

**SANDY FIRE**  
 BURNED AREA REHABILITATION PLAN

BLM/BOISE DISTRICT/FOUR RIVERS FIELD OFFICE  
 IDAHO

FIRE BACKGROUND INFORMATION

|                       |                    |
|-----------------------|--------------------|
| Fire Name             | Sandy              |
| Fire Number           | DY21               |
| District/Field Office | Boise/Four Rivers  |
| Admin Number          | ID 102             |
| State                 | Idaho              |
| County(s)             | Washington         |
| Ignition Date/Cause   | 08-31-07/Lightning |
| Date Contained        | 09-2-07            |
| Jurisdiction          |                    |
| BLM                   | 1,515              |
| State                 | 445                |
| Private               | 8,279              |
| Other                 | 0                  |
| Total Acres           | 10,238             |
| Total BAR Plan Costs  | \$ 439,000         |

Status of Plan Submission (check one box below)

|                                     |                                             |
|-------------------------------------|---------------------------------------------|
| <input checked="" type="checkbox"/> | Initial Submission                          |
| <input type="checkbox"/>            | Updating or Revising the Initial Submission |
| <input type="checkbox"/>            | Amendment                                   |

## PART 1. REHABILITATION PLAN SUMMARY

### BACKGROUND ON THE FIRE

The Sandy Fire burned 1,515 acres of public land in the Pleasant View (70 acres), Barker Individual (725 acres) and Sand Hollow (720 acres) Allotments. These Allotments are mostly private land and are authorized to graze cattle: Pleasant View 11% public land used 4/16-5/31 (96 AUMs), Barker Individual 16 % public land, used 6/1-6/30 (5 AUMs), and Sand Hollow 25% public land, used 10/26-2/28 (1,348 AUMs).

The northern and eastern areas of the fire were characterized by a pre-fire vegetation of antelope bitterbrush intermixed with basin big sagebrush, and gray and green rabbitbrush. The understory was dominated by native perennial forbs and grasses which included milkvetch, pussytoes, western yarrow, arrowleaf balsamroot, Sandberg's bluegrass, bottlebrush squirreltail, and Thurber's needlegrass. Other and less prevalent understory species were sixweeks fescue, cheatgrass and bulbous bluegrass. The southern portion of the fire supported a pre-fire vegetation that was primarily great basin big sagebrush and to a lesser extent antelope bitterbrush with an understory of cheatgrass, and bulbous bluegrass, and many native annuals perennials. Native species included common sunflower, biscuitroot, western yarrow, sixweeks fescue Sanberg's bluegrass, and bottlebrush squirreltail. Medusahead occurred in small patches within the southern portion of the fire. Two isolated parcels (totaling 70 acres) in the most western and northern extents of the fire had a pre-fire plant community dominated by annual grasses and forbs with no shrub overstory. Being highly competitive annual plant communities and impractical to fence, these two parcels will not be considered for rehabilitation treatments; however, they will be monitored for noxious weeds. The scattered occurrence of rush skeletonweed was noted throughout the burned area. Diffuse knapweed is known to occur at sites along the western boundary of the fire, and the occurrence of Scotch thistle has been noted within Cherry Gulch.

The fire burned an area utilized by elk and mule deer yearlong. Sharp-tailed grouse, BLM sensitive specie, are known to occur in this area. Mulford's milkvetch and Aase's onion are BLM Type 2 Sensitive Plants known to occur on public lands impacted by the fire. On private lands within the fire perimeter there are three known extant populations of Southern Idaho ground squirrels, a candidate species for listing under the Endangered Species Act. These three populations are found less than one-half mile from public lands.

If funding for rehabilitation treatments proposed in this BAR is not approved, fence repair and noxious weed inventory and treatment would still need to be conducted.

### COST SUMMARY TABLE

| Spec. # | Planned Action       | Unit  | # Units | Unit Cost | FY07 | FY08    | FY09   | FY10  | Spec. # Totals |
|---------|----------------------|-------|---------|-----------|------|---------|--------|-------|----------------|
| R3      | Aerial Seeding       | Acres | 1,445   | 15        | 0    | 21,000  | 0      | 0     | 21,000         |
| R3      | Aerial Seed Purchase | Acres | 1,445   | 147       | 0    | 213,000 | 0      | 0     | 213,000        |
| R4      | Seedling planting    | Each  | 70,000  | 2.3       | 0    | 126,000 | 37,000 | 0     | 163,000        |
| R5      | Noxious Weeds        | Acres | 1,445   | 1.4       | 0    | 2,000   | 2,000  | 2,000 | 6,000          |

|     |                   |       |       |       |   |         |        |       |         |
|-----|-------------------|-------|-------|-------|---|---------|--------|-------|---------|
| R7  | Fence Repair/Gate | Miles | 7.3   | 3,288 | 0 | 24,000  | 0      | 0     | 24,000  |
| R15 | Closures          | Acres | 0     | 0     | 0 | 0       | 0      | 0     | 0       |
| R16 | Monitoring        | Acres | 1,515 | 2.6   | 0 | 4,000   | 4,000  | 4,000 | 12,000  |
|     | TOTAL COSTS       |       | 1,515 | 290   | 0 | 390,000 | 43,000 | 6,000 | 439,000 |

## LAND USE PLAN CONSISTENCY

Some of the proposed actions listed below are not directly addressed in the 1987 Cascade Resource Management Plan (RMP), but they are clearly consistent with LUP decisions (objectives, terms, and conditions).

1. Aerial Seeding (R3): A perennial seed mixture comprised of forbs, grasses, and a shrub would be aerial broadcast seeded. The Cascade RMP, Resource Management Guidelines, Wildlife Resources, states “Habitat to support viable populations of all native and exotic wildlife species present in the resource area will be maintained” and further stipulates under Sage Grouse that where applicable, seed mixtures for fire rehabilitation projects will include a mixture of grasses, forbs, and shrubs that benefit sage grouse. In addition, the RMP, Resource Management Guidelines, Fire Management, Rehabilitation, Greenstripping and Reductions Actions/Procedures (6.) states “Seedings will include appropriate seed mixtures to replace wildlife habitat that burned.”
2. Shrub Seedling Planting (R4): To restore the shrub structure lost by the fire, bitterbrush seedlings would be hand planted. The Cascade RMP, Preferred Alternative E, Wildlife Resources, Objectives, cites “shrub plantings” as a way of improving wildlife habitat, and the RMP Resource Management Guidelines, Wildlife Resources, Mule Deer Habitat, acknowledges the use of bitterbrush plantings as a method for improving forage condition for mule deer.
3. Noxious Weeds (R5): The burned area would be surveyed for the presence of noxious species, and appropriate control measures would be initiated. The control of noxious weeds is consistent with Cascade RMP, Resource Management Guidelines, Weeds (Control of Noxious), “BLM districts will work with respective County governments to monitor the location and spread of noxious weeds and to maintain up-to-date inventory records.” BLM will control the spread of noxious weeds on public lands where possible, where economically feasible, and to the extent that funds are prioritized for that purpose.” The control of noxious weeds is in compliance with State and county laws.
4. Fence Repair/Gate (R7): Fire damaged fence would be repaired/replaced to provide a functional structure that would allow for the control of livestock grazing distribution and recovery of the burned area. The repaired fence would be used to exclude livestock and foster recovery, while providing for the grazing use of unburned areas within pastures and allotments outside the fire perimeter. The repair of fire damaged fence, although not addressed in the Cascade RMP, is consistent with RMP Resource Management Guidelines to rest areas from livestock grazing and provide for recovery.
5. Livestock Closure (R15): Livestock are to be excluded from the treatment area until monitoring results, documented in writing; show rehabilitation objectives have been met. In

case of treatment failure, other factors may need to be considered, such as natural recovery of untreated areas, and need or reason to continue closure. The Cascade RMP, Resource Management Guidelines, Fire Management, Rehabilitation, Greenstripping and Reduction Actions/Procedures, (3.) states “All grazing licenses issued that include areas recently burned and/or seeded will include a statement concerning the amount of rest needed in the seedings or burned area. Normally two years of rest will be necessary to enable recovery of these areas.”

6. Monitoring Effectiveness of Treatments (R16): Monitoring data would be collected from initiation of the proposed treatments through 2010.

