Grass Valley Complex / Starvation Ridge
Emergency Fire Rehabilitation Plan
and
Environmental Assessment
OR-056-01-086

I. INTRODUCTION

The Grass Valley Complex (N535) consisted of two fires which burned in the northern part of the Prineville District, Wagner Mountain (N528) and Ferry Canyon (N548). The Starvation Ridge Fire (N543) burned in the same general area at the same time, yet was not incorporated into Grass Valley Complex (Refer to the attached Maps # 1 and 2). This Emergency Fire Rehabilitation Plan (EFR) Plan and EA will address the Grass Valley Complex (N535) and Starvation Ridge Fire (N543) with the majority of the proposed projects being located within the Ferry Canyon Fire perimeter. No rehabilitation needs were identified within Wagner Mountain fire area.

The Ferry Canyon Fire burned approximately 11,820 acres of BLM land and 6,724 of private for a total of over 18,500 acres. The fire burned most of the ground in three grazing allotments and a minor portion of two more. The most affected allotments include Bird (7501), Ferry Canyon (7547) and Bully Point (7600). Bird Allotment had approximately 4,100 acres of public land burn, Ferry Canyon Allotment 4,782 acres, and Bully Point 800 acres. Less affected were the P. Sharp Allotment (7569) which had approximately 200 acres of public land burn and E.W. Hammel Allotment (7533) which had approximately 120 acres burn. The fire was started July 12, 2001 by lightning, and was contained July 16, 2001. A large part of the fire was within the Deschutes River Wild and Scenic corridor.

The Starvation Ridge Fire was also started by lightning on July 12 and contained on July 16. The fire was primarily on private land with 6,959 total acres burned. However, approximately 1240 acres of public land adjacent to the John Day River also burned. Fire fighting resources from the Grass Valley Complex were dispatched to assist local firefighters. Within the Starvation Ridge fire perimeter, the Baseline (2560) and Smith Point (2520) Allotments are the only allotments included in the Proposed Action. The allotments contains 598 and 2,596 acres of public land respectively.

II. PURPOSE AND NEED

The Grass Valley Complex and Starvation Ridge Fires occurred in primarily bunchgrass vegetation community type, with small areas vegetated by big sagebrush and bunchgrass. Approximately 70 percent of the public land acres burned were in mid to late seral condition and about 30 percent were in early seral condition. The early seral sites were dominated by cheatgrass *(Bromus tectorum)* with areas of medusahead rye (*Taeniatherum caput-medusae*). The purpose of the proposed action is to regain vigor of existing native bunchgrasses, re-establish desirable perennial species on sites dominated by annual vegetation, and to retard the invasion and spread of noxious weed species. By establishing perennial grasses to create as much cover and soil stabilizing vegetation as possible, water-caused soil erosion would be reduced. Proposed treatments would facilitate moving the system toward a mid or late seral

condition. Establishment of desirable vegetation would also improve the structure and diversity of the vegetation in the system. The improved vegetative condition and ecological processes resulting from the implementation of the proposed action would assure the BLM lands within both fire perimeters would meet Standard and Guidelines for Rangeland Health. The proposed action would potentially enhance forage and browse for wildlife species and decrease the intensity and frequency of future wildfires. The burned areas would be rested from livestock grazing for at least two growing seasons (H-1742-1) to aid in vegetative recovery. Allotment fences, damaged by the fire, need reconstruction to protect burned areas from livestock grazing during the recovery of existing native, perennial vegetation and establishment of proposed seeded species. Grazing would still be authorized for a portion of the Bird Allotment that didn't burn, so there is also need for construction of temporary electric fencing to keep the cattle out of proposed treatment areas. In addition, the proposed action includes repair to existing minor improvements that burned, including a protective fence enclosing a cultural site in Macks Canyon Campground, and five spring developments. The Macks Canyon cultural fence helps protect the site and its resources from theft and vandalism. The spring developments provide high quality water for wildlife and livestock in troughs, while protecting the sites from damage associated with livestock concentration.

Approximately 50 acres within Macks and Sixteen Canyons and on the main stem of the Deschutes River within the Grass Valley Complex have infestations of diffuse knapweed, Canada thistle and scotch thistle. One tract of BLM land within the perimeter of the Starvation Ridge Fire has infestations of diffuse knapweed, dalmation toadflax and saltcedar. All of these weed species tend to increase with fire disturbance. Chemical treatment would reduce the increase and spread of these noxious weeds. Chemical treatment would also give desirable grass species a chance to establish. Forty acres within the Starvation Ridge fire would be seeded with perennial species following treatment. Once established, the grasses would create competition for any remaining weeds or their seed. The presence of perennial species would improve ecological processes, watershed function and vegetative diversity.

Relationship to Planning

The proposed action is consistent with the current land use plans including:

-Two Rivers Resource Management Plan and Record of Decision, June 1986.
-Lower Deschutes River Management Plan and Environmental Impact Statement, May 1991.
-John Day River Management Plan, Two Rivers, John Day and Baker Resource Management Plan Amendments, Environmental Impact Statement and Record of Decision; March 2001.

III. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

A. Common to All Alternatives

Proposed treatment areas for herbicide application are located at T. 2S., R. 16 E., Section 16 on the Deschutes River (Grass Valley Complex) and T.1N., R.20E., Sections 30 & 31on the John Day River (Starvation Ridge Fire). The proposed treatments on the Deschutes River would be applied by backpack sprayer as spot treatment with ½ lb./ac

ai (active ingredient) picloram formulation. The treatment would occur over the next two years for optimum effectiveness. Mechanical application of ½ lb/ac ai picloram formulation would be applied to 40 acres dominated by diffuse knapweed within the Starvation Ridge Fire perimeter. Herbicide would be applied using a lightweight, four wheel, all terrain vehicle (ATV). No vehicle mounted or powered boom sprayers would be used within 25 feet of surface water. A backpack sprayer would be used to within 10 feet of surface water. Twenty acres of Dalmation toadflax at the same location would be treated at a rate of 1 lb/ac ai picloram, using the same methods described above. One acre of salt cedar would be cut down using chainsaws then the stumps treated using 50% solution of Tordon RTU. Herbicide treatment would take place in the spring/early summer of 2002 within the optimum control window for each species.

