United States Department of the Interior
BUREAU OF LAND MANAGEMENT

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Boise District Office
3948 Development Ave.
Boise, ID 83705

Vale District Office
100 Oregon Street
Vale, Oregon 97918

NOTICE OF DISTRICT MANAGER'S FINAL DECISION
Soda Fire Emergency Stabilization and Rehabilitation Plan
Boise and Vale District Offices, Bureau of Land Management

Introduction

The Soda fire affected rangelands in both Idaho and Oregon, impacting lands managed by the Bureau of Land Management's (BLM) Boise District's Owyhee Field Office and Vale District's Malheur Field Office. BLM determined that Emergency Stabilization and Rehabilitation (ESR) efforts would be addressed at the landscape scale to be consistent with Secretarial Order 3336. As a result, both BLM offices proposed treatments in a single ESR plan.

This document will provide information regarding the proposed treatments, compliance with the National Environmental Policy Act (NEPA), and rationale for the decisions to be made. This document will consist of two decisions; one for treatments to be authorized in Idaho and one for treatments to be authorized in Oregon. This is due in part to provide a clear identification of the authorized officer for each jurisdictional boundary as well as identifying the appropriate Office of the Solicitor if a party choses to appeal this decision and petition for a stay. This decision will be issued as effective upon issuance.

Background

On August 10, 2015, the Soda Fire started eight miles northeast of Jordan Valley, Oregon. The fire burned a total of 279,144 acres in Owyhee (Idaho) and Malheur (Oregon) counties. The Soda fire was declared 100% contained on August 23, 2015. The fire burnt a total of 279,144 acres across multiple jurisdictions, which is illustrated in Table 1. A total of 41 grazing allotments were directly affected by the Soda fire.

Table 1.

Jurisdiction	Combined	Idaho	Oregon
BLM	225,953	179,639	46,314
BOR	157	157	0
State	12,896	12,097	785
Private	40,138	36,184	3,954
Total	**279,144**	**228,077**	**51,067**

An Interdisciplinary Team (IDT) assembled with local resource specialists was assembled on August 18 to assess values affected by the fire. The team consisted of individuals representing hydrology, soils, geology, cultural resources, wildlife, vegetation, fisheries, recreation, rangeland management, engineering, hazardous materials, invasive and noxious weeds, fuels, and geographic information systems (GIS). Field reconnaissance occurred between August 19 and August 23, 2015. Data from the field missions were compiled, and added to existing, pre-burn information to create a list of values threatened by the fire or potential post-fire effects.

Coordination was established with the Shoshone-Paiute Tribes, U.S. Fish and Wildlife Service (FWS), Idaho Department of Fish and Game, Oregon Department of Fish and Wildlife, Idaho and Oregon Departments of Lands, Idaho State Department of Agriculture, Idaho Governor's Office of Species Conservation, Oregon Parks and Recreation, Succor Creek State Natural Area, the Natural Resource Conservation Service in Idaho and Oregon, Owyhee County Commissioners, and affected Idaho and Oregon grazing permittees.

Rapid Assessment Process:

The timelines associated with emergency response planning require a rapid assessment of post-fire changes to values at risk at a landscape level. Field reconnaissance and data compilation/analysis within an incident as large as the Soda fire requires a highly coordinated effort between an interdisciplinary team, the local field offices, Tribes, state and federal agencies, landowners, permittees, county commissioners, and suppression forces. Information used in this report was generated from field reconnaissance, review of relevant scientific literature, management plans, GIS databases, and discussions with stakeholders. Field reconnaissance consisted of individual programs completing on-site inspection of fire impacted habitats, recreation sites, grazing allotments, and other site specific values and hazards on BLM lands. An official species list was generated from the Boise and Portland Fish and Wildlife Offices to identify federally listed species within and adjacent to the fire perimeter. Additionally, BLM's GIS and field survey databases were accessed to determine if there were known occurrences within the fire perimeter or immediately downstream. Hydrologic models were developed to estimate risks to structures and important habitat areas from run-off and sedimentation. Satellite imagery was also used to develop maps of soil burn severity and vegetation mortality within the fire perimeter. The resulting report assessments, along with additional site visits and meetings with the Owyhee and Malheur Field Offices and other local specialists were utilized to prepare the development of treatments for an ESR plan (Plan).

Response Actions:
Many threats were identified during this assessment; however, the team concluded that the threats listed below pose the greatest risk across the landscape:

- Expansion of invasive plant species
- Habitat recovery for threatened species
- Increased runoff, erosion potential, and resulting flooding
- Loss of cultural resources

Primary objectives of the actions proposed include:

- Minimize threats to human life and property
- Minimize threats to known critical cultural resource values
- Stabilize and prevent degradation to natural resources
- Restore habitat for BLM Type 2 Special Status Species (SSS)
- Mitigate watershed response and stabilize soils
- Reduce post-fire effects and the likelihood of future large wildfires
- Minimize the establishment and spread of noxious weeds and invasive species
- Repair/replace fire-damaged facilities

The Plan identifies an initial set of treatments that must be applied collectively to increase the likelihood of success, especially when considering the enhancement or recovery of habitat for the, Greater Sage-Grouse (*Centrocercus urophasianus)* (GRSG). These actions are summarized in the Treatment Section of the Plan and have been designed to mitigate identified threats. These actions will either:

- Mitigate an immediate threat, or
- Achieve emergency stabilization objectives, or
- Provide the foundation to proceed with further rehabilitation or restoration activities, or
- Restore vegetation to provide fully functioning, resilient and resistant SSS habitat.

The ESR program is expanding to include treatments for up to five years following a wildfire. This expansion will allow treatments to be evaluated and modified as needed to maximize treatment success and allow for multiple treatments over multiple years. Additional restoration treatments and re-treatments will be determined by the response of these first stabilizing treatments allowing for new ideas and treatments to be added. Resource-specific identification of the values-at-risk and associated threats supports the proposed treatments. Other treatments have also been identified within the project record, however, for reasons of timing, or a need for further analysis those actions are not yet being proposed for implementation.

The scale of the Soda fire and the scope of its impacts necessitate implementation of a suite of coordinated treatments across the landscape. Even moderate treatment success in areas with limited access (steep rocky terrain, lack of roads etc.) will hasten the recovery of the burned area. There are few unburned islands of vegetation remaining to serve as seed sources to re-establish native vegetation within the fire perimeter, especially on the east side of the fire.

Treatment polygons displayed on plan maps may cross private, state, and other land ownership; however treatments described within the plan and this decision refer to BLM lands only. Coordination between BLM, private, state and other land owners will occur for possible joint treatments. Treatments shown on ownership other than BLM are for illustrative purposes only.

Provisional seed zones were used in the development of seed mixes; suggested species will be purchased when they are available and feasible.

The actions are grouped into the following categories:

- **Emergency Stabilization (ES):** actions critical to stabilizing or protecting values at risk. These actions usually occur within the first year but may extend into the second fall planting season after a wildfire to maximize opportunities for success.
- **Rehabilitation (BAR):** actions moving toward a resistant and resilient situation to reduce or eliminate threats to values. These actions could occur for up to five years from the wildfire ignition date.
- **Restoration** actions begin with stabilization or rehabilitation actions, but will likely require a secondary step (Future Projects). These actions create a healthy, resilient condition in which native species are well represented, and facilitates the return of natural ecological cycles.

Treatments associated with potential restoration efforts will not be brought forward in this decision as they are yet to be formally developed and analyzed through NEPA. Objectives for treatment success and reintroduction of grazing (both wild horses and livestock) will be developed by early calendar year 2016. Monitoring for all treatments proposed will occur over the next 2-5 years at a minimum.

Compliance

The Soda Emergency Stabilization and Rehabilitation (ESR) plan was prepared under the guidance of and is consistent with the Burned Area Emergency Stabilization and Rehabilitation Handbook H-1742-1. The treatments have been designed to conform to the following documents which direct and provide the framework for management of BLM lands within Boise and Vale Districts:

- Taylor Grazing Act (43 U.S.C. 315), 1934
- The National Environmental Policy Act (42 U.S.C. 4320-4347), 1970
- Federal Land Policy and Management Act (43 U.S.C. 1901), 1978
- Secretarial Order #3336 – Rangeland Fire Prevention, Management and Restoration 2000)
- National Historic Preservation Act (16 U.S.C. 470)
- Programmatic Agreement Among USDI BLM, the Advisory Council on Historic Preservation and the Oregon State Historic Preservation Officer Regarding the Identification, Evaluation, and Treatment of Historic Properties Managed by the BLM, Oregon State Office, Throughout the State of Oregon
- Executive Order 12372, Intergovernmental Review
- Executive Order 13112, Invasive Species
- Greater Sage-Grouse Conservation Assessment and Strategy for Oregon: A plan to Maintain and Enhance Populations and Habitat; ODF&W 4/22/2011
- SEORMP Settlement Agreement (Case 05-35931, June 10, 2010) between Vale District BLM and Oregon Natural Desert Association (ONDA) resulting from Ninth Circuit Court of Appeals decision (*ONDA v. BLM*, 625 F.3d 1092 (9th Cir. 2010).
- Oregon Greater Sage-Grouse Approved Management Plan Amendment (ARMPA) and ROD (2015)

- Idaho and Southwestern Montana Greater Sage-Grouse Approved Resource Management Plan Amendment (ARMPA) and ROD (2015)
- Owyhee Resource Management Plan (RMP) (1999)
- Southern Oregon RMP (2002)

Careful consideration was made in the development of all treatments as to how GRSG habitat would be stabilized and protected. All emergency stabilization and rehabilitation actions identified in this decision are consistent with ARMPA goals, objectives, land use allocations, management decisions (MDs), and required design features (RDFs) established for protecting and preserving GRSG and its habitat on public lands managed by BLM in Idaho. These management decisions, presented by program area, and are included in Appendix A for Idaho treatments and Appendix B for Oregon treatments.

To comply with the NEPA, the Owyhee and Malheur Field Office IDT completed the review of the Determination of NEPA Adequacy (DNA) checklist and determined that the proposed actions that were described for immediate implementation are covered under existing NEPA documents, pending funding and alignment of assets. Existing Land Use and Activity Plans that analyze the treatments consist of the following:

Land Use and Activity Plans

- Owyhee Resource Management Plan (RMP) 1999
- Southeastern Oregon RMP 2002
- Respective District Fire Management Plans
- 2007 Vegetation Treatments Using Herbicides on BLM lands in 17 Western States ROD (National Vegetation Final Environmental Impact Statement (FEIS))
- Boise District Normal Fire Emergency Stabilization and Rehabilitation Plan EA 2005
- Vale District Normal Fire Emergency Stabilization and Rehabilitation Plan EA 2005
- Buzzard Complex Fire Emergency Stabilization and Rehabilitation Plan EA DOI-BLM-OR-V040-2014-0076-EA
- Boise District Noxious and Invasive Weed Treatment EA 2007
- Vale BLM District Five Year Integrated Weed Control Plan EA (OR-030-89-19)

Other Related Documents

- Instruction Memorandum No. 2013-035, Requirements for Processing and Approving Temporary Public Land Closure and Restriction Orders, 2012.
- Idaho's Standards for Rangeland Health and Guidelines for Livestock Grazing Management
- Herbicides Approved for Use on BLM Lands in Accordance with the 17 PEIS ROD and Oregon EIS Rod – September 1, 2011 update.
- 2010 Vegetation Treatments Using Herbicides on BLM Lands in Oregon ROD
- National Seed Strategy (August 2015).

Section 7 Consultation
No threatened or endangered species were identified in official FWS species lists as occurring within the fire perimeter. Two federal Candidate species, GRSG and Columbia spotted frog (*Rana luteiventris*), were previously identified as occurring within the fire perimeter. Recent findings by the FWS determined that neither species was warranted for listing under the Endangered Species Act. Both species are currently considered BLM Type 2 Special Status Species and do not require formal FWS consultation

Through the rapid assessment process and identification of necessary treatments to protect human life and safety and to further protect resource values from further degradation the Boise and Vale Districts are prepared to issue this decision as effective upon issuance. The Plan identified a number of treatments that need to be implemented immediately, while also recognizing that future treatments would also be required to further address rehabilitation and restoration of the landscape. All treatments that are immediate in nature were assessed through the completion of DOI-BLM-ID-B030-2015-0016-DNA. Both Boise and Vale District BLM offices are prepared to issue the following decisions for both District Offices:

BOISE DISTRICT FINAL DECISION

I have determined that the vegetation, soil and other resources on the public lands are at immediate risk of erosion and other damage due to the effects of the Soda fire. Please refer to the Soda ESR Plan Maps using following link for an illustration of the treatments identified in this decision:

https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=renderDefaultPlanOrProjectSite&projectId=52963&dctmId=0b0003e8808c9ef8

With completion of DOI-BLM-ID-B030-2015-0016-DNA, I have determined that implementing proposed Soda fire ESR treatments identified in this decision would have similar or the same effects as described in the NEPA documents identified above and does not constitute as a major Federal action that will not adversely impact the human environment. Therefore the preparation of an Environmental Impact Statement is not required. Based on resource reports compiled by specialists, and analysis and input from the Soda ESR interdisciplinary team, it is my final decision to implement the following treatments as identified in the Soda ESR Plan and associated maps.

SUMMARY OF PROPOSED ACTIONS and RATIONALE

Emergency Stabilization Actions will include –

1. **<u>Install water bars for protection of Mac D Mercury Mine and Retort Site:</u>**
   Installation of water bars in the road upstream of the Mac D site to slow and/or divert water away from the site. Monitoring after each significant rain event will occur for the first year after the fire to ensure diversions are holding and no erosion is occurring.

Rationale: At the time of the Soda fire the site was pending fall seeding to establish vegetation cover on the newly installed cap. The fire burned off nearly all vegetation surrounding the Mac D Mercury Mine & Retort Site. The fence and soil cap were undamaged. However, the loss of vegetation increases the potential for even more common rainfall events to result in increased overland flow over the soil cap leading to erosional processes jeopardizing the integrity of the cap. Monitoring after each significant rain event will aid in ensuring rapid response measures are taken if diversions are not adequately working to divert run-off and resulting erosion of soils.

2. **Conduct maintenance on road/trail water diversion structures.** BLM will complete the following to maintain integrity of roads and warn the public to post-fire hazards to the human environment:

    - Clean culverts, ditches, and catchment basins of sediment and debris. Replace nine damaged or plugged ditch relief culverts and install nine new culverts in locations that will increase the number of drain points to reduce the flow in existing ditchlines.
    - Grade 27.3 miles of road template to efficiently direct runoff to the nearest drainage structure (culverts and lead-out ditches) to prevent long runs down the roadway that will result in surface and road fill loss.
    - Place riprap below two culvert sites to minimize erosion and stabilize the fill slopes.
    - Repair a portion of the retaining wall that burned along the concrete ramp at the Jump Creek Recreation Site.
    - Replace existing culverts which will not pass predicted post fire flows with culverts of larger diameter with increased flow capacity. There are thirteen culverts recommended to be upgraded in size.
    - Install warning signs to alert the public to the hazards associated with post fire conditions and locate the signs at major entry points to the fire.
    - Patrol transportation system for early detection of problems. Timely repair will reduce the damage to the road structure and will provide for increased public safety.

Rationale: The watersheds within the fire are now in a condition that will generate larger stream and debris flows following precipitation events due to the loss of live vegetation on both the hillslopes and within riparian areas in the drainage bottoms. The increased flows will move more debris and may threaten human life and safety at road/stream crossings and could lead to road damage requiring significant expense to repair. Following increased flows, ford crossings would have limited road damage as the debris can pass through the crossing sites. Many areas have a rocky soil type that will be more resistant to erosion and road surface loss.

There is an extreme risk to human life and safety resulting from increased flows from burned watersheds. Injury or death can result from flash floods at road/stream crossings or from hazards such as rolling rocks and road fill slope washouts caused by post fire storms.

The watersheds that burned in the Soda fire will show the effects of the fire via increased runoff rates, erosion, sediment, and debris transport creating a future concern for roads, culverts, and channels along the drainage paths of the burned watersheds in that they may be plugged, overtopped or washed away more frequently than in its pre-fire condition. The value of infrastructure is at a high risk for significant damage from these post-fire effects.

The Sands Basin Road #3701 has steep climbing grades with a large spacing distance between ditch relief culverts that will be unable to handle post-fire flows without damage to the ditchlines and fill slopes. The McBride Creek Road # 3705 has several drainage crossings with through fills that would be expensive to repair if damaged during a post-fire flood event. Post-fire flow estimates show that the culverts in some of the stream crossings on these roads are undersized and the roads will likely be impacted by water overtopping and the subsequent loss of road segments.

3. **Construct fence to restrict access to mine workings in Stewart Gulch:** Approximately 300 feet of fence will be constructed to restrict access to mine workings on the west side of Stewart Gulch to the road heading to Upper Stewart Spring. An additional 50 feet of fence will be installed to restrict access along Stewart Gulch.

Rationale: A locked gate on the road heading to Upper Stewart Spring currently blocks public access to these workings. Little vegetative cover or anything of significance exists along the side of the gate and road as a result of the fire, resulting in the public being able to easily drive around the gate and accessing the largest open adit observed during field reconnaissance post-fire. Reducing public access will aid in the re-establishment of the vegetation in the area as well as aiding in public safety.

4. **Aerial Application of Pre-Emergent Herbicide for Invasive Annual Grass Control.** Aerially apply approximately 22,305 acres of the herbicide imazapic at a rate of 6 ounces per acre in the fall of 2015 on areas suitable for drill seeding. Imazapic is a pre-emergent herbicide that is partially selective to annual grass species and will be used as a seedbed preparation for subsequent drill seeding treatments. Imazapic has been shown to negatively impact some established perennial grasses and forbs, as well as sagebrush germination. Allowing sites to remain fallow for a year following the herbicide treatment will be necessary to allow for the establishment of desired seeded species. These areas will be drill seeded in the fall of 2016.

   Buffers for resource values of concern during the aerial application of herbicide are:

   - 300 feet from perennial and fish-bearing intermittent streams are required prior to aerial herbicide treatment application;
   - 100 feet from Special Status Plant habitat areas.

   Areas that are not proposed for herbicide treatment in the fall of 2015 will be evaluated for future applications. Much of the areas to be aerially seeded have highly erodible soils; erosion control is a primary objective for seeding treatments. Applying herbicide in the fall of 2015 would result in not meeting this objective. Therefore, BLM will apply herbicide to these areas (all or in part) once seeded species are established and the sites are evaluated for site competition with invasive species in order to reduce these undesirable species.

Rationale: Most weeds recover more quickly than native or other non-native desirable perennials due to their ability totake advantage of moisture and nutrients earlier, therefore proliferating following wildfire. Weed control within the burned area will help prevent invasive/noxious species from dominating the site, suppressing recovery of desired vegetation and further degrading sage grouse and other wildlife habitat. Aerial application of the pre-emergent imazapic will reduce medusahead wildrye, cheatgrass, and other invasive annual grass species. Imazapic is designed to suppress invasive annuals and release perennial species allowing them to increase in density and continue to compete with invasive species. Therefore, this treatment will prepare the seedbed in part which will provide an opportunity for perennial grasses and sagebrush to establish and allow for GRSG habitat to witness the initial stages of recovery. Without herbicide treatments as identified in the herbicide treatment map, the areas will likely become dominated by annual grasses, with minimal to no value for nesting/early brood-rearing habitat for GRSG in the short or long-term.

Areas that will not receive herbicide treatment in 2015 require immediate establishment of vegetation in order to mitigate soil erosion. Once vegetation is established, treating the site with a pre-emergent herbicide will help reduce newly established crops of invasive species while allowing desirable species to continue to proliferate.

5. **Drill Seeding Treatments:** Approximately 20,841 acres, spread throughout multiple areas, will be drill seeded using standard rangeland drills without depth bands in the fall 2015. These are areas outside of the fall 2015 herbicide/all 2016 drill seeding treatments. The areas are in soils identified as highly erosive and thus were excluded from the initial fall imazapic herbicide treatment. These areas contain various densities of annual invasive grasses and will be evaluated for seeding success in approximately two years. Based on the seeding success a follow-up treatment of imazapic or other suitable herbicide may be necessary to reduce the amount of annual grass on site and release remaining native vegetation and drill seeded species; this could include broadcast or spot treatments based on evaluation results.

   Soda Drill seeding mixes are identified in Tables 2-3 below and will be used in both 2015 and 2016 treatments. Drill seeding of areas that were chemically treated with imazapic in 2015 will be drill seeded in the fall of 2016. Appropriate inventories will be conducted through a combination of BLM personnel or contracted consultants prior to drilling. Any potentially significant known cultural resource identified in the treatment areas would be avoided by rangeland drills. Equipment used in the burned areas would be cleaned prior to use on the site and would be cleaned following use to eliminate the potential to disseminate weed seeds.

   There are 5 Areas of Critical and Environmental Concern (ACEC) that were impacted by the Soda fire. The following is the Standard Operating Procedures that will be employed for seeding treatments:
   - Jump Creek – Drill seed above canyon as necessary
   - Squaw Creek – No treatment in unburned section (southern unit). Burned section (northern unit) broadcast seed (hand or aerial) as necessary.
   - McBride Creek – Drill or broadcast in sagebrush areas (not ash outcrop).

- Coal Mine Basin – Broadcast seed in sagebrush areas (not ash outcrops).
- Sommercamp Butte – No broadcast or drill, but plant locally-collected source seedlings or larger containers of mountain mahogany and oceanspray plants.

Table 2: Drill Grass Seeding Mix A

Soda Drill Mix A – Native -	Seeding Acres	Bulk Lbs/ Ac	PLS Lbs/ Ac	% of Mix
Snake River Wheatgrass, Secar	2,793	1.0	0.8	11%
Bluebunch Wheatgrass, Anatone	2,793	5.0	3.8	45%
Thickspike Wheatgrass, Critana	2,793	2.0	1.5	20%
Big Bluegrass, Sherman	2,793	0.5	0.3	24%
TOTAL	2,793	8.5	6.4	100%

Table 3: Drill Grass Seeding Mix B

Soda Drill Mix B – Introduced -	Seeding Acres	Bulk Lbs/ Ac	PLS Lbs/ Ac	% of Mix
Crested Wheatgrass, Hycrest II	18,048	3.0	2.4	30%
Siberian Wheatgrass, Vavilov II	18,048	5.0	4.0	55%
Thickspike Wheatgrass, Critana	18,048	2.0	1.5	15%
TOTAL	18,048	10.0	8.0	100%

Rationale: Drillable acreages within the Soda fire perimeter are limited in comparison to the overall acreages burnt. Seed mixes were chosen for their ability to establish in the ecological sites where drill seeding will occur. Species in the native mix were common on site according to monitoring information collected pre-burn. The overall objective for use of the non-native species mix is to stabilize and rehabilitate the burned area by competing with invasive species and noxious weeds while providing functional structural habitat for wildlife. In some areas of the fire, the herbaceous understory vegetation contained minimal amounts of perennial plants, leaving the area without the seed source needed for the recovery of suitable wildlife habitat. Without a seeding treatment, these areas will likely become dominated by annual grasses, resulting in low resistance and resilience to future wildfires and leaving them unsuitable for desired habitat. The fire did not consume the invasive annual grass seed bank; non-native perennial grasses will be more competitive than native perennial grasses in these situations. The non-native seed mix will also occur in areas around heavily traveled roads and will provide a barrier for noxious weed germination from seeds transported via vehicles.

6. **Aerial Seeding Treatments:** Approximately 64,200 acres will be treated with one of the following seed mixes in the fall of 2015 (See Table 4-13). Seed mixes are adaptable to the ecological site they will be applied to and were identified to target specific issues such as erosion control, high elevation sites exposed to year-long use by wild horses,

level of expected competition with existing invasive grass species, riparian corridors, or a specified wildlife use:

Table 4: Aerial Grass Seeding Mix 1

Soda Aerial Grass Mix 1 Fall 2015 Native Erosion Control	Seeding Acres	Bulk Lbs/ Ac	PLS Lbs/ Ac	% of Mix
Bluebunch Wheatgrass, Anatone	17,978	6.0	4.6	31%
Streambank Wheatgrass, Sodar	17,978	3.0	2.4	20%
Thickspike Wheatgrass, Schwendimar	17,978	1.5	1.1	9%
Big Bluegrass, Sherman	17,978	1.5	0.9	41%
TOTAL	17,978	12.0	9.1	100%

Table 5: Aerial Grass Seeding Mix 2				
Soda Aerial Grass Mix 2 Fall 2015 Native High Elevation Hardtrigger HMA	Seeding Acres	Bulk Lbs/ Ac	PLS Lbs/ Ac	% of Mix
Bluebunch Wheatgrass, Anatone	13,032	8.0	6.1	31%
Big Bluegrass, Sherman	13,032	2.0	1.3	42%
Idaho Fescue, Joseph	13,032	2.0	1.6	27%
TOTAL	13,032	12.0	9.0	100%

Table 6: Aerial Grass Seeding Mix 3

Soda Aerial Grass Mix 3 Fall 2015 Native/Introduced Moderate Invasive Competition	Seeding Acres	Bulk Lbs/ Ac	PLS Lbs/ Ac	% of Mix
Siberian Wheatgrass, Vavilov II	18,994	5.0	4.0	39%
Snake River Wheatgrass, Discovery	18,994	3.0	2.3	17%
Bluebunch Wheatgrass, Anatone	18,994	3.0	2.3	14%
Sandbergs Bluegrass, Mountain Home	18,994	1.0	0.7	30%
TOTAL	18,994	12.0	9.3	100%

Table 7: Aerial Grass Seeding Mix 4

Soda Aerial Grass Mix 4 Fall 2015 Introduced/Native High Invasive Competition	Seeding Acres	Bulk Lbs/ Ac	PLS Lbs/ Ac	% of Mix
Siberian Wheatgrass, Vavilov II	12,804	8.0	6.5	56%
Sandbergs Bluegrass, Mountain Home	12,804	1.0	0.7	27%
Bottlebrush Squirreltail	12,804	3.0	2.0	17%
TOTAL	12,804	12.0	9.2	100%

Table 8: Aerial Grass Seeding Mix 5

Soda Aerial Grass Mix 5 Fall 2015 Riparian Corridors and Springs/Seeps	Seeding Acres	Bulk Lbs/ Ac	PLS Lbs/ Ac	% of Mix
Streambank Wheatgrass, Sodar	1,383	6.0	4.8	53%
Basin Wildrye, Trailhead	1,383	6.0	4.6	44%
Triticale	1,383	6.0	4.9	4%
TOTAL	1,383	18.0	14.3	100%

Table 9: Aerial Sagebrush/Forb Seeding Mix 7

Soda Aerial Sagebrush/Forb Mix 7 Winter 2015/2016 Low Sagebrush		Seeding Acres	Bulk Lbs/ Ac	PLS Lbs/ Ac	% of Mix
Alfalfa, Ladak	*Medicago sativa*	56,680	1.0	0.81	31%
Small Burnet, Delar	*Sanguisorba minor*	56,680	1.0	0.76	6%
Western Yarrow, Eagle	*Achillea millefolium* var. *occidentalis*	56,680	0.1	0.1	36%
Low Sagebrush	*Artemisia arbuscula*	56,680	1.0	0.2	26%
TOTAL		56,680	3.1	1.8	100%

Table 10: Aerial Sagebrush/Forb Seeding Mix 8

Soda Aerial Sagebrush/Forb Mix 8 Winter 2015/2016 Wyoming Big Sagebrush		Seeding Acres	Bulk Lbs/ Ac	PLS Lbs/ Ac	% of Mix
Alfalfa, Ladak	*Medicago sativa*	83,628	1.0	0.81	31%
Small Burnet, Delar	*Sanguisorba minor*	83,628	1.0	0.76	6%
Western Yarrow, Eagle	*Achillea millefolium* var. *occidentalis*	83,628	0.1	0.1	36%
Big Sagebrush, Wyoming	*Artemisia tridentate* ssp. *Wyomingensis*	83,628	1.0	0.2	26%
TOTAL		83,628	3.1	1.8	100%

Table 11: Aerial Sagebrush/Forb Seeding Mix 9

Soda Aerial Sagebrush/Forb Mix 9 Winter 2015/2016 Basin Big Sagebrush		Seeding Acres	Bulk Lbs/ Ac	PLS Lbs/ Ac	% of Mix
Alfalfa, Ladak	*Medicago sativa*	16,280	1.0	0.81	31%
Small Burnet, Delar	*Sanguisorba minor*	16,280	1.0	0.76	6%
Western Yarrow, Eagle	*Achillea millefolium* var. *occidentalis*	16,280	0.1	0.1	36%
Big Sagebrush, Basin	*Artemisia tridentata* ssp. *tridentata*	16,280	1.0	0.2	26%
TOTAL		16,280	3.1	1.8	100%

Table 12: Aerial Forb Seeding Mix 10

Soda Aerial Forb Mix 10 Fall/Winter 2015 Sage-grouse Preferred		Seeding Acres	Bulk Lbs/ Ac	PLS Lbs/ Ac	% of Mix
Penstemon, Firecracker	*Penstemon eatonii*		0.100	0.072	33.0%
Penstemon, Sand (Sharpleaf)	*Penstemon accuminatus*		0.001	0.001	0.2%
Globemallow, Gooseberryleaf	*Sphaeralcea grossulariifolia*		0.200	0.135	51.6%
Western Hawksbeard	*Crepis occidentalis*		0.015	0.011	7.0%
Arrowleaf Balsamroot	*Balsamorhiza sagittata*		0.070	0.014	0.6%
Basalt Milkvetch	*Astragalus filipes*		0.130	0.091	7.0%
Biscuitroot, Fernleaf	*Lomatium* sp.		0.025	0.050	0.5%
TOTAL		*	0.541	0.374	100%

*Acres for this mix will be determined based upon seed availability.

Table 13: Aerial Shrub/Forb Seeding Mix 11

Aerial Shrub/Forb Mix 11 Antelope Bitterbrush		Seeding Acres	Bulk Lbs/ Ac	PLS Lbs/ Ac	% of Mix
Bitterbrush, Antelope	*Purshia tridentata*	3,182	1.0	0.8	100%
TOTAL		3,182		0.8	100%

Rationale: The majority of the landscape within the Soda fire is not accessible to rangeland drills and therefore requires aerial application of seed mixes. All proposed aerial seed mixes are adapted to the ecological sites within the proposed treatment areas; many were common in pre-burn monitoring. These species have been extensively utilized in similar ecological sites throughout the Boise District. Ecological site descriptions, provisional seed zone information, monitoring data and local specialists were utilized in species selection. Locally collected seed will be utilized to the extent that it is available as well. The species chosen for each mix will allow for specific objectives in landscape resource management to be witnessed, such as providing for erosion control in highly erodible soils, providing structure and function to the ecological site while also having resilience to year-long use by wild horses, competitive success against invasive weed species, rehabilitation of GRSG habitat for the species' varying lifecycle needs as well as those needs for other wildlife species that utilize the habitat such as pronghorn, mule deer, and bighorn sheep.

Seed mixes identified will be of value for wildlife species, including GRSG. The fire occurred within the Owyhee North Fire and Invasive Assessment Tool (FIAT) Project Area. It impacted 10 Occupied GRSG leks and 15 leks with Unoccupied/Undetermined status. These leks were spread across the Cow Creek, Texas Basin, Blackstock Springs, Rockville, and Hardtrigger lek complexes. All of these complexes were located within Priority (Cow Creek and Texas Basin)

and Important (Blackstock Springs, Rockville, and Hardtrigger) Habitat Management Areas. In general, GRSG nesting, brood rearing, and wintering habitat across these complexes suffered high vegetation mortality and low to moderate soil burn severity. Field reconnaissance did not detect any direct GRSG mortality, and telemetry studies have documented this bird's ability to avoid fire fronts, therefore estimated direct mortality was low. Indirect effects through loss of habitat represent the greatest impact to GRSG. Burned areas will be unsuitable for GRSG until significant regrowth occurs from intact root crowns and/or the seed bank. Therefore, seed mixes proposed specifically for GRSG will be necessary to provide habitat for the various lifecycles of GRSG. Re-establishing sagebrush will be necessary where the majority of the sagebrush overstory was consumed by the fire to reduce the amount of time needed for this area to provide suitable nesting and brood-rearing habitat; preferred forb will be seeded with sagebrush seeding or seedling plantings as well in order to augment or restore late brood-rearing habitat. Much of the aerial shrub and forb seeding treatment area will be first drill seeded and/or chained, which will provide an improved seedbed for establishment of these species.

In addition, the values at risk identified for aquatics include perennial and intermittent stream channels (lotic systems), reservoirs and lakes (lentic systems), and aquatic species (including macroinvertebrates). The fire effects on stream channels and lentic systems impact the aquatic and riparian obligate BLM special status species present, which include inland redband trout (*Oncorhynchus mykiss gairdneri*), and Columbia spotted frogs, among others.

Lotic systems are at risk for having increased stream channel alterations as a result of vegetation loss along the riparian corridor and in the up-lands, changes in water chemistry due to ash delivery, changes in water temperature from loss of canopy shading, scouring of riparian/aquatic vegetation, changes in pool habitat due to geomorphic bed movement, sediment delivery and flushing of species during flood events downstream. Lentic systems are at risk of drying from loss of vegetative cover that maintains soil moisture, sedimentation and erosion from overland flow events, degradation of water quality, reduced ability to maintain water on site and recharge subsurface flows, and authorized uses. Since some of the drainages burned very hot, aquatic species may have died as a result. Seed mixes specific to riparian corridors and springs or seeps will aid in stabilizing these areas from further degradation.

7. **Cultural Resource Protection**: Aerial seed high risk sites to camouflage artifacts and limit erosion. Recommendation is based on GIS analysis of sites having significant elements combined with those on >25 degree slope and/or near main roads within moderate to high intensity burn GIS data, and as determined by past or post-fire observations of looting, erosion, and fire effects. Sites include open lithic scatters and rock shelters with significant cultural elements.

   Placement of anti-looting signs will also occur inside and outside the burn area. Patrols by law enforcement officers will also increase. Sites with the highest risk of erosion and looting will be monitored by a qualified archaeologist at least annually until soils and vegetation has recovered.

The following design features will also be implemented:

- Archaeological surveys and reporting as needed for potentially site-disturbing treatments. These will likely be extensive and require contractors through an IDIQ to carry out inventories and reporting with COR/archaeologist oversight. Modeling of sample areas based on site probability in areas where there is sufficient data for sampling justification and negotiation of a less than 100% inventory with the State Historic Preservation Office (SHPO) and consultation with the Shoshone-Paiute Tribes has occurred.
- Any inadvertent discoveries of human remains must be dealt with through the Native American Graves Protection and Repatriation Act (NAGPRA) process, including work stoppage, immediate notification of the county sheriff and field office manager and protection of the integrity and confidentiality of finds to the extent possible. Field personnel and managers should be aware of these requirements in order to avoid violations.
- Limit travel to existing roads and trails. Administrative exemption for access is allowed for treatment application and assessment.

Rationale: A number of known sites were impacted by the Soda fire and are included in the administrative record for the project. One of the most devastating effects to cultural resources after a fire is looting, including surface collection and movement of surface artifacts, thus destroying significant cultural and scientific values. Fires make sites more susceptible to looting by exposing surface artifacts and making rock shelters and other features more visible. Soil disturbance and erosion also have the potential to damage or destroy features and artifact spatial context at sites, particularly those around drainages and on slopes. Therefore aerial seeding around high risk sites to camouflage artifacts and limit erosion will be critical. Design features will further reduce potential impacts to critical cultural resource values.

