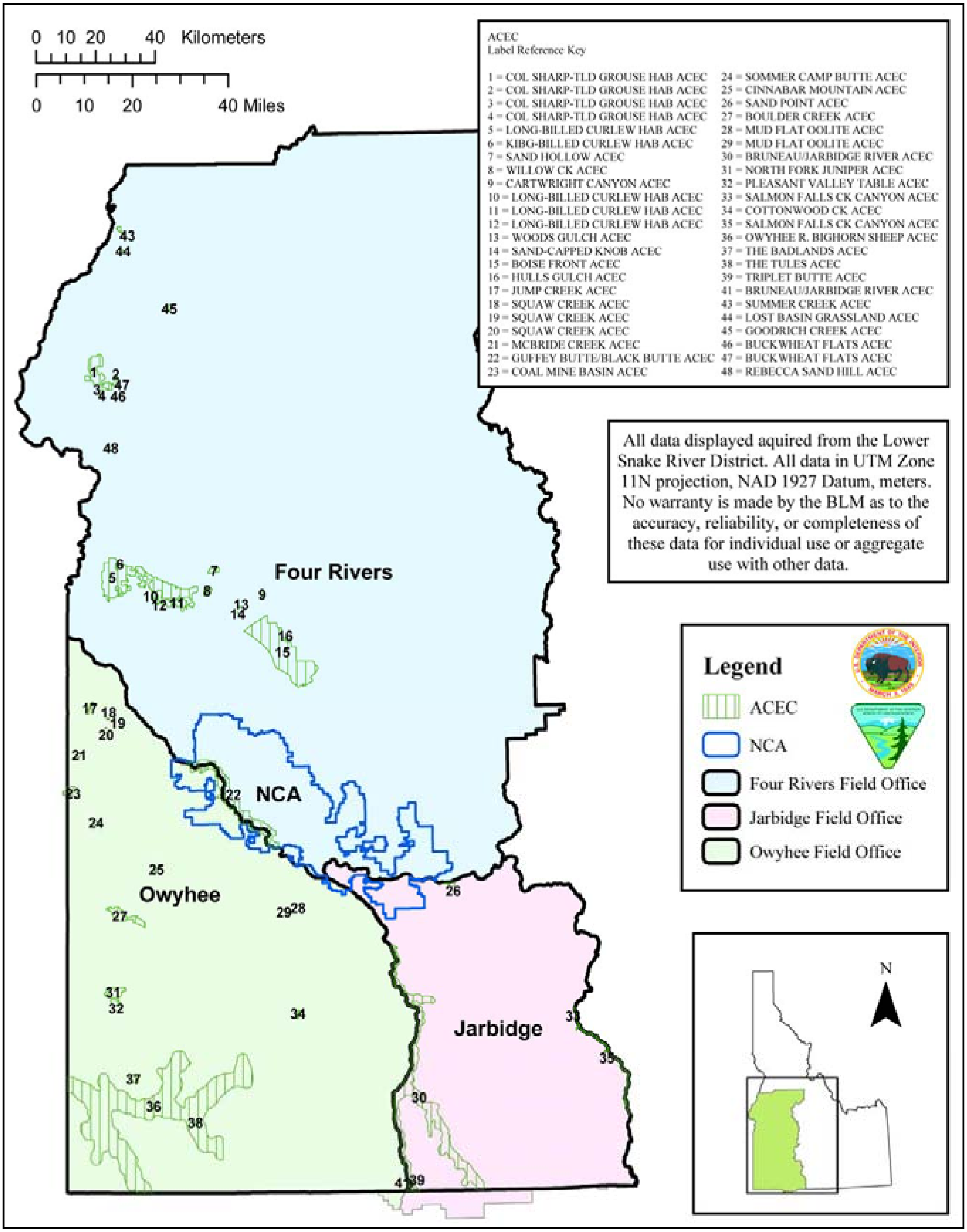
**Figure 3: Boise District Areas of Critical Environmental Concern**



## J. Visual Resources

Public lands have a variety of visual values. Visual values are identified through the VRM Inventory (Manual Section 8410) and are considered with other resource values in the resource management planning process. Visual management objectives are established in conformance with the land use allocations. These area specific objectives provide the standards for planning, designing, and evaluating future management projects.

VRM Class I is the most restrictive category and applies to BLM special administration designations where public interest and BLM management call for the preservation of pristine landscapes such as designated Wilderness and WSAs, Wild and Scenic Rivers, or Visual/Scenic ACECs, and visible sections of the Oregon NHT. Most of the Class I areas in the District are in or adjacent to the deeply incised canyons of the Snake, Owyhee, and Bruneau-Jarbidge river systems or along the North and South Alternates of the Oregon NHT.

VRM Classes II to IV would allow increasingly higher levels of landscape alteration. Management activities in Class II areas may be seen but should not attract the attention of the casual observer, and would repeat the basic elements of form, line, color, texture, and scale found in the predominant natural features of the characteristic landscape.

Management activities may attract attention in Class III areas but would not dominate the view of the casual observer. Management activities in Class IV may be major modification of the existing landscape character that dominates the view and is the major focus of viewer attention, however, every attempt would be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements. A substantial majority of the lands in the District fall into either VRM Classes III or IV.

## K. Cultural Resources

Cultural resources are those fragile and non-renewable remains of human activity, occupation, or endeavor, reflected in districts, sites, structures, objects, artifacts, ruins, and works of art as well as natural features that were of importance in human events. There are numerous recorded cultural resource sites on the Boise District and probably many more that have not been recorded. The evidence of previous human activity ranges from the weathering metal apparatus of a mining operation to the textiles created from desert plants and used by the indigenous people. Although some site elements like machinery survive destructive forces the context in which all site elements lie is the vital component of the scientific study of cultural resources.

The NHPA established that the historical and cultural foundations of the Nation should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people. The need for an official list of the Nation’s cultural resources that are worthy of preservation was established by the NHPA. The register lists archaeological, historic, and architectural properties such as districts, sites, buildings, structures, and objects nominated for their local, state, or national significance. The Boise District has several large prehistoric and/or historic district sites on the register including the Oregon NHT (Table 8).

Paleontological sites are subsumed under the cultural resources field. Paleontological sites are common in the Boise District and are found associated with the Idaho Group which is composed of intercalated stream and lake deposits, basalt flows, and water-lain and air fall ash deposit of Lower Quaternary and Upper Tertiary Age. The Ten Mile gravels (i.e. glacial outwash two million years of age) and other Pleistocene sediments north and south of the Snake River and along the Boise Front Range have been the most productive for the preservation of fossils. Idaho contains some of the most significant fossil evidence for the evolution of species and continental drift. It is likely that many sites remain undiscovered or have not exhausted their research potential.

**Table 8: National Register of Historic Places and Cultural Complexes**

| Resource Area | FRFO | OFO | NCA | JFO |
|---|---|---|---|---|
| Guffey Butte/Black Butte Archaeological District | X | X | X | |
| Oregon National Historic Trail | X | X | X | X |
| Kelton Road | X | | | X |
| Goodale's Cut-off | X | | | |
| Silver City Historic Mining District | | X | | |
| DeLamar Historic Mining District | | X | | |
| Camas Creek-Pole Creek Archaeological District | | X | | |
| Lava Tube Caves (including Tank/Cathedral, Higby, and Kuna Caves) | X | | | |
| Shoofly Creek Rock Alignments | | X | | |
| Bruneau River | | X | | X |
| Five Finger Buffalo Jump | | X | | |
| Y Buffalo Jump | X | | | |
| Union Pacific (Oregon Short Line) Railroad | X | | | |
| Crater Rings National Natural Landmark | X | | | |
| Dry Lakes/Bruneau River Complex | | | | X |
| Devil Creek Complex | | | | X |
| Sand Point Cultural/Paleontological Complex | | | | X |
| Dove Springs | | | | X |
| Pothole | | | | X |
| Juniper Ranch | | | | X |
| Clover Creek | | | | X |
| Cougar Creek | | | | X |
| Post Office | | | | X |
| Pilgrim Stage Station | | | | X |

## L. GRAZING MANAGEMENT

Livestock grazing began on the Lower Snake River Plains as early as 1700, when the Shoshone Native Americans brought horses into the northern Great Basin. With the opening of the Oregon Trail and subsequent settlement, uncontrolled grazing with large numbers of cattle, sheep, and horses occurred. This uncontrolled grazing led to significant resource damage in many areas in the northern Great Basin. In 1934, the passage of the Taylor Grazing Act occurred. The passage of this act resolved much of the uncontrolled grazing issues occurring on the public lands by the creation of grazing districts. Today, livestock grazing occurs through grazing permits which contain not only mandatory terms and conditions, but also allotment specific terms and conditions. Grazing permits are tied to the permittees' base property, which can be land or water. Grazing allotments are managed to insure that standards for rangeland health and guidelines for livestock grazing management are being progressively met.

Issues that can affect many operators include forage accessibility, annual fluctuations of forage production, lack of permanent water, and loss of perennial plant communities due to disturbances such as wildland fire.

# IV. ENVIRONMENTAL CONSEQUENCES

This chapter describes the predicted environmental consequences that would result from implementing the No Action Alternative and the Proposed Action described in Chapter II. Alternatives. All relevant issues identified during public scoping for the proposed project were considered in the impact analysis, and a brief summary of the scoping comments are included in Section V. Public Involvement.

The impact analysis follows the same general outline for resources discussed in Chapter III. Affected Environment. It addresses direct, indirect, and cumulative effects on those aspects of the physical, biological, and human environments most likely to be affected. Resources that are unlikely to be affected or only minimally affected are discussed only briefly, and resources that would have similar affects were combined.

## A. NO ACTION ALTERNATIVE (CONTINUE USING THE 1987/88 NFRPS)

The No Action Alternative would include all of the actions in the Proposed Action. The same environmental effects would occur under the No Action Alternative, as those described under the Proposed Action, except that individual EAs would have to be prepared for ESR treatments outside the scope of the 1987/88 NFRPs. Potential delays may increase the likelihood of missing critical implementation timelines. As a result, site objectives may not be met in a timely manner, and indirect post-wildfire effects such as increased erosion and proliferation of noxious and invasive weeds may increase.

## B. PROPOSED ACTION

### 1. SOILS

After a fire, much of the burned area soil would be exposed and prone to wind and water erosion. If surface runoff occurs before ground cover becomes re-established, erosion would occur. ESR treatments would be prescribed on a site-specific basis. All seeding methods have a low probability of reducing erosion the first year because most of the benefits of the seeding occur after germination and root development. Therefore, the benefits of seeding are considered to be long-term. Once the area is rehabilitated and ground cover becomes re-established, soil erosion would be similar to that of the pre-burn landscape.

Mechanical seedbed preparation, seeding, seed covering, weed control, fencing, and off-road vehicle traffic associated with ESR treatments could create some short-term impacts to the remaining vegetation and to the soil surface, such as increasing the rate of wind erosion in sandy soils or sealing the soil surface in clay soils. The no-till drill or a modified rangeland drill with depth bands and hand seeding would have less short-term soil impacts than other mechanical methods used to prepare soil for seeding. Chaining, standard rangeland drilling, and harrowing would have the highest short-term soil impacts because they would expose the soil surface to wind erosion, and they would do the most damage to remaining vegetation.

The imprinter may be beneficial when it is used on sandy soils to create impressions that trap water but can cause the surface of clay soils to "seal" due to compaction. The sealed surface traps water but does not allow it to infiltrate, so the moisture is lost to evaporation. Therefore this method would not be used on clay soils.

The no-till drill or modified rangeland drill with depth bands would be preferred for areas with good microbiotic crust cover to protect the remaining crust. In areas with poor crust cover the other mechanical methods (e.g. rangeland drill, harrowing, and chaining) may be used because improving the crust (by preventing cheatgrass invasion and encouraging stable bunchgrass or bunchgrass/shrub communities) in the long-term would be an important objective. Good microbiotic crust cover would improve hydrology, minimize erosion, increase plant community structure and biological diversity, decrease the likelihood for cheatgrass invasion, and would help to re-establish more normal fire cycles.

Despite a variety of potential soil impacts from the mechanical treatments, the long-term benefits from re-establishing perennial vegetation would quickly out-weigh the short-term disturbances because revegetation would provide long-term soil and water quality protection. For example, drilled treatments exhibit higher infiltration rates, and less surface runoff and soil erosion during precipitation than untreated sites. In addition, controlling annual grasses and establishing native or desirable non-native vegetation would result in more natural fire cycles that are less damaging to soil and produce less erosion in the long-term.

Installation of hillslope treatments (low stage check dams, straw bales and wattles, contour felled logs) causes ground disturbance in the immediate area around the structure. The benefits of reducing overland flow energy and trapping sediment outweigh the potential for structures to fail.

In-channel sediment storage structures such as check dams would be used sparingly in small, ephemeral and naturally intermittent channels only, because hillslope erosion control treatments that prevent sediment delivery to waterways are generally more effective, and there is always a risk that sediment storage structures would fail and cause more damage to channels, aquatic habitat, and special status aquatic species when stored sediments are released (Robichaud *et al.* 2000; Rosgen 1996). Straw bale check dams, gravel bags, straw wattles, and other structures that capture large material, allow fine sediment to pass and decompose over time, would have the lowest potential for channel damaging failures.

### 2. WATER

The effects to water resources are related to upland, hillslope, and channel treatment effects discussed in the previous Soils Section. Soils exposed after a fire are prone to erosion. Impairment to water quality could happen if a large runoff event occurs before ground cover becomes re-established, whether or not an area has had ESR treatment. Seedbed preparation and mechanical seeding generally result in increased infiltration and less runoff. Sediment detention structures, such as straw wattles interrupt overland flow, reduce runoff energy, minimize rill and fully formation, and trap sediment that may otherwise be transported downslope.

Short-term indirect effects would occur if soil particles from mechanized treatment areas are transported downslope to a stream. Long-term indirect effects from upland treatments include improved hydrologic function of the watershed as the site becomes revegetated with desirable species. The ESR treatments for soil stabilization, road and trail drainage improvements, and channel stability would protect beneficial uses by minimizing erosion and post-fire sediment delivery to stream channels.

The design features and BMPs for working in riparian areas and aquatic environments would minimize the direct affects to water quality. Direct, short-term impacts to water quality could occur during facilities maintenance, such as culvert removal and replacement, if sediment enters into a flowing stream.

Riparian tree and shrub seedlings or herbaceous plugs would be planted as needed to provide long-term canopy cover to shade streams from direct solar radiation or provide streambank stability to maintain water quality and protect beneficial uses.

Proper selection, timing, and application of herbicides for prescribed weed treatments would minimize the risk that these substances inadvertently enter aquatic ecosystems. Direct effects to water quality could occur if chemicals were accidentally spilled into the water. Over time, noxious/invasive weed control would result in healthier watersheds by reducing competition with desirable species that provide greater soil stability.

### 3. FLOODPLAINS/WETLANDS/RIPARIAN ZONES

Overall impacts to riparian areas from treatment methods would be minimal due to the specific design features. Riparian and aquatic environments would realize long-term benefits from upland, near-channel, and in-channel treatments that are designed to stabilize soil, minimize rill and gully erosion, and protect streambanks.

Short-term soil impacts associated with riparian or in-channel bioengineering techniques (e.g. seeding, planting woody or herbaceous riparian species, willow wattles, whole tree felling) or silt fencing include a localized, increased risk of erosion until the site becomes revegetated. Bioengineering would improve riparian and channel process in the long-term, channel stability would be maintained, and aquatic habitat would be improved or protected.

Fences would be used to protect riparian areas from livestock, wild horses, or wildlife as needed. There would be some short-term vegetative impacts associated with fence construction or reconstruction (primarily brush clearing) and planting, but riparian areas would be quickly revegetated due to available soil moisture.

### 4. AIR

Soil disturbing ESR activities such as mechanical seedbed preparation, seeding, seed cover, and weed treatments may affect air quality for a short duration. Re-establishing vegetative cover would benefit air quality in the long-term because soil that is at risk of erosion due to fire and ash would be stabilized and would not become airborne as dust storms. The proposed desirable native and non-native species used for revegetation would restore more natural fire regimes and reduce the long-term air quality impacts associated with large-scale, high intensity fires fueled by annual grasses.

The herbicide label restrictions and the proposed design criteria based on distance from open water, wind speed and direction, and public notification would protect human health during aerial herbicide applications to the extent practicable.

## 5. VEGETATION

### a. General Vegetation

Natural recovery would contribute to the recovery of the remaining vegetation and would benefit the future native plant community structure. Mechanical seedbed preparation, seeding, seed covering, weed control, fencing, and off-road vehicle traffic associated with ESR treatments could create some short-term impacts to the soil and remaining vegetation. The no-till drill or rangeland drill with depth bands, and hand seeding would be less damaging to existing vegetation than other mechanical methods used to prepare soil for seeding. Chaining, standard rangeland drilling, and harrowing would have the highest short-term soil impacts because they would expose the soil surface to wind erosion, and would do the most damage to existing vegetation.

The short-term detrimental effects of mechanical seedbed preparation, planting, and covering seed would be minimized by the design features and would be vastly out-weighed by the long-term benefits such as enhanced site stability and vigor of the vascular plant community. Other beneficial effects expected to occur with implementation of the Proposed Action would be: 1) improving and restoring the biodiversity of native vegetation, 2) restoring quality habitat for wildlife, 3) protecting sensitive plant and animal habitat, and 4) contributing toward the return of a more natural fire cycle.

Aerial seeding would have no short-term impact to vegetation. The long-term effects would be similar to mechanical seeding in promoting vegetative recovery.

Protective fences and/or deferred livestock grazing would protect recovering sites for at least two growing seasons after the fire, or until vegetation is established adequately to withstand grazing. Some short-term vegetative impacts would be associated with fence construction or reconstruction primarily from off-road vehicle traffic and brush clearing, but these impacts would be site-specific and minimal compared to the long-term revegetation benefit. Protective fencing would also promote recovery of slickspot peppergrass habitat and microbiotic crusts.

There are areas currently so heavily infested with cheatgrass that the benefits of seedbed preparation from aerial spraying and weed management would greatly enhance the potential for site rehabilitation on a large-scale. Aerial herbicide application would be the most effective and aggressive treatment method for quickly treating large noxious and invasive weed-infested areas. By implementing design features, any impacts to remaining vegetation would be minimized. Over time, all vegetation would benefit from reductions in weed competition and contribute toward a more natural fire cycle.

Some of the herbicides proposed are selective and target only broadleaf species, trees, or shrubs. Some of the proposed herbicides are non-selective and target both broadleaf plants as well as grasses. Therefore herbicide selection and application rates would be site-specific. If non-selective herbicides are applied when the targeted weeds are actively growing and native vegetation is inactive, there would be less potential for negative impact to native vegetation. Spraying in early spring, late summer, and fall would mimic these conditions. Grasses may suffer slight damage with selective herbicide treatments but would recover and should increase due to reduced competition.

### b. Special Status Plants

**Slickspot Peppergrass**
The ESR recommendations in the Candidate Conservation Agreement for slickspot peppergrass (GOSC *et al.* 2003) are incorporated in the general and species-specific design criteria. The use of a no-till drill or a modified rangeland drill with depth bands would minimize the short-term impacts to slickspot habitat and the resulting plant establishment would have long-term benefits to the species by re-establishing a natural habitat, reducing invasive annual grasses, and contributing to the return of a more normal fire cycle. Emphasizing the use of native seed and including native forbs in the seed mix would benefit slickspot peppergrass by increasing the diversity and pollen sources for insect pollinators. Deferred grazing and protective fencing would benefit slickspot peppergrass by eliminating the effects of trampling and protecting the hydrology of slickspot microsites during the rehabilitation process. The long-term benefits of revegetation would be site stability and decreased likelihood of cheatgrass invasion.

**Other Sensitive Plants**
Inventories for SSS and their habitats would be conducted prior to implementation of all ground disturbing activities. SSS locations would be avoided or impacts would be minimized. Utilizing design features and recognizing individual SSS plant needs would contribute towards the recovery of the SSS species and their habitats over time. Proposed actions would contribute to the return of a more natural fire cycle over time and enhance SSS plant habitats.

## 6. TERRESTRIAL WILDLIFE

### a. General Terrestrial Wildlife

**California Bighorn Sheep, Pronghorn Antelope, Mule Deer, and Elk**
ESR treatments would not be expected to adversely affect pronghorn antelope, mule deer, and elk. If any direct adverse impacts were to occur, they would be expected to be localized, temporary, and minor. Beneficial effects would increase incrementally over a long period of time, as long as weed-infested areas recover to more natural conditions and the fire cycle returns to more natural conditions as a result of ESR. Wildlife species that rely on shrub-grassland-forb communities (e.g. pronghorn) would benefit most since these areas have been the most impacted by recent weed invasions, and large and more frequent large scale, high intensity fires.

There would be a time period when habitat values would be low during revegetation because of low vegetation density, however, these areas already had low habitat values prior to treatment due to burn conditions and/or noxious and invasive weeds. Once the burned areas are revegetated, wildlife habitat values would improve because new seasonal growth would provide palatable forage and a better diversity of native perennial grass, forb, and shrub species. Over time, mosaics of mature shrubs and trees would provide thermal and hiding cover, and winter forage.

Protective fences that allow for wildlife passage would be used as needed to protect recovering sites from livestock for two growing seasons or until site objectives have been met. The design features would ensure that the fences are visible to wildlife and would only minimally inhibit wildlife movements.

Ground based herbicide applications would be unlikely to come in direct contact with these highly mobile species. There is a possibility that aerial applications may come in direct contact with big game animals, however, these species are likely to vacate an area with aircraft activity. Herbicides do not bioaccumulate or biomagnify, and are rapidly excreted if ingested on plant material, so there would be little or no effects from ingestion.

**Migratory Birds**

Revegetation with a variety of native species, and noxious and invasive weed treatments that maintain or improve migratory bird nesting habitat would benefit this group in the long-term. Ground-disturbing mechanical treatments such as rangeland drill, no-till drill, press wheel, land imprinter, cultipacker, chaining, and harrowing implemented during the spring-early summer could affect the reproductive success of ground-nesting birds in the short-term.

Long-billed curlew habitat has actually increased over the last several decades due to the increased size and frequency of fires, and conversion of large areas of shrub-steppe to grasslands. Return to a more normal fire cycle and protection/rehibilitation of shrub-steppe ecosystems would decrease available long-billed curlew habitat in the long-term. Including short grass species in the seed mix would benefit long-bill curlew habitat as appropriate and feasible.

**Other Wildlife**

The potentially adverse impacts of ESR treatments on non-game mammals, waterfowl, non-native game birds, amphibians, and reptiles are expected to be relatively minor and short-lived, and would be more than offset by long-term benefits of ESR treatments. Adverse impacts during treatment implementation would include temporary disturbance or displacements of mobile wildlife. Beneficial affects would include a more rapid establishment of suitable habitat, along with an overall increase in quality and quantity of food and cover over the long-term.

Recovery of weed-infested areas would have benefits similar to those described for big game, but would provide an even greater benefit to smaller, ground dwelling species such as reptiles, amphibians, and small mammals whose movements can be restricted by dense stands of cheatgrass or other invasive species. Many of these species also have very small home ranges and would be eliminated from large areas of infestation.

Wildlife species that rely on low elevation shrub communities (i.e. Wyoming big sagebrush and salt desert shrub) and riparian areas would benefit most since these areas have been the most impacted by recent weed invasions and large scale, high intensity fires.