All herbicide treatments would be in accordance with the Prineville District Integrated Weed EA (#OR-053-3-062) and John Day River Integrated Weed Management EA (No.OR-054-3-63). Potential impacts from the proposed treatments were analyzed within those EAs.

B. Proposed Action

Seeding

Approximately 1,050 acres inside the Grass Valley Complex and 200 additional acres within the Starvation Ridge burn, would be seeded with rangeland drills during the winter of 2001/2002 using the seed and application rates listed in Table A. Seeding within the Deschutes Wild and Scenic River corridor (40 acres in Grass Valley Complex) would be accomplished using an ATV broadcast seeder during the winter of 2001/2002, using seed mix and application rates in Table A. Forty acres in Starvation Ridge fire that were identified for herbicide application would be seeded in the fall/winter of 2002 through ATV seeding, also using the mix and rates in Table A. (Refer to the attached maps #3-5 showing seeding locations).

Table A
Grass Valley Complex Starvation Ridge Fires
Proposed Alternative Seed Mix and Rates

Species	Upland Mix (lbs/acre)
Bottlebrush Squirreltail (*Sitanion hystrix)*	0.25
Bluebunch Wheatgrass (*Agropyron spicatum*, cultivars Whitmar and Secar)	4.0
Sherman Big Bluegrass (*Poa ampla*, cultivar Sherman)	1.5
Crested Wheatgrass (*Agropyron cristatum*, cultivar Hycrest)	1.0
Crested Wheatgrass (*Agropyron cristatum*, cultivars Fairway and Douglas)	1.0
Alfalfa (*Medicago sativa* var. Ladak)	0.5
Alfalfa (*Medicago sativa* var. Spreador III)	0.5
Sand Dropseed (*Sporobolus cryptandrus)*	.25
Small Burnett (*Sanguisorbia minor*)	1.0
Thickspike wheatgrass (*Agropyron dasystachyum* var. Bannock)	1.0
Total:	11.0

Minor Improvements

Within the Grass Valley Complex, approximately 2.5 miles of existing fence would be reconstructed to protect natural recovery and seeded areas from livestock (T.2S, R.15E., Sections 13 & 14). The reconstruction would include specifications for a four strand fence with considerations for deer and elk movements. The top three wires would be barbed and the bottom wire smooth with a spacing of 18", 23", 28" and 40" respectively, from the ground up. Posts would be steel, green colored, and spaced one rod apart

(16.5 feet) with a wire stay inserted halfway between each post. Where possible, prefabricated steel panels would be used for corners and stress panels, because they wouldn't burn in the event of another wildfire. All gates, rock cribs and miscellaneous structures would be constructed in accordance with Bureau standards and specifications.

Two spring developments (T.2S., R.15E., Sections 15 SWNE & 23 NENE) would require total reconstruction due to fire damage, including rebuilding fences, replacing troughs and plastic pipe. Three more spring developments (T.2S., R.15E., Section 21 S1/2 and T.2S., R.16E., Section 8 NWNE) would need partial reconstruction by replacing wooden corner and brace panels in fences or replacing plastic pipe. Burnt wood corners and panel braces would be replaced by all metal structures. These proposed projects are also located within the Grass Valley Complex.

A fence protecting the prehistoric cultural resource site in Macks Canyon Campground within Grass Valley Complex would be repaired by replacing the burnt wooden corners with steel pipe structures drilled into the ground. The 12 foot non-climb wire would be re-stretched as tightly as possible. When the work was completed, the wire would not be as tight as the fence was prior to the fire, yet the fence would be functional and the expense of total reconstruction would be avoided.

Grazing

BLM policy requires that lands burned by wildfire and seeded areas, should not be grazed by livestock for two consecutive growing seasons (H 1742-1). Public lands that burned in the Grass Valley Complex including Bird (7501), Ferry Canyon (7547) and Bully Point (7600) Allotments, also Baseline (2560),and Smith Point (2520) allotments in Starvation Ridge fire, would be rested for two grazing seasons. The majority of the Bird Allotment's north pasture didn't burn. This area would still be open to grazing and temporary electric fencing would be used to keep cattle out of the rehabilitation portion of the pasture (see attached map for temporary fence location). The two public land tracts that burned in the P. Sharp (7569) and EW Hammel (7533) allotments within the perimeter of the Grass Valley Complex are steep and rugged terrain that preclude cattle access. Incidental use that may occur in those areas would not impact rehabilitation efforts.

C. Alternatives

No Action:

No Action. Do not reconstruct the damaged minor improvements or seed selected burn areas.

Alternative 1:

Reconstruct the minor improvements and restrict grazing for a minimum of 2 years as stated in the Proposed Action, but do not seed selected burn areas.

The proposed herbicide treatment areas in both Starvation Ridge and Grass Valley burns are primarily listed as Sandy Alluvium in the Sherman County Soil Survey. This soil varies widely in texture within short distances. It consists of stratified layers of fine sandy loam, and silt loam, loamy fine sand, loam and silt loam. Normally the depth to bedrock is 78 inches or more, but in places it is as little as 15. Natural drainage is somewhat excessive, permeability is moderate to rapid and surface run off is slow. Sandy alluvium is normally low in moisture supplying capacity with low to moderate fertility.

The important aspects of post-fire hydrology are typically water retention and water quality. High intensity burns associated with heavy fuel loads result in hydrophobic soil conditions, which may decrease infiltration rate and limit water holding capacity. The alteration of these parameters result in the inability of the burned area to absorb rainfall and overland flow may increase. Upland fuel loads were light to moderate. Even though the burns were of moderate to high intensity, fire induced hydrophobic characteristics are not anticipated due to lower fuel loads.

Vegetation

Deeper soil sites within both fire perimeters would be dominated by bluebunch wheatgrass in late seral condition. The bluebunch wheatgrass habitat type is characterized by up to 65% cover of bluebunch wheatgrass and smaller amounts of Idaho fescue, Sandberg bluegrass, lupine, longleaf phlox, yarrow and other forb species. Shallow soil sites known as scab are also present within the burned area in the Grass Valley Complex. These areas are typically vegetated by 75% stiff sagebrush, Sandberg bluegrass and small amounts of bottlebrush squirreltail and forb species. Steeper slopes tend to be in late seral condition and are dominated by native perennial species, but the ridge tops within Grass Valley Complex and Starvation Ridge Fires are in early seral condition and dominated by cheatgrass, medusahead rye, sixweek's fescue and scattered amounts of big sagebrush or rabbitbrush. Dispersed plants of Sandberg bluegrass, bluebunch wheatgrass and Thurber's needlegrass are present but in limited amounts.