8. **<u>Noxious Weed Treatments</u>**: A number of noxious weeds have been previously identified to occur within the burn area. Early detection rapid response (EDRR) assessment/monitoring of noxious weeds will being in 2016. Chemical treatments using pickups, UTVs/ATVs and backpack spray units may be used on any noxious weeds located within the fire on public lands. BLM will coordinate with appropriate entities when weeds are found on State or private lands.

   A trial use of D7, a bio-herbicide, has been allowed on public lands. However, an Environmental Assessment must be completed. Therefore, the trial is only mentioned here for reference of the use of this particular tool from a research standpoint.

Rationale: Noxious weeds are now recognized worldwide as posing threats to biological diversity, second only to direct habitat loss and fragmentation. Noxious weeds are known to alter ecosystem functions such as nutrient cycles, hydrology, and wildfire frequency; out-compete and exclude native plants and animals; and to hybridize with native species. The presence and abundance of noxious weeds in an ecosystem is highly dynamic subject to changes in the local environment (Whitson, T.D., et al. 1992, Cal-Ipc, 2007). All natural communities

are susceptible to invasion by noxious weeds; when disturbed these lands can become more susceptible to invasion. Control of noxious weeds is consistent with the management plans for the resource and will help protect the ecological integrity, biodiversity, and site productivity of this shrub-steppe plant community. Working cooperatively with local weed management groups and private landowners will achieve better weed management.

9. **Sign placement within high-use recreation areas**: Trail numbering system signage that was damaged due to the wildfire needs to be replaced throughout the designated travel management system within the Wilson Creek and Hemingway/Rabbit Creek Areas. In addition, signs alerting visitors to the potential of falling rock will be installed.

Rationale: The numbering system on designated trails is important for management of the system, especially during the fall, winter and spring when the trails get the highest concentration of use. The numbering system is essential to ensure people stay on designated trail and road systems and are within designated areas appropriate for their use type. Signs alerting visitors of the potential dangers will be needed in areas of exposed soils due to the wildfire, which has left areas susceptible to falling rock.

10. **Fence Construction for Protection of Special Status Plants**: Construct approximately three miles of vehicle barrier segment fences for the purpose of protecting special status plants in areas of ash outcrops (*Mentzelia mollis* in Rats Nest Pasture 1; *Chaenactis cusickii* and *Phacelia lutea var. calva* in Juniper Spring Pasture 1; possibly *Chaenactis cusickii* in Poison Creek Pasture 1). All moderate to high risk fence segments within 2 km of occupied leks will be marked with collision diverter devices. All fencing will be constructed to meet BLM wildlife-friendly design specifications.

Rationale: Segments of protective fencing are needed in order to deter recreationalists from traveling off-roads or trail systems that would impact known special status plant species. These areas are subject to increased hill climbing as a result of the removal of surrounding vegetation.

11. **Construction of temporary protective fencing**: Install approximately 50 miles of new temporary fence to protect treatments as needed and to facilitate grazing on unburned portions of pastures where practicable. If possible, new wire fences will not be built within 2 km of occupied leks. If this is not feasible, moderate to high risk fence segments will be marked with collision diverter devices. All fencing will be constructed to meet BLM wildlife-friendly design specifications.

Rationale: Protective fencing for treatments on the edge of unburned areas will help facilitate treatment success while allowing for uses such as grazing of livestock, in the adjacent unburned portions of the watershed. Grazing levels in adjacent unburned pastures or allotments is still to be determined and will be addressed through a grazing agreement or decision document before the start of the next grazing year (March 2016).

12. **<u>Construction of reference area and study exclosures</u>**: Construct a number of reference and study area exclosures within treatment area. All moderate to high risk fence segments within 2 km of occupied leks will be marked with collision diverter devices. All fencing will be constructed to meet BLM wildlife-friendly design specifications.

Rationale: Reference areas and/or study exclosures will provide sites that allow for monitoring treatment sites and control sites. These areas provide valuable information to future treatment needs as well as the level of success of a particular implementation technique.

Rehabilitation Actions Will Include -

1. **<u>Planting of sagebrush and bitterbrush seedlings:</u>** Approximately 1,350,000 sagebrush seedlings will be planted throughout the burned site over the next three years (see Table 14). The planted seedlings will be a combination of containerized and bare-root stock of the appropriate species and subspecies. Planting will occur in both fall/spring. Planting areas and preferred species for each site will be identified by local biologists and ecologists. Local specialists will also assist with adjustments to planting strategy based on aerial shrub seeding success and observed GRSG behavior and habitat use.

   Approximately 750,000 seedlings of bitterbrush will be planted over the next three years (see Table 14). The planted seedlings will be bare-root stock and planting will occur in both the fall and spring. Identification of targeted planting areas and adjustments to planting strategy based on field observations will be coordinated with local biologists and ecologists. Field office biologists assisted with identifying priority planting areas for fall of 2015 and fall of 2016. The potential exists for fire scorched bitterbrush to re-sprout on its own or propagate from seed that may have occurred before the fire.

   Based on funding and surplus stock available for purchase, numbers proposed for planting could change for each of the fall and spring planting seasons. Bitterbrush and sagebrush will be grown out in fiscal year 2016; planting will occur if surplus stock is available for purchase.

Table 14: Seedling Planting Commitment

Species	FY17	FY18	FY19
Sagebrush	450,000	450,000	450,000
Bitterbrush	250,000	250,000	250,000

Rationale: The objective of sagebrush seedling plantings will be to increase the suitability of habitat surrounding occupied leks and late brood rearing areas damaged by the fire. Initially targeted planting areas will focus on suitable areas within three miles of leks and utilized seeps, springs, and streams. Planted seedlings will provide for and enhance nearby cover and foraging habitat for GRSG during the breeding and late brood rearing season. In future years seedling plantings will expand to areas outside of leks into other areas to provide shrub structure in conjunction with the aerial shrub seeding.

Bitterbrush was abundant in certain areas of the fire; high density areas were identified using aerial imagery, ecological site descriptions (ESDs), field visits and local knowledge. Seedling plantings are identified to help promote the re-establishment of bitterbrush, which is an important cover for many wildlife species, particularly big game.

2. **Planting of woody species as needed**. Approximately 13 miles of stream corridor will be assessed to determine if planting of woody species will be needed. Planting will occur in the spring of 2016.

Rationale: Monitoring for the level of natural recovery in stream corridors where woody vegetation facilitates the proper functioning of the system will be required before planting occurs. If it is found that natural recovery did not occur then planting of appropriate woody species to the site will take place in order to aid in rehabilitation of these areas.

3. **Repair or Replace Damaged Exclosures**: Repair 44 spring exclosures and approximately 18 miles of riparian exclosure fence damaged by the fire. In addition repair exclosure fences at McBride Creek, Coal Mine Basin, Succor Creek Pastures 1 & 2, and Stateline ACEC boundary fences. All riparian exclosure fences will be marked with collision diverter devices. All fencing will be constructed to meet BLM wildlife-friendly design specifications.

Rationale: Fire damaged the integrity of pre-existing exclosure fences. The structural integrity of the fences is in question and needs to be maintained as a result of the fire in order to protect the sensitive resource values identified when the improvement was originally installed.

4. **Repair or replacement of approximately 350 miles of damaged pasture and/or allotment boundary fence:** The Soda fire impacted approximately 350 miles of livestock management fence including gates, corners, braces, and wooden fence posts. BLM, permittees and affected private landowners will work together when possible to repair livestock management fences within the fire boundary. All moderate to high risk fence segments within 2 km of occupied leks will be marked with collision diverter devices. All fencing will be constructed to meet BLM wildlife-friendly design specifications.

Rationale: Fencing is needed for the orderly use of the rangelands. Pasture and Allotment boundaries (which also make up Herd Management Area boundaries) need to be repaired as a result. Fences will be constructed utilizing primarily metal posts, corners and stays in order to ensure protection if the area is burnt again in the future.

5. **Repair water developments and installation of approximately 100 floats and shut-off valves for developed springs**: Water developments currently identified to have been impacted by the wildfire include Windy Point Pipeline and Ratsnest/Hardtrigger Pipeline. Other water developments are expected to have little to no fire damage. These facilities will be repaired to working condition; Windy Point pipeline, located in East Reynolds Creek Allotment/North Rabbit Pasture, is seven miles in length and provides water to

nine troughs and one guzzler. The pipeline sustained damage during the fire due to heat and suppression actions.

Floats and shut-off valves are necessary to enable spring/seep areas to recharge subsurface water patterns and provide water storage on the landscape. Diverting excess water back to the spring/seep source will encourage and support the reestablishment of riparian vegetation either through natural recolonization or planting/seeding efforts.

Rationale: These rangeland improvement projects (RIPs) are necessary to manage livestock grazing and will need to be repaired or replaced, or alternate management created, prior to resumption of livestock grazing.

6. **Inventory and repair of wildlife guzzlers**: Reconnaissance of 12 wildlife guzzlers to determine the level of repair to make the structures functional.

Rationale: Wildlife guzzlers provide valuable water sources and add to habitat values, particularly during the driest months of the year. Repair or replacement of these facilities will aid in rehabilitation of the habitat values within the vicinity of the guzzlers as a result.

7. **Maintenance and Repair of existing reservoirs**: Cleanout of existing reservoirs if they become filled with sediment.

Rationale: Cleanout of reservoirs to original specifications will be necessary to maintain the functionality of the reservoirs ensures that wildlife as well as wild horses and livestock (once re-introduced to the area) have viable water sources. The reservoirs also serve a purpose in aiding in future fire suppression efforts.

RIGHT OF APPEAL

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and Form 1842-1. If an appeal is filed, your notice must be filed in the **Boise District Office, 3948 Development Ave., Boise, Idaho 83705** within 30 days of receipt. The appellant has the burden of showing that the decision appealed is in error.

Filing an appeal does not by itself stay the effectiveness of a final BLM decision. If you wish to file a petition for a stay of the effectiveness of this decision, pursuant to 43 CFR 4.21, the petition for stay must accompany your notice of appeal. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

A petition for stay is required to show sufficient justification based on the standards listed below.

Standards for Obtaining a Stay
Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

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

A notice of appeal electronically transmitted (e.g. email, facsimile, or social media) will not be accepted as an appeal. Also, a petition for stay that is electronically transmitted (e.g., email, facsimile, or social media) will not be accepted as a petition for stay. Both of these documents must be received on paper at the office address above.

Persons named in the *Copies sent to:* sections of this decision are considered to be persons "named in the decision from which the appeal is taken." Thus, copies of the notice of appeal and petition for a stay must also be served on these parties, in addition to any party who is named elsewhere in this decision (see 43 CFR 4.413(a) & 43 CFR 4.21(b)(3)) and the appropriate Office of the Solicitor (see 43 CFR 4.413(a), (c)) **Boise Field Solicitors Office, University Plaza, 960 Broadway Ave., Suite 400, Boise Idaho, 83706** at the same time the original documents are filed with this office. For privacy reasons, if the decision is posted on the internet, the *Copies sent to:* section will be attached to a notification of internet availability and persons named in that section are also considered to be persons "named in the decision from which the appeal is taken."

Any person named in the decision, *Copies sent to:* section of the decision, or who received a notification of internet availability that receives a copy of a petition for a stay and/or an appeal and wishes to respond, see 43 CFR 4.21(b) for procedures to follow.

If you have any questions regarding this project, please contact the Project Lead, Michele McDaniel at the Owyhee Field Office at (208) 896-5912.

Jenifer Arnold — *October 19, 2015*

Jenifer Arnold
Acting Boise District Manager

Date

VALE DISTRICT FINAL DECISION

I have determined that the vegetation, soil and other resources on the public lands are at immediate risk of erosion and other damage due to the effects of the Soda fire. Please refer to the Soda ESR Plan Maps using following link for an illustration of the treatments identified in this decision:

https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=renderDefaultPlanOrProjectSite&projectId=52963&dctmId=0b0003e8808c9ef8

With completion of DOI-BLM-ID-B030-2015-0016-DNA, I have determined that implementing proposed Soda fire ESR treatments identified in this decision would have similar or the same effects as described in the NEPA documents identified above and does not constitute as a major Federal action that will not adversely impact the human environment. Therefore the preparation of an Environmental Impact Statement is not required. Based on resource reports compiled by specialists, and analysis and input from the Soda ESR interdisciplinary team, it is my final decision to implement the following treatments as identified in the Soda ESR plan.

SUMMARY OF PROPOSED ACTIONS and RATIONALE

Emergency Stabilization Actions will include –

1. **Application of Pre-Emergent Herbicide for Invasive Annual Grass Control.** Aerially apply approximately 24,200 acres of the herbicide imazapic at a rate of 6 ounces per acre in the fall of 2015. Imazapic is a pre-emergent herbicide that is partially selective to annual grass species and will be used as a seedbed preparation for subsequent drill seeding treatments. Imazapic has been shown to negatively impact some established perennial grasses and forbs, as well as sagebrush germination. Allowing sites to remain fallow for a year following the herbicide treatment will be necessary to allow for the establishment of desired seeded species. Areas that do not show adequate release of perennial vegetation will be drill seeded in the fall of 2016.

Rationale: Most weeds recover more quickly than native or other non-native desirable perennials, take advantage of moisture and nutrients earlier, and proliferate following wildfire. Weed control within the burned area will help prevent invasive/noxious species from dominating the site, suppressing recovery of desired vegetation and further degrading sage grouse and other wildlife habitat. Aerial application of the pre-emergent imazapic will reduce medusahead wildrye, cheatgrass, and other invasive annual grass species. Imazapic is designed to suppress invasive annuals and release perennial species allowing them to increase in density and continue to compete with invasive species. Therefore, this treatment will prepare the seedbed in part which will provide an opportunity for perennial grasses to establish and allow for GRSG habitat to witness the initial stages of recovery. This treatmentwill aid in stabilizing the site from further degradation and aid in the success of drill treatments scheduled to occur in the fall of 2016 if adequate perennial vegetative release is not witnessed.

2. **<u>Drill Seeding Treatments</u>**: Approximately 4,215 acres will be drill seeded using standard rangeland drills, without depth bands, in the fall of 2016 following the 2015 imazapic treatment. Seed mixes for drill seeding is identified in Tables 15-16, depending upon availability:

Table 15: Drill Seed Lower Elevations Native/Non-native Mix

Species	Seeding Acres	Bulk Lbs/ac	PLS Lbs/ac	% of Mix (Bulk Lbs/ac)
Snake River wheatgrass *Elymus wawawaiensis*	3850	5.5	4.68	51
Siberian wheatgrass, Vavilov II *Agropyron fragile*	3850	4.5	3.23	42
Munro's globemallow *Sphaeralcea munroana*	3850	.25	.17	2
Basalt milkvetch *Astragalus filipes*	3850	.5	.23	5
TOTAL	3850	10.75	8.08	100

Table 16: Drill Seed Higher Elevations Native Mix

Species	Seeding Acres	Bulk lbs/ac	PLS lbs/ac	% of Mix (bulk lbs/ac)
Bluebunch wheatgrass, Anatone *Psuedoroegneria spicata ssp. spicata*	365	7	5.36	70
Bottlebrush squirreltail, Vale *Elymus elymoides*	365	2	1.35	20
Sandberg bluegrass, Vale *Poa secunda*	365	.25	.18	2
Munro's globemallow *Sphaeralcea munroana*	365	.25	.17	2
Western yarrow *Achillea millefolium var. occidentalis*	365	.1	.08	1
Basalt milkvetch *Astragalus filipes*	365	.5	.23	5
TOTAL	365	10.1	7.37	100

Rationale: The portion of the Soda fire that burned through Oregon generally burned at a low intensity. This was confirmed by the BARC photography and on-site visits where many islands of unburned vegetation were observed as well as partially burned sagebrush. Examination of the perennial grass showed little damage to the crowns and high likelihood of survival.

Observations also showed that both medusahead wildrye and cheatgrass where common in the area, especially in the southern area that burned west of Highway 95, along roads and other high livestock use areas such as near reservoirs. The elevation of the burned area ranges from over 5,000 feet on Pole Top table to less than 2,600 feet in the extreme northern reaches of the burn. Nearly 75 percent of the area lies above 4,000 feet and should recover quickly especially if the medusahead wildrye is treated. One area, which is estimated at 365 acres in size, has been identified as a possible location to drill with native grasses if the perennial bunchgrasses do not recover as anticipated. The area would be monitored in spring/summer 2016 to assess condition of the bunchgrasses. Areas between 2,600 and 4,000 feet in elevation are much less resilient and will require greater intervention to rehabilitate. Drill seeding with a drought tolerant native/non-native mix has been identified on approximately 3,850 acres. These seedings would occur in fall 2016, one year after it has been treated with imazapic.

Implementation of seeding treatments will protect soils in the burned area, including preventing potential loss of soil due to wind and water erosion; reduce potential invasion and establishment of noxious weeds and invasive annual grass species; prevent degradation of GRSG habitat and increase its rate of recovery. GRSG is a high priority for protection within the BLM in Oregon and across the western United States. Seeding will likewise help meet established rangeland health standards in accordance with guidelines for integrated vegetation management.

3. **Cultural Resource Protection**: Seed high risk sites to camouflage artifacts and limit erosion. Recommendation is based on GIS analysis of sites having significant elements combined with those on >25 degree slope and/or near main roads within moderate to high intensity burn GIS data, and as determined by past or post-fire observations of looting, erosion, and fire effects. Sites include open lithic scatters and rock shelters with significant cultural elements.

   Placement of anti-looting signs will also occur inside and outside the burn area. Patrols by law enforcement officers will also increase. Sites with the highest risk of erosion and looting will be monitored by a qualified archaeologist at least annually until soils and vegetation has recovered.

Rationale: A number of known sites were impacted by the Soda fire and are included in the administrative record for the project. One of the most devastating effects to cultural resources after a fire is looting, including surface collection and movement of surface artifacts, thus destroying significant cultural and scientific values. Fires make sites more susceptible to looting by exposing surface artifacts and making rock shelters and other features more visible. Soil disturbance and erosion also have the potential to damage or destroy features and artifact spatial context at sites, particularly those around drainages and on slopes. Therefore seeding around high risk sites to camouflage artifacts and limit erosion will be critical.

4. **Noxious Weed Treatments**: A number of noxious weeds have been previously identified to occur within the burn area. Early detection rapid response (EDRR) assessment/monitoring of noxious weeds will being in 2016. Inventory of approximately 15,000 acres for noxious and invasive species with an initial chemical treatment of 20 acres of known occurrences will be implemented. Chemical treatments using pickups, UTVs/ATVs and backpack spray units may be used on any noxious weeds locating within the fire on public lands. BLM will coordinate with appropriate entities when weeds are found on State or private lands.

Rationale: Noxious weeds are now recognized worldwide as posing threats to biological diversity, second only to direct habitat loss and fragmentation. Noxious weeds are known to alter ecosystem functions such as nutrient cycles, hydrology, and wildfire frequency; out-compete and exclude native plants and animals; and to hybridize with native species. The presence and abundance of noxious weeds in an ecosystem is highly dynamic subject to changes in the local environment (Whitson, T.D., et al. 1992, Cal-Ipc, 2007). All natural communities are susceptible to invasion by noxious weeds; when disturbed these lands can become more susceptible to invasion. Control of noxious weeds is consistent with the management plans for the resource and will help protect the ecological integrity, biodiversity, and site productivity of this shrub-steppe plant community. Working cooperatively with local weed management groups and private landowners will achieve better weed management.

5. **Maintenance of Roads**: Maintain 5 miles of road for rangeland drill access.

Rationale: The road leading to drill units is in poor condition. The road needs to be maintained to safely mobilize equipment.

6. **Construction of temporary protective fencing**: Install approximately 7 miles of new temporary fence to protect treatments as needed and to facilitate grazing on unburned portions of pastures where practicable.

Rationale: Protective fencing for treatments on the edge of unburned areas will help facilitate treatment success while allowing for uses, such as grazing of livestock, in the adjacent unburned portions of the watershed. Grazing levels in adjacent unburned pastures or allotments is still to be determined and will be addressed through a grazing agreement or decision document before the start of the next grazing year (March 2016).

7. **Construction of reference area and study exclosures**: **Construction of reference area and study exclosures**: Construct a number of reference and study area exclosures within treatment areas.Wildlife All moderate to high risk fence segments within 2 km of occupied leks will be marked with collision diverter devices. All fencing will be constructed to meet BLM wildlife-friendly design specifications.

Rationale: Reference areas and/or study exclosures will provide sites that allow for monitoring treatment sites and control sites. These areas provide valuable information to future treatment needs as well as the level of success of a particular implementation technique.

Rehabilitation Actions Will Include -

1. **<u>Planting of sagebrush and antelope bitterbrush seedlings:</u>** Approximately 80,000 sagebrush seedlings will be planted on 1,500 acres within the burned area over the next three years. The planted seedlings will be a combination of containerized and bare-root stock of the appropriate species. Planting will occur in both fall and spring. Planting areas and preferred species for each site will be identified by local field office biologists and ecologists or botanists. Field office personnel will also assist with adjustments to the planting strategy based on monitoring of the burned area. Initially targeted planting areas will focus on suitable areas within three miles of leks and utilized seeps, springs, and streams. Planted seedlings will provide and enhance nearby cover and foraging habitat for GRSG during the breeding and late brood rearing season.

   Approximately 14,000 seedlings of bitterbrush will be planted on 300 acres over the next three years. The planted seedlings will be bare-root stock and planting will occur in both the fall and spring. Identification of targeted planting areas and adjustments to planting strategy based on field observations will be coordinated with local field office biologists, ecologists or botanists. The potential exists for fire scorched bitterbrush to re-sprout on its own or propagate from seed that may have occurred before the fire.

   Based on funding and stock available for purchase, numbers proposed for planting could change for each of the fall and spring planting seasons.

Table 17: Seedling Planting Commitment

Species	FY16	FY17	FY18
Sagebrush	Local seed collection and grow out	Local seed collection, grow, and plant 40,000 plugs	Plant 40,000 plugs
Bitterbrush	Local seed collection and grow out	Local seed collection, grow, and plant 7,000 plugs	Plant 7,000 plugs

Rationale: This portion of the sagebrush steppe impacted by the Soda fire affected important wildlife habitat for sagebrush obligate species including GRSG, migratory birds, mule deer and pronghorn antelope. Habitat fragmentation from the fire was one of the highest concerns in the area pre-burn. It is important to restore sagebrush seed sources within the burn area while limiting or preventing the conversion of sagebrush communities into marginal or non-habitat. Suitability for planting was based on risk of conversion to cheatgrass and the likelihood of planting success. Soils along with annual rainfall were used to determine the appropriate species to use to increase the probability of success for the treatments.

The objective of sagebrush seedling plantings is to increase the suitability of habitat for migratory birds as well as surrounding occupied leks and late brood rearing areas damaged by the fire. Planted seedlings will provide for and enhance nearby cover and foraging habitat for GRSG during the breeding and late brood rearing season. In future years seedling plantings will expand to areas outside of leks into other areas to provide shrub structure in conjunction with the aerial shrub seeding.

Bitterbrush was abundant in certain areas of the fire; high density areas were identified using aerial imagery, ecological site descriptions (ESDs), field visits and local knowledge. Seedling plantings are identified to help promote the re-establishment of bitterbrush, which is an important cover for many wildlife species, particularly big game.

2. Construction of protective exclosure fences: Ten miles of eight-foot tall wildlife exclosure fence will be built around planted bitterbrush seedlings.

Rationale: Protective fence will be constructed in order to protect young seedlings from wildlife herbivory. The areas where plantings will occur are likely to witness high rates of wildlife herbivory if not protected by fencing or Vexar tubing, resulting in seedling planting failure.

3. Repair or replacement of approximately 50 miles of damaged pasture and/or allotment boundary fence; repair of cattle guard: The Soda fire impacted approximately 50 miles of livestock management fence including gates, corners, braces, and wooden fence posts. One cattleguard will need to be cleaned out and repaired with replacement of braces and wings. BLM, permittees and affected private landowners will work together when possible to repair livestock management fences within the fire boundary.

Rationale: Fencing is needed for the orderly use of the rangelands. Pasture and Allotment boundaries need to be repaired as a result. Fences will be constructed utilizing primarily metal posts, corners and stays in order to ensure protection if the area is burnt in the future. To ensure integrity of the fence, cattle guards must be functioning as well.

4. Repair Water Developments: Repair two springs with trough and pipeline replacement.

Rationale: These water developments are necessary for better wildlife and livestock distribution will need to be repaired prior to resumption of livestock grazing. Therefore timely processing of repair within the next two growing seasons will be necessary.

5. Maintenance and Repair of existing reservoirs: Cleanout of 7 existing reservoirs if they become filled with sediment.

Rationale: Cleanout of reservoirs to original specifications will be necessary to maintain the functionality of the reservoirs ensures that wildlife as well as wild horses and livestock (once re-introduced to the area) have viable water sources. The reservoirs also serve a purpose in aiding in future fire suppression efforts.

AUTHORITY

Authority for the stabilization and rehabilitation wildfire decisions is found under 43 Code of Federal Regulations (CFR) 4190.1 Effect of wildfire management decision (a) Notwithstanding the provisions of 43 CFR 4.21(a)(1), when BLM determines that vegetation, soil or other resources on the public lands are at substantial risk of wildfire due to drought, fuels buildup, or other reasons, or at immediate risk of erosion or other damage due to wildfire, BLM may make a

rangeland wildfire management decision effective immediately. Wildfire management includes but is not limited to: (1) Fuel reduction or fuel treatment such as prescribed burns and mechanical, chemical, and biological thinning methods (with or without removal of thinned materials); and, (2) Projects to stabilize and rehabilitate lands affected by wildfire. Under these regulations, implementation of projects to stabilize and rehabilitate lands such as seeding (aerial and drilling), planting, weed treatments (aerial and ground), erosion control, road maintenance and protection, fence maintenance and reconstruction, and range improvement reconstruction will be effective upon the date of the authorized officer's signature.

This wildfire management decision is issued under 43 CFR 4190.1 and is effective immediately. The BLM has made the determination that vegetation, soil, or other resources on the public lands are at substantial risk of wildfire due to drought, fuels buildup, or other reasons, or at immediate risk of erosion or other damage due to wildfire. Thus, notwithstanding the provisions of 43 CFR 4.21(a) (1), filing a notice of appeal under 43 CFR Part 4 does not automatically suspend the effect of the decision. Appeal of this decision may be made to the Interior Board of Land Appeals in accordance with 43 CFR 4.410. The Interior Board of Land Appeals must decide an appeal of this decision within 60 days after all pleadings have been filed, and within 180 days after the appeal was filed as contained in 43 CFR 4.416.

RIGHT OF APPEAL

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and Form 1842-1. If an appeal is filed, your notice must be filed in the **Vale District Office, 100 Oregon Street, Vale, Oregon, 97918** within 30 days of receipt. The appellant has the burden of showing that the decision appealed is in error.

Filing an appeal does not by itself stay the effectiveness of a final BLM decision. If you wish to file a petition for a stay of the effectiveness of this decision, pursuant to 43 CFR 4.21, the petition for stay must accompany your notice of appeal. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

A petition for stay is required to show sufficient justification based on the standards listed below.

Standards for Obtaining a Stay
Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

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

A notice of appeal electronically transmitted (e.g. email, facsimile, or social media) will not be accepted as an appeal. Also, a petition for stay that is electronically transmitted (e.g., email,

facsimile, or social media) will not be accepted as a petition for stay. Both of these documents must be received on paper at the office address above.

Persons named in the *Copies sent to:* sections of this decision are considered to be persons "named in the decision from which the appeal is taken." Thus, copies of the notice of appeal and petition for a stay must also be served on these parties, in addition to any party who is named elsewhere in this decision (see 43 CFR 4.413(a) & 43 CFR 4.21(b)(3)) and the appropriate Office of the Solicitor (see 43 CFR 4.413(a), (c)) **Office of the Solicitor, US Department of the Interior, Pacific Northwest Region, 805 SW Broadway, Suite 600, Portland, Oregon 97205,** at the same time the original documents are filed with this office. For privacy reasons, if the decision is posted on the internet, the *Copies sent to:* section will be attached to a notification of internet availability and persons named in that section are also considered to be persons "named in the decision from which the appeal is taken."

Any person named in the decision, *Copies sent to:* section of the decision, or who received a notification of internet availability that receives a copy of a petition for a stay and/or an appeal and wishes to respond, see 43 CFR 4.21(b) for procedures to follow.

If you have any questions regarding this project, please contact the Project Lead, Michele McDaniel with the Owyhee Field Office in Marsing, Idaho at (208) 896-5912.

Shane Deforest, Acting for — *October 19, 2015*

Donald N. Gonzalez — Date
Vale District Manager

APPENDIX A
-Objectives, Management Decisions (MD), and Required Design Features (RDF) for Idaho Treatments-

OBJECTIVES AND MANAGEMENT DECISIONS -

Special Status Species

- Objective SSS 1: Maintain or make progress toward all lands within Priority Habitat Management Areas (PHMA) and Important Habitat Management Areas (IHMA) (at least 70%) capable of producing sagebrush so there is a minimum of 15% sagebrush cover and conifers absent to uncommon within 1.86 miles of occupied leks.
- Objective SSS 2: Incorporate GRSG Seasonal Habitat Objectives (ARMPA, Table 2-2), into the design of projects or activities, as appropriate, based on site conditions and ecological potential.
- Objective SSS 3: Maintain a resilient population of GRSG in Idaho.
- Objective SSS 4: Designate GRSG management areas and associated management to maintain a resilient population and to designate strategically located adjacent areas to provide a buffer from unpredictable habitat loss such as wildfire to the resilient population areas.
- MD SSS 5: Prioritize activities and mitigation to conserve, enhance, and restore GRSG habitats (i.e., fire suppression activities, fuels management activities, vegetation treatments, invasive species treatments, etc.) by PHMA, then IHMA, then GHMA within Conservation Areas.
- MD SSS 33: Conduct implementation and project activities, including construction and short-term anthropogenic disturbances consistent with seasonal habitat descriptions described in Idaho ARMPA Appendix C.
- MD SSS 39: Monitor invasive vegetation post vegetation management treatment.

Vegetation

- Objective VEG 1: Reconnect and expand areas of higher native plan community integrity/rangeland health to increase the extent of high quality habitat and, where possible, to accommodate the future effects of climate change.
- Objective VEG 2: Increase the amount and functionality of seasonal habitats by:
    - a. Increasing or enhancing canopy cover and average patch size of sagebrush.
    - b. Increasing the amount, condition, and connectivity of seasonal habitats.
    - c. Protecting or improving GRSG migration/movement corridors.
    - d. Reducing conifer encroachment within GRSG seasonal habitats.
    - e. Improving understory (grass, forb) and/or riparian condition within breeding and late brood-rearing habitats.
    - f. Reducing the extent of annual grasslands within and adjacent to PHMA and IHMA.
- MD VEG 1: Implement habitat rehabilitation or restoration projects in areas that have potential to improve GRSG habitat using a full array of treatment activities as appropriate, including chemical, mechanical, and seeding treatments.
- MD VEG 2: Implement vegetation rehabilitation or manipulation projects to enhance sagebrush cover or to promote diverse and healthy grass and forb understory to achieve the greatest improvement in GRSG habitat.

- MD VEG 3: Require use of native seeds for restoration based on availability, adaptation (ecological site potential), and probability of success. Non-native seeds may be used as long as they support GRSG habitat objectives to increase the probability of success, when adapted seed availability is low or to compare with invasive species especially on harsher sites.
- MD VEG 6: Allocate use of native seed to GRSG or ESA listed species habitat in years when preferred native seed is in short supply. This may require reallocation of native seed from ESR projects outside of PHMA or IHMA to those inside it. Where probability of success or native seed availability is low, nonnative seeds may be used as long as they meet GRSG habitat conservation objectives. Re-establishment of appropriate sagebrush species/subspecies and important understory plants, relative to site potential, shall be the highest priority for rehabilitation efforts.
- MD VEG 9: Incorporate results of the FIAT Assessments into projects and activities addressing invasive species as appropriate.
- MD VEG 10: Implement noxious weed and invasive species control using integrated vegetation management actions per national guidance and local weed management plans for Cooperative Weed Management Areas in cooperation with State and Federal agencies, affected counties, and adjoining private land owners.
- MD VEG 11: Conduct integrated weed management actions for noxious and invasive weed populations that are impacting or threatening GRSG habitat quality using a variety of eradication and control techniques including chemical, mechanical, and other appropriate means.
- MD VEG 13: Treat areas that contain cheatgrass and other invasive or noxious species to minimize competition and favor establishment of desired species.

<u>Fire</u>

- Objective FIRE 1: Design fuel treatments to restore, enhance, or maintain GRSG habitat.
- MD FIRE 32: Utilize the findings and Restoration/Rehabilitation Strategy developed as part of the FIAT Assessment process to determine if GRSG rehabilitation actions are needed, based on ecological potential, and direct emergency stabilization and rehabilitation (ESR actions after fire.
- MD FIRE 33: Incorporate GRSG Habitat Management Objectives into ESR/BAER plans based on site potential and in accordance with the Restoration/Rehabilitation Strategy developed as a result of the FIAT Assessments.
- MD LG 11: Design any new structural range improvements, following appropriate cooperation, consultation, and coordination, to minimize and/or mitigate impacts on GRSG habitat. Any new structural range improvements should be placed along existing disturbance corridors or in unsuitable habitat, to the extent practical, and are subject to RDFs.
- MD LG 13: Prioritize removal, modification, or marking of fences or other structures in areas of high collision risk following appropriate cooperation, consultation, and coordination to reduce the incidence of GRSG mortality due to fence strikes.

REQUIRED DESIGN FEATURES

General RDFs

- RDF 1: Solicit and consider expertise and ideas from local landowners, working groups, and other federal, state, county, and private organizations during development of projects.
- RDF 2: No repeated or sustained behavioral disturbance (e.g., visual, noise over 10 dbA at lek, etc.) to lekking birds from 6:00 pm to 9:00 am within 2 miles (3.2 km) of leks during the lekking season.
- RDF 3: Avoid mechanized anthropogenic disturbance, in nesting habitat during the nesting season when implementing: 1) fuels/vegetation/habitat restoration management projects, 2) infrastructure construction or maintenance.
- RDF 4: Avoid mechanized anthropogenic disturbance during the winter, in wintering areas, when implementing: 1) fuels/vegetation/habitat restoration management projects, 2) infrastructure construction or maintenance.

Fuels Management RDFs

- RDF 20: Where applicable, design fuels treatment objectives to protect existing sagebrush ecosystems, modify fire behavior, restore native plants, and create landscape patterns which most benefit GRSG habitat.
- RDF 24: Where appropriate, ensure that treatments are configured in a manner that promotes use by GRSG.
- RDF 28: As funding and logistics permit, restore annual grasslands, to a species composition characterized by perennial grasses, forbs, and shrubs or one of that referenced in land use planning documents.
- RDF 29: Emphasize the use of native plant species, especially those from a warmer area of the species' current range, recognizing that non-native species may be necessary depending on the availability of native seed and prevailing site conditions.

Vegetation Treatment RDFs

- RDF 40: Utilize available plant species based on their adaptation to the site when developing seed mixes.
- RDF 41: Utilizing the warmer component of a species' current range when selecting native species for restoration when available.
- RDF 42: Reduce annual grass densities and competition through herbicide, targeted grazing, tillage, prescribed fire, etc.
- RDF 43: Reduce density and competition of introduced perennial grasses using appropriate techniques to accomplish this reduction.
- RDF 44: Utilize techniques to introduce desired species to the site such as drill seeding, broadcast seeding followed by a seed coverage technique, such as harrowing, chaining or livestock trampling, and transplanting container or bare-root seedlings.
- RDF 45: Assess existing on-site vegetation to ascertain if enough desirable perennial vegetation exists to consider techniques to increase on-site seed production to facilitate an increase in density of desired species.
- RDF 46: Use site preparation techniques that retain existing desirable vegetation.

- RDF 47: Use "mother plant" techniques or planting of satellite populations of desirable plants to serve as seed sources.
- RDF 48: Utilize post-treatment control of annual grass and other invasive species.
- RDF 49: Utilize new tools and use of new science and research as it becomes available.
- RDF 50: Give higher priority to vegetation rehabilitation or manipulation projects that include:
    - • Sites where environmental variables contribute to improved chances for project success.
    - •Areas where seasonal habitat is limiting GRSG distribution and/or abundance (wintering areas, wet meadows and riparian areas, nesting areas, leks, etc.).
    - • Re-establish sagebrush cover in otherwise suitable GRSG with consideration to local needs and conditions using the general priorities in the following order:
        - • Recently burned native areas
        - • Native grassland with suitable forb component
        - • Nonnative grassland with suitable forb component
        - • Recently converted annual grass areas
        - • Native grassland
        - • Nonnative grassland
    - • Where desirable perennial bunchgrasses and/or forbs are deficient in existing sagebrush stands, use appropriate mechanical, aerial or other techniques to re-establish them. Examples include but are not limited to, use of a Lawson aerator with seeding, harrow or chain with seeding, drill seeding, hand planting plugs, aerial seeding or other appropriate techniques.
    - • Cooperative efforts that may improve GRSG habitat quality over multiple ownerships.
    - • Projects that may provide connectivity between suitable habitats or expand existing good quality habitats.
    - • Projects that address conifer encroachment into important GRSG habitats. In general the priority for treatment is 1) Phase 1 (≤10% conifer cover), 2) Phase 2 (10-30%), and 3) Phase 3 (>30%).
    - • Replacing stands of annual grasses within otherwise good quality habitats with desirable perennial species.
    - Other factors that contribute to the importance of the restoration project in maintaining or improving GRSG habitat.

<u>Grazing RDFs</u>

- RDF 105: Avoid building new wire fences within 2 km of occupied leks. If this is not feasible, ensure that high risk segments are marked with collision diverter devices or as latest science indicates.
- RDF 106: Place new, taller structures, including corrals, loading facilities, water storage tanks, windmills, out of line of sight or at least one kilometer (preferably 3 km) from occupied leks, where such structures would increase the risk of avian predation.
- RDF 107: Utilize temporary fencing (e.g., ESR, drop down fencing) where feasible and appropriate to meet management objectives.
- RDF 108: Fence wetlands (e.g., springs, seeps, wet meadows and/or riparian areas) where appropriate, to maintain or foster progress toward Proper Functioning Condition and to

facilitate management of GRSG habitat objectives. Where constructing fences or exclosures to improve riparian and/or upland management, incorporate fence marking or other BMPs/RDFs as appropriate.

- RDF 112: Design new spring developments in GRSG habitat to maintain or enhance the free flowing characteristics of springs and wet meadows. Modify developed springs, seeps and associated pipelines to maintain the continuity of the predevelopment riparian area within priority GRSG habitat where necessary.
- RDF 113: Install ramps in new and existing livestock troughs and open water storage tanks to facilitate the use of and escape from troughs by GRSG and other wildlife.

<u>West Nile Virus RDFs</u>

- RDF 114: Construct water return features and maintain functioning float valves to prohibit water from being spilled on the ground surrounding the trough and/or tank and return water to the original water source, to the extent practicable.
- RDF 115: Minimize the construction of new ponds or reservoirs except as needed to meet important resource management and/or restoration objectives.
- RDF 116: Develop and maintain non-pond/reservoir watering facilities, such as troughs and bottomless tanks, to provide livestock water.
- RDF 118: Maintenance of healthy wetlands at spring sources helps control mosquitoes and their larvae by providing habitat for natural predators such as birds, dragonflies and amphibians. Protecting the wetland at the spring source with a fence is an option to consider.
- RDF 121: Maintain a properly functioning overflow to prevent water from flowing onto the pad and surrounding area, to eliminate or minimize pooling of water that is attractive to breeding mosquitoes.
- RDF 123: Install and maintain float valves on stock tank fill pipes to minimize overflow.
- RDF 131: Where an existing reservoir has filled with silt, consider cleaning to reduce shallow water habitat conducive to mosquito reproduction.

APPENDIX B
-Objectives, Management Decisions (MD), Required Design Features (RDF) and Best Management Practices (BMPs) for Oregon Treatments-

OBJECTIVES and MANAGEMENT DECISIONS-

Special Status Species (SSS):

- Objective SSS 1: Protect PHMA necessary to conserve 90 percent of Oregon's Greater Sage-grouse population with emphasis on highest density and important use areas that provide for breeding, wintering, and connectivity corridors. Protect GHMA necessary to conserve occupied seasonal or year-round habitat outside of PHMA.
- Objective SSS 2: Maintain or improve habitat connectivity between PHMA within Oregon and adjoining states to promote Greater Sage-grouse movement and genetic diversity.
- MD SSS-9: Apply buffers and seasonal restrictions in Table 2-3 of the Oregon ARMPA to all occupied or pending leks in PHMA and GHMA to avoid direct disturbance to Greater Sage-grouse. In undertaking BLM management actions, and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM will apply the lek buffer-distances identified in the USGS Report Conservation Buffer Distance Estimates for Greater Sage-Grouse—A Review (Open File Report 2014-1239) (Manier et al. 2014; Appendix B of Oregon ARMPA).
- MD SSS-12: Identify Greater Sage-grouse habitat outside of PHMA that can function as connecting habitat. Consider the habitat connectivity map developed by The Nature Conservancy and BLM for Oregon (Jones and Schindel, 2015). When conducting analysis for project level NEPA, include Greater Sage-grouse habitat and populations in adjoining states within 4 miles of leks in Oregon.
- MD SSS-13: All authorized actions in Greater Sage-grouse habitat are subject to RDFs and BMPs in Appendix C and these disturbance screening criteria:
  - Where avoidance is not possible, disturbance will be allowed under the following conditions:
    - Development in each Oregon PAC and PHMA does not exceed the disturbance cap at either the Oregon PAC scale or the project scale (Appendix E of Oregon ARMPA).
    - New anthropogenic disturbance does not occur within 1.0 mile of an occupied or pending lek in PHMA or GHMA.
    - Development meets noise restrictions in PHMA and GHMA (Appendix L of Oregon ARMPA).
    - Analyze through implementation level NEPA seasonal protection and timing limitations of occupied and pending leks in PHMA and GHMA.
    - All disturbance is subject to net conservation gain mitigation to Greater Sage-grouse and its habitat (see Appendix F of Oregon ARMPA) in PHMA and GHMA.
    - All new permitted activities will follow Required Design Features (Appendix C of Oregon ARMPA) in PHMA and GHMA.

- To the extent feasible, development should only occur in non-habitat areas. If this is not possible, then development must occur in the least suitable habitat for Greater Sage-grouse.
- Apply buffers and seasonal restrictions in Table 2-3 of Oregon ARMPA to all occupied or pending leks in PHMA and GHMA to avoid direct disturbance to Greater Sage-grouse.

Screening criteria and conditions will not be applicable to vegetation treatments being conducted to enhance GRSG habitat, except noise and seasonal restrictions will apply.

Vegetation (VEG):

- Objective VEG 1: Within the boundaries of each Field Office establish a mix of sagebrush classes as identified in Table 2-4 of Oregon ARMPA Desired Mix of Sagebrush Classes by Sagebrush Type. Evaluate progress toward the objective every 10 years.
- Objective VEG 3: Reduce the area dominated by invasive annual grasses to no more than 5 percent within 4.0 miles of all occupied or pending leks. Manage vegetation to retain resistance to invasion where invasive annual grasses dominate less than 5 percent of the area within 4.0 miles of such leks.
- Objective VEG 8: Coordinate vegetation management activities with adjoining landowners.
- Objective VEG 9: In all Sagebrush Focal Areas and Priority Habitat Management Areas, the desired condition is to maintain all lands ecologically capable of producing sagebrush (but no less than 70%) with a minimum of 15% sagebrush cover or as consistent with specific ecological site conditions. The attributes necessary to sustain these habitats are described in Interpreting Indicators of Rangeland Health (BLM Tech Ref 1734-6) and in Table 2-5 of Oregon ARMPA.

Habitat Restoration

- MD VEG 1: Priority areas for Greater Sage-grouse habitat restoration and maintenance projects are*:
  - Sites with a higher probability of success.
  - Seasonal habitats thought to be limiting to Greater Sage-grouse populations.
  - Connectivity corridors between Greater Sage-grouse populations and subpopulations.
  - Following stand-replacing events at least 100 acres in size.

  *Not in priority order. Incorporate these priorities in the assessments conducted using the FIAT process detailed in Appendix H of Oregon ARMPA.
- MD VEG 2: Base species composition, function, and structure of sagebrush communities on ecological site descriptions. Use climate change science concerning projected changes in species ranges and changes in site capability to adjust expected and desired native species compositions as that information becomes available.
- MD VEG 3: Do not treat sagebrush during nesting and early brood-rearing within 4.0 miles of occupied or pending leks. Conduct pre-treatment lek surveys to determine if the lek is active. Breeding and brood-rearing typically occur from March 1 to June 30; use local information to further refine this period.

- MD VEG 5: Vegetation management activities that are timing-sensitive for maximum effectiveness, such as herbicide application or seeding operations, can occur during the breeding season within 4.0 miles of occupied or pending leks. Limit operations to no more than 5 days and to the period beginning two hours after sunrise and ending two hours before sunset during the breeding and early brood rearing period. Conduct pre-treatment surveys for nests and do not damage or destroy identified nests during treatment operations. Conduct operations so as to minimize the risk of accidentally killing chicks. Breeding and early-brood-rearing typically occur from March 1 through June 30; use local information to further refine this period.
- MD VEG 6: Use adaptive management principles (for example, monitoring and adjusting seed mixes, planting methods or timing of planting to increase success rates) to provide for persistence of seeded or planted species important to Greater Sage-grouse.
- MD VEG 7: Do not use non-specific insecticides in brood-rearing habitat during the brood-rearing period. Use instar-specific insecticides to limit impacts on Greater Sage-grouse chick food sources.
- MD VEG 8: Use native plant materials for restoration and rehabilitation based on availability, adaptive capacity, and probability of successful establishment (see Appendix I). Where native plant material availability or probability of successful establishment is low, use desirable non-native plant materials that are of a similar functional/structural group as native plant species (e.g. deep-rooted, tall perennial bunchgrass, tap-rooted perennial forb).
- MD VEG 9: When sufficient native plant materials are available, use native plant materials unless the area is immediately threatened by invasive plant species spread or dominance.
    - Use non-native plant materials as necessary to:
        - Limit or control invasive plant species spread or dominance.
        - Create fuel breaks along roads and ROWs.
        - Create defensible space within 0.5 mile of human residences.
- MD VEG 10: When seedings include non-native plant materials, evaluate post-planting within 10 years to determine the need to increase native species populations or compositions to be more representative of the ecological site description and capability. When existing native herbaceous diversity is less than 50 percent of the potential diversity for the applicable ecological site description, conduct treatments to increase the diversity.
- MD VEG 11: Do not conduct forage enhancement solely for domestic livestock in PHMA.
- MD VEG 12: Adjust discretionary land uses, such as active use for livestock grazing or recreational uses or seasons, as needed to facilitate attainment and persistence of vegetation restoration objectives.
- MD VEG 13: Use provisional and established seed zones identified by the Great Basin Native Plant Project (http://www.fs.fed.us/rm/grassland-shrubland-desert/research/projects/gbnpsip/) to determine appropriate seed sources for grasses, forbs, and shrubs. Identify sagebrush seed collection areas to provide locally adapted sagebrush seed sources.

- MD VEG 14: Allowable methods for vegetation treatment include mechanical, biological (including targeted grazing), chemical, or wildland fire or combinations of these general treatment categories.
- MD VEG 15: Create mosaics of varying sagebrush density using spot treatments within the treatment area. Sagebrush density shall be equivalent to Classes 1 through 4 in cool-moist sagebrush and Classes 1 through 3 in warm-dry sagebrush (see Table 2-4). Maximum stand-replacement patch size shall not exceed 25 acres and total stand-replacement patches shall not exceed 15 percent of the treatment block. See Required Design Features for additional details.
- MD VEG 16: Test new potential restoration methods in areas with a sagebrush overstory and an annual grass understory.

Integrated Invasive Species

- MD VEG 20: In priority treatment areas for invasive annual grasses, apply early detection-rapid response principles on*:
    - New infestations.
    - Satellite populations.
    - Isolated populations.
    - Where invasive annual grasses are still sub-dominant.
    - Edges of large infestations
    - Where sites are frequently or commonly used for temporary infrastructure such as incident base camps, spike camps, staging areas, and helicopter landing areas.

*Not in priority order. Incorporate these priorities in the assessments conducted using the process detailed in Appendix H of Oregon ARMPA (FIAT process).

- MD VEG 21: Allowable methods of invasive plant control include mechanical, chemical, biological (including targeted grazing, biocides, and bio-controls), or prescribed fire or combinations of these methods. Treat areas that contain cheatgrass and other invasive or noxious species to minimize competition and favor establishment of desired species.
- MD VEG 22: Use of approved herbicides, biocides, and bio-controls is allowed on all land allocations currently providing or reasonably expected to provide Greater Sage-grouse habitat. Follow the guidance in the 2010 Record of Decision for Vegetation Treatments Using Herbicides on BLM Lands in Oregon and subsequent step-down decision records, when complete, or successor/subsequent decisions governing the use of additional herbicides and biocides.
- MD VEG 23: On Type I through Type III wildfires provide and require the use of weed washing stations and acceptable disposal of subsequent waste water and material to minimize the risk of further spread. Wash all vehicles and equipment arriving from outside the local area before initial use in the fire area and during post-fire emergency stabilization and rehabilitation operations. Wash all vehicles and equipment prior to release from the incident to reduce the probability of transporting invasive plant materials to other locations.
- MD VEG 24: Wash vehicles and equipment used in field operations prior to use in areas without known infestations of invasive plants. Wash vehicles and equipment used in areas with known infestations prior to use in another area to limit the further spread of invasive species to other locations.

- MD VEG 25: Locate base camps, spike camps, coyote camps, or other temporary infrastructure in areas that lack invasive plant populations. Where no such options are available provide for post-operation invasive plant treatments.

REQUIRED DESIGN FEATURES -

Common to All:

- RDF 3. Restrict the construction of fences and tall structures to the minimum number and amount needed. Tall structures are any man-made structure that has the potential to disrupt lekking or nesting birds by creating perching/nesting opportunities for predators (e.g., raptors, ravens) or decrease the use of an area by sage-grouse. This includes but is not limited to communication towers, meteorological towers, electrical transmission or distribution towers, power poles, wind turbines, and associated structures.
- RDF 5. Construct new ROW, tanks, and other structures with perch deterrents or other anti-perching devices, and with structures or devices that discourage nesting of raptors and corvids.
- RDF 6. Refer to the model by Bryan Stevens (2011) to identify fences that pose a threat to sage-grouse. Remove any unneeded or unused fences and mark needed fences with anti-strike markers if the fence poses a threat to the sage-grouse. Remove or mark fences within 1.2 mile of newly discovered leks that were not included in the model. Update the model when new leks are found (PHMA only).
- RDF 10. Locate on-site work/project camps and staging areas outside of priority habitat (PHMA only).
- RDF 11. Powerwash all vehicles and equipment involved in land and resource management activities prior to entering the project area to minimize the introduction and spread of invasive plant species.
- RDF 12. Use native plant species; locally sourced where available, recognizing that use of non-native species may be necessary depending on the availability of native seed and prevailing site conditions.
- RDF 13. Ensure proposed sagebrush treatments are planned with interdisciplinary input from BLM and /or state wildlife agency biologist and promote use by sage-grouse.
- RDF 15. Focus restoration outward from existing intact habitat.
- RDF 16. Consider using available organic material or mats to reduce vegetation disturbance for activities and for roads between closely spaced authorizations to reduce soil compaction and maintain soil structure for increasing the likelihood of vegetation reestablishment. Remove or incorporate cover at the decommissioning stage of the project or authorized use period.
- RDF 18. Minimize unnecessary cross-country vehicle travel during field and fire operations in sage-grouse habitat.
- RDF 19. There will be no disruptive activities two hours before sunset to two hours after sunrise from March 1 through June 30 within 1.0 miles of the perimeter of occupied leks, unless brief occupancy is essential for routine ranch activities (e.g., herding or trailing livestock into or out of an area at the beginning or end of the grazing season). Disruptive activities are those that are likely to alter sage-grouse behavior or displace birds such that reproductive success is negatively affected or an individual's physiological ability to

cope with environmental stress is compromised. Examples of disruptive activities may include noise, human foot or vehicle traffic,

Vegetation and Fuels Management

- RDF 1. Where applicable, design treatment objectives to protect existing sagebrush ecosystems, modify fire behavior, restore native plants, and create landscape patterns which most benefit sage-grouse habitat.or other human presence.
- RDF 4. Use native plant species; locally sourced where available, recognizing that use of non-native species may be necessary to achieve site-specific management objectives.
- RDF 5. Fuel Breaks:
  a. Incorporate roads and natural fuel breaks into fuel break design, where applicable.
  b. Design fuel breaks in areas of high fire frequency to facilitate firefighter safety, reduce the potential acres burned, and reduce the fire risk to sage-grouse habitat.
  c. Develop maps of existing fuel breaks in relation to sage-grouse habitat to assist wildfire response activities.
  d. Use perennial vegetation (e.g., green-strips) paralleling road rights-of-way.
  e. Incorporate key habitats or important restoration areas (such as where investments in restoration have already been made) in fuel break design.

Livestock Grazing

- RDF 3. Locate new and/or relocate livestock water developments within sage-grouse habitat to maintain or enhance habitat quality.
- RDF 4. Spring developments should be constructed or modified to maintain their free-flowing, natural, and wet meadow characteristics.
- RDF 5. Fence wetlands (e.g., springs, seeps, wet meadows and/or riparian areas) where appropriate, to maintain or foster progress toward Proper Functioning Condition and to facilitate management of sage-grouse habitat objectives. Where constructing fences or exclosures to improve riparian and/or upland management, incorporate fence marking or other BMPs/RDFs as appropriate.
- RDF 6. Ensure wildlife accessibility to water and install escape ramps in all new and existing water troughs.
- RDF 7. Construct new livestock facilities (livestock troughs, fences, corrals, handling facilities, “dusting bags,” etc.) at least 1.2 miles from leks or other important areas of sage-grouse habitat (i.e., wintering and brood-rearing areas) to avoid concentration of livestock, collision hazards to flying birds, or avian predator perches.
- RDF 8. Place new, taller structures, including corrals, loading facilities, water storage tanks, windmills, out of line of sight or at least 1.2 miles from occupied leks, where such structures would increase the risk of avian predation.

Noise (RDFs apply to all activities)

- RDF 1. Limit noise at the perimeter of occupied or pending leks from 2 hours before to 2 hours after sunrise and sunset during the breeding season to less than 10 decibels above ambient sound levels.
- RDF 2. Require noise shields for noise creating authorizations (e.g. drilling).

- RDF 3. Locate new compressor stations and other noise creating authorizations outside priority habitats and design them to reduce noise that may be directed towards priority habitat.

West Nile Virus

- RDF 2. Use the following steps for reservoir design to limit favorable mosquito habitat:
  a. Overbuild size of ponds for muddy and non-vegetated shorelines.
  b. Build steep shorelines to decrease vegetation and increase wave actions.
  c. Avoid flooding terrestrial vegetation in flat terrain or low lying areas.
  d. Construct dams or impoundments that restrict down slope seepage or overflow.
  e. Line the channel where discharge water flows into the pond with crushed rock.
  f. Construct spillway with steep sides and line it with crushed rock.
  g. In areas experiencing a West Nile Virus outbreak, treat waters with larvicides to reduce mosquito production where water occurs on the surface.

BEST MANAGEMENT PRACTICES

Post Fire and Restoration Seeding

- BMP 1. Use ecological site descriptions to determine appropriate seed mixes. Seed mixes should include a diversity of forbs that maximize blooming times when pollinators are most active and include nectar and pollen-producing plants.
- BMP 2. When using locally collected seed, handle and store seed properly to maintain maximum viability.
- BMP 3. When using non-native grasses, do not mix crested wheatgrass (*Agropyron cristatum* or *A. desertorum*) with native perennial grass species. If crested wheatgrass is needed to compete with invasive annual grasses, use a non-native grass mix.
- BMP 4. Prefer minimum-till and standard drill seeding to aerial or broadcast seeding, particularly to control invasive annual grasses. Where possible, prefer minimum-till drill seeding to standard drill seeding.
- BMP 5. Where live Sandberg bluegrass (*Poa secunda*) is well distributed post-fire or after vegetation treatment, do not drill seed as drill seeding reduces surviving Sandberg bluegrass with little concomitant establishment of seeded grass species.
- BMP 6. In areas where average annual precipitation is less than 10-12 inches, test alternative and experimental methods, such as use of coated seed, to establish perennial grasses, particularly when using native species. Limit seeding to priority areas within these low precipitation zones to meet vegetation objectives and favor drought-tolerant forbs and grasses.
- BMP 7. Prefer planting sagebrush and other shrubs to aerial or drill seeding until alternative methods for seeding are developed. Plant on microsites with a higher probability of success, such as at higher elevation, on northerly aspects, higher precipitation zones, or in deeper soils to create sagebrush patches rather than uniform spacing of individuals.
- BMP 8. In large burn areas or similar settings, where nearly all or all sagebrush has been lost and where annual grass dominance is considered unlikely, plant sagebrush as scattered islands. Exclude such areas from grazing by domestic livestock and wild horses and burros until sagebrush establishment objectives are met.

- BMP 9. Focus seeding treatments within 4 miles of occupied and pending leks and lek complexes with designated PHMA a higher priority than designated GHMA. Within PHMA, higher priority areas to treat are leks or lek complexes with a higher number of birds, on average, and leks or lek complexes with stable or increasing greater sage-grouse populations.
- BMP 10. Perennial grass should be seeded at no more than 3-5 lb/ac PLS1 if big sagebrush establishment is one of the treatment objectives.
- BMP 11. Limit forage kochia use to fuel breaks, road edges, under powerlines and other areas expected to see regular disturbance, such as mowing, as part of the maintenance needed to maintain the function of the site. Forage kochia may be used in other areas on a case-by-case basis; document the rationale for why forage kochia is needed and why a native species cannot be used instead.
- BMP 12. Rest seeded and planted areas from grazing by livestock for at least two growing seasons. When possible, exclude seeded or planted areas from wild horses and burros as well. Grazing should not resume until vegetation objectives have been met. Plans must clearly describe the vegetation objectives and how attainment will be measured and determined.

<u>Travel Management</u>

- BMP 1. Allow primitive roads to reclaim naturally, and where necessary, use pitting, water bars, vertical mulch, to create physical structures that accelerate native vegetation growth.
- BMP 2. If possible, attempt to disguise road entrances to discourage use, by using vertical mulch, native seeding, and natural barriers that blend in with the natural surroundings.
- BMP 3. Inspect closed roads to ensure that vegetational stabilization measures are operating as planned, drainage structures are operational, and noxious weeds are not providing erosion control. Conduct vegetation treatments and drainage structure maintenance as needed.
- BMP 4. Fully decommission or obliterate temporary roads upon completion of use.
- BMP 5. Consider decommissioning or fully decommissioning low volume permanent roads not needed for future resource management located in, or draining into wetlands, riparian management areas, floodplains or waters of the state.
- BMP 6. Prevent use of vehicular traffic using methods such as gates, guard rails, earth/log barricades, to reduce or eliminate erosion and sedimentation due to traffic on roads when possible.