USDA-FOREST SERVICE FS-2500-8 (7/00)

Date of Report: 8/4/2005

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[ ] 1. Funding request for estimated WFSU-SULT funds
[X] 2. Accomplishment Report
[] 3. No Treatment Recommendation

B. Type of Action

[ ] 1. Initial Request (Best estimate of funds needed to complete eligible rehabilitation measures)

[ ] 2. Interim Report
[ ] Updating the initial funding request based on more accurate site data or design analysis
[ ] Status of accomplishments to date

[X] 3. Final Report (Following completion of work)

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Jacket

B. Fire Number: P3A659, AZ-COF-052

C. State: AZ

D. County: Coconino

E. Region: 3

F. Forest: Coconino

G. District: Mormon Lake

H. Date Fire Started: June 18, 2004

I. Date Fire Contained: 7/21/2004

J. Suppression Cost: $625,000 (estimated).

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 0
2. Fireline seeded (miles): .5 (est.)
3. Other (identify): 1 road crossing cleanout of sediment

L. Watershed Number: 15020015030 (new 5th), 1502001515 J, H, G, F, E (affected old 6th codes, 109,838 acres)

M. Total Acres Burned: 17,211
NFS Acres(**16,161**) Other Federal (Hopi) (40) State (425) Private (585)

N. Vegetation Types: Pinyon Pine/One seed Juniper/Cliffrose/sparse Blue Grama/galleta

O. Dominant Soils: Lithic and Calcic Ustochrepts, loamy-skeletal, carbonatic or mixed, mesic, and Typic and Lithic Haplustalfs, loamy-skeletal, mixed, mesic, sandy loams

P. Geologic Types: Kaibab limestone, minor areas of basaltic limestone and basalt alluvium.

Q. Miles of Stream Channels by Order or Class: 18.2 miles (1st Order), .7 miles (2nd Order)

R. Transportation System

Trails: 0 miles Roads: 34.5 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): (unburned) 1553, (low) 198 , (moderate) Trace , (high/unburned mix) 3960, (high) 11,508

B. Water-Repellent Soil (acres): 13,488

C. Soil Erosion Hazard Rating (acres):
11,421 (low) 3998 (moderate) 1792 (high)

D. Erosion Potential: 8 tons/acre (USLE and Sauders spreadsheet program, 2004)

E. Sediment Potential: 1260 cubic yards/square mile.

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 2

B. Design Chance of Success, (percent): 75

C. Equivalent Design Recurrence Interval, (years): 25

D. Design Storm Duration, (hours): 6

E. Design Storm Magnitude, (inches): 2.6

F. Design Flow, (cubic feet / second/linear streamcourse: 500 cfs (TR55)

G. Estimated Reduction in Infiltration, (percent): 55%

H. Adjusted Design Flow, (cfs per linear streamcourse): 775 cfs

PART V - SUMMARY OF ANALYSIS

A. **Describe Watershed Emergency**:

The fire mainly burned in large blocks of high burn severity class and a mosaic of undeliniable high and unburned burn severity classes in dense pinyon-juniper woodlands that were bark beetle and drought stricken. Most burned acres were dominated by PJ canopies greater than about 40 - 45%. The litter layer and tree canopy were completely consumed in high areas. Understory litter and grass burned predominantly under or adjacent to dense PJ canopy. Some open interspaces did not carry the fire and were left unburned. Because most of the understory is sparse and low in species composition, little seed bank and regeneration potential exists in high burned areas.

The majority of high burn severity classes are located on gentle slopes. Based on USLE erosion model estimates, all areas burned should result in sheet and rill erosion within or slightly above erosion thresholds within the first two years except on steep slopes (minor acreages overall). Wind erosion probably poses a greater threat to site productivity than water erosion due to calcareous sandy loam surfaces and a topo-edaphic wind effect.

Currently, there are a few moderate to large poplulations of invasive weeds (both cheatgrass brome and scotch thistle) directly adjacent to the fire along the powerline road (western boundary of fire (see map), converted PJ area adjoining the north boundary of the fire and 1977 Jacket Fire. These areas were ground disturbed or converted (pushed) and have since been invaded by invasive weeds. The 1977 Yellowjacket Fire, located on the eastern boundary of the fire, never regenerated into acceptable native herbaceous vegetation and likely will be an additional source of invasive weed expansion left unchecked. Cheatgrass is recognized as a serious problem throughout the western United States where it affects fire interval and changes the trajectory of succession. It is believed that if the Jacket Fire remains untreated, it will have unacceptable native vegetation regeneration and degradation of resources similiar to the disturbed areas mentioned above (powerline road, push, and 1977 Jacket Fire due to overall low seedbank and threat of the invasion of noxious weeds.

Scotch thistle (about 5 acres) is present along a few roadsides and also poses a threat to natural recovery of areas in high burn severity classes. The greatest risk of invasive species expansion is probably directly adjacent to converted areas, and roads.

Based on the results of the BAER assessment, the Jacket Fire poses a threat to vegetation recovery and site productivity and if untreated, would likely result in unacceptable resource degradation due to the invasion, establishment and expansion of invasive weeds.

Approximately 4 miles of Forest boundary were burned along the eastern edge of the fire. This fence had divided grazing pastures intermingled between the Forest Service, private land, State and Hopi land.
Left open, unpermitted cattle grazing from outside interests would threaten vegetation recovery and site productivity.

Six order 1, ephemeral drains are located within the burn perimeter, and one, short 2 order stream is located at the confluence of Yellow Jacket and Billy Back Draws. Some short-term deposition within these drains can be expected following initial monsoon storms before high burned areas revegetate. The order 2 drain has a box culvert (bridge crossing) that may require substantial cleanout the first two years (already has from small storm event on 7/18/2004) and emergency treatments (proposed storm patrol and culvert inlet clean-out). A 25 or 50 year storm event is beyond the culvert designed capacity. **Potential sediment, small woody debris, and high volumns of water delivered in such a storm could damage the culvert, bridge crossing and FR 126 beyond reasonable repair and cost more than $100,000 left untreated.**

The Padre Canyon Inventoried Roadless Area was burned and now opens once closed PJ stands to unauthorized vehicular travel. There are 3 closed Forest roads entering the area that now will require barriers and signage alerting Forest users to the closure. **Left open and unsigned, these roads pose a threat to currently undisturbed vegetation recovery and site productivity, and high density archaelogical resources and if untreated, would likely result in unacceptable resource degradation**

Numerous hazard trees lay across or are likely to fall on at least 2 Forest roads (FR 126 and FR 9119Q within the fire perimeter posing a threat to safe travel by Forest users. These trees are likely to fall across the road.
These hazardous trees pose a safety threat to travellers by forcing them to drive over trees or outside of the road prism in precarious areas unsafe for passage. It is possible that these hazard trees could fall on Forest users.

B. Emergency Treatment Objectives:

1) To prevent the unacceptable degradation of the vegetative and soil resource due to the invasion, establishment, and expansion of invasive weeds into burned areas. Anticipated desired vegetation cover is inadequate due to pre-fire extremely low herbaceous understory and dominance of invasive weeds in and adjacent to burned areas. