

**FINDING OF NO SIGNIFICANT IMPACT AND
DECISION RECORD FOR THE TUCKER FIRE
EMERGENCY FIRE REHABILITATION PLAN
EA# OR-010-2002-06**

Introduction

The Lakeview Resource Area, Bureau of Land Management (BLM) has analyzed a proposal and several alternatives for reseeding and fencing to accomplish emergency rehabilitation of burned lands under BLM administration associated with in the Tucker Fire (M-264). The Tucker fire burned between July 12 and July 18, 2002. The fire burned approximately 1560 acres of public land and 240 acres of private land.

Decision:

After consideration of the analysis of impacts and mitigating measures of the proposed action (preferred alternative) and other alternatives, my decision is to implement the proposed action as follows:

Aerial seed approximately 1000 acres and broadcast seed approximately 300 acres of public land. The seed mixes contain native grasses, forbs and shrubs adapted to the specific ecological sites present.

The construction of one mile of permanent protection fence will remain in place. The area will remain it's present status, which is not permitted for livestock grazing. 1000 feet of boundary fence will be reconstructed to further protect the area from livestock grazing. One-half mile of dozer line in a steep erodible canyon would be seeded, water-barred and signed closed to vehicle traffic.

Other alternatives considered include Alternative 1: No Action-continue present management; and Alternative 2: No seeding, build protection fence only.

Rationale

The proposed action will provide a perennial vegetation cover of native grasses, forbs, and shrubs. These species will compete with cheatgrass and other exotic annuals and occupy the site which will discourage noxious weed invasion. The result would be a more diverse vegetation community. The establishment of these vegetation communities will inhibit reoccurring wildfires and lessen the potential for a catastrophic wildfire in these Wyoming big sagebrush, and basin big sagebrush /cheatgrass zones. The establishment of perennial vegetation communities will lessen the potential for accelerated erosion. When the sites have an established perennial vegetation communities, they will progress toward native communities.

The construction of a permanent protection fence/pasture fence versus an on-site temporary protection fence within Tucker Allotment is the most economical. This fence will protect the seeded area, which will remain closed to livestock grazing.

The reconstruction of 1000 feet of existing allotment boundary fence is essential to protect the

Effective Date: This decision is in full force and effect as of August 15, 2002.

Appeal Process: Any person who is adversely affected by this decision may file an appeal within 30 days of the decision record in accordance with 43 CFR, Part 4. Any request for a stay of this decision in accordance with CFR Part 4.21 must be filed with the appeal.

Finding of No Significant Impact

The Lakeview District, BLM, has analyzed a proposal and several alternatives for emergency stabilization and rehabilitation of BLM lands recently burned in the Tucker Fire (M264) located within the Lakeview Resource Area. The High Desert Management Framework Plan (MFP) (1983) is silent on the issue of reseeded following wildfire. However, the MFP and the Lakeview Grazing Management FEIS/ROD (1982) cover the impacts of construction of protective fencing. These documents may be reviewed at the Lakeview District Office. More recently, national wildfire rehabilitation policy has been formally developed in the BLM Emergency Fire Rehabilitation Handbook (1998) and a native seeding policy has been developed through executive order.

The design features and the recommended mitigation measures identified in the attached Environmental Assessment (EA) would assure that no significant adverse impacts would occur to the human environment. The following resource values either are not present in the project area or would not be impacted by any of the alternatives considered: air quality, prime or unique farmlands, flood plains, wetlands or riparian zones, water quality, American Indian religious or traditional use areas, hazardous or solid wastes, visual resources, wild and scenic rivers, wilderness study areas, wild horses, livestock grazing, paleontological resources, lands, fisheries, minerals, or low income/minority populations.

The adverse affects identified are minimal and of short durations with no significant secondary, indirect, or cumulative impacts. They area as follows:

- a) soil disturbance.
- b) fencing could have minimal effects to movement of wildlife species, as pronghorn antelope; although design would be incorporated to facilitate passage by antelope.

Determination

On the basis of the information contained in the EA and all other information available to me as summarized above, it is my determination that none of the alternatives analyzed constitutes a major Federal action affecting the quality of the human environment. Therefore, an Environmental Impact Statement (EIS) is unnecessary and will not be prepared.



Acting Field Manager
Lakeview Resource Area



Date

TUCKER FIRE (M264)
EMERGENCY STABILIZATION AND REHABILITATION PLAN
AND
ENVIRONMENTAL ASSESSMENT
EA OR-010-2002-06

Bureau of Land Management
Lakeview District Office
Lakeview Resource Area
1301 South G Street
Lakeview, Oregon 97630

PREPARED August 15, 2002

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TUCKER EMERGENCY FIRE REHABILITATION PLAN
AND
ENVIRONMENTAL ASSESSMENT
OR-010-2002-6

CHAPTER I. INTRODUCTION: PURPOSE OF AND NEED FOR ACTION

A. Introduction

On July 12, 2002, the Tucker Fire (M-264) was started by a lightning strike, as numerous storm cells moved through the Lakeview District. The Tucker Fire burned approximately 1560 acres of public land and 240 acres of private land 8 miles southwest of Paisley, Oregon, in the Lakeview District of the Bureau of Land Management (BLM).

The elevation on the Tucker Fire ranges from 4,320 feet to 4,984 feet. The topography is a gently sloping hilltop plateau with steep rocky sides (50-60%) sloping to the sandy shoreline of Lower Chewaucan Marsh. The plateau and all aspects surrounding the plateau were burned. The area receives 10-12 inches of precipitation, with most of the precipitation occurring during the winter in the form of snow. Some precipitation occurs during the summer and fall in the form of thunderstorms but this precipitation is ineffective for plant growth.

The Tucker Fire is within the Tucker Hill Allotment #409. The livestock grazing AUMs on the Tucker Hill allotment were transferred to the crested wheatgrass seedings in the Paisley Desert. The area is no longer permitted for livestock use. This fire burned in a Wyoming big sagebrush and bluebunch wheatgrass vegetation community. Lower elevations burned in a greasewood and basin big sagebrush community. A variety of grass species were found in the area including Indian ricegrass, basin wildrye, needle-and-thread grass, and saltgrass. Large portions of the communities have cheatgrass in the grass component.

B. Purpose and Need

The purpose of this project is to rehabilitate the burned areas to restore vegetation to stabilize the site.

Fires which have previously burned in this vicinity, quickly become dominated by cheatgrass, an invasive nonnative species, which necessitates rehabilitating the area to ensure long-term ecosystem integrity and productivity. Additionally, noxious weeds are increasing in this area and opportunities for weed establishment would be much greater without competitive native vegetation.

If not treated, cheatgrass would dominate the plant community. The likelihood of the area burning again would be greater with increased levels of cheatgrass.

Adjacent areas of sagebrush would also be at a greater risk of fire.

C. Relationship to Planning/Conformance with Land Use Plans

The High Desert Management Framework Plan (MFP), 1983, is the current land use plan for the area. The plan is silent on the issue of wildfire rehabilitation. However, the fencing component of the proposed action is considered within the MFP and the Lakeview Grazing Management FEIS/ROD (1982).

The Carlson-Foley Act (Public Law 90-583), provides direction to federal agencies for control of weeds on public lands. The Lakeview Resource Area operates under the weed protocols set forth in the following documents: Vegetation Treatment on BLM Lands in Thirteen Western States Final Environmental Impact Statement and Record of Decision (1991), and the Supplement to the Northwest Area Noxious Weed Control Program Final Environmental Impact Statement and Record of Decision (1987), and the Integrated Noxious Weed Control Program Environmental Assessment (1994).

The proposed action is in conformance with these land use plans and the BLM Emergency Stabilization and Rehabilitation (ESR) Plan (1998).

CHAPTER II. ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. Proposed Action

The Tucker Fire burned 1560 acres of public land and 240 acres of private land. The proposed action addresses only the public land. The proposed action for the Tucker Fire (M-264) (see Appendix 1, Map 1) is to seed approximately 300 acres broadcast by rubber tire tractor or 4-wheeler and 1000 acres broadcast aerially by helicopter or fixed wing aircraft. The recommended seed mixture for aerial seeding includes native grass species such as bluebunch wheatgrass, squirreltail, Sandbergs bluegrass and Thurbers needlegrass. Recommended native forb species would be blue flax, Lupinus species (Lupinus lepidus preferred), and/or clover species and astragalus species. Basin wildrye would be aerially or broadcast seeded on the dozer line which follows a steep drainage. The 300 acres would be broadcast seeded with a mixture of native grass species such as bottlebrush squirreltail, creeping wildrye, and sand dropseed. Shrub components would include spiny hopsage. Forb species would be similar to the aerial seeded species. The exact species may vary based on seed availability.

Approximately one mile of three-strand (bottom wire smooth) protective fence would be constructed to prevent cattle from adjacent areas drifting onto the seeding. Approximately 1000 feet of four wire boundary fence would be reconstructed. The area is not permitted for livestock grazing and no livestock use is expected on the rehabilitation area. District standard design specifications would be used for the fence which identify wire spacing measurements. Fencing would remain in place.

One-half mile of dozer line in a steep erodible canyon located in the north one-half of section 25 would be seeded, water-barred and signed, closed to vehicle traffic.

To discourage introduction of noxious weed seed to the rehabilitation area, equipment used for seeding such as tractors, drags, and vehicles to transport seed would be cleaned of vegetative material (seed, debris, etc.) before working on-site.

Monitoring of the rehabilitation area would occur for a minimum of three growing seasons to determine if rehabilitation objectives are being met. Rangeland monitoring would include compliance checks to ensure livestock don't get into the area. New photo points and plots of sufficient dimension will be set up in the seeding area to measure the variety and density of species seeded and assess the success of seedings. The new plots would be measured for 3 years. Photo points and aerial photo interpretation would be used to measure erosion. Soil movement and changes in drainage locations would be indicators of increased erosion.

Because noxious weeds could be introduced at any time, areas of high susceptibility require repeat inventorying on a periodic basis. Initial surveys for noxious weeds beginning the year after a wildfire event would provide for finding small infestations which typically are too small to see within a few months of the fire. Weed surveys would occur the first, second and third year after the fire (FY03,04,05). If noxious weeds are found, control treatments would occur primarily in FY04 and 05 depending on the size of the infestations and treatments necessary.

A cultural resource inventory of areas within the fire perimeter found significant archaeological properties. Protection measures will be taken to preserve these resources. A total of 300 acres would be inventoried for this assessment and protection project.

Appendix 2 contains the detailed Burned Area ESR Plan.

A cost/risk analysis has been prepared comparing the proposed alternative, the no action alternative, and the fence only alternative. This analysis is contained in Appendix 3.

B. Alternative 1: No Action

No public land would be seeded. Natural vegetation reestablishment without seeding would be allowed to occur. There would be no protective fence constructed for the burned areas.

C. Alternative 2: No Seeding, Protection Fence Only

This alternative would be the minimum necessary to protect the burned area while vegetation naturally becomes reestablished. There would be one mile of protection fence constructed, and 1000 feet of existing boundary fence repaired. Vegetation would be allowed to reestablish naturally within the burned areas.

D. Alternative 3: Alternatives Considered but Eliminated from Detailed Analysis

Drill Seed with Crested Wheatgrass Only, Install Protection Fence

This alternative was not analyzed because Bureau policy directs the utilization of native species to the extent possible and to seed in mixtures, regardless of the species being used.

CHAPTER III. AFFECTED ENVIRONMENT

A. Critical Elements

The following resource values would not be affected by the proposed action or alternatives: air quality, Areas of Critical Environmental Concern, prime or unique farmlands, floodplains, American Indian religious concerns, hazardous or solid wastes, visual resources, water quality, wetlands or riparian zones, Wild and Scenic Rivers, wild horses, livestock grazing, low income or minority populations, paleontological resources, lands, fisheries, minerals, and wilderness. Those resources which are not affected will not be discussed further in this document. The following critical elements would be affected by the proposed action or alternatives.

1. Cultural Resources

An extensive cultural resources inventory of Tucker Hill was completed for the Tucker Hill complex by James Hutchins (Kautz Environmental Consultants or KEC) and the BLM and is described in a document entitled *A Cultural Inventory of Tucker Hill, Lake County, Oregon* (KEC, 1995). The following summarizes key findings of the archeological report.

Based on the type of cultural resource sites found, the Chewaucan Lake Basin has been used by humans for thousands of years. The time period of human occupation is determined based on the types of artifacts found at a particular site.

Occupation by tribal people occurred into the early 1900s. Euro-American explorers were known to pass through central Oregon as early as 1825 when Peter Skene Ogden, from the Hudson Bay Company, followed the Crooked River east during a trapping expedition. As of 1866, the southcentral portion of Oregon was identified as “Klamath or Lutuama Indian Country” (KEC, 1995), although, the westward expansion of emigrating pioneers began during the 1840's and 1850's. Eventually, ranching became established in this area.

During the course of the archeological survey conducted by both the BLM and KEC, numerous cultural resource sites were identified on the Tucker Hill formation. In the past, three archeological sites had been formally evaluated for placement on the National Register of Historic Places. The formation of Tucker Hill appears potentially eligible as a National Register Archeological District and potentially eligible as a Traditional Cultural Property.

2. Noxious Weeds

The Tucker fire contains a small number of Mediterranean sage and bull thistle plants. Tumble mustard and cheatgrass are present throughout the area. Medusahead rye, Canadian thistle and bull thistle are present in many areas near the burn. The nearest location of medusahead rye is 2 miles. Heavy vehicle traffic in the area also increases the risk of weed infestations. The overall potential for weed infestations is very high.

3. Special Status Species

Thirteen culturally significant plants were identified at Tucker Hill by tribal consultants and the BLM ethnobotanist. There is ethnographic documentation for all the listed plant species. Some of the plants occurred only at the quarry site, while other are scattered throughout the formation. There is no evidence, however, that any of these plants has a limited range, or that Tucker is a single source for these plants. Plants identified as culturally significant for food and fiber at Tucker Hill include: Se-go Lily *Calochortus macrocarpus* Dougl., gray desert parsley/biscuit root *Lomatium macrocarpum*, Desert celery *Lomatium nevadense*, Canby's desert parsley *Lomatium canbyi*, spiked wheat grass *Agropyron spicatum*, Indian onion *Allium parvum*, big sagebrush *Artemesia tridentata*, Great Basin wild rye *Elymus cinereus*, juniper *Juniperus occidentalis*, Indian asparagus *Orobanche fasciculata*, squaw currant *Ribes cereum*, white-stemmed stickleaf *Mentzelia albicaulis*, tumble mustard *Sisymbrium altissimum*.

Threatened, Endangered and Sensitive Plant Species

Symphoricarpos longiflorus (fragrant snowberry) has been located on the south side of Tucker Hill. The species is commonly associated with pinyon-juniper woodlands and limestone slopes. The species was found with scattered, sparse juniper (no pinyon), at an elevation of approximately 4,950 feet which would put it at the lower edge of its habitat range (4500 to 7000) *Symphoricarpos logiflorus* is an Oregon Natural Heritage Program List 2 species (Threatened or Endangered in Oregon, more common or stable elsewhere).

A small population of cactus *Opuntia fragilis* is located within the burned area. The species is extremely rare in south central Oregon.

Threatened, Endangered and Candidate Wildlife Species

The federally listed bald eagle (*Haliaeetus leucocephalus*), currently listed as a threatened species, occurs in the area.

Habitat present in the Tucker Hill area may support a small number of candidate, category 2 species (species which may warrant listing as threatened or endangered, but for which sufficient biological information necessary to support a rule to list is lacking), although none of the species have been found in the area including: pygmy rabbits (*Brachylagus idahoensis*), Preble's shrew (*Sorex preblei*), western sage grouse (*Centrocercus urophasianus phaios*), and northern sagebrush lizard (*Sceloporus graciosus graciosus*).

Several candidate bat species may utilize crevices in the cliffs on Tucker Hill as roosting sites. Several candidate or sensitive shorebird species utilized the Chewaucan Marsh, including the greater sandhill crane (*Grus canadensis*) and white-faced ibis (*Plegadis chihi*).

B. Noncritical Elements

1. Soils

The dominant soils associated with the Tucker Fire area include the Lorella and McConnel gravelly sandy loams, Mesman fine sandy loam, Deppy rubble land complex 30-50% slopes and Red canyon rock outcrop complex 30-50% north slopes. See Map 2 for Range Site Locations.

Water erosion is a concern on the Deppy rubble land, Lorella gravelly sandy loam, and Red canyon rock soils. The water erosion hazard can reach the moderate range, water runoff erosion in the vicinity of the dozer line in the north half of section 25 is high. Wind erosion is a concern on the Lorella and McConnel gravelly sandy loams, and on Mesman fine sandy loam. Revegetation of the burned area is critical. The wind erosion hazard is at least moderate to high until vegetative cover can be established.

2. Vegetation

There are three basic plant communities in the area, each with some variation of understory. At the top of Tucker Hill vegetation was dominated by big sagebrush with an understory of various forbs and grasses consisting of native plants and introduced weeds such as mustards and cheatgrass. Potential dominant vegetation in the area should include bluebunch wheatgrass, Idaho fescue, and antelope bitterbrush. Steep north slopes were dominated by Wyoming big sagebrush, with an understory of native plants various forbs and introduced cheatgrass. Potential vegetation in this area includes Wyoming big sagebrush and bluebunch wheatgrass. Bottom lands surrounding the area were dominated by basin big sagebrush, black greasewood and spiny hopsage with native grass understory, cheatgrass and various forbs. Potential dominant vegetation in this area includes Indian ricegrass, bottlebrush squirreltail, shadscale, and bud sagebrush. Sites that are more alkaline should potentially support basin big sagebrush, Indian ricegrass, black greasewood, basin wildrye and spiny hopsage.

3. Watershed

The Tucker burn site, although in a lowered seral state, was stable without accelerated erosion. The big sagebrush species which provided deep rooting systems, have been removed by the fire.

4. Wildlife

Habitat present in the project area includes big sagebrush, rabbitbrush and greasewood. These vegetation communities represent breeding habitat for small birds, mammals and reptiles as well as foraging habitat for raptors and larger mammals. Mule deer utilize Tucker Hill as wintering habitat , and antelope may winter on the surrounding flats. Chukar have been observed on the hill. Raptor nest surveys from 1978-1984 found a single golden eagle nest, at least five prairie falcon nests and three barn owl nests. Other wildlife present in the area include small mammals and small and medium-sized carnivores. Some of which are: coyotes, western meadowlarks, sage thrashers, Brewers sparrows, Townsend's solitaires, and mountain bluebirds. Cliff swallows nest on cliffs bordering the hill.

6. Recreation and Visual Resource Management

Recreation values include some hunting for deer, antelope and chukar. Visual Resource Management (VRM) for both areas is Class III. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

CHAPTER IV. ENVIRONMENTAL CONSEQUENCES INCLUDING CUMULATIVE IMPACTS

A. Proposed Action - Critical Elements

1. Cultural Resources

Cultural resource sites such as lithic scatters could be impacted by tractor or 4-wheelers. Breakage, vertical and horizontal movement, and mixing of cultural deposits could be expected. If significant sites are avoided during seeding these impacts would not occur. There would be no known cumulative impacts from the proposed action.

Aerial seeding has a positive affect on cultural resources as it would aid in erosion control.

Cumulative Impacts - There would be no cumulative impacts from this action.

2. Noxious Weeds

A large percentage of the soil types in the burned areas are clay dominated. These soils are particularly susceptible to medusahead invasion. Medusahead is currently dominating many acres in the Lakeview Resource Area and new sites are establishing from the main epicenters. Current control options are extremely inadequate and prevention is the number 1 strategy for medusahead. Establishing a competitive plant community is the first step to preventing establishment of any new weeds. Aerial seeding activities would have no effect on noxious weeds that may already be present.

Cumulative Impacts - The cumulative impacts of the proposed action

would be to help prevent invasion into the burned area as well as surrounding areas.

3. Special Status Species

Reestablishment of native vegetation in the burned area would recreate similar habitat to what occurred prior to the fire. Preventing the increase of noxious weeds would maintain existing habitat in the area as well as improving the habitat in the Tucker Fire area which was invaded by cheatgrass.

Cumulative Impacts - The cumulative impacts of the proposed action would be to maintain existing Special Status species habitat and prevent increased loss of habitat from future fires.

B. Proposed Action - Noncritical Elements

1. Soils

Immediate revegetation after fire promotes site potential by generating cover which increases interception of water and wind energy, reduces the time before litter begins to accumulate which increases water holding capacity, and reduces the effects of water and wind kinetic energy prior to soil contact. Cover also reduces the generation of sediments from upland areas.

These soils would have potential for producing a more diverse, perennial vegetative community as a result of seeding the burned area. Any sites not seeded would revert to annual cheatgrass and other associated annuals with a high susceptibility to repeated wildfires.

The proposed seeding mixes would be expected to establish a diverse perennial vegetation cover with a well-developed rooting system. These plant communities would be able to hold the soil in place and protect it from raindrop impact, and would also reduce overland flows and other potential erosion hazards such as wind erosion.

Cumulative Impacts - There would be no cumulative impacts from this action.

2. Vegetation

Seeding the project areas would ensure the establishment of a perennial vegetation cover with varied species of shrubs, grasses, and forbs providing structural diversity. Annual cheatgrass, other annuals, and possibly noxious weeds would compete strongly during the first 3 years following seeding of the areas. The plant species mix, using native species, was selected for drought tolerance and germination characteristics with the potential to eventually outcompete annual cheatgrass, other introduced annuals, and noxious weeds.

The native seed mix would provide a perennial vegetative cover for soil protection, varied plant community structure, and palatability for wildlife and livestock. Included in the seeding mix are several grass species which can tolerate light to moderate fires and would lessen the influence of future wildfires on this landscape and promote historical fire return intervals.

Cumulative Impacts - Establishing perennial species in the burned area would lessen the fire return intervals in the area. Longer fire return intervals would allow improved ecosystem function and stability.

3. Watershed

The mix of species proposed for seeding would provide for the capture and release of precipitation and snowmelt which would help in preventing future soil erosion. These perennial species would provide developed rooting systems and community structure lacking in an annual cheatgrass-dominated plant community. Once perennial species are established, overall watershed health would be improved.

Cumulative Impacts - There would be no cumulative impacts from this action.

4. Wildlife

Seeding with a mixture of native grasses and shrub species would be consistent with wildlife values. Rehabilitation of native plant populations and communities would likely provide the structure and forage needed by wildlife. Rehabilitation efforts to move the burned areas toward the potential natural plant populations and communities should provide habitat needed for a diversity of wildlife species.

Cumulative Impacts - The proposed action would increase the diversity of habitat types for wildlife and maintain existing habitats by reducing the amount of cheatgrass-dominated area.

5. Recreation and Visual Resource Management

Restoring a more diverse plant community and lessening the impacts of the expected establishment of annual cheatgrass would improve visual resources. Recreation potential would be improved by lessening the fire hazard and providing improved wildlife habitat. The proposed protection fence would be visible to the recreationist when in close proximity to the fence. There would be adequate gates constructed to ensure access in and out of the project areas.

Informational signing stating OHV use within the fire rehabilitation areas would help protect vegetation while the area is recovering from the effects of the fire.

Cumulative Impacts - There would be no cumulative impacts from this action.

C. Alternative 1: No Action - Critical Elements

1. Cultural Resources

In general, not seeding by various means would have a negative affect on archaeological sites because wind and water erosion could result in exposure and unauthorized collection of buried cultural materials.

Cumulative Impacts - Fire frequency and size would increase under this alternative which would increase the number of archaeological sites exposed to erosion and unauthorized collection.

2. Noxious Weeds

Cheatgrass and noxious weeds would have a very high likelihood of invading the burned area identified for seeding in the Proposed Action. Cheatgrass would become dominant, creating a landscape of decreased competitive plant cover and flashy fuels susceptible to recurring fire.

Cumulative Impacts - Fires would increase in frequency and size which would increase the amount of cheatgrass-dominated area. This would allow for increased areas available for weed establishment.

3. Special Status Species

Without seeding, nonnative invasive species would dominate the burned areas eliminating habitat for the known and suspected Special Status species in this area.

Cumulative Impacts - Fires would increase in frequency and size which would increase the amount of cheatgrass-dominated area. This would allow for decrease available habitat for Special Status species.

D. Alternative 1: No Action - Noncritical Elements

1. Soils

The important aspects of post-fire soil protection are typically prevention of water and wind erosion. If immediate efforts to revegetate exposed soils are not made, the effects of wind and water energy, coupled with fine soils surface textures, slope and a lack of soil surface fragments can result in erosion. The resulting loss of soil, especially top soil, can result in a decrease in ecological site potential in the form of reduced soil fertility, reduced resistance to the erosive energy generated by slope, reduced moisture holding capacity, reduced moisture infiltration rates, increased moisture runoff, higher soil surface temperature, and a decrease in vegetative rooting depths. Other concerns can be effects to water and air quality, and invasion of weed species suited to early seral sites.

Under natural revegetation, annual cheatgrass and other annuals would reestablish with few to no perennial species. The root systems of these annual species are not sufficient to hold the soil in place which would increase the probability of accelerated soil erosion.

Cumulative Impacts - Fires would increase in frequency and size which would increase the amount of cheatgrass-dominated area. This would allow for increased areas susceptible to erosion.

2. Vegetation

Some perennial native species such as bottlebrush squirreltail and Sandberg's bluegrass would reestablish; however, these and other perennial grasses and forbs were limited on the site because of the high percentage of bare ground and cheatgrass prior to the burn. The area would be susceptible to repeated wildfires, increasing the hazard to adjacent unburned sagebrush plant communities. The vegetation in the area after repeated burns would become dominated by annual cheatgrass,

mustards, and associated annuals.

Cumulative Impacts - Fires would increase in frequency and size which would increase the amount of cheatgrass-dominated area. Overall vegetation diversity would decline.

3. Watershed

The association of low seral stage perennial and annual grasses, which would occupy the site, would not provide sufficient vegetation cover or root mass to maintain stable soil conditions. Accelerated erosion and deteriorated watershed condition would be expected on this site. The size of this burn and location on the landscape would have a minimal impact on the entire watershed.

As described in the vegetation and soils section, the burned area would revegetate to annual cheatgrass, mustards, other exotic annuals, and the site would be susceptible to noxious weed invasion. These species provide poor vegetation cover and root structure providing little surface protection and soil holding capacity. These conditions would result in a deteriorated portion of the watersheds.

Cumulative Impacts - These areas would be vulnerable to repeat wildfires which would result in further deterioration of the watershed.

4. Wildlife

No seeding would increase the potential for establishment of invasive plants, such as cheatgrass and noxious weeds, with potential to have direct and indirect adverse impacts on wildlife habitats. Cheatgrass-dominated sites would cause a reduction in wildlife habitat diversity. Native vegetation reestablishment through recruitment/recolonization after wildfire in big sagebrush communities is limited due to the combination of low precipitation and the competitiveness of the nonnative species.

5. Recreation and Visual Resource Management

Establishment of annual vegetation would detract from the visual resources of the area. Recreation opportunities could be impacted by increased fire frequency and lessened vegetation diversity resulting in reduced habitat potential for wildlife and a less desirable area for hiking and camping. Wildfire hazards would increase as more of the landscape is dominated by cheatgrass and other annuals of high fire susceptibility.

By not providing informational signing for OHV use, there is potential for

cross-country travel by vehicles resulting in increased potential for erosion and gullying on the steep slopes.

Cumulative Impacts - Fires would increase in frequency and size which would increase the amount of cheatgrass-dominated area. Recreational opportunities would decline and the quality of the recreational experience would deteriorate.

E. Alternative 2: Fence Only - Critical Elements

1. Cultural Resources

In order to mitigate potential negative impacts caused by rangeland fencing operations, significant cultural properties would be avoided.

Cumulative Impacts - Same as in Alternative 1.

2. Noxious Weeds

Weeds do not recognize fences as boundaries and without the competing vegetation, weeds would probably establish in the burned area.

Cumulative Impacts - Same as in Alternative 1.

3. Special Status Species

Same as described under Alternative 1.

Cumulative Impacts - Same as in Alternative 1.

F. Alternative 2: Fence Only - Noncritical Elements

1. Soils

Same as Alternative 1.

Cumulative Impacts - Same as in Alternative 1.

2. Vegetation

Under the fence only alternative, there would be little reestablishment of native species. Most of the burned area had a large component of cheatgrass which dominates after fire. Sagebrush does not reestablish in cheatgrass-dominated areas. Cheatgrass is highly flammable and would likely reburn within the next 5 to 10 years. This short return interval of fire would result in a community dominated by annual cheatgrass, mustard, and other associated annuals. These sites would be open for invasion by noxious weeds and highly susceptible to recurring wildfire as with the no action alternative.

Cumulative Impacts - Same as in Alternative 1.

3. Watershed

Same as the Alternative 1.

Cumulative Impacts - Same as in Alternative 1.

4. Wildlife

No seeding would increase the potential for establishment of invasive plants, such as cheatgrass and noxious weeds, with potential to have adverse impacts on wildlife habitats. Cheatgrass-dominated areas would cause a reduction in wildlife habitat diversity. Native vegetation reestablishment through recruitment/recolonization after wildfire in Wyoming sagebrush communities are limited due to the combination of low precipitation and the competitiveness of the nonnative species.

Cumulative Impacts - Same as in Alternative 1.

5. Recreation and Visual Resource Management

The visual resource changes due to vegetation would be as described under the proposed action. The fence would provide some additional impact to visual resources. Informational signing impacts would be the same as under the proposed action.

Cumulative Impacts - Same as in Alternative 1.

CHAPTER V. CONSULTATION AND COORDINATION

Burns Paiute Tribe
Klamath Tribe
Oregon Department of Fish and Wildlife

CHAPTER VI. LIST OF PREPARERS

A. Participating BLM Staff

Theresa Romasko, Rangeland Management Specialist, Team Lead/Preparer
Bill Cannon, Archaeologist
Todd Forbes, Wildlife Biologist
Lucile Housley, Botanist
Trish Lindaman Recreation, VRM
Barbara Machado, Hydrologist
Erin McConnel, Natural Resource Specialist (Weeds)
Ken Kestner, Acting Lakeview Resource Area Field Manager

CHAPTER VIII. APPENDICES

Appendix 1 - Maps
Appendix 2 - Emergency Stabilization and Rehabilitation Plan
Appendix 3 - Cost/Risk Analysis

APPENDIX 3

Cost/Risk Analysis

Part 1. Treatment Cost

<u>Treatments</u>	<u>Cost</u>
Revegetation	\$ 115,850
Protective Fencing	\$ 3500
Weed Treatment	\$ 36,350
All Other Costs	\$ 42,500
Total Cost	\$198,200

Part 2. Probability of Rehabilitation Treatments Successfully Meeting EFR Objectives

Treatments	Units	%
Revegetation (overall rating)	1000 ac	75
Broadcast Seeding (acres)	300 ac	80
Aerial Seeding (acres)	1000ac	70
Protective Fence to Exclude Grazing (miles)	1 mi	95
Fence Repair to Exclude Grazing (miles)	1000 feet	95
Weed Treatment (acres)	1560 ac	75

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.

Alternative 1 - No Action- Treatments Not Implemented (check one)

Resource Value	None	Low	Mid	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
Offsite Sediment Damage to Private Property			X	
Offsite Threats to Human Life	X			
Other - none	X			

Alternative 2 - Fence Treatment Only (check one)

Resource Value	None	Low	Mid	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
Offsite Sediment Damage to Private Property		X		
Offsite Threats to Human Life	X			
Other - none	X			

Proposed Action - Treatments Successfully Implemented (check one)

Resource Value	None	Low	Mid	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		
Offsite Sediment Damage to Private Property		X		
Offsite Threats to Human Life	X			
Other - none	X			

Part 3. 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, 2) the fence only alternative is taken, and 3) 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 EFR objectives. Answer the following questions to determine which proposed EFR 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 for answer: The proposed action of seeding and fencing will establish a perennial ground cover which would stabilize the soils and prevent loss of soil by wind and water erosion. The perennial ground cover would occupy the site and prevent the invasion of weeds. Species selected will help avoid repeated wildfire hazards.

No Action Yes No Rationale for answer: Without establishing perennial ground cover, the site would be left open to invasion by weeds which pose a threat of repeated fires of increasing size.

Alternative(s) Yes No Rationale for answer: Same rationale as the no action alternative.

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

Proposed Action Yes No Rationale for answer: Species selected for seeding are adapted to this ecosystem and are expected to establish. The area is not permitted for livestock grazing.

No Action Yes No Rationale for answer: Without seeding, fires of this intensity do not have adequate survival of native plants to prevent weed invasion. The site would become dominated by cheatgrass and be subject to repeated fires.

Alternative(s) Yes No Rationale for answer: Same as no action alternative.

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

Proposed Action , Alternative(s) , or No Action

Comments: The cost of the proposed action is modest given the extensive use of native species. The high probability of future wildfire and noxious weed invasion without treatment makes the proposed action imperative.

APPENDIX 2

TUCKER EMERGENCY STABILIZATION AND FIRE REHABILITATION PLAN (M-264)

Item	Cost/Unit	Units	Total lbs seed	Total Cost	Funding Year Requested
Aerial Seeding (helicopter contract)	\$650/hour & 500/day seeder rental	5hrs & 1 day		\$3750	2003
Broadcast seed contract	\$20/acre	300		\$6000	2003
Wyoming big sagebrush (bulk seed)	\$7/lb	1000	1000	\$7000	2003
Shadscale	\$8/lb	300	300	\$2400	2003
Bottlebrush squirreltail	\$30/lb	1300 acres	1600	\$48,000	2003
Bluebunch wheatgrass	\$5/lb	1000 acres	3000	\$15,000	2003
Thurber's needlegrass	\$4/lb	1000 acres	1000	\$4000	2003
Basin wildrye	\$10/lb	300 acres	600	\$6000	2003
Creeping wildrye	\$9/lb	300 acres	300	\$2700	2003
Blue flax	\$3/lb	1300	350	\$1050	2003
Pacific lupine	\$42/lb	1000	100	\$4200	2003
Bighead clover	\$15/lb	1000	500	\$7500	2003
Astragalus spp	\$27/lb	1300	150	\$4050	2003
Freight costs (hauling seed to and from mixer)				\$1000	2003
Seed testing	.50/lb	2400		\$1200	2003
seed mixing (includes cost for some seed currently on district)	.20/lb	20,000		\$2000	2003
SUBTOTAL			8600		
Fence materials	1500/mi	1.2 mile		\$1800	2003

Item	Cost/Unit	Units	Total lbs seed	Total Cost	Funding Year Requested
Labor includes 2 workmonths and vehicle cost for fence crew	1700			\$1700	2003
SUBTOTAL				\$3500	2003
Administrative Costs/Work Months (WM)					
ESR Plan Development	\$6000/WM	2 WM 2002		\$12,000	2002
Cultural Clearances	\$4000/WM	1WM		\$4000	2002
Project layout, contract prep, contract inspection	\$5500/WM	3 WM		\$16,500	2003
Project area monitoring	\$6000/WM	1 WM/ year		\$18,000	2003,2004 2005
Weed inventory and monitoring; 3 years	\$4000/WM	1WM/ year		\$12,000	2003,2004 2005
Weed control	2500 yr 1, 5000 yrs 2,3			\$12,500	2003,2004 2005
Vehicle cost (mileage) -Project layout	\$250/month & .30/mi	2000 mi/ month		\$850	2003
Weed vehicle	300/month & .35/mi	2000mi & 1month /yr		\$3000 1000/yr	2003,2004 2005
SUBTOTAL Administrative Costs				96,850	2002-2005
TOTAL				16,000	2002
TOTAL				150,200	2003
TOTAL				16,000	2004
TOTAL				16,000	2005
TOTAL PROJECT				198,200	2002-2005

PROPOSED SEED MIXTURE

Native Plants

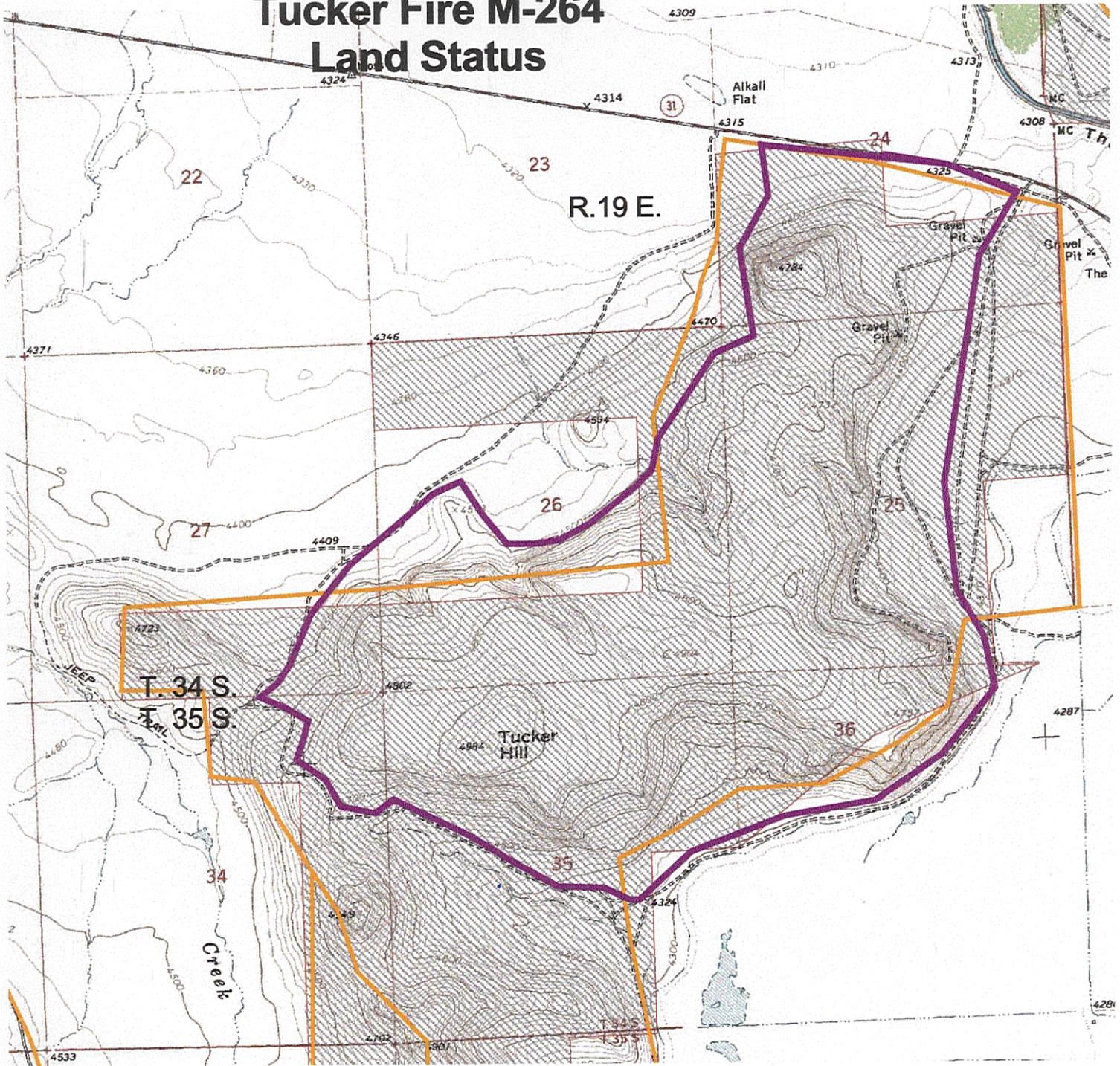
Mix #1 Aerial Seed 1000 acres

Helicopter or fixed wing	lbs/acre	Total lbs	Total Project Needs
1. Bluebunch wheatgrass	3	3000	3000
2. Bottlebrush squirreltail	1	1000	1600
3. Thurber needlegrass	1	1000	1000
4. Sandbergs bluegrass	1	1000	1000
5. Lupine spp. (Lupinus lepidus)	.1	100	100
6. Blue flax (linum)	.25	250	350
7. Trifolium gymnocarpon	.5	500	500
“ ” or macrocephalum			
8. Astragalus lentiginosus	.1	100	150
filipes			
curvicarpos			
9. Wyoming big sagebrush	1lb/acre bulk	1000	1000
	based on .251b/acre PLS		

Mix #2 Broadcast seeding rubber tire tractor, 4-wheeler no drilling 300 acres

1. Bottlebrush squirreltail	2	600	
2. Sand dropseed	.25	75	75
3. Basin wildrye	2	600	600
4. Spiny hopsage	1	300	300
5. Creeping wildrye	1	300	300
6. Blue flax (linum)	.25	75	
7. Astragalus lentiginosus	.1	30	

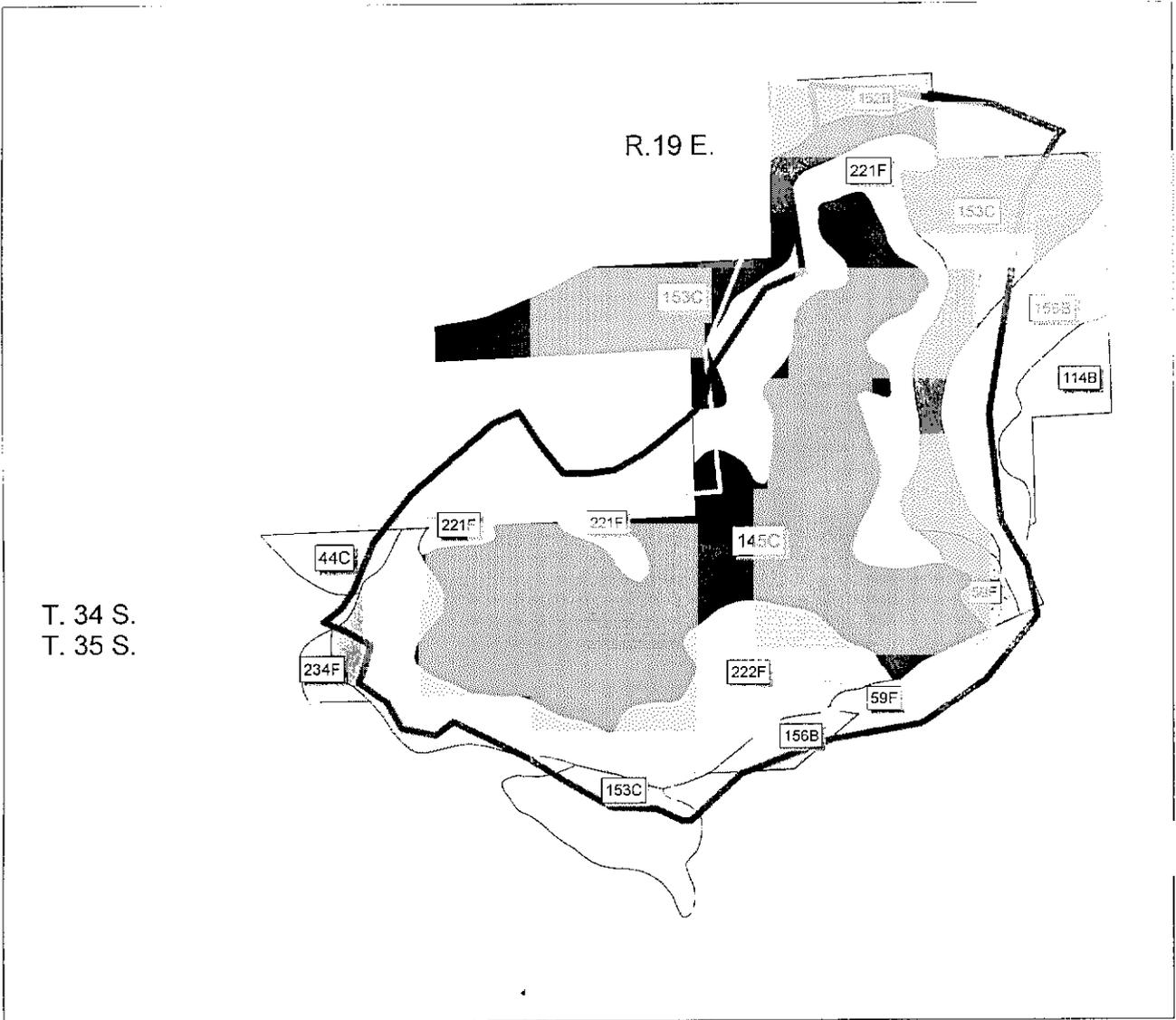
Appendix 1, Map 1 Tucker Fire M-264 Land Status



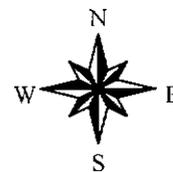
-  Fire Perimeter
-  Tucker Hill Allotment Boundary
- Ownership**
-  BLM
-  Private



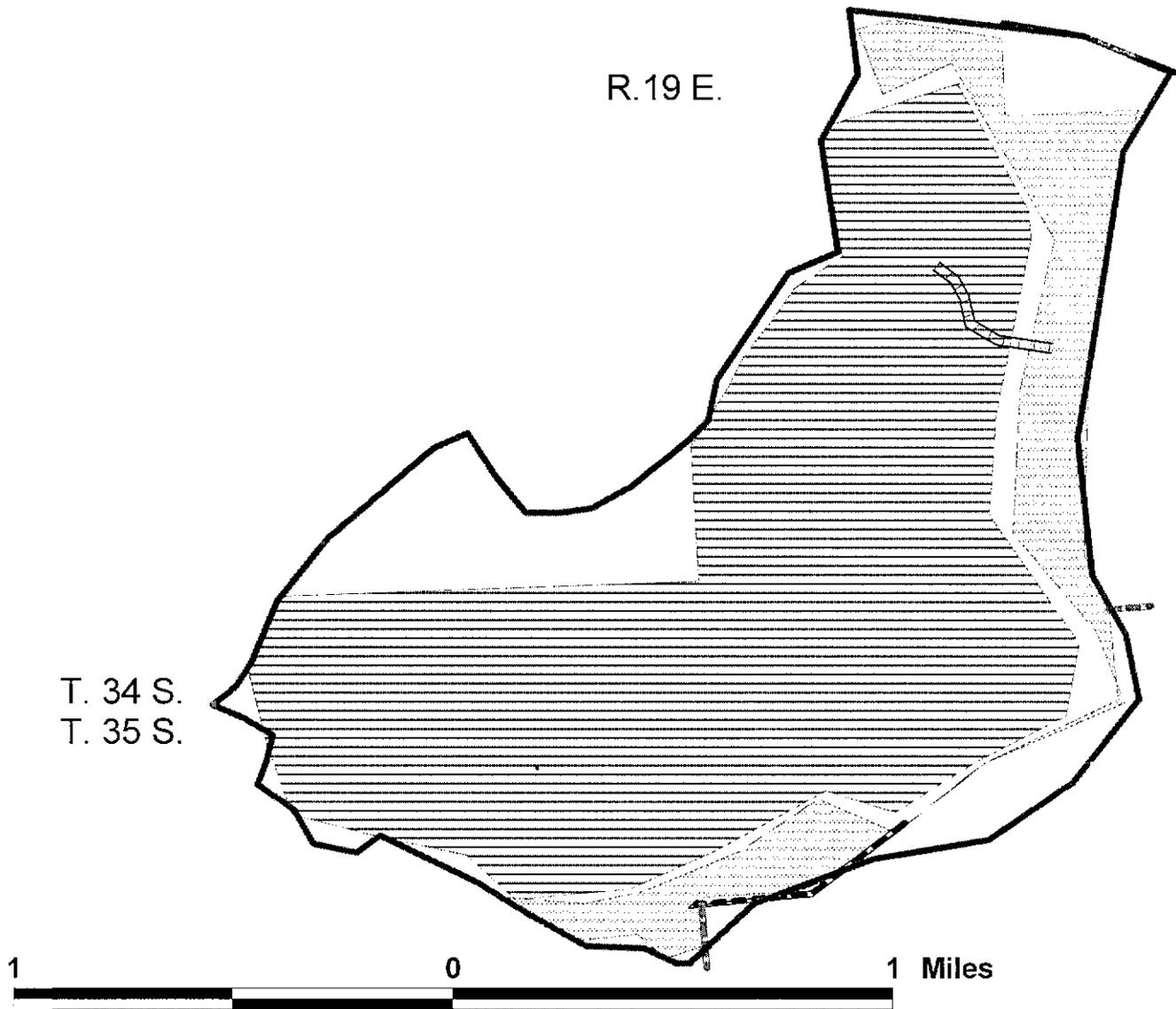
Appendix 1, Map 2 Ecological Range Sites

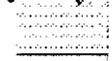
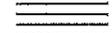


- Fire Perimeter
- Tucker Hill Allotment Boundary
- Range Site**
- 222F
- 44C
- 59F
- 234F
- 156B
- 162B
- 153C
- 221F
- 153C
- 153C
- 145C
- 156B
- 114B



Appendix 1, Map 3 Tucker Fire M-264 Proposed Action



-  Dozer Line Repair
-  Fire Perimeter
-  Repair fence
-  Protection fence
-  Broadcast Seeding
-  Aerial Seeding

