. It is expected that noxious weeds will increase due to the removal of existing plant cover by the wildfire which has opened up bare ground for the weeds to invade. Treatments would be conducted for the first year under ES.*

C. Why is the treatment/activity reasonable, within policy, and cost effective? *Weed treatments in the Burley Field Office typically run about \$2.51 per acre. Field work would be combined with other weed treatments in the area for cost efficiency.*

BURNED AREA REHABILITATION ISSUES AND TREATMENTS

Burned Area Rehabilitation Objectives. 1). To evaluate actual and potential long-term post-fire impacts to critical cultural and natural resources and identify those areas unlikely to recover naturally from severe wildland fire damage; 2). To develop and implement cost-effective plans to emulate historical or pre-fire ecosystem structure, function, diversity, and dynamics consistent with approved land management plans, or if that is infeasible, then to restore or establish a healthy, stable ecosystem in which native species are well represented; and 3) To repair or replace minor facilities damaged by wildland fire. 620DM3.4

Burned Area Rehabilitation Priorities. 1). To repair or improve lands damaged directly by a wildland fire; and 2). To rehabilitate or establish healthy, stable ecosystems in the burned area.

BAR Issue 1 - Lands Unlikely to Recover Naturally. N/A

BAR Issue 2 - Weed Treatments. Chemical, manual, and mechanical removal of invasive species, and planting of native and non-native species, restore or establish a healthy, stable ecosystem even if this ecosystem cannot fully emulate historical or pre-fire conditions.

Noxious Weeds

All 1990 acres of the burned public land will be inventoried and treated as needed for noxious weeds in FY14 -15. The objective of this treatment is to identify and control the expected noxious weed increase using spot herbicide application on the burned area. Noxious weeds could increase due to the removal of existing plant cover by the wildfire.

Treatment Activity: R5 Noxious Weeds

A. Treatment/Activity Description. *Canada thistle and Scotch thistle are the primary noxious weeds that are found adjacent to the burn area. Noxious weed inventory and control within the burned area would be done in the first year following the fire to directly treat the expected weeds. Areas where weeds have been treated in the past will be inventoried first. The weeds will be treated with the BLM approved chemicals.*

B. How does the treatment relate to damage or changes caused by the fire? *The objective of this treatment is to identify and control the expected noxious weed increase using spot herbicide application of the burn area. It is expected that noxious weeds will increase due to the removal of existing plant cover by the wildfire which has opened up bare ground for the weeds to invade. Treatments would be conducted for the second and third year under BAR.*

C. Why is the treatment/activity reasonable, within policy, and cost effective? *Weed treatments in the Burley Field Office typically run about \$2.51 per acre. Field work would be combined with other weed treatments in the area for cost efficiency.*

BAR Issue 3 - Tree Planting. N/A

BAR Issue 4 - Repair/Replace Fire Damage to Minor Facilities.

Livestock Management Fences

Approximately one half mile of interior pasture fence was destroyed by the fire. Damaged wire, corners, and braces would be repaired or replaced. The repairs would be needed to maintain the integrity of the grazing system and keep adjacent livestock grazing from entering the burn area during the rest period. Labor will be accomplished by Twin Falls District BLM staff. Materials will be used from previous fences that were salvaged or material that was left over from previous projects.

Treatment/Activity: R7 Fence/Gate

A. Treatment/Activity Description. *The objective of this treatment is to repair and/or replace approximately one half mile of interior livestock management fence damaged by the fire. Damaged wood corners and braces would be replaced with galvanized steel posts. Damaged wire would also be repaired. The management fences would be constructed to BLM fence standards.*

B. How does the treatment relate to damage or changes caused by the fire? *The wildfire damaged fences associated with the livestock management of the affected allotments. Reconstruction and repair of management fences damaged by the fire would maintain the future integrity of the existing livestock grazing systems. Repair of damaged management fences would also help to manage vegetation recovery.*

C. Why is the treatment/activity reasonable, within policy, and cost effective? *Fence repair contracts typically run \$5,000 per mile. No new cost will be occurred for this fence because of in-house labor and earlier purchased or salvaged fencing material from previous projects will be used. Damaged wood stretch points and corners would be replaced with galvanized steel pipe thus increasing the longevity of the structures and would be resistant to future wildfire damages.*

PART 3 – DETAILED TREATMENT COST TABLE

Emergency Stabilization		Units	FY12	FY13	FY14	FY15	Total Costs
S1	Planning (Plan Prep/Project Mangt)						
	National Office ESR Support	WM's		5,000	5,000	5,000	15,000
	Project Management Field Office	WM's		5,000	5,000	5,000	15,000
	Project Management State Office	WM's		5,000	5,000	5,000	15,000
	Total		0	15,000	15,000	15,000	45,000
S2	Ground Seeding						
	Seed	Total	9,000				9,000
cultural	Clearances	Total	26,000				26,000
	Total		35,000	0	0	0	35,000
S3	Aerial Seeding						
chaining	Labor	WM's		43,000			43,000
	Travel/Vehicles	Total		3,000			3,000
	Equipment Rental/FOR	Total		8,000			8,000
	Equipment Mobilization	Total		3,000			3,000
aerial	Contract	Total	13,000				13,000
	Contract Administration	WM's		2,000			2,000
	Seed	Total	152,000				152,000
	Seed Mixing	WM's		4,000			4,000
	Seed Testing	Total		1,000			1,000
	Total		165,000	64,000	0	0	229,000
S5	Noxious Weeds						
	Labor	Acres		4,000			4,000
	Travel/Vehicles	Total		500			500
	Supplies/Materials	Total		500			500
	Total		0	5,000	0	0	5,000

Emergency Stabilization		Units	FY12	FY13	FY14	FY15	Total Costs
S6	Soil Stabilization (other than seeding/planting)						
	Labor	WM's		20,000			20,000
	Travel/Vehicles	Total		5,000			5,000
	Clearances	Total		2,000			2,000
	Supplies/Materials	Total		22,000			22,000
	Total		0	49,000	0	0	49,000
S13	Monitoring						
	Labor	WM's		5,500	5,500	5,500	16,500
	Travel/Vehicles	Total		500	500	500	1,500
	Total		0	6,000	6,000	6,000	18,000
	EMERGENCY STABILIZATION TOTALS		\$200,000	\$139,000	\$21,000	\$21,000	\$381,000

Rehabilitation		Units	FY13	FY14	FY15	Total Costs
R1	Planning (Plan Prep/Project Mangt)					
	Project Management Field Office	WM's		2,000	2,000	4,000
	Total		0	2,000	2,000	4,000
R5	Noxious Weeds					
	Labor	WM's		4,000	4,000	8,000
	Travel/Vehicles	Total		500	500	1,000
	Supplies/Materials	Total		500	500	1,000
	Total		0	5,000	5,000	10,000
	BURNED AREA REHABILITATION TOTALS		\$0	\$7,000	\$7,000	\$14,000

PART 4 – SEED LISTS

GROUND SEED

Species	% PLS	Seeds/lb. (bulk)	Total Seeds/Acre (bulk)	PLS Seeds/ac.	PLS Seeds/sq. ft.	Aerial Seeding (acres)	Lbs/Acre	Total Pounds	Cost per lb	Total Costs
Antelope Bitterbrush	85%	15,000	7,500	6,375	0.15	858	0.5	450	20.00	9,000.00
TOTALS					0.15		0.50	450		9,000.00

AERIAL SEED

Species	% PLS	Seeds/lb. (bulk)	Total Seeds/Acre (bulk)	PLS Seeds/ac.	PLS Seeds/sq. ft.	Aerial Seeding (acres)	Lbs/Acre	Total Pounds	Cost per lb	Total Costs
Anatone Bluebunch WG	76%	140,000	560,000	425,600	9.77	1,990	4	8,000	8.00	64,000.00
Vavilov II Siberian WG	80%	220,000	880,000	704,000	16.16	1,990	4	8,000	5.00	40,000.00
Secar Snakeriver WG	76%	170,000	340,000	258,400	5.93	1,990	2	4,000	8.00	32,000.00
Sandberg Bluegrass	72%	950,000	285,000	205,200	4.71	1,990	0.3	600	6.00	3,600.00
Mountain Big Sage	16%	2,250,000	1,125,000	180,000	4.13	1,990	0.5	1,000	12.00	12,000.00
TOTALS					40.71		10.80	21,600		151,600.00

PART 5 - 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 species are adapted to the ecological sites within the proposed treatment areas. These species have been extensively utilized in similar ecological sites within the Burley Field Office.*

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

Yes No Rationale: *The native seed proposed for the estimated 1990 acres in the treatment area is generally available in the required quantities. Aerial seeding would not occur until the winter and spring of FY13 which should allow seed quantities to be more 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 native seed proposed for use has been increasingly utilized in recent years for stabilization, rehabilitation and restoration. The demand has resulted in increased production and decreased price.*

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

Yes No Rationale: *The native taxa proposed for seeding have exhibited the ability to establish and persist in similar ecological sites within the Burley Field Office.*

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 areas will be rested from livestock grazing until resource objectives listed in this ES&BAR plan are met. This will help the new herbaceous seeding treatments become established. Prior to the resumption of livestock grazing the treatment areas will have to meet minimum criteria (see monitoring plan) before livestock grazing may resume.*

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

General Note: The likelihood of introducing a non-native plant species into a plant community without altering the present competitive interaction among remnant native and non-native species is remote. The inclusion of non-native species is to enhance the probability of re-establishment of a perennial plant community in an environment where normal plant successional processes have been altered by invasion of exotic annual grasses and forbs, along

with noxious weeds, and difficult site conditions (i.e. clay soils). Establishing a stable, diverse, multi-layered perennial plant community utilizing both native and non-native cultivars is expected to restore resource values that might not recover naturally, considering the pre-fire plant community and site conditions.

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

Yes No Rationale: *The use of the proposed non-native plant species is in conformance with the goals and objectives outlined in the 2005 Shoshone and Burley Field Office Normal Fire Rehabilitation Plan. The proposed use of non-native plants is not located within a Wilderness Study Area.*

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 remnant native grasses and forbs. The natural successional processes and interspecific competition which normally occur within a native plant community have been altered by the encroachment and establishment of Juniper. The proposed non-native plants can effectively compete with cheatgrass which is expected to dominate the site following the fire. Establishing a competitive perennial plant species with a mixture of native and non-native species will promote a greater degree of resiliency within the plant community and restore more natural successional processes.*

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

Yes No Rationale: *The proposed introduced plant species have been used in seedings in the Burley Field Office area for over 40 years. The seedings have occurred in range sites similar to 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 and dominance of native plant species or communities.*

A "no" response requires additional analysis in the environmental assessment or selection of an alternate species in the seed mixture.

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

Non-native Plants	Native Plants
‘Vavilov ’ II Siberian Wheatgrass <i>Agropyron fragile</i>	‘Secar’ Bluebunch Wheatgrass <i>Elymus wawawaiensis</i>
	‘Anatone’ Bluebunch Wheatgrass <i>Psuedoroegneria spicata</i>
	Sandberg Bluegrass <i>Poa sandbergii</i>
	Mountain big sagebrush <i>Artemisia tridentata Nutt. Ssp. vaseyana</i>
	Antelope bitterbrush <i>Purshia tridentata</i>

PART 6. – COST-RISK ANALYSIS

A. Probability of Treatments Successfully Meeting Objectives

Action/ Spec. #	Planned ES Action (LF22000000)	Unit (acres, WMs, number)	# Units	Total Cost	% Probability of Success
S2	Ground Seeding	Acres	858	\$35,000	80
S3	Aerial Seeding/Chaining	Acres	1990	\$229,000	100
S5	Noxious Weeds	Acres	1990	\$5,000	90
S6	Soil Stabilization	Acres	100	\$49,000	80
S7	Temporary Fence	Miles	1	\$0	100
S13	Monitoring	Acres	1990	\$18,000	100
TOTAL COSTS:				\$336,000	

Action/ Spec. #	Planned BAR Action (LF3200000)	Unit (acres, WMs, number)	# Units	Total Cost	% Probability of Success
R5	Noxious Weeds	Acres	1990	\$10,000	90
R7	Fence/Gates	Miles	0.5	\$0	100
TOTAL COSTS:				\$10,000	

B. Cost Risk Summary

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

Proposed Action Yes No Rationale for answer: *The aerial seeding of perennial grass and shrubs will help with the establishment and recruitment of future grass and shrub cover.*

The noxious weed treatments will help protect adjacent private and BLM lands against further expansion of noxious weeds. The temporary fence will ensure no disturbance to the newly seeded area.

No Action Yes No Rationale for answer: *Wildlife habitat on adjacent unburned land would be compromised with the expansion of noxious weeds. The burned area will have a high chance of invasion of cheatgrass and noxious weeds due to the bare soil.*

Alternative(s) Yes No Rationale for answer: *N/A*

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: *Monitoring and observation of recent weed control efforts in similar soils and precipitation zones indicate that success would be high. Normal climatic conditions and the exclusion of livestock grazing for the period of seeding establishment and/or on-site vegetation recovery would increase the probability of success.*

No Action Yes No Rationale for answer: *The burned area has a high potential for expansion of noxious weeds. There is high potential for adjacent unburned areas becoming dominated by noxious weeds.*

Alternative(s) Yes No Rationale for answer: *N/A*

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: *None*

C. Risk of Resource Value Loss or Damage

No Action - Treatments Not Implemented (check one)

Resource Value	N/A	None	Low	Medium	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 (check one)

Resource Value	N/A	None	Low	Medium	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 7 – MONITORING PLAN

Monitoring and evaluation of ES and BAR treatments would be implemented to ensure that treatments are properly implemented, effective, and maintained. Monitoring methods may be qualitative or quantitative, and would be commensurate with the level of treatment complexity and extent. Monitoring and evaluation information would provide adaptive management feedback to improve ES and BAR treatment performance. Monitoring would be the responsibility of the BLM interdisciplinary team. An annual monitoring summary report would be submitted documenting treatment effectiveness.

Treatment/Activity: *S2/S3 Ground and Aerial Seeding*

1) Treatment Objectives: *The objective of the seeding treatments is to establish a perennial dominated plant community within three years. The results are based on site potential.*

The aerial seed treatment would be considered successful if:

The seeded grass species reach densities of:

- 1) *Three plants per square meter for grasses.*

The ground seed treatment of bitterbrush and sagebrush would be considered effective if:

- 1) *Bitterbrush and sagebrush seedlings average 0.1 seedlings per square meter across all density plots; or*
- 2) *In qualitative surveys they are found to be common.*

2) 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.*

3) Describe how effectiveness will be monitored, how it will be measured, and within what time period: *The methods used to monitor the treated area would include field observations, photo plots, and cover transects utilizing the line-point intercept and density plot methods. Plots would be randomly established through the treated area. Effectiveness monitoring of the ground and aerial seeding will be done for a period of three growing seasons.*

Treatment/Activity: S5/R5 Noxious Weeds Treatments

1) Treatment Objectives: *Canada thistle and Scotch thistle are the primary weeds that are found adjacent to the burn area. It is expected that these and other weeds could expand their range as a result of the fire. Since these weed species is not uniformly distributed across the burn area, a quantifiable objective cannot be determined until the first year inventory occurs.*

The objective for the first growing season is to conduct an inventory of the burn area and treat any noxious weeds discovered in the burn area. The objective for the second and third years is to decrease the acreage needing treatment as determined by the first year inventory.

2) Describe how implementation will be monitored: *During the first growing season treatment, a detailed map of location, weeds species sprayed, and the amount of herbicide utilized would be documented. The second and third year objective would be measured by the number and size of locations sprayed and the amount of herbicide utilized.*

3) Describe how effectiveness will be monitored, how it will be measured, and within what time period. *At the end of three years of treatment, the herbicide spray data would be summarized. If further treatment is required beyond the third year then the responsibility for treatment would be forwarded to the Twin Falls District normal weed spraying program.*

Treatment/Activity: S6 Soil Stabilization

1) Treatment Objectives: *The treatment objective is to establish soil erosion structures in shallow trench forming a continuous barrier along the contour (across the slope) to intercept water running down slope.*

2) Describe how implementation will be monitored: *Various soil stabilization structures sites will be visited annually to assess integrity and effectiveness. Photos will be taken of structures immediately after installation and then prior to runoff occurring events. An “as built” will*

document any changes from the plan and describe implementation particulars.

3) Describe how effectiveness will be monitored, how it will be measured, and within what time period. *Soil erosion structures will be monitored through contract administration. Effectiveness will be gauged through amount of soil movement. Measurement of success will be captured using photo points. Implementation and completion will be documented in a project file “as built” and filed in the project file. Construction of the soil erosion structures will be completed within the first year of the fire. Maintenance or repairs will be completed within the second or third years.*

Treatment/Activity: S7/R7 Fence/Gate/Cattle Guard

1) Treatment Objectives: *The objective of this treatment is to repair or replace approximately one half mile of existing fence and to build approximately one miles of temporary fence that uses existing permanent fence. This will help to ensure natural recovery of the burned area with no disturbances and help maintain grazing allotment integrity. The fences would be constructed to BLM fence standards.*

2) Describe how implementation will be monitored: *Any changes from the planned implementation would be noted in the project file “as built” discussion.*

3) Describe how effectiveness will be monitored, how it will be measured, and within what time period. *Repair and replacement of damaged fences and the temporary fence will be monitored through contract administration. Repairs and completion will be documented in a project file “as built” and filed in the project file. Construction of temporary fence will be completed within the first year of the fire. Repairs will be completed within the second or third year of the fire.*

Treatment/Activity: S12 Closures (Livestock grazing)

1) Treatment Objectives: *Exclusion of livestock is critical for the recovery of burned vegetation or establishment and protection of new seeding. The seed treatment area would be closed to livestock grazing for a minimum period of two growing seasons to promote recovery of burned vegetation and to facilitate the establishment of seeded species as specified in the 2005 Shoshone and Burley Normal Fire Rehabilitation Plan (#ID-077-2004-008).*

2) Describe how implementation will be monitored: *Resumption of livestock grazing would ultimately depend on monitoring and meeting of ES&BAR plan ground seeding and natural recovery objectives. Recovery of the treated area would be monitored for availability to grazing on a yearly basis. 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.*

3) Describe how effectiveness will be monitored, how it will be measured, and within what time period: *The ground seed treatment area would be considered recovered and available for grazing when:*

- *The amount of bare mineral soil (lacking cover of plants, litter, or biological soil crust) is within 10% of what would be expected for the site,*

- *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.*

PART 8 - MAPS

1. Fire Perimeter and Unburned Islands of Vegetation over 40 acres
2. Colored Land Status Map
3. Burned Management Fences/Other Structures (guzzlers, signs, etc.)
4. Seeding Treatment Areas
5. Protective Fences and the Adjoining Pasture Fences That They Tie Into
6. Vegetation Communities
7. Threatened and Endangered Species Areas
8. Invasive Species
9. Water Erosion Risk Map

PART 9 – REVIEW, APPROVALS, and PREPARERS

TEAM MEMBERS

Position	Team Member (Agency/Office)	Initial and Date
Team Leader	Dustin Smith (BLM/Burley)	DS 8/21/2012
Operations	Scott Uhrig (BLM/Shoshone)	SU 8/18/2012
Cultural Resources/Archaeologist	Suzann Henrikson (BLM/Burley)	LSH 8/21/2012
Rangeland Mgt. Specialist	Jason Theodozio (BLM/Burley)	JT 8/20/2012
Wildlife Biologist	Jesse Rawson (BLM/Burley)	JR 8/20/2012

PLAN APPROVAL

/s/ Michael C Courtney

8/21/2012

Michael Courtney
FIELD 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.

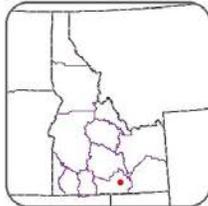
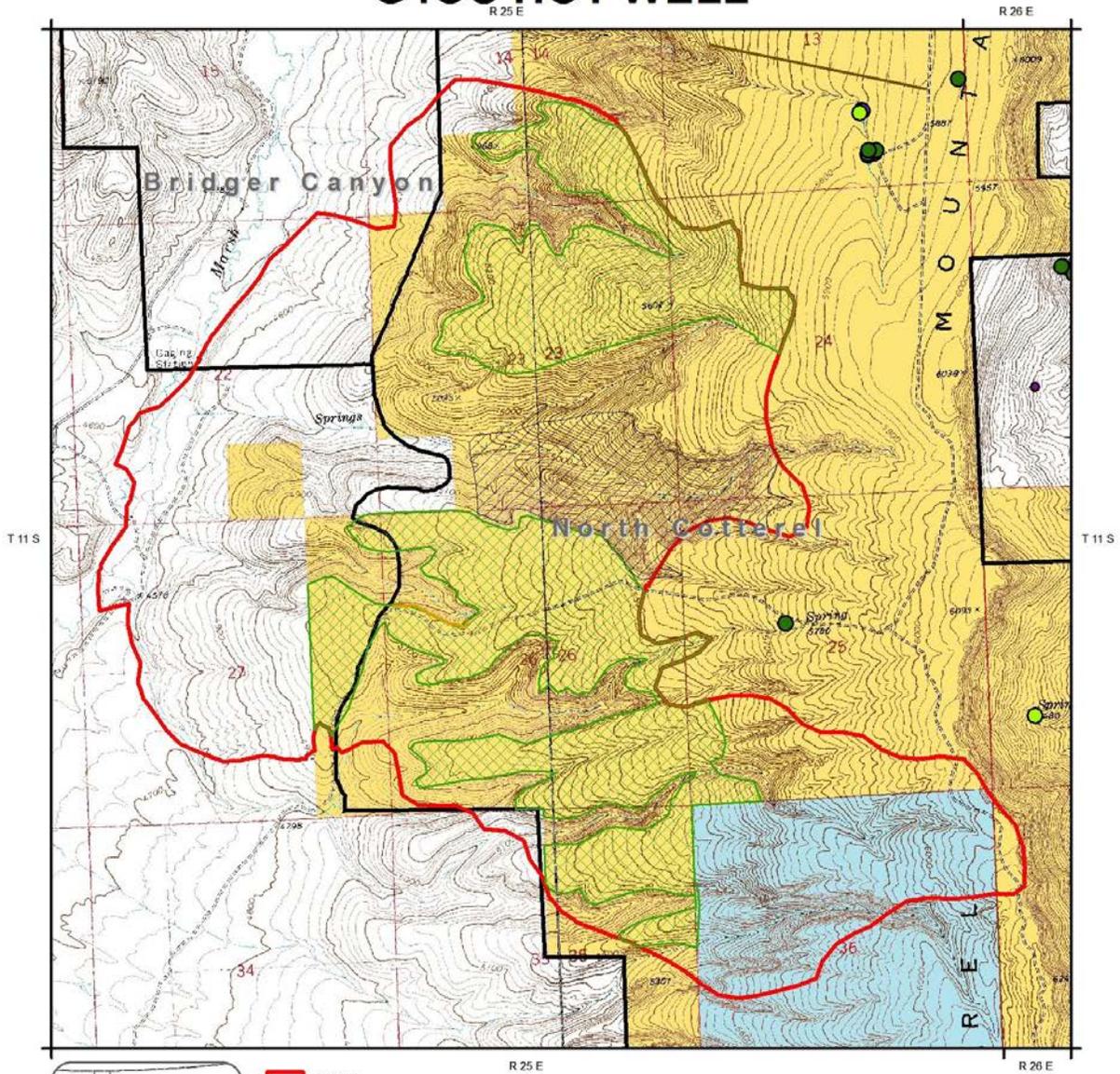
Works Cited

Greater Sage-Grouse Interim Mangement Policies and Procedures Insturction Memorandum No. 2012-043

Idaho Sage-grouse Advisory Committee . (2006). *Conservation Plan for the Greater Sage-grouse in Idaho*.

Emergency Stabilization and Rehabilitation Seed Mixture Development Instruction Memorandum No. ID200-2008-003

G40U HOT WELL



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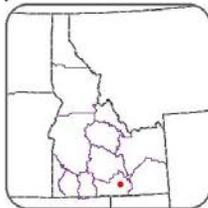
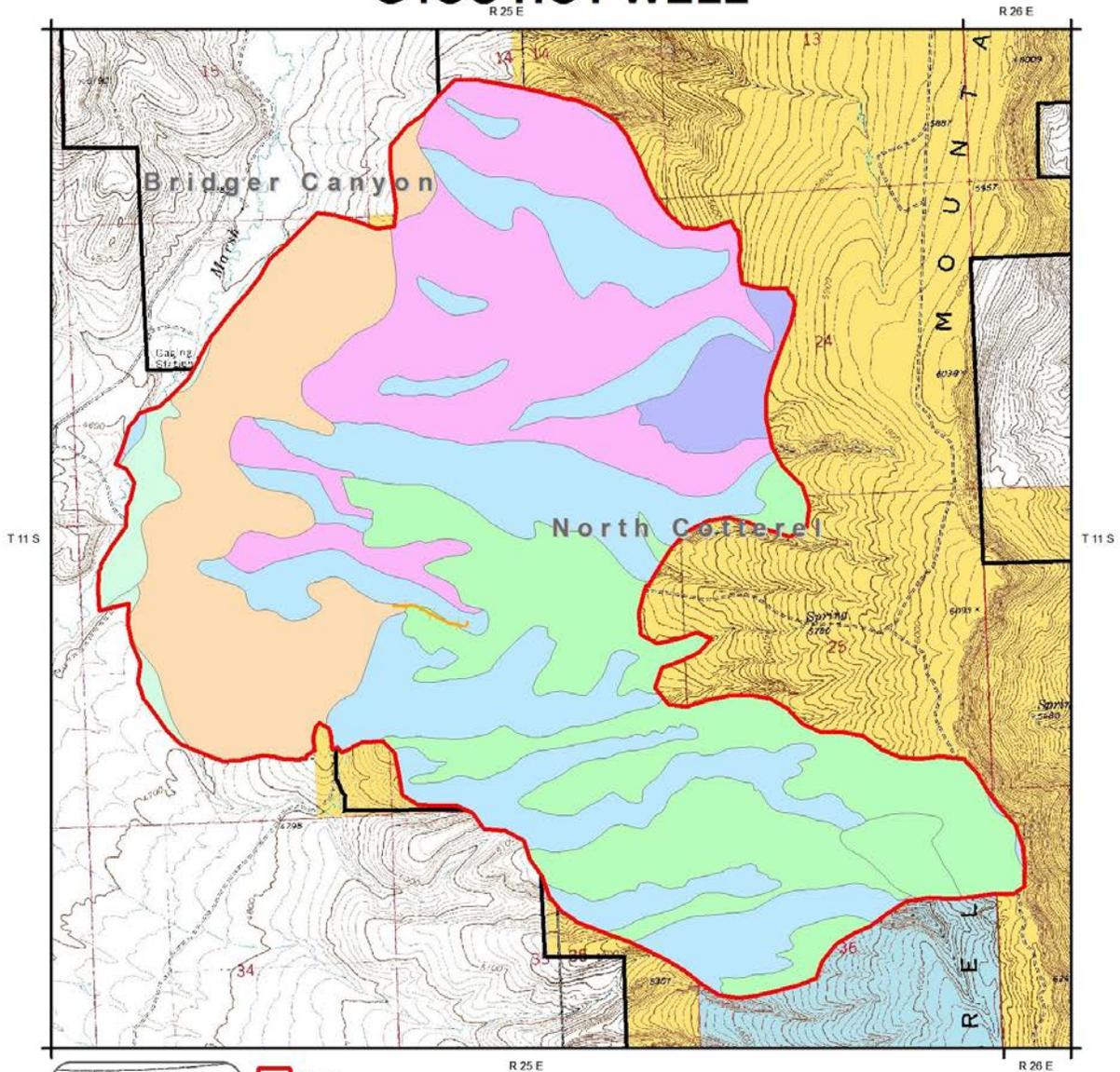
- Hot Well
- Everything Else
- Canada Thistle
- Scotch Thistle
- Hot Well Fence Repair
- Hot Well Temporary Fence
- Soil Erosion Structures
- Hot Well Chaining and Ground Seeding Areas
- Range Allotment
- Pasture
- Bureau of Land Management
- Private; other
- State



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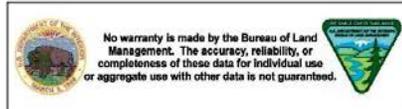
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Author: dustin.smith

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Bureau of Land Management
Twin Falls District, Idaho

- Hot Well
- LOAMY 11-13 ARTRW8/PSSPS
- LOAMY 12-16 ARTR/PSSPS
- LOAMY 12-16 ARTRV/PSSPS-FEID
- SHALLOW CALCAREOUS LOAM 10-16 ARARN/PSSPS
- SHALLOW STONY 12-20 ARAR8/PSSPS
- STEEP SOUTH SLOPES 12-16 ARTRV/PSSPS
- Range Allotment
- Pasture
- Bureau of Land Management
- Private, other
- State



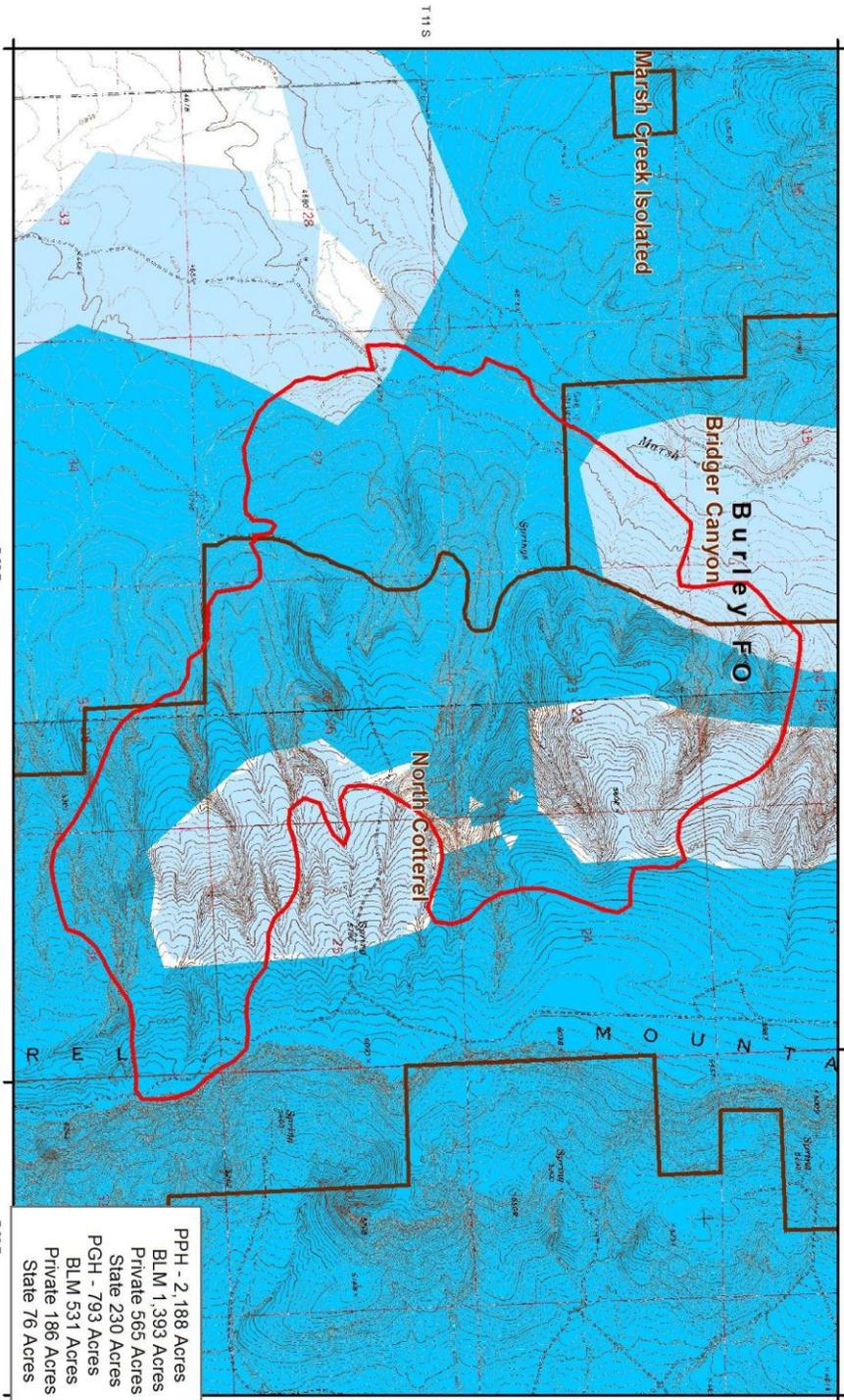
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Author: dustin.smith

G40U - HOT WELL

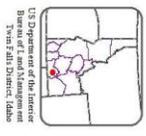
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Date: 8/20/2012



PPH - 2,188 Acres
 BLM 1,393 Acres
 Private 565 Acres
 State 230 Acres
 PGH - 793 Acres
 BLM 531 Acres
 Private 186 Acres
 State 76 Acres



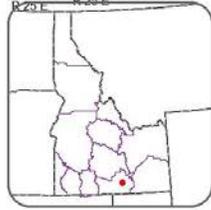
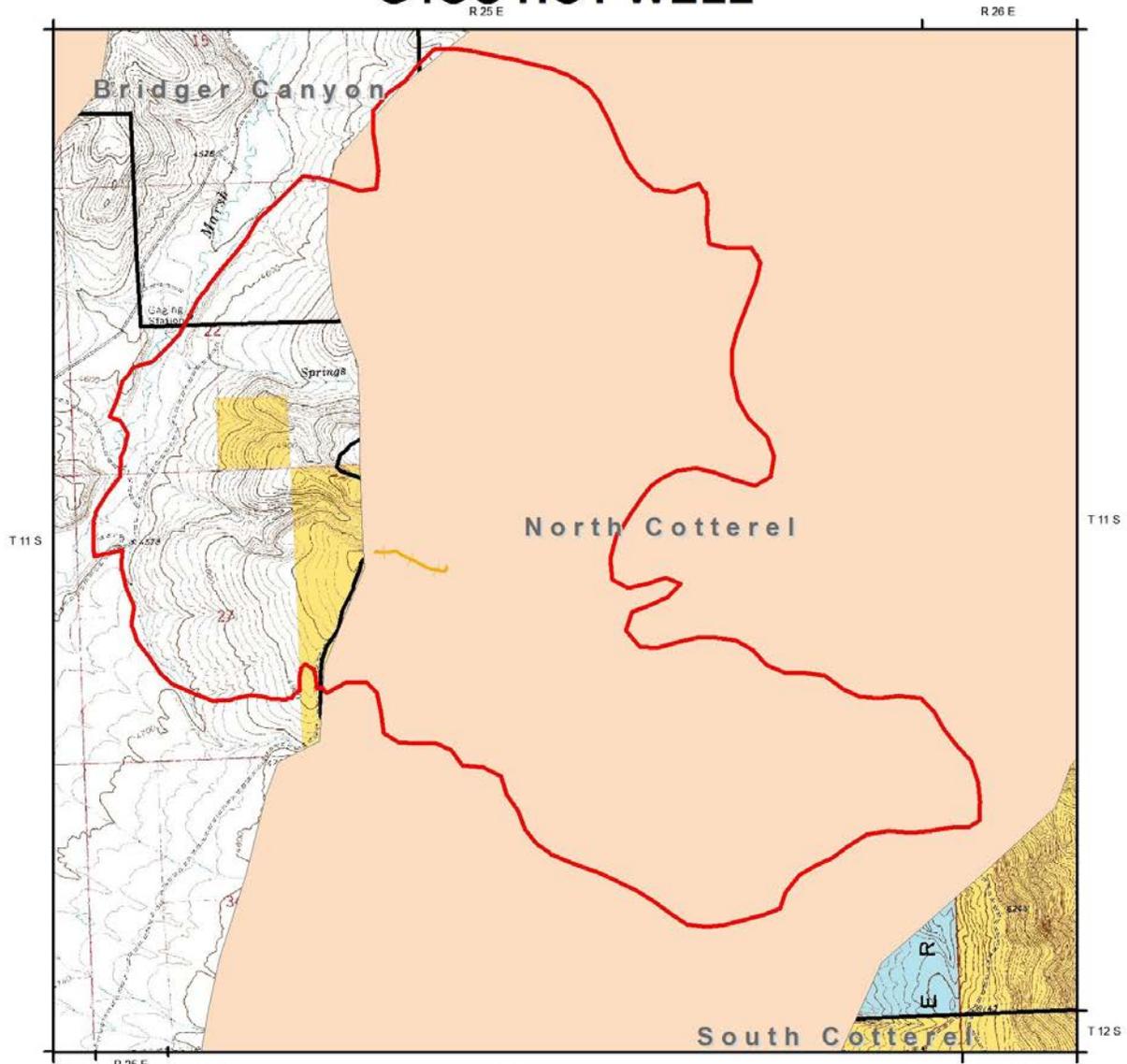
- Fire Perimeter
- Idaho Sagegrouse 2012 PPH
- Idaho Sagegrouse 2012 PGH
- BLM Offices
- National Monument
- State Boundary
- Range Allotment
- Pasture
- Wilderness
- NSA
- ACEC

3,056 Total Acres
 BLM 1,990 Acres
 State 315 Acres
 Private 751 Acres

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G40U HOT WELL



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|---------------------------------|-----------------------------|
| Hot Well | Forest Service |
| Deer Habitat | Fish and Wildlife Service |
| Bureau of Land Management | National Park Service |
| Bureau of Reclamation | Native American Reservation |
| Military, Department of Defense | Private; other |
| Bankhead-Jones Land Use | State |
| Department of Energy | State Fish and Game |
| National Grasslands | Historical Open Water |



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Data Displayed in NAD_1983_UTM_Zone_11N Projection
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Author: dastinsmidh