In late seral or climax condition, the proposed herbicide treatment areas within both fire areas would be dominated by Great Basin wild rye mixed with small amounts of Sandberg bluegrass, Kentucky bluegrass, Idaho fescue, big bluegrass and bluebunch wheatgrass. Presently, knapweed or Scotch thistle dominate the sites with lesser amounts of cheatgrass, Canada thistle, Scotch thistle, Dalmation toadflax or saltcedar.

Wildlife

A variety of nongame mammals, reptiles, raptors, birds, and amphibians common to North-central Oregon can be found throughout the area. The burned area is also used year-long by game species including mule deer, chukar, elk and pronghorn antelope.

Special Status Species

A. Wildlife/Fisheries

Special status or sensitive wildlife species that are suspected to occur in the vicinity of the burned areas based on recent records, regional data, and county specific documentation include: burrowing owl (*Athene cunicularia)*, Ferruginous hawk (*Buteo regalis)*, Swainson's hawk (*Buteo swainsoni)*, bald eagle (*Haliaeetus leucocephalus)*, and loggerhead shrike (*Lanius ludovicianus)*.

The following Special Status species of fish occur within the project area:

Redband trout (*Oncorhynchus mykiss)* is a Bureau Sensitive Species and a State Species of Concern. Summer Steelhead (*Oncorhynchus mykiss)* is listed as threatened under Endangered Species Act.

The Deschutes River and some of its tributaries within the fire perimeters contain spawning and rearing habitat, while the John Day River is migratory habitat in the area of the Starvation Ridge Fire.

B. Plants

One special status plant, *Lomatium farinosum* var. *hamblenieae* is known to be located within the Ferry Canyon burn perimeter.

Lomatium farinosum var. *farinosum* (Hamblen's lomatium) is a small member of the carrot family endemic to Wasco Co. as well as parts of Washington. As a BLM assessment species it is considered by the natural heritage data base to be threatened or endangered in Oregon but more common elsewhere. Other known locations include land near Tygh Ridge and in the Criterion Ranch area where it prefers rocky slopes and scab areas.

Other species suspected of occurring include: *Astragalus tyghensis* (Tygh Valley milkvetch), *Carex hystericina* (porcupine sedge), *Lomatium watsonii* (Watson's lomatium), *Mimulus jungermannioides* (hepatic monkeyflower)*, Astragalus collinus,* var.*laurentii* (Laurence's milkvetch)*, Juncus torreyi* (Torrey's rush), *Lupinus sericeus* var. *egglestonianus* (silky lupine), *Myosurus sessilis* (sessile mousetail), and *Rorippa columbiae* (Columbia cress).

Several botanical surveys have been completed within the general area of the proposed projects. With the exception of *Lomatium farinosum* var. *hamblenieae*, no special status plants have been found within the fire perimeters. However, it is likely that unknown populations of *Carex hystericina* and *Mimulus jungermannioides* are within the Ferry Canyon Fire perimeter, as well as additional populations of *Lomatium farinosum* var. *hamblenieae*.

<u>Grazing</u>

The Bird (7501), Ferry Canyon (7547) and Bully Point (7600) Allotments were most affected by the Ferry Canyon fire and Grass Valley Complex, although small portions of P. Sharp (7569), E.W. Hammel (7533) and J.P. Reckman (7564) Allotments also

burned. The Starvation Ridge Fire most affected pubic land grazing within Baseline (2560) and Smith Point (2520) Allotments.

Cultural Resources

A number of Cultural Resource inventories have been conducted within the perimeter of the Grass Valley Complex and Ferry Canyon burn, with the majority of the inventory occurring near the Deschutes River. A few surveys have been done up the narrow riparian corridors of side canyons and at some of the springs. Results of those surveys include a small house pit site upriver from Ferry Canyon, Macks Canyon prehistoric site, Ferry Canyon ranch complex, and a homestead site located at Sheep Spring. As a result of the fire, the Sheep Spring homestead and portions of the Ferry Canyon site were lost. A 12 foot fence surrounds the prehistoric site at Macks Canyon Campground to protect it from artifact collecting.

No known sites were identified within proposed treatment areas in Starvation Ridge Fire, yet limited survey has occurred.

Wild and Scenic Rivers

Both the Grass Valley Complex and Starvation Ridge fires burned largely in the Deschutes and John Day Wild and Scenic River corridors. However, only 90 acres of proposed treatment in the Grass Valley Complex would occur within the Deschutes Wild and Scenic River corridor. Also, one of the springs proposed for reconstruction and the Macks Canyon cultural fence are situated within the Deschutes Wild and Scenic River boundary. The proposed herbicide and seeding project in the Starvation Ridge Fire is within the John Day Wild and Scenic River corridor.

Visuals

Due to steep terrain, most of the uplands are not easily accessed from the river by the public. General access across the ridge tops is not common due to the large amounts of private land. Portions of the uplands were dominated by annual grasses and rabbitbrush prior to both fires, which could be rated lower in visual appeal to the viewer than a later seral habitat type if it were present.

Portions of both the John Day River and Deschutes River corridors within both fire perimeters are infested with noxious weeds. Generally, low visual appeal is assumed in those types of situations.

B. Environmental Impacts of the Proposed Action and Alternatives

Water and Soil

Proposed Action:

Objectives of the proposed action are to decrease erosion potential and increase infiltration. The seeding portions of the action would accomplish that through replacing annual grasses with perennial species. If the current drought situation were to persist, the use of non native species in the seed mix would increase the probability of the seeding being successful. As a general rule, native species won't establish as readily as selected non natives in the presence of cheatgrass and medusahead particularly in drought conditions. Even in the best weather conditions, the establishment of pure native seed mixes could have highly variable results. As the seeded grasses established, the deeper rooted perennial species would improve soil stability and filter water down into the soil instead of allowing it to run off. Improved water quality would be expected as erosion and sediment loads decreased from the upland areas. Presence of perennial vegetation would also lengthen the fire return interval, further reducing future risk of erosion and infiltration problems.

A small amount of compaction may result from the tires of the all terrain vehicle during the spraying and seeding; however it is predicted to be minimal. Reducing competition so that desirable perennial grasses can be established, would benefit water and soil resources in the future.

By rebuilding 2 ½ miles of allotment fence and using temporary electric fences in other areas of Grass Valley Complex , the burned area would be protected from grazing by livestock. There would be some short term light disturbance to soils during the construction of permanent fence. Slight compaction may occur from trailing cattle on the opposite side of the fences from the burn, which would be temporary, as the animals re-learned the boundaries.

Repairing the spring developments benefit long term water quality. No livestock use would occur for at least two years. When grazing resumed, the fences around the springs that had been repaired would keep livestock from accessing those sites.

No further impacts to soils or water would result from reconstructing the exclosure fence in Macks Canyon campground.

No Action:

The no action alternative would allow very little recovery for the lands within the burns that are dominated by annual grasses and weedy species. Those areas hold very little opportunity for natural rehabilitation due to the lack of a viable seed source for the deeper rooted perennial species. The No Action alternative would result in increased potential for erosion and lowered infiltration. Risk of accelerated soil loss or overland flow would remain because of the shallow root systems of cheatgrass and medusahead rye. This alternative would do nothing to help the treatment areas meet or move toward meeting BLM Standard and Guidelines for Rangeland Health.

Without fences and spring development repair, there would be potential impacts to soil and water quality from livestock accessing the burned areas in the Grass Valley

Complex from surrounding private land and areas still authorized for grazing. Perennial grass recovery would be slowed, as would the build up of litter that aids in holding soil in place and reducing erosion.

Alternative 1:

Under this alternative, no seeding would be done but the fences and springs would be repaired. The impacts to soil and water from not seeding would be the same as the No Action alternative and repair to improvements would have the same effects as in the proposed action.

<u>Vegetation</u>

Proposed Action:

The proposed action would accelerate vegetative recovery through seeding, controlling noxious weeds and two seasons rest from livestock grazing. In order to implement rest from grazing within the Grass Valley Fire perimeter, the 2½ miles of permanent fence that burned would need to be rebuilt and temporary electric fencing would also be required. Both types of fencing would cause slight, short term disturbance to vegetation during construction. Trailing from livestock along the fences outside the burn may also occur, however the impacted area would be minimal. Benefits from seeding with perennial species would be realized through increased vegetative diversity, lengthened fire return interval, and improved overall rangeland health. The non-native species proposed in the seed mix would ensure improved vegetative cover faster than seeding with natives only. All of the proposed introduced species tend to establish more quickly and efficiently, yet wouldn't out compete or curb the establishment of seeded native species. Eventually, many of the seeded non-natives would die out.

Disturbance to vegetation during the reconstruction of the spring developments and Macks Canyon cultural fence would be minimal. Long term protection to riparian vegetation inside the spring exclosure fences would allow recovery.

No Action

If the proposed rehabilitation efforts were not completed, areas currently in early seral condition most likely would remain that way indefinitely. Domination of annual grasses or noxious weeds cause the lack of a seed source for more desirable types of vegetation. Without reconstruction of fences, or temporary fencing, livestock would be able to wander into the burned area from adjacent public and private lands where grazing is still authorized. Also, without spring reconstruction, when grazing resumed, existing fences would be inadequate to protect the riparian vegetation at the springs. Since some of the pipe also burned, the water would not flow into the stock tank which would leave the spring itself as the only available water.

Alternative 1

As with soils and water, this alternative would be similar to the Proposed Action for the improvement repair portion and the same as No Action for seeding.

Wildlife

Proposed Action

If the proposed action were implemented, the benefits to wildlife would be numerous. Seeding would increase forage and cover for both game and non game species. Spring development repair, would increase sources of clean water in the troughs. Spring exclosure fences would protect riparian vegetation from future use by livestock and increase habitat for neo-tropical birds. However, all of the fences would potentially impact big game movement, in the form of a physical barrier . This impact would be partially mitigated through fence design with special wire heights and by using smooth wire on the bottom.

No Action

Under the no action, improvement of wildlife habitat would be slow if it occurred at all. Large areas would provide poor forage and cover value due to domination of annual grasses or weeds. Improvement of riparian habitat at spring developments would also be slowed without the protection of the spring exclosure fences. Livestock would be able to access the burned area and compete with wildlife for forage.

Alternative 1

As with the proposed action, wildlife would benefit from fences and spring reconstruction, and rest from livestock grazing. However, with no vegetative treatments, forage for wildlife would be limited in areas currently lacking perennial species.

Special Status Species

Wildlife/Fisheries

Common to All Alternatives

Prineville District Fisheries Biologists made a "No Effect" determination to Threatened, Endangered and Sensitive fish species for use of herbicides applied in accordance with

Visuals

Proposed Action

Visual appeal of the public lands within the Starvation Point and Grass Valley Complex fire perimeters would improve as vegetation shifted from annual grasses to more desirable perennial species. There would be no added visual impacts by reconstructing the fences and springs in Grass Valley Complex as they all existed prior to the fire. In addition, most of these improvements proposed for repair are not easily visible to the general public as they are located on upper slopes of the Deschutes River Canyon. These areas are landlocked by private lands on top and are very difficult to access from the public land on the river.

No Action

There would be very little change and no improvement of the visual appeal within the burned areas. It is also likely that annual grasses would increase and spread because of the fires, which would further deteriorate visual appeal in portions of both the Deschutes and John Day River canyons.

Alternative 1

This alternative would lead to no new visual encroachments due to reconstruction of minor improvements. Yet in the long term, there also would be very little improvement of visual appeal in those areas dominated by annual grasses.

V. MITIGATION AND STIPULATIONS

None other than those already listed above.

VI. NO IMPACT ITEMS

The following items were considered, but will not be addressed because they will either not be affected or do not exist in the project areas.

1. ACEC's
2. Air Quality
3. Water Quality
4. Hazardous Wastes
5. Prime or Unique Agricultural lands
6. Solid Waste
7. Wilderness
8. Environmental Justice
9. Recreation
10. Floodplains

VII. RESIDUAL IMPACTS

Cumulative impacts of the proposed action would include vegetative improvements (establishment of non-invasive quality forage plants) and soil stability on public lands within the project areas. Other than those items already addressed in this document, no mitigating measures would be required for implementation of the proposed action.

VIII. CONSULTATION/COORDINATION

External:

Jim Torland, Oregon Department of Fish and Wildlife
Mary Beth Smith, Natural Resources Conservation Service, Sherman County
Brian Stradley, Sherman County Soil and Water Conservation Service
Jim Bishop, Natural Resources Conservation Service, Wasco County
Bob Hammel, Rancher
John Clausen, Rancher
Bill Hammel, Rancher
Paul Limmeroth, Rancher
Jim Bird, Rancher
Joe Sharp, Rancher
Mary Sayrs, Adjacent Landowner

Internal:

Helen McGranahan, Range Technician
John Hanf, Range Conservationist
Scott Cooke, Wildlife Biologist
Bill Dean, Wildlife Biologist
Mike Crumrine, Natural Resource Specialist
Ron Halvorson, Special Status Plants
Craig Obermiller, Range Conservationist
Jimmy Eisner, Fisheries Biologist
Michelle McSwain , Hydrologist
John Zancanella, Archeologist
Ron Gregory, Archeologist

NEPA Requirements met:

_____ _____

Marci Todd Date
Environmental Coordinator
Deschutes Resource Area

Exhibit 6-1 NATIVE/NON-NATIVE PLANT WORKSHEET

This worksheet is required for all ESR Plans. These criteria will be evaluated by the interdisciplinary team preparing the ESR Plan. Each element requires a short narrative/rationale.

Proposed Native Plants in Seed Mixture

1. Are the native plants proposed for seeding adapted to the ecological sites in the burned area?
X Yes ☐ No

Rationale: All plants are known to grow within the precipitation zone and soil types that occur in the rehabilitation area.

2. Is seed or seedlings of native plants available in sufficient quantity for the proposed project?
X Yes ☐ No

Rationale: Supply and demand of native species is always a concern, however the quantity needed for this fire rehabilitation does not appear to be a problem at this time.

3. Is the cost and/or quality of the native seed reasonable given the project size and approved field unit management and ESR Plan objectives?
☐ Yes X No

Rationale: Native seed is generally more expensive and harder to establish than non native species, particularly under less than ideal conditions. All of the proposed treatment areas have well established stands of cheatgrass and/or medusahead rye, which will compete with the seeded plants.

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

Yes X No
Rationale: Currently Wasco and Sherman counties have are experiencing moderate to severe drought conditions. If the moisture regime were to improve, it is possible that native species would establish and survive. However, it is not likely the establishment would be in pure, dense stands due to the moderate to heavy cover of annual grasses and shallow soils in some of the proposed treatment areas. One of the seedings proposed within the boundaries of Fire N535, has large amounts of knapweed, Dalmation toadflax and saltcedar which will also hinder establishment of native grasses

5. Will the current or proposed land management (e.g., wildlife populations, recreation use, livestock, etc.) after the seeding establishment period maintain the seeded native plants in the seed mixture?
X Yes ☐ No

Rationale: Livestock would be excluded from the seeded areas for at least two years after the treatment took place. Recreational use in the Deschutes and John Day Wild and Scenic River corridors is moderate to heavy depending on the season. None of the proposed seeding locations are projected to have a detrimental amount of recreational use. Use by big game is most likely not heavy enough to cause a problem.

Use of native species for rehabilitation projects is required if all the answers to this portion of the worksheet are yes (assuming that the native plant species are available).

Proposed Non-native Plants in Seed Mixture

1. Is the use of non-native plants necessary to meet objectives, e.g., consistent with applicable approved field unit management plans ?
X Yes ☐ No Rationale:

Management plans for John Day and Deschutes River both recognize the need to seed the best suited plant in riparian and upland areas that will speed vegetative recovery of degraded areas and increase wildlife habitat diversity. A mixture of natives and desirable non-natives can work well when competing with weed species. Many desirable non native species are more aggressive and establish faster and better. They can provide watershed stability and available forage for wildlife as good if not better than native species.

2. Will non-native plants meet the objective(s) for which they are planted without unacceptably diminishing diversity and disrupting ecological processes (nutrient cycling, water infiltration, energy flow, etc.) in the plant community?
X Yes ☐ No

Rationale: The seed mix for this project is proposed as 60% native / 40% non-native. The smaller percentage of non-native seed that would be applied would not be enough to allow non-natives to crowd out the native seedlings. These species will actually increase the ecosystem processes mentioned and increase the diversity of the area.

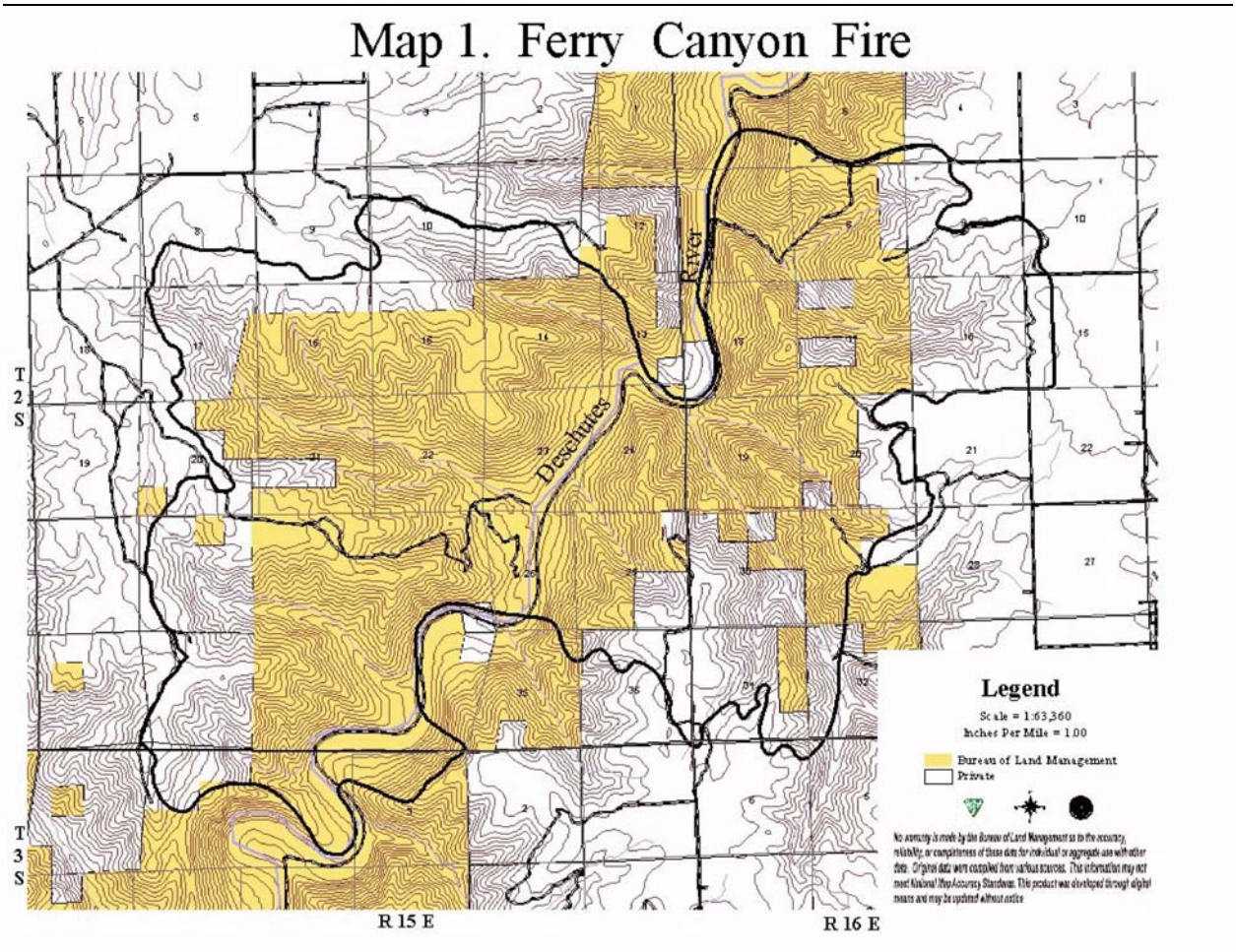
3. Will non-native plants stay on the site they are seeded and not significantly displace or interbreed with native plants?
X Yes ☐ No

Rationale: The non-native species proposed have not been shown to displace or interbreed with native species in similar projects and sites on the Prineville District. The crested wheatgrass and small burnett should inhabit the site indefinitely. The Ladak alfalfa would eventually die out, however, prior to that would be valuable for species diversity, nitrogen fixation and wildlife forage.

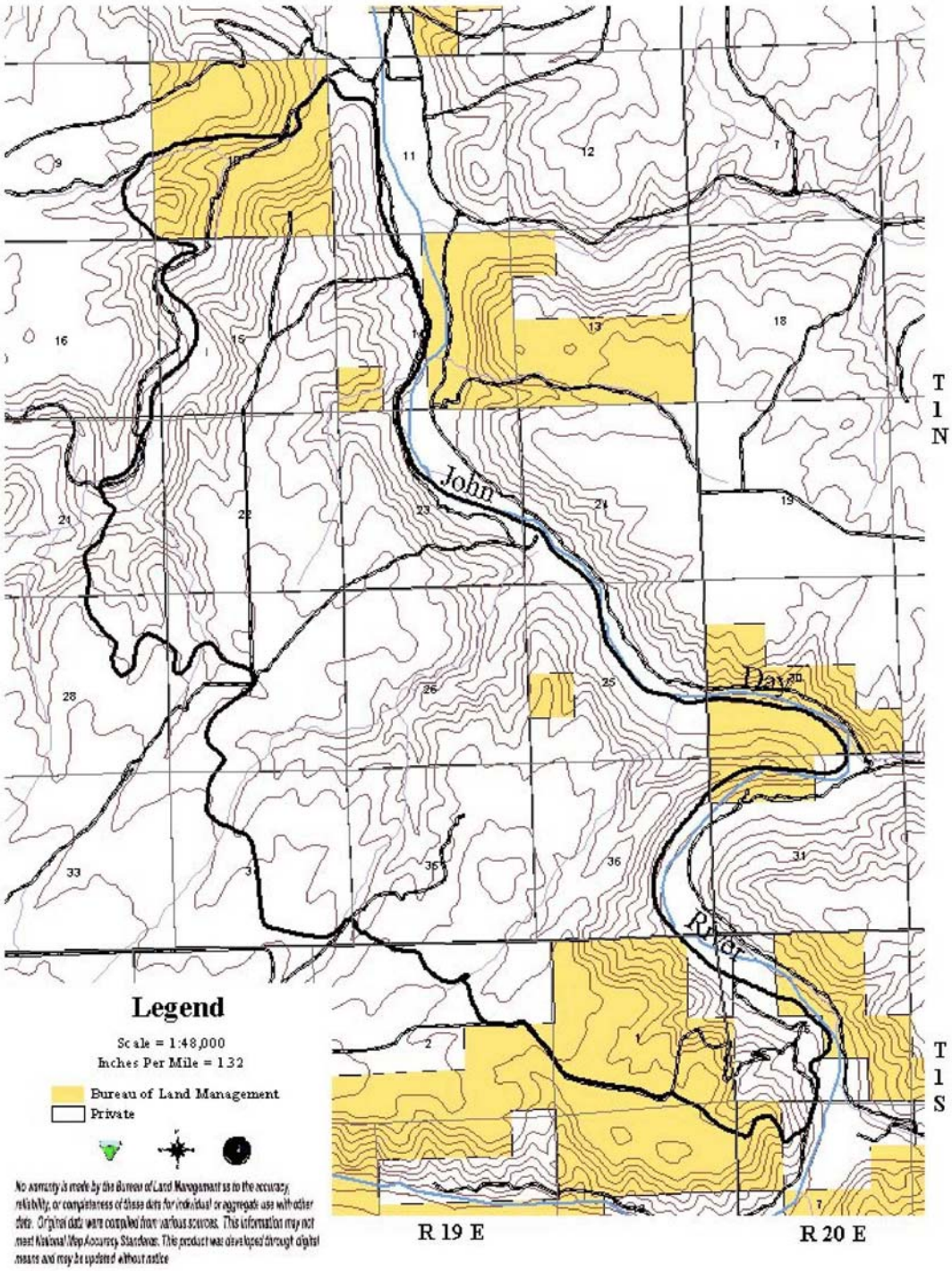
A "no" response requires additional analysis in the environmental assessment or selection of an alternate species in the seed mixture.