## **PART 2. – REHABILITATION ISSUES**

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

Priorities: 1) To repair or improve lands damaged directly by a wildland fire; and 2) To rehabilitate or establish healthy, stable ecosystems in the burned area. 620DM3.8

### **Rehabilitation Issues**

1. **Lands Unlikely to Recover Naturally.** Repair or improve lands unlikely to recover naturally from wildland fire damage by emulating historical or pre-fire ecosystem structure, function, diversity, and dynamics consistent with existing land management plans.

The pre-fire vegetation within the burned area was representative of a relatively native perennial shrub/grass plant community with a relatively low to moderate dominance of invasive annuals. The rehabilitation would inhibit the spread of invasive annuals into the native plant community and restore shrub structure.

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

Noxious weeds (rush skeletonweed) was present in the burned area and is present in immediate surrounding area. Failure to locate and control possible existing noxious weed sites would lead to spreading of undesirable species.

3. **Tree Planting.** Tree planting to reestablish burned habitat, reestablish native tree species lost in fire, prevent establishment of invasive plants, and regenerating Indian trust commercial

timberland as prescribed by a certified silviculturalist to not regenerate for ten years following the fire.

Bitterbrush was a major pre-fire vegetation component. Planting of bitterbrush seedlings would re-establish pre-fire shrub structure.

4. **Repair/Replace Fire Damage to Minor Facilities.** Repair or replace fire damage to minor operating facilities (e.g., campgrounds, interpretive signs and exhibits, shade shelters, fences, wildlife guzzlers, etc.) [Rehabilitation may not include the planning or replacement of major infrastructure, such as visitor centers, residential structures, administration offices, work centers and similar facilities. Rehabilitation does not include the construction of new facilities that did not exist before the fire, except for temporary and minor facilities necessary to implement burned area rehabilitation efforts.]

Repair and/or replacement of existing fence is necessary to provide a functional structure for livestock grazing management. Repair of fire damaged fence would allow for the exclusion of livestock from the treatment area, providing for the establishment of desired seeded species and natural recovery. These fire damaged fences adjoin fences on private lands that are being repaired by grazing allotment permittees.

### PART 3. - DESCRIPTION OF TREATMENTS

#### Issue 1. Actions to Repair/Improve Lands Unlikely to Recover Naturally

##### R3 - Aerial Seeding

A. Treatment/Activity Description (Map 1): Aerial Seed Mix 1: 1,445 acres would be aerial broadcast seeded in the fall/winter of 2007-2008.

Aerial Seed Mix 1

| Variety                         | Approximate Acres | PLS lbs/acre |
|---------------------------------|-------------------|--------------|
| Western yarrow (White)          | 1,445             | 0.05         |
| Sandberg's bluegrass (Mtn Home) | 1,445             | 2.0          |
| Bluebunch wheatgrass (Antone)   | 1,445             | 5.0          |
| Big sagebrush (Basin)           | 1,445             | 0.1          |

B. How does the treatment relate to damage or changes caused by the fire? The goal is to reestablish the native perennial forb, grass and shrub components of the ecosystem. The establishment and maintenance of perennial species would impede the post-fire increased spread of cheatgrass and other invasive annuals, and contribute to the stabilization of the recovering ecosystem. The success of the seeding treatment is dependent upon spring moisture and could range in effectiveness from 50-80%.

C. Why is the treatment/activity reasonable, within policy, and cost effective? Specific costs of the aerial seeding are shown in the cost tables. Aerial broadcast seeding is the most efficient and

effective way to plant a seed mixture comprised of very small seeds. This method insures seed contact with the soil is evenly broadcast over the burned area, at the desired seed rate. Aerial seeding has been used to rehabilitate similar habitat types within the Four Rivers Field Office that have been burned by wildfire, with a fairly high rate of success during average or favorable growing conditions. The selected perennial forbs, grasses, and shrub are suitable to the site, and would compete with invasive annuals. Establishment of the selected perennials would protect watershed values, restore important wildlife habitat components, and improve the functioning condition of the ecosystem.

#### **R15 - Livestock Closure**

A. Treatment/Activity Description Map 1: The repair of pasture and allotment boundary fences damaged by the fire would provide for the exclusion of livestock and protection of the 1,445 acre treatment area. The area would remain closed to livestock grazing until monitoring results, documented in writing; show rehabilitation objectives have been met. In case of treatment failure, other factors may need to be considered, such as natural recovery, and need or reason to continue closure.

B. How does the treatment relate to damage or changes caused by the fire? Closure of the area to livestock grazing would provide for the establishment of seeded species and achievement of BAR objectives.

C. Why is the treatment/activity reasonable, within policy, and cost effective? Considering the significant cost of implementing the BAR, the exclusion of livestock grazing is a reasonable and cost effective method of facilitating the establishments of desired seeded species, and protecting this investment.

#### **Issue 2. Weed Treatments**

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

A. Treatment/Activity Description (Map 1): Starting in the spring of 2008, the 1,515 acre burned area would be surveyed for the presence of noxious species and appropriate control measures would be taken. Follow up surveys and monitoring/retreatment of noxious weed sites would be conducted through 2010. Rush skeletonweed is scattered throughout the burned area. Diffuse knapweed is known to occur at sites along the western boundary of the fire, and the occurrence of Scotch thistle has been noted within Cherry Gulch. These areas will be monitored for the occurrence and spread of these weeds.

B. How does the treatment relate to damage or changes caused by the fire? The potential for noxious weeds to spread is amplified after a wildland fire disturbance. Wildfires foster the spread of noxious weeds by the burning and removal of competitive vegetation. The application of appropriate treatments would control the spread of noxious weeds. The effectiveness of controlling noxious weeds is related to the size and configuration of the weed population. The smaller and more uniform the noxious weed population, the more effective the control with anticipated 60-90% effectiveness.

C. Why is the treatment/activity reasonable, within policy, and cost effective? Compliance with State and county laws requires the control of noxious weeds. The establishment and long-term maintenance of perennial seeded species could be jeopardized if noxious weeds are not controlled. Considering the significant cost of implementing the BAR plan, the treatment of noxious weeds is a reasonable and cost effective method of protecting this investment and complying with State and county laws.

### **Issue 3. Tree Planting**

#### **R4 - Shrub Seedling Planting**

A. Treatment/Activity Description (Map 1): In the spring of 2008 and 2009, bitterbrush seedlings would be hand planted. To maximize the success, seedlings would be planted on mostly north and northeast aspects and where possible next to fire-killed bitterbrush plants for shading and protection from browsing. At approximately 200 plants/acre, bitterbrush seedlings would be planted over 350 acres for a total of 80,000 seedlings; 200 acres (50,000 seedlings) would be planted in 2008 and 150 acres (30,000 seedlings) would be planted in 2009.

B. How does the treatment relate to damage or changes caused by the fire? Planting of bitterbrush seedlings would re-establish important elements of the fire-damaged ecosystem. The goal of the planting is to restore this species as a primary habitat component. The success of a seedling planting is dependent on growing conditions (e.g. spring moisture) and suitability of site. The seedling planting would be conducted in an area where bitterbrush occurred prior to the fire, and where moisture and growing conditions are favorable. The effectiveness of the seedling planting to meet objectives could range from 50-80%.

C. Why is the treatment/activity reasonable, within policy, and cost effective? Specific costs of the bitterbrush seedling planting are shown in the cost tables. The establishment of bitterbrush would foster the achievement of the objective to return the functioning condition of the ecosystem to pre-fire levels. To afford protection and foster establishment, seedlings would be planted next to fire-killed bitterbrush plants. Hand planting of bitterbrush seedlings has typically been used in similar situations, and is a much more successful way of establishing this shrub as compared to the planting of its seed. Perennial native shrub structure is an important component of wildlife habitat. The restoration of shrub structure to pre-fire conditions would provide for the habitat needs of big game and many other wildlife species.

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

#### **R7 - Repair Fence/Gate**

A. Treatment/Activity Description (Map 1): Approximately 7.3 miles of existing allotment management fence was damaged by the wildfire. These pasture and allotment boundary fences adjoin private fences and are in need of repair and/or replacement to control livestock grazing distribution and provide for natural recovery and/or establishment of desired seeded species. Fence repair on public lands would conform to current BLM standards for fences located in deer

habitat. Repair of the existing fence would include replacing burned wooden brace structures with metal ones, and replacing damaged wire and steel posts as needed. Fence repair would take place starting the fall/winter 2007.

**B. How does the treatment relate to damage or changes caused by the fire?** Fire damaged fence would be repaired and/or replaced to provide a functional structure that would allow for the control of livestock grazing distribution and recovery of the burned area. The repaired fence would be used to exclude livestock and foster recovery, while providing for the grazing use of unburned areas within pastures and allotments outside the fire perimeter. This measure would be highly effective in controlling livestock distribution, providing for natural recovery and/or establishment of desired seeded species, and achievement of BAR objectives.

**C. Why is the treatment/activity reasonable, within policy, and cost effective?** Fence repair would provide for effective management of livestock and protection of treatment areas. The cost of repairing fire damaged fence is substantially lower than construction of new fence. Considering the significant cost of implementing the other BAR plan treatments, fence repair is a reasonable and cost effective method of protecting this investment.

#### PART 4. - INDIVIDUAL TREATMENT SPECIFICATIONS

| BAR |                                | FY07 | FY08    | FY09   | FY10 | Total Costs |
|-----|--------------------------------|------|---------|--------|------|-------------|
| R3  | Aerial Seeding                 |      |         |        |      |             |
|     | Labor                          | 0    | 0       | 0      | 0    |             |
|     | Travel/Vehicles                | 0    | 1,445   | 0      | 0    |             |
|     | Equipment Mobilization         | 0    | 0       | 0      | 0    |             |
|     | Supplies/Materials             | 0    | 217     | 0      | 0    |             |
|     | Contract                       | 0    | 17,340  | 0      | 0    |             |
|     | Contract Administration        | 0    | 2,168   | 0      | 0    |             |
|     | Total                          | 0    | 21,000  | 0      | 0    | 21,000      |
| R3  | Aerial Seed                    |      |         |        |      |             |
|     | Seed Aerial Fall 2007          |      | 210,090 |        |      |             |
|     | Seed Aerial Fall 2008          |      | 0       |        |      |             |
|     | Seed Mixing/Handling/Testing   | 0    | 2,786   | 0      | 0    |             |
|     | Total                          | 0    | 213,000 | 0      | 0    | 213,000     |
| R4  | Seedling Planting (shrub/tree) |      |         |        |      |             |
|     | Labor                          | 0    | 4,500   | 2,500  | 0    |             |
|     | Travel/Vehicles                | 0    | 3,150   | 1,750  | 0    |             |
|     | Supplies/Materials             | 0    | 2,250   | 1,250  | 0    |             |
|     | Contract Seedling Purchase     | 0    | 59,500  | 0      | 0    |             |
|     | Contract Seedling Planting     | 0    | 40,500  | 22,500 | 0    |             |
|     | Contract Administration        | 0    | 15,750  | 8,750  | 0    |             |
|     | Total                          | 0    | 126,000 | 37,000 | 0    | 163,000     |
| R5  | Noxious Weeds                  |      |         |        |      |             |
|     | Labor                          | 0    | 1,084   | 1,084  | 921  |             |
|     | Travel/Vehicles                | 0    | 434     | 434    | 368  |             |

| BAR |                                            | FY07 | FY08    | FY09   | FY10  | Total Costs |
|-----|--------------------------------------------|------|---------|--------|-------|-------------|
|     | Chemical Purchase                          | 0    | 289     | 289    | 246   |             |
|     | Supplies/Materials                         | 0    | 0       | 0      | 0     |             |
|     | Contract                                   | 0    | 0       | 0      | 0     |             |
|     | Contract Administration                    | 0    | 0       | 0      | 0     |             |
|     | Total                                      | 0    | 2,000   | 2,000  | 2,000 | 6,000       |
| R7  | Protective Fence Repair/Gate               |      |         |        |       |             |
|     | Labor                                      | 0    | 2,190   | 0      | 0     |             |
|     | Travel/Vehicles                            | 0    | 1,825   | 0      | 0     |             |
|     | Clearances                                 | 0    | 0       | 0      | 0     |             |
|     | Fence Material                             | 0    | 7,300   | 0      | 0     |             |
|     | Contract Fence Construction                | 0    | 10,950  | 0      | 0     |             |
|     | Contract Administration                    | 0    | 1,460   | 0      | 0     |             |
|     | Supplies/Materials                         | 0    | 730     | 0      | 0     |             |
|     | Total                                      | 0    | 24,000  | 0      | 0     | 24,000      |
| R15 | Closures (OHV/livestock/area)              |      |         |        |       |             |
|     | Labor                                      | 0    | 0       | 0      | 0     |             |
|     | Travel/Vehicles                            | 0    | 0       | 0      | 0     |             |
|     | Supplies/Materials                         | 0    | 0       | 0      | 0     |             |
|     | Contract                                   | 0    | 0       | 0      | 0     |             |
|     | Contract Administration                    | 0    | 0       | 0      | 0     |             |
|     | Total                                      | 0    | 0       | 0      | 0     | 0           |
| R16 | Monitoring (implementation, effectiveness) |      |         |        |       |             |
|     | Labor                                      | 0    | 379     | 379    | 379   |             |
|     | Travel/Vehicles                            | 0    | 379     | 379    | 379   |             |
|     | Supplies/Materials                         | 0    | 152     | 152    | 152   |             |
|     | Contract                                   | 0    | 1,894   | 1,894  | 1,894 |             |
|     | Contract Administration                    | 0    | 758     | 758    | 758   |             |
|     | Total                                      | 0    | 4,000   | 4,000  | 4,000 | 12,000      |
|     | BURNED AREA REHABILITATION                 | 0    | 390,000 | 43,000 | 6,000 | 439,000     |

### SEED LISTS

| Seed Type/Variety              | PLS Rating | Seeding Acres | Lbs/ Ac Bulk | Lbs/ Ac PLS | # Seeds/ Lb Bulk | # Seed Lb PLS | # Seed/ Ac Bulk | # Seed/ Ac PLS | # Seed/Sq Ft PLS | Total Lbs PLS | Total Lbs Bulk | Cost Per Lb | Total Cost   |
|--------------------------------|------------|---------------|--------------|-------------|------------------|---------------|-----------------|----------------|------------------|---------------|----------------|-------------|--------------|
| Bluebunch Wheatgrass, Anatone  | 0.7650     | 1,445         | 7.2          | 5.5         | 140,000          | 107,100       | 1,008,000       | 771,120        | 17.7             | 7,959         | 10,450         | \$15.00     | \$156,750.00 |
| Sandberg's Bluegrass, Mtn Home | 0.7200     | 1,445         | 1.3          | 0.9         | 950,000          | 684,000       | 1,235,000       | 889,200        | 20.4             | 1,353         | 1,900          | \$13.00     | \$24,700.00  |
| White Western Yarrow           | 0.8100     | 1,445         | 0.06         | 0.05        | 2,700,000        | 2,187,000     | 162,000         | 131,220        | 3.0              | 70            | 100            | \$20.00     | \$2,000.00   |

|                         |        |       |     |      |           |         |           |           |      |       |        |         |              |
|-------------------------|--------|-------|-----|------|-----------|---------|-----------|-----------|------|-------|--------|---------|--------------|
| Big Sagebrush,<br>Basin | 0.1600 | 1,445 | 1.0 | 0.16 | 2,500,000 | 400,000 | 2,500,000 | 400,000   | 9.2  | 231   | 1,480  | \$18.00 | \$26,640.00  |
| TOTALS                  |        | 5,780 | 9.6 | 6.7  |           |         | 4,905,000 | 2,191,540 | 50.3 | 9,613 | 13,930 |         | \$210,090.00 |

| SHRUB SEEDLINGS      |                            |                       |                      |                 |            |
|----------------------|----------------------------|-----------------------|----------------------|-----------------|------------|
| Seedling Species     | Acres of Seedlings Planted | # of Seedlings / Acre | Total # of Seedlings | Cost / Seedling | Total Cost |
| Antelope Bitterbrush | 350                        | 200                   | 70,000               | \$ 0.85         | \$ 59,500  |

## NATIVE PLANT WORKSHEET

### Proposed Native Plants in Seed Mixture

1. Are the native plants proposed for seeding adapted to the ecological sites in the burned area?  
Yes  No  Rationale: Native species being proposed for seeding are known to occur in the local area.
  
2. Is seed or seedlings of native plants available in sufficient quantity for the proposed project?  
Yes  No  Rationale: It is anticipated that sufficient quantities of the proposed native plant seeds would be available from the commercial market.
  
3. Is the cost and/or quality of the native seed reasonable given the project size and approved field unit management and Plan objectives?  
Yes  No  Rationale: The quantity and subsequent cost of proposed native seed is reasonable.
  
4. Will the native plants establish and survive given the environmental conditions and the current or future competition from other species in the seed mix or from exotic plants?  
Yes  No  Rationale: They would establish at this site under normal or average climatic conditions, as indicated by pre-fire vegetation and previous rehabilitation projects conducted in the Four Rivers Field Office.
  
5. Will the existing or proposed land management practices (e.g. wildlife populations, recreation use, livestock, etc.) maintain the seeded native plants in the seed mixture when the burned area is re-opened?  
Yes  No  Rationale: The more northern portion of the treatment area has only very light authorized livestock grazing use, and livestock grazing use of the southern portion is made during the plant dormant fall/winter period, which would foster the maintenance of seeded native species.

PROPOSED SEED SPECIES

| Non-native Plants | Native Plants          |
|-------------------|------------------------|
| ---               | Western yarrow (White) |
| ---               | Sandberg's bluegrass   |
| ---               | Bluebunch wheatgrass   |
| ---               | Big sagebrush (Basin)  |
| ---               | Antelope bitterbrush   |

PART 5. - COST-RISK ANALYSIS

Probability of Rehabilitation Treatments Successfully Meeting Objectives

| Action/<br>Spec. # | Planned Action                                     | Unit<br>(acres, WMs,<br>number) | #<br>Units     | Total<br>Cost | % Probability of<br>Success |
|--------------------|----------------------------------------------------|---------------------------------|----------------|---------------|-----------------------------|
| R3                 | Aerial Seeding                                     | acres                           | 1,445          | 234,000       | 50-80                       |
| R4                 | Shrub Seedling Planting                            | acres/<br>number                | 350/<br>70,000 | 163,000       | 50-80                       |
| R5                 | Noxious Weeds                                      | acres                           | 1,515/<br>3yrs | 6,000         | 80-90                       |
| R7                 | Fence Repair/Gate<br>Construct Protective<br>Fence | miles                           | 7.3            | 24,000        | 100                         |
| R15                | Livestock Closure                                  | acres                           | 1,445          | 0             | 100                         |
| R16                | Monitoring                                         | acres                           | 1,445/<br>3yrs | 12,000        | 100                         |
| TOTAL              |                                                    |                                 |                | 439,000       |                             |

COST-RISK SUMMARY

The costs of the project and probability of success of the proposed treatments are compared with the risks to resource values if: 1) no action is taken, and 2) the proposed action is successfully implemented. Alternatives may be included in this analysis to assist in the selection of the treatments that will cost effectively achieve the rehabilitation objectives. Answer the following questions to determine which proposed treatments should be selected and implemented.

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

**Proposed Action:** Yes  No  Rationale: The proposed treatments (aerial seeding, shrub seedling planting, fence repair, and livestock closure) are related actions which maximize the probability of success and effectiveness of restoring ecosystem components, and achieving BAR objectives.

**No Action:** Yes [ ] No [X] Rationale: No action could result in the spread of cheatgrass and other invasive annuals, lack of plant diversity and shrub structure, and a lower functioning ecosystem.

**Alternative(s):** Yes [ ] No [X] Rationale: Although acceptable alternatives may exist, none have been identified that would pose less risk to the natural resources than the proposed treatments.

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

**Proposed Action:** Yes [X] No [ ] Rationale: The probability of the proposed treatments being successful are relatively high, and the costs is reasonable considering the benefits to be realized.

**No Action:** Yes [ ] No [X] Rationale: There would be no costs associated with no action, but no benefits would be realized and further degradation ecosystem components.

**Alternative(s):** Yes [ ] No [X] Rationale: No alternatives have been identified that would be more cost effective than the proposed treatments.

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

**Proposed Action** [X], **Alternative(s)** [ ], or **No Action** [ ]

Comments: The proposed treatments are anticipated to be cost effective, and reduce vulnerability of the site to expansion of invasive annuals by restoring ecosystem components lost by the fire. The cost/risk is reasonable considering the benefits to the long-term health of the ecosystem.

### RISK OF RESOURCE VALUE LOSS OR DAMAGE

Identify the risk (high, medium, low, none or not applicable (NA) of unacceptable impacts or loss of resources.

No Action-Treatments Not Implemented (check one)

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

Proposed Action-Treatments Successfully Implemented (check one)

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

## PART 6. – MONITORING PLAN

Monitoring protocols for vegetation treatments within this plan are based primarily on those described in the Monitoring Manual for Grassland, Shrubland, and Savanna Ecosystems by Jeffery E. Herrick, Justin W. Van Zee, Kris M. Havstad, Laura M Burkett, and Water G. Whitford; published in 2005 by USDA-ARS Jornada Experimental Range, New Mexico State University.

The proposed treatments would be actively monitored and documented by personnel of the Boise District; Division of Operations and Four Rivers Field Office. Effectiveness of the ground seeding, aerial herbicide application(s), and aerial seeding would be monitored by collecting density, cover, and soil gap data from randomly located plots which diagonally traverse flight patterns and drill rows within the treatment areas.

### 1. Aerial Seeding

Monitoring the success of the aerial seeding would take place during the summers of 2008-2010. Treatment objectives would be achieved when density data collected from not less than one hundred (100) 0.125m<sup>2</sup> plots indicate mean establishment densities as follows:

|                   |                                   |
|-------------------|-----------------------------------|
| Aerial Seed Mix 1 | Western yarrow $\geq 1/m^2$       |
|                   | Sandberg's bluegrass $\geq 5/m^2$ |
|                   | Bluebunch wheatgrass $\geq 1/m^2$ |
|                   | Basin Big sagebrush $\geq 1/9m^2$ |

### 2. Shrub Seedling Planting

Monitoring the success of the shrub seedling planting would be conducted during the summers of 2008-2010. Treatment objectives would be achieved when data collected from at least one hundred (100) bitterbrush seedlings, randomly located within ten (10) identified planting sites show a survival rate of 40-50%. Data would be collected from one hundred (100) seedlings

planted in spring 2008 and from one hundred (100) seedlings planted in spring 2009.

**3. Noxious Weeds**

Starting in 2008, BLM noxious weed specialists would inventory the 1,515 acre burn area for noxious weeds and take appropriate treatment action. Species identified, treatment and GPS location would be recorded. Personnel would revisit the treated sites 2009-2010 to evaluate mortality and inventory for additional weed populations.

**4. Livestock Closure**

Livestock are to be excluded from the treatment area (1,445 acres) until monitoring results, documented in writing; show rehabilitation objectives have been met. In case of treatment failure, other factors may need to be considered, such as natural recovery, and need or reason to continue closure. Routine site visits would be made by BLM personnel to monitor for livestock trespass and ensure effectiveness of area closure.

**PART 7 - MAPS**

1. Aerial Seeding, Shrub Planting, & Fence Repair

**REVIEW, APPROVALS, AND PREPARERS**

REHABILITATION PLAN TEAM MEMBERS

| Position                        | Team Member (Agency/Office) | Initial and Date |
|---------------------------------|-----------------------------|------------------|
| Team Leader                     | Marry Clark (BLM/ID110)     |                  |
| Rangeland Management Specialist | Mike Barnum (BLM/ID110)     |                  |
| Operations ESR Coordinator      | Cindy Fritz (BLM/ID102)     |                  |
| Botanist                        | Mark Steiger (BLM/ID110)    |                  |
| Wildlife Biologist              | Tim Carrigan (BLM/ID110)    |                  |
| Natural Resource Specialist     | Jack LaRocco (BLM/ID110)    |                  |

**REHABILITATION PLAN APPROVAL**

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

/s/ John Sullivan (Acting)

9/24/2007

FIELD OFFICE MANAGER

DATE

## FUNDING APPROVAL

Rehabilitation plans are approved through the AWP, on a priority basis by the Interior BAER Coordinators. Funding for prior year fires is typically through the AWP the following year. If it becomes necessary to prioritize, this will be done by the IBAER coordinators based on relative values to be protected, commensurate with rehabilitation costs.

### Boise District 2007 Wildfire: Sandy (DY21) Aerial Seeding - Fall/Winter 2007, Fence Repair - Winter 2008, and Seedling Planting - Winter/Spring 2008 & 2009