Herbicide applications would have a higher likelihood of coming in direct contact with smaller, less mobile species, but when applied properly and according to design features should have no noteworthy adverse impacts to any wildlife species.

### b. SPECIAL STATUS TERRESTRIAL WILDLIFE

**Gray Wolf and Canada Lynx**

The proposed ESR treatments would not directly affect the highly mobile gray wolf or Canada lynx that are found primarily in forested habitat. The design criteria for avoidance of activities near an active wolf den or rendezvous site would eliminate or minimize any potentially adverse impacts.

Treatments that benefit prey species (e.g. ground squirrels, rabbits, and ground-nesting birds) such as noxious and invasive weed control, revegetation, and return to more normal fire cycles would indirectly benefit the gray wolf and Canada lynx. The Proposed Action would not result in a "likely to jeopardize the continued existence of" the gray wolf.

Using the specific design features specified for lynx would either have "No Effect" or be discountable, insignificant, or completely beneficial. If ESR treatments are needed outside the scope of these design features, additional site-specific ESA Section 7 consultation would be required.

**Idaho Ground Squirrels and Pygmy Rabbit**

Natural recovery of vegetation would not adversely affect ground squirrels or the pygmy rabbit.

Inventories for SSS and their habitats, including northern Idaho ground squirrel, southern Idaho ground squirrel, and pygmy rabbit would be conducted prior to implementation of all ground disturbing and/or noise generating activities and herbicide treatments.

All site-specific ESR treatments proposed within the historic range of the northern Idaho ground squirrel would require additional ESA Section 7 consultation with the FWS during site-specific planning, however, short- and long-term effects from ESR treatments to northern Idaho ground squirrel, southern Idaho ground squirrel, and pygmy rabbit would be minimized by implementation of the species-specific design features. Hillslope and in-channel erosion control structures would avoid direct impact to ground squirrel habitat, and would have no adverse impact on the species.

Activities that incorporate design features to avoid or minimize ground disturbance within ground squirrel habitat are expected to be beneficial by re-establishment of suitable habitat along with an overall increase in quality and quantity of food and cover over the long-term. The use of multiple forb species in ground squirrel and pygmy rabbit habitats would increase available forage and habitat quality for these species.

Reconstruction or construction of fence lines would create open spaces and provide raptor perches that can increase ground squirrel and pygmy rabbit predation. Maintaining minimal clearings along fence lines to avoid increased opportunities for predation would reduce these effects. The selective removal of standing dead juniper in burn areas would also benefit pygmy rabbits by reducing the number of post-fire raptor perches.

Incorporating design features into herbicide treatments would minimize the impacts to the ground squirrel and pygmy rabbits, and aid in establishment of native and seeded vegetation which would benefit the species in the long-term.

Using the specified design features for treatments other than ground disturbing or herbicide treatments, effects to northern Idaho ground squirrels would be minimized, however, all site-specific ESR treatments proposed within the historic range of the northern Idaho ground squirrel, including ground disturbing or herbicide treatments, would require additional ESA Section 7 consultation with FWS during site-specific planning to ensure treatments would have "No Effect" or be discountable, insignificant, or completely beneficial.

Any proposed ground disturbing or herbicide ESR treatments within southern Idaho ground squirrel sites would be designed to minimize potential impacts to the species. The effects of other treatments to southern Idaho ground squirrels would either have "No Effect" or be discountable, insignificant, or completely beneficial using the activity-specific design features.

**Bald Eagle and Other Raptors**
Natural recovery of vegetation would have no adverse affects on the bald eagle or other raptors.

Inventories for SSS and their habitats, including the bald eagle would be conducted prior to implementation of all ground disturbing and/or noise generating activities and herbicide treatments. Those treatments incorporating design features would minimize any potential affects to bald eagles. Limited motorized vehicle use and aerial applications around currently used bald eagle nests and roost sites would assist in eliminating negative impacts to the species.

The repair and replacement of minor facilities for public health and safety, and cultural site protection and stabilization would have no adverse impact on the bald eagle.

Over both the short-term and the long-term, proposed treatments implemented with design features would accelerate soil stabilization and recovery of native vegetation, especially riparian trees such as cottonwoods, relative to natural recovery. Herbicide treatments implemented with the design features would have no adverse impact on bald eagle prey availability and would promote native plant recovery. The recovery of native, riparian vegetation would expedite the re-establishment of roosting and nesting habitat for raptors, and reduce the risk of post-wildland fire flooding and landsliding that could impact availability of prey species and cover.

The Proposed Action is also expected to contribute to the return of a more natural fire cycle over time, which would assist in the conservation of raptors by reducing future habitat loss and fragmentation due to large scale, high intensity wildland fire. The ESR treatments such as noxious and invasive weed control, revegetation, and return to more normal fire cycles that benefit prey species would indirectly benefit raptors.

Using the specified design features for ESR treatments, affects to bald eagle would either have "No Effect" or be discountable, insignificant, or completely beneficial. If ESR treatments are needed outside the scope of these design features, additional site-specific ESA Section 7 consultation would be required.

**Yellow-Billed Cuckoo**
Natural recovery of vegetation would have no adverse affect on the yellow-billed cuckoo.

Inventories for SSS and their habitats, including yellow-billed cuckoo would be conducted prior to implementation of all ground disturbing and/or noise generating activities and herbicide treatments. Mechanical seedbed preparation and seed covering; broadcast seeding with motorized vehicles; greenstrip construction; fence construction or reconstruction; off-road vehicle traffic; and aerial seeding and/or herbicide applications would have minimal effects on yellow-billed cuckoo because activities would be restricted near any occupied habitat during the nesting season.

Treatments incorporating design features for minimal disturbance near any occupied yellow billed-cuckoo habitat would be a "May Affect, Not Likely to Adversely Affect" on the yellow-billed cuckoo. For example, avoidance of herbicide treatments near occupied yellow-billed cuckoo habitat during the nesting season would reduce potential impacts to food resources and cover. Repair and replacement of minor facilities for public health and safety, and cultural site protection and stabilization would have no adverse effect on the yellow-billed cuckoo.

The treatments would benefit cuckoo by accelerating soil stabilization and recovery of native vegetation, especially riparian trees such as cottonwoods and willows, relative to natural recovery. The recovery of native riparian vegetation would promote re-establishment of insect food sources and potential nesting habitat for yellow-billed cuckoo, and reduce the risk of post-fire invasion by noxious weeds and erosion events that could degrade riparian habitat. The Proposed Action is also expected to contribute to the return of a more natural fire cycle over time, which would assist in the conservation of the yellow-billed cuckoo by reducing future habitat loss and fragmentation due to large scale, high intensity wildland fires.

**Greater Sage-grouse and Other Sagebrush Obligate Birds**
Sagebrush covertypes provide important habitat for sage-grouse, sage sparrows, Brewer's sparrows, a diversity of neotropical migrants, and other species including ground-nesters, and tend to re-establish slowly following fire (USDA Forest Service 2003a). Therefore, these habitat types would be a high priority for ESR treatments such as seedbed preparation, seeding with native vegetation, seed covering, and weed control.

Sage-grouse and other birds that occur in big sagebrush habitat could be impacted by ground-disturbing ESR treatments such as harrowing, disking, cultipacker, imprinter, chaining, vehicle traffic, and fencing. These impacts would be mostly in the form of temporary displacement of animals from adjacent unburned habitats or disruption of movements between habitats. The impacts would be reduced by design features that preclude these ground disturbing activities during the critical breeding and nesting seasons.

Treatments which incorporate design features for the use of herbicides in sage-grouse habitats would have no adverse affect on the species. Treatments would not occur during breeding and nesting season, and therefore their impacts are minimized.

Vegetation ESR treatments in greater sage-grouse habitat would consider the guidance found in *Idaho Sage-grouse Management Plan* (Hemker 1997), *Guidelines to Manage Sage-grouse*

*Populations and Their Habitats* (Connelly *et al*. 2000), and *Management Considerations for Sagebrush* (*Artemisia*) *in the Western United States* (USDI BLM 2002) to minimize the short-term impacts and maximize the long-term benefits of ESR treatments.

Weed treatments, revegetation, and deferred livestock grazing would benefit sage-grouse habitat in the long-term by a rapid establishment of a suitable habitat along with an overall increase in quality and quantity of food and cover.

**Columbian Sharp-tailed Grouse**
Big sagebrush cover types provide important habitat for Columbian sharp-tailed grouse and establishes slowly following fire. Therefore, these habitat types would be a high priority for ESR treatments.

Mountain shrub and riparian shrub habitats respond favorably to fire, but can be damaged by a hot fire. These habitat types would be a high priority for ESR treatments to rapidly re-establish shrubs and to improve species diversity.

Sharp-tailed grouse and other species that occur in these habitats could be impacted by ground-disturbing ESR treatments such as harrowing, disking, cultipacker, imprinter, chaining, vehicle traffic, and fencing. These impacts would be mostly in the form of temporary displacement of animals from adjacent unburned habitats or disruption of movements between habitats, but would be reduced by design features that preclude these ground disturbing activities during the critical breeding and nesting seasons.

Although Columbian sharp-tailed grouse use slightly more mesic habitats than greater sage-grouse, their requirements are close enough to adopt greater sage-grouse guidelines for sharp-tailed habitat, and the vegetation ESR treatments in Columbian sharp-tailed grouse would consider guidance found in *Idaho Sage-grouse Management Plan* (Hemker 1997), *Guidelines to Manage Sage-grouse Populations and Their Habitats* (Connelly *et al.* 2000), and *Management Considerations for Sagebrush* (*Artemisia*) *in the Western United States* (USDI BLM 2002) to minimize the short-term impacts and maximize the long-term benefits of ESR treatments. More site-specific guidelines are located in the Four Rivers Field Office *Hixon Columbian Sharp-tailed Grouse Habitat Management Plan* (USDI BLM 1994). Weed treatments, revegetation, and deferred livestock grazing would also benefit sharp-tailed habitat in the long-term by rapid establishment of suitable habitat and an overall increase in the quality and quantity of food and cover.

## 7. AQUATIC WILDLIFE

### a. GENERAL AQUATIC WILDLIFE

Natural recovery of vegetation would have no adverse impact on general aquatic wildlife.

The potentially adverse impacts of ESR treatments would be minimized by incorporating design features, and are expected to be relatively minor and short-lived. Adverse impacts during treatment implementation would include temporary disturbance of wetland, riparian, or aquatic habitats. Beneficial affects would include a more rapid re-establishment of suitable riparian and aquatic habitat than natural recovery; improved water quality by maintaining bank stability, reducing sediment loads, maintaining low water temperatures; and diminishing the risk of post-fire flooding and landsliding that could degrade riparian habitat, water quality, and aquatic habitat over the long-term. The short-term impacts would be more than offset by long-term benefits of ESR treatments.

The ESR herbicide application design features would minimize impacts to riparian vegetation and water quality. Post-fire weeds could spread from the initial area of disturbances and eventually dominate a riparian area if left untreated. Recovery of weed-infested areas and re-establishment of desirable riparian species would provide better soil and water protection, insect production, stream canopy cover, bank protection, and large woody debris recruitment potential to benefit aquatic wildlife.

### b. Special Status Aquatic Wildlife

Natural recovery of vegetation would have no adverse impact on bull trout.

Inventories for SSS and their habitats, including bull trout, would be conducted prior to implementation of all ground disturbing activities and herbicide treatments.

ESR treatments that incorporate design features to minimize impacts of ground disturbance and herbicide applications upstream and adjacent to bull trout habitat are expected to have minimal short-term and wholly beneficial long-term impacts. For example, the most restrictive herbicide design features would be in the zones closest to live water to protect water quality, and wetland, riparian, and aquatic habitats.

In the long-term, native riparian vegetation recovery would assist in the maintenance of and/or improvement in water quality for bull trout by maintaining bank stability; reducing sediment loads; increasing insect production; maintaining canopy cover and low water temperatures; providing large woody debris; and diminishing the risk of post-fire flooding and land sliding that could degrade water quality and aquatic habitat. ESR treatments would benefit bull trout by accelerating soil stabilization and recovery of native vegetation, especially riparian trees such as cottonwoods and willows, relative to natural recovery.

Using the specific design features, most of the proposed ESR treatments would either have “No Effect” or “May Affect, Not Likely to Adversely Affect” on bull trout and would not adversely affect primary constituent elements of proposed critical habitat for bull trout. The installation of in- or near-channel erosion control structures, or repair or replacement of facilities, have the potential to contribute to instream sediment levels, or may directly impact individual bull trout. Site-specific instream or sediment generating treatments upstream or adjacent to bull trout populations and/or within proposed bull trout critical habitat would be designed to minimize potential impacts. These treatments would also be evaluated on a site-specific basis to determine if additional ESA Section 7 consultation and/or conferencing would be required.

If ESR treatments are needed outside the scope of the resource specific design features, or if any treatment, including instream activities such as culvert or bridge replacement or repair is determined to be “Likely to Adversely Affect” to bull trout or proposed critical habitat based on site-specific parameters, additional site-specific ESA Section 7 consultation and/or conferencing would be required.

**Redband Trout**
Natural recovery of vegetation would have no adverse impact on redband trout.

Inventories for SSS and their habitats, including redband trout, would be conducted prior to implementation of all ground disturbing activities and herbicide treatments.

ESR treatments that incorporate design features to minimize impacts of ground disturbance and herbicide applications upstream and adjacent to redband trout habitat are expected to have minimal short-term and wholly beneficial long-term impacts. For example, the most restrictive herbicide design features would be in the zones closest to livewater to protect water quality, and wetland, riparian, and aquatic habitats.

In the long-term, native riparian vegetation recovery would assist in the maintenance of and/or improvement in water quality for redband trout by maintaining bank stability; maintaining canopy cover and low water temperatures; providing large woody debris; and diminishing the risk of post-fire flooding and landsliding that could degrade water quality and aquatic habitat. ESR treatments would benefit bull trout by accelerating soil stabilization and recovery of native vegetation, especially riparian trees such as cottonwoods and willows, relative to natural recovery.

The installation of in- or near-channel erosion control structures, or repair or replacement of facilities, have the potential to contribute to instream sediment levels, or may directly impact redband trout. Site-specific instream or sediment generating treatments would be designed to minimize potential impacts to redband trout.

**Aquatic Snails**
Natural recovery of vegetation would have no adverse impact on the six ESA listed snails.

Inventories for SSS and their habitats, including the listed snails would be conducted prior to implementation of all ground disturbing activities and herbicide treatments.

ESR treatments that incorporate design features to minimize impacts of ground disturbance and herbicide applications upstream and adjacent to listed snail habitat are expected to have minimal short-term and wholly beneficial long-term impacts. For example, the most restrictive herbicide design features would be in the zones closest to livewater to protect water quality, and wetland, riparian, and aquatic habitats.

In the long-term, native riparian vegetation recovery would assist in the maintenance of and/or improvement in water quality for listed snails by maintaining bank stability; reducing sediment loads; increasing insect production; maintaining canopy cover and low water temperatures; maintaining spring flow; providing large woody debris; and diminishing the risk of post-fire flooding and landsliding that could degrade water quality and aquatic habitat. ESR treatments would benefit the snails by accelerating soil stabilization and recovery of native vegetation relative to natural recovery.

Using the specific design features, most of the proposed ESR treatments would either have "No Effect" or "May Affect, Not Likely to Adversely Affect" on the snails. The installation of in- or near-channel erosion control structures, or repair or replacement of facilities, have the potential to contribute to instream sediment levels, or may directly impact individual snails. Site-specific instream or sediment generating treatments upstream or adjacent to listed snail populations would be designed to minimize potential impacts. These treatments would also be evaluated on a site-specific basis to determine if additional ESA Section 7 consultation and/or conferencing would be required.

If ESR treatments are needed outside the scope of the resource specific design features, or if any treatment, including instream activities such as culvert or bridge replacement or repair is determined to be "Likely to Adversely Affect" to a listed snail based on site-specific parameters, additional site-specific ESA Section 7 consultation and/or conferencing would be required.

**Frogs**
Natural recovery of vegetation would have no adverse impact on Columbian spotted frog and northern leopard frog.

Inventories for SSS and their habitats, including Columbian spotted frog and northern leopard frog, would be conducted prior to implementation of all ground disturbing activities and herbicide treatments.

Most ESR treatments that incorporate design features to minimize impacts of ground disturbance and herbicide applications upstream and adjacent to SSS frog habitat are expected to have minimal short-term and wholly beneficial long-term impacts. For example, the most restrictive herbicide design features would be in the zones closest to livewater to protect water quality, and wetland, riparian, and aquatic habitats. In the long-term, native riparian vegetation recovery would assist in the maintenance of and/or improvement in water quality for SSS frogs by maintaining bank stability; reducing sediment loads; increasing insect production; maintaining canopy cover and low water temperatures; providing large woody debris; and diminishing the risk of post-fire flooding and landsliding that could degrade water quality and aquatic habitat. ESR treatments would benefit the frogs by accelerating soil stabilization, recovery of native vegetation relative, and re-establishment of insect food sources relative to natural recovery. Therefore, most ESR treatments would be "No Effect" or "May Affect, Not Likely to Adversely Affect" on Columbia spotted frog.

The installation of in- or near-channel erosion control structures, or repair or replacement of facilities, have the potential to contribute to instream sediment levels, or may directly impact frogs. Site-specific instream or sediment generating treatments would be designed to minimize potential impacts to frogs. These treatments would be evaluated on a site-specific basis to determine if additional ESA Section 7 consultation and/or conferencing for Columbia spotted frog would be required.

### 8. RECREATION

Short-term impacts to recreation would occur if burned areas require temporary closure to the public to prevent resource damage such as scarring, accelerated erosion, and damage to remnant vegetation, or to allow ESR treatments such as seedings to become established. In developed or high use undeveloped areas, this would result in reduced recreational opportunities and could result in increased use in other areas. ESR treatments that stabilize soil and promote vegetative recovery, including temporary closures would benefit recreational, natural, and cultural resources in the long-term.

Aesthetic properties of the landscape would be changed as a result of ESR treatments in both the short- and long-term, and could change recreational use patterns. In the long-term, treatment of previously degraded areas (e.g. annual grassland) would result in enhanced visual quality (see below) and decrease the risk of fire associated with recreational use. In the long-term, the potential impacts to recreational resources would be reduced and future recreational experiences would be improved as a result of ESR treatments.

Repair and/or reconstruction of damaged recreation facilities would benefit the public by re-establishing minor structures damaged by wildland fire.

Herbicide application re-entry notices, as outlined on herbicide use labels, would be posted in all spray areas as necessary. All herbicide applications would follow strict design features to protect potable water sources.

## 9. SPECIAL MANAGEMENT AREAS

### ACECs and Wild and Scenic Rivers

Natural recovery would have no adverse impact on SMAs, including ACECs and Wild and Scenic river segments.

Impacts to ACECs and Wild and Scenic Rivers would be minimized by utilizing design features to protect and maintain the water quality, viewsheds, airsheds, plant and animal habitat, and recreational opportunities by preventing soil erosion, water quality degradation, spread of noxious and invasive weeds; and maintaining vegetative cover, native ecosystems, and pristine landscapes.

Mechanical soil treatments such as rangeland drills, no-till drills, press wheels, and imprinters may leave visual rows or uniform planting patterns on the landscape and would only be used in these SMAs if the rows can be created in an irregular pattern and knocked down to minimize unnatural patterns to: 1) maintain the suitability of proposed Wild and Scenic river segments for inclusion in the National Wild and Scenic River System, 2) protect and prevent irreparable damage to the important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes in ACECs, and 3) maintain and protect the high scenic values in ONAs, RNAs, Wild and Scenic River corridors, and the other VRM Class I viewsheds.

### Wilderness Study Areas

Natural recovery would have no adverse impact on WSAs. However, short-term visual impacts would result from the presence of temporary protective fencing. The recovery of native vegetation and removal of protective fencing would enhance wilderness values in the long-term.

Impacts of ESR treatments in WSAs would be mitigated by utilizing the NFRP design features, and adherence to guidance outlined in the *Interim Management Policy and Guidelines for Lands Under Wilderness Review* (IMP) H-8550-1 (USDI LM 1967) and the *Boise District Wilderness Interim Management Plan* (USDI BLM 1987).

The use of hand or broadcast seeding without seed covering treatments due to WSA status can reduce the effectiveness of the seeding and may result in increased soil erosion and the spread of noxious and invasive species. The use of the least intrusive/lowest impact methods of seedbed preparation, seeding, and seed covering treatments to stabilize soils, control noxious and invasive weeds could result in short-term loss of vegetative cover and soil surface disturbance.

Application of both herbicide and seeding treatments would result in some temporary loss of wilderness values through short-term equipment use and loss of vegetation cover. Short-term visual impacts would also result from the presence of temporary protective fencing. ESR treatments in the long-term would enhance wilderness values by stabilizing soils and replacing annual grassland with plant communities that would be functionally and structurally similar to native sagebrush-steppe.

Seed cover methods have varying degrees of impact to the wilderness resource. The primary impact would be visual based on the selected seed cover method. The use of a rangeland drill or no till-drill to directly apply seed would give the seed the highest probability for germination because of optimum seed coverage. Even with the design feature of irregular planting margins the use of a drill would have a visual impact. The no-till drill would be less visually impacting because the drill row would be less discernible.

Erosion control structures would have a short-term visual impact to wilderness values. The use of erosion control to stabilize watersheds and to minimize the risk of degrading water quality would benefit WSAs in the long-term by preventing soil erosion and water quality degradation to protect, maintain, or improve water quality, wildlife habitat, and SSS habitats.

### 10. VISUAL RESOURCES

Impacts to visual resources as a result of the Proposed Action could be relatively high immediately following mechanical treatments such as drilling, chaining, or harrowing. There are some high visual sensitivity areas in the Class III and IV VRM areas (e.g. areas adjacent to highways or other heavily-traveled roads) where mechanical disturbances could create high levels of contrast to the surrounding landscapes, and temporarily degrade scenic quality. Over the long-term, as seeded vegetation becomes successfully established, the levels of contrast would be reduced or improved as a result of ESR treatments.

ESR treatments would be applied to preserve the visual qualities of the landscape in SMAs (e.g. WSAs, Wild and Scenic Rivers, ACECs, VRM Class I Areas). BMPs are normally applied to minimize the visual impacts of management activities through careful location, minimal disturbance, and consideration of visual contrasts with the surrounding landscape. In addition, potential ESR impacts would be mitigated by utilizing NFRP design features, and adherence to guidance outlined in the *Interim Management Policy and Guidelines for Lands under Wilderness Review* (IMP) H-8550-1 and the *Boise District Wilderness Interim Management Plan* (USDI BLM 1987) in WSAs. There would be short-term impacts to visual qualities due to soils disturbance associated with some seeding treatments and the visibility of slope stabilization treatments. In the long-term, ESR treatments would maintain visual quality by preventing erosion and maintaining native vegetation.

### 11. CULTURAL RESOURCES

The proposed combination of "survey and avoid" and consultation with SHPO would protect irretrievable paleontological, cultural, and historic resources during ground disturbing treatments such as seedbed preparation, seeding, seed covering, contour trenching, and fencing to the extent practicable under the NHPA.

The use of no-till or rangeland drills with depth bands would benefit cultural resources by promoting revegetation and preventing additional degradation or loss of cultural resources due to exposure and/or access. Soil stabilization treatments would also benefit cultural resources by minimizing soil movement around and onto cultural resources following wildland fire.

Utilizing cultural specialist direction and supervision during cultural ESR treatments would prevent direct, adverse affects to cultural resources.

The use of ESR closures and patrols to prevent post-fire damage from livestock, vehicles, and people until sites are stabilized would protect cultural resources that are exposed due to loss of vegetative cover.

Structural ESR of historical properties would also be done under direction and supervision of cultural resource specialists. These treatments would protect and preserve historical properties damaged by fire in the long-term.

The Boise District is part of Shoshone-Bannock and Shoshone-Paiute Tribes (the Tribes) aboriginal lands and the Tribes are sovereign, self-governing entities. The Tribes have a government to government relationship with the United States, and the federal government has a trust obligation to protect the Tribes' interests including protection of paleontological, cultural, and heritage resources. The proposed ESR treatments and design features, including coordination with the Tribes would meet these obligations.

### 12. GRAZING MANAGEMENT

There could be some short-term economic loss to livestock permittees as a result of post-fire ESR treatments due to public land grazing closures and/or restrictions. Re-vegetated and burned but not re-vegetated areas may be closed to livestock grazing for a minimum of two growing seasons following the season in which the wildland fire occurred to promote recovery of burned perennial plants and/or facilitate the establishment of seeded species. Closures and/or restrictions may be in effect for two growing seasons, or until site objectives for soil stabilization and vegetation have been met as per Interagency Burned Area Emergency Response Handbook V 4.0 Section 8.3.2.2 Livestock, Wild Horse, and Burro Use and in the BLM Supplemental ESR Guidance page 10. During these time frames, permittees must locate other feed sources such as feeding their livestock hay on their private grounds, leasing other pastures, and/or the possibility of having to liquidate some of their livestock herd until ESR vegetative recovery and/or resource objectives have been met.

ESR treatments would prevent noxious weed invasion and/or replace poor quality rangelands, such as those dominated by cheatgrass with high quality perennial community types; improve the ecological health of the rangeland; and contribute toward reducing large-scale, high intensity fires. These improvements would result in increased rangeland health and stability in the long-term.

## C. CUMULATIVE IMPACTS

The ESR program would contribute toward reversing the trend of higher frequency and higher intensity fires by converting annual grasslands back to fire-adapted, native plant species and/or desirable non-native species.

Special status and non-status plants and animals would be protected by the general and species-specific design features, and would benefit from a return to more natural fire cycles and improved ecosystem function including better habitat/population connectivity, migratory corridors, habitat structure, forage, and stability. Prey species would directly benefit from ESR treatments, and predator species would benefit indirectly when prey species populations rebound.

There would be a short-term loss of forage for livestock and/or wild horses as a result of the fire and during periods of deferred grazing. In the long-term, soil would be protected and more diverse, palatable and fire-resistant vegetation would be established which would benefit livestock, wild horses, and wildlife.

The cumulative improvements that result from ESR treatments would also help protect non-living resources and communities from future fire impacts.

# V. COORDINATION, CONSULTATION, AND PUBLIC INVOLVEMENT

**Coordination**

The Boise District is part of the Tribes aboriginal lands, and the Tribes are sovereign, self-governing entities. The Tribes were consulted during two Wings and Roots Native American Campfire meetings on June 17 and July 15, 2004. The Tribes have a government to government relationship with the United States, and the federal government has a trust obligation to protect the Tribes' interests including protection of paleontological, cultural, and heritage resources. The proposed ESR treatments and design features includes coordination with the Tribes.

**Consultation**

A list of ESA listed, proposed, and candidate species and critical habitat was requested from USFWS on November 17, 2003, and a response was received on January 5, 2004. ESA Section 7 consultation continued with USFWS during the development of the EA. The Boise District Level 1 ESA Streamlining (Level 1) Team will review, discuss, and come to an agreement on the Biological Assessment. A final decision based on the EA will not be made until consultation is concluded which is estimated to be the end of August 2004.

Since this consultation is based on a programmatic analysis, continued coordination between USFWS and the BLM would assist in monitoring individual ESR projects and furthering the knowledge based on species post-fire recovery. When ESR treatments may affect listed, proposed, or candidate species, USFWS would be given the opportunity to participate as a member in site-specific ESR planning interdisciplinary teams. In addition, the Boise District Level 1 Team would be given the opportunity to review site-specific ESR planning documents if Proposed Actions "May Affect" listed, proposed, or candidate species and to corroborate the interdisciplinary team's effects determinations. If site-specific ESR treatments exceed the parameters described under the Proposed

Action and/or "May Adversely Affect" proposed or listed species or their habitats, additional site-specific ESA Section 7 consultation may be required prior to individual project implementation.

As part of monitoring, the acreages and locations of site-specific actions associated with listed, proposed, and candidate species and/or critical habitat would be submitted to USFWS annually. The BLM would also report the acreages and locations of site-specific actions implementing in slickspot peppergrass habitat annually.

**Public Involvement**

A scoping letter informing the public of the purpose and need for action was sent to 1,077 interested publics including organizations, and federal and state agencies in October 2003. By the end of the 30-day scoping period, a total of twenty letters (both mail and e-mail) and six phone calls were received. The comments received are summarized below.

The majority of the comments focused on: 1) seeding practices, 2) livestock grazing, 3) effectiveness monitoring, 4) noxious and invasive weeds, and 5) economic concerns. Some comments were outside the scope of this analysis including comments related to the Boise District Fire Management Plan (USDI BLM draft 2004).

Responses to a single broad comment often incorporated several topics of concern. In these cases, the issues were broken out and addressed as separate comments. Comments were grouped under a total of 18 subject topics, as shown in the comment summary table (below).

**Summary of Initial Public Scoping Issues**

| | Comment Issues | Number of Comments |
|---|---|---|
| 1. | Seeding Native / Non-Native | 17 |
| 2. | Livestock Grazing | 17 |
| 3. | Effectiveness Monitoring | 10 |
| 4. | Miscellaneous | 10 |
| 5. | Noxious and Invasive Weeds | 7 |
| 6. | Economic Concerns | 7 |
| 7. | Timeliness of Implementation | 6 |
| 8. | BLM Policy | 6 |
| 9. | NEPA Request for More Documentation | 6 |
| 10. | Fire Management Plan (Related but Outside the Scope) | 5 |
| 11. | Cumulative Impacts | 4 |
| 12. | Enforcement/Trespass (Livestock & Recreation) | 3 |
| 13. | NEPA Analysis Level Should Be an EIS | 3 |
| 14. | Recreation | 3 |
| 15. | Wildlife | 3 |
| 16. | Outside the Scope of this Analysis | 2 |
| 17. | Herbicide Containment | 2 |
| 18. | EPA 303(d) Water Quality Limited Stream Segments | 1 |

Many comments (17) were received about native and non-native seed use. Primarily, those who commented supported either native seeding or non-native seeding. As explained in the EA, areas of high intensity wildland fires would generally be reseeded or revegetated when the native vegetation and seed source have been burned, or when invasive and/or noxious weeds and annuals (e.g. cheatgrass or medusahead wildrye) are present or have a seed source nearby. The use of native seeds including shrub species would be emphasized depending on cost and availability in compliance with BLM Manual 1745. In most circumstances, a mixture of site-specific native, perennial grasses, shrubs, and forbs, including nitrogen-fixing forbs would be used for revegetation. Introduced species would be used for revegetation only if: 1) suitable native species are not available, 2) the natural biological diversity is not diminished, 3) exotic and naturalized species can be confined within the proposed treatment area, 4) analysis of appropriate information including ecological site inventory indicates that a site may not support re-establishment of a species that was historically part of the natural environment, or 5) resource management objectives cannot be met with native species.

The issue of livestock grazing also received many comments (17). The comments were either pro or con post-fire grazing deferment. Primarily, people either supported post-burn livestock grazing or deferred livestock grazing. As explained in the EA, livestock grazing would be deferred for a minimum of two full growing seasons after the burn or until site objects have been met to allow natural recovery areas and seeded areas to recover and set seed, and to meet resource objectives. Effectiveness monitoring would be used to determine when livestock grazing could be resumed. This is as per BLM ESR Handbook H-1742-1 1999. "Re-vegetated and burned but not re-vegetated areas will be closed to livestock grazing for a minimum of two growing seasons following the season in which the wildland fire occurred to promote recovery of burned perennial plants and/or facilitate the establishment of seeded species. Livestock permittees must be informed of the closure early during the plan preparation process, and livestock closures will be made a condition or term on the grazing license or permit. Livestock closures for less than two growing seasons may be justified on a case-by-case basis, based on sound resource data and experience."