PROPOSED SEED MIXTURE

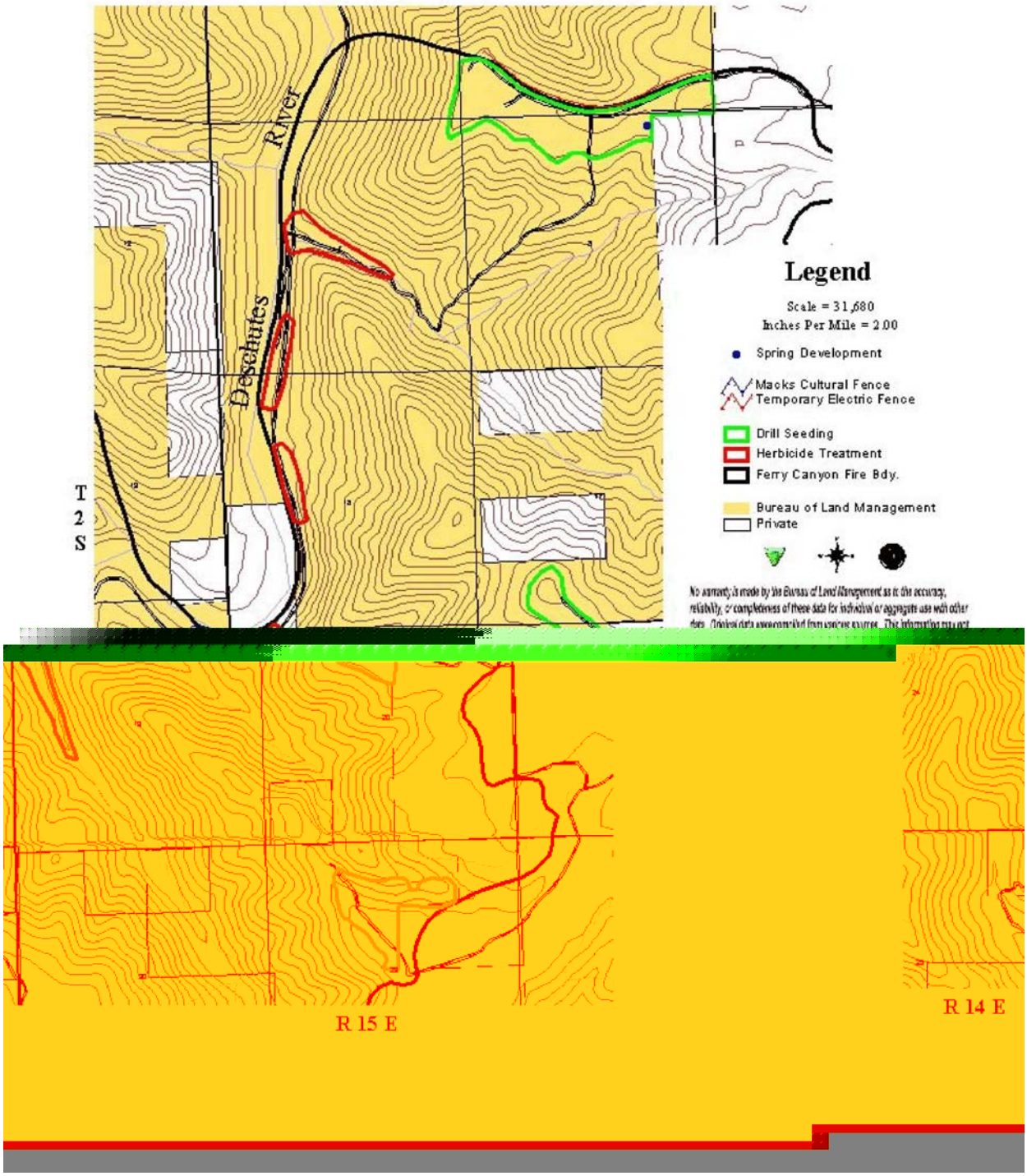
Non-native Plants	Native Plants
Crested Wheatgrass (*Agropyron cristatum* var. Fairway and Hycrest)	Bluebunch Wheatgrass (*Agropyron spicatum* var. Secar)
Small Burnett (*Sanguisorbia minor*)	Sand Dropseed *(Sporobolus cryptandrus)*
Alfalfa (*Medicago sativa* var. Ladak and Spreader 3)	Sherman Big Bluegrass (*Poa ampla* cultivar Sherman
	Bottlebrush Squirreltail (*Sitanion hystrix)*
	Thickspike wheatgrass *(Agropyron dastachyum* var. Bannock)


Map 1. Ferry Canyon Fire
Deschutes
River
T 2 S
T 3 S
R 15 E
R 16 E
Legend
Scale = 1:63,360
Inches Per Mile = 1.00
Bureau of Land Management
Private

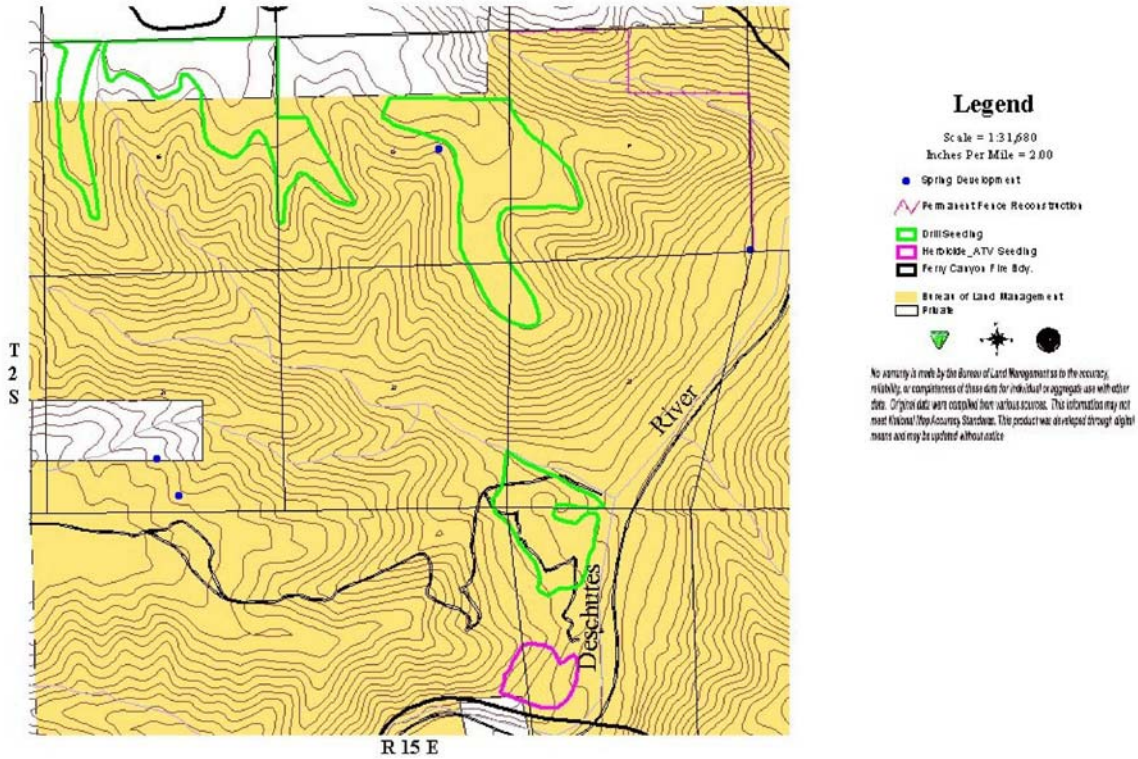
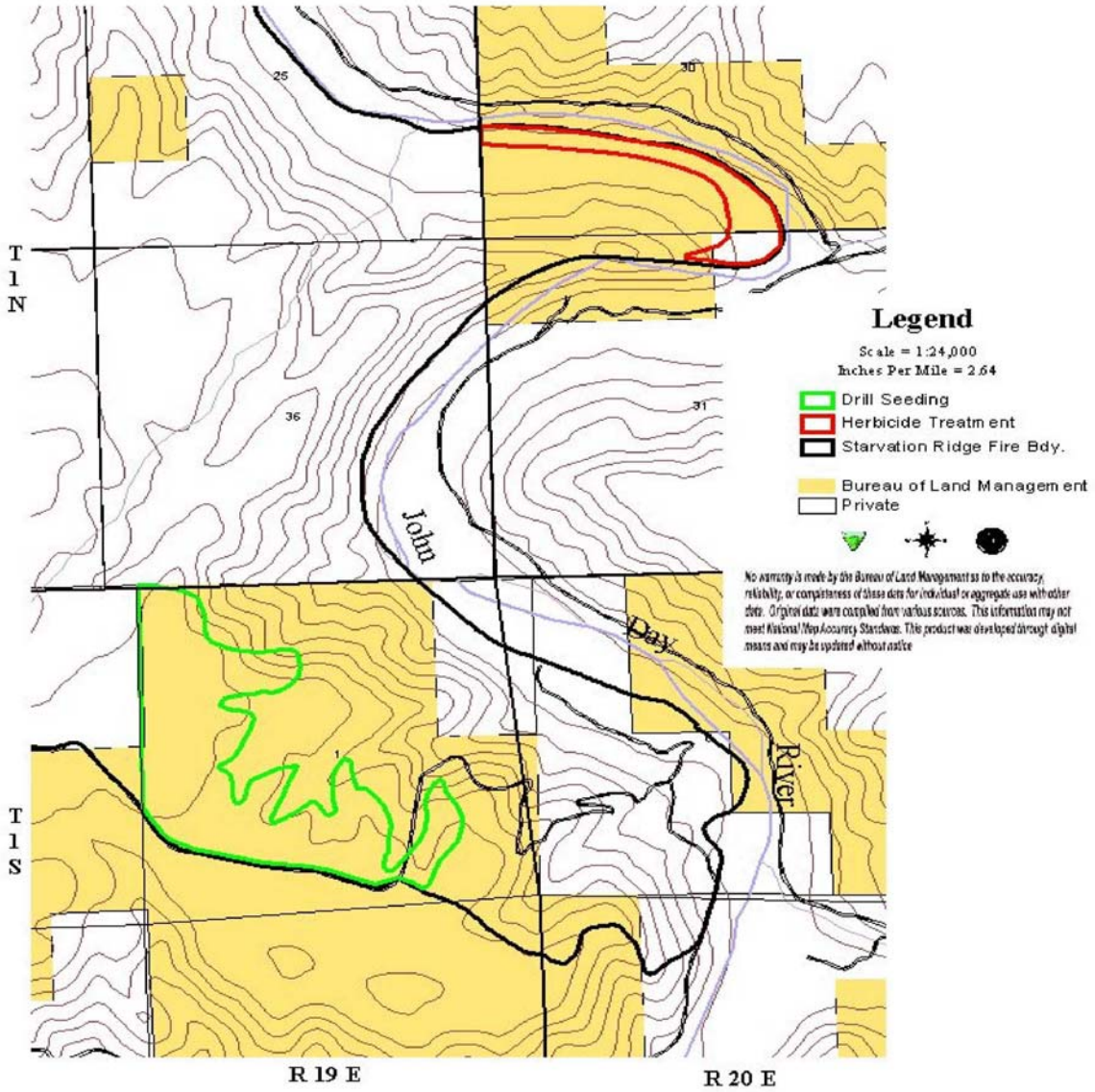
Map 2. Starvation Ridge Fire



Map 3. Ferry Canyon Fire
Treatments Areas



Map 4. Ferry Canyon Fire
Treatments Areas



Map 5. Starvation Ridge Fire
Treatment Areas