The issue of effectiveness monitoring also received many comments (10). Goals for monitoring are a part of the Proposed Action in the EA and specific monitoring plans would be required for the ESR plans after a fire. Effectiveness monitoring is a part of every plan, and the USDI is developing standard protocols and a reporting system to improve information dissemination. Past ESR experience on the District has been used to develop the normal treatments in this NFRP EA. Effectiveness monitoring would be used to continually improve local ESR effectiveness.

The issues of weed management and economic concerns also received many comments (7). Weed management is a primary objective of this NFRP EA because of existing conditions on the District, and noxious and invasive weed control would be an integral part of all ESR plans.

Economic concerns (7) were primarily focused on loss of forage during deferred grazing periods, protective fencing, and the cost of unsuccessful ESR treatments. There would be some short-term economic loss during deferred grazing periods, however, forage production and rangeland health would benefit in the long-term. Deferment could be accomplished with protective fences, pastures closures, or whole allotment closures, whichever is more economically feasible.

Precipitation in the years following an ESR treatment is often the most important factor in determining treatment success. Treatments can occur up to three years after control of a fire to: 1) repair or improve land damaged by wildland fire that is unlikely to recover to a pre-fire condition, 2) repair or replace minor facilities damaged or destroyed by fire, or 3) retreatments that were implemented under an approved ESR Plan but failed due to natural factors such as drought or flooding.

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# VIII. LIST OF ACRONYMS

| | |
|---|---|
| **ACEC** | Area of Critical Environmental Concern |
| **BLM** | Bureau of Land Management |
| **EA** | Environmental Assessment |
| **ESA** | Endangered Species Act |
| **ESP** | Emergency Stabilization Plan |
| **ESR** | Emergency Stabilization and Rehabilitation |
| **IDEQ** | Idaho Department of Environmental Quality |
| **IDFG** | Idaho Department of Fish and Game |
| **LSRD** | Lower Snake River District |
| **NCA** | Snake River Birds of Prey National Conservation Area |
| **NEPA** | National Environmental Policy Act |
| **NFRP** | Normal Fire Rehabilitation Plan |
| **NHPA** | National Historic Preservation Act |
| **ONA** | Outstanding Natural Area |
| **RNA** | Research Natural Area |
| **RP** | Rehabilitation Plan |
| **SHPO** | State Historic Preservation Officer |
| **SMA** | Special Management Area |
| **SSS** | Special Status Species |
| **USDA** | United States Department of Agriculture |
| **USDI** | United States Department of the Interior |
| **USFWS** | U.S. Fish and Wildlife Service |
| **VRM** | Visual Resource Management |
| **WSA** | Wilderness Study Area |

## Appendix A: List of Species Commonly Used in Revegetation

**GRASSES**

Barley (*Hordeum vulgare*)

Bluegrass, (*Poa* spp.)

Brome, mountain (*Bromus marginatus)*

Brome, smooth (*Bromus intermis*)

Dropseed, sand (*Sporobulus cryptandrus*)

Fescue, creeping red (*Festuca rubra*)

Fescue, Idaho (*Festuca idahoensis*)

Foxtail, meadow (*Alopecurus pratensis*)

Needle-and-thread (*Hesperostipa comata comata*)

Needlegrass, Thurber's (*Achnatherum thurberiana)*

Orchardgrass (*Dactylis glomerata*)

Ricegrass, Indian (*Achnatherum hymenoides*)

Ryegrass, perennial (*Lolium perenne*)

Sacaton, alkali (*Sporobolus airoides*)

Squirreltail, bottlebrush (*Elymus elymoides*)

Wheatgrass, bluebunch (*Pseudoroegneria spicata*)

Wheatgrass, crested (*Agropyron cristatum*)

Wheatgrass, standard crested (*Agropyron desertorum*)

Wheatgrass, intermediate (*Thinopyrum intermedia intermedia*)

Wheatgrass, RS (*Elymus hoffmannii*)

Wheatgrass, pubescent *(Thinopyrum intermedia trichophorum)*

Wheatgrass, Siberian (*Agropyron fragile sibericum*)

Wheatgrass, slender (*Elymus trachycaulus trachycaulus*)

Wheatgrass, Snake River (*Elymus wawawaiensis*)

Wheatgrass, streambank (*Elymus lanceolatus psammophilus*)

Wheatgrass, tall (*Elytrigia elongata*)

Wheatgrass, thickspike (*Elymus lanceolatus lanceolatus*)

Wheatgrass, western (*Pascopyrum smithii)*

Wildrye, basin (*Leymus cinereus*)

Wildrye, beardless (*Leymus triticoides*)

Wildrye, Russian (*Psathyrostachys juncea*)

**FORBS**

Alfalfa (*Medicago sativa*)

Aster (*Aster* spp.)

Balsamroot, arrowleaf (*Balsamorhiza sagittata*)

Biscuitroot, Gray's *(Lomatium grayi)*

Burnet, small (*Sanquisorba minor*)

Buckwheat species *(Eriogonum* spp.*)*

Flax, blue (*Linum perenne*)

Flax, Lewis (*Linum perenne lewisii*)

Globemallow, gooseberryleaf (*Sphaeralcea grossulariifolia*)

Globemallow, scarlet (*Sphaeralcea coccinea*)

Hawksbeard species *(Crepis* spp.*)*

Lupine species *(Lupinus* spp.*)*

Milkvetch, cicer (*Astragalus cicer*)

Penstemon, palmer (*Penstemon palmeri*)

Penstemon, Rocky Mountain (*Penstemon strictus*)

Sainfoin (*Onobrychis viciifolia*)

Sweetclover, yellow (*Melilotus officinalis*)

Sweetvetch (*Hedysarum* spp.)

Yarrow, western (*Achillea millefolium*)

**SHRUBS**

Bitterbrush, antelope (*Purshia tridentata*)

Bitterbrush, desert (*Purshia glandulosa*)

Budsage *(Artemisia spinescens)*

Buffaloberry, silver (*Shepherdia argentea*)

Ceanothus, Martin's (*Ceanothus martinii*)

Chokecherry (*Prunus virginiana*)

Cliffrose (*Purshia stansburiana*)

Currant, golden (*Ribes aureum*)

Ephedra, green (*Ephedra viridis*)

Greasewood *(Sarcobatus vermiculatus)*

Horsebrush, spineless *(Tetradymia canescens)*

Hopsage, spiny (*Grayia spinosa*)

Kochia, prostrate (*Kochia prostrata*)

Mahogany, curl-leaf mountain (*Cercocarpus ledifolius*)

Rabbitbrush, rubber *(Chrysothamnus nauseosus)*

Rabbitbrush, green *(Chrysothamnus viscidiflourus)*

Rose, Wood's (*Rosa woodsii*)

Sagebrush, basin big (*Artemisia tridentata tridentata*)

Sagebrush, black (*Artemisia nova*)

Sagebrush, low *(Artemisia arbuscula)*

Sagebrush, silver *(Artemisia cana)*

Sagebrush, mountain big (*Artemisia tridentata vaseyana*)

Sagebrush, Wyoming big (*Artemisia tridentata wyomingensis*)

Saltbush, fourwing (*Atriplex canescens*)

Saltbush, Gardner's (*Atriplex gardneri*)

Serviceberry, Saskatoon (*Amelanchier alnifolia*)

Shadscale (*Atriplex confertifolia*)

Snowberry, mountain (*Symphoricarpus albus*)

Sumac, skunkbush (*Rhus trilobata*)

Willow (*Salix* spp.)

Winterfat *(Krascheninnikovia lanata)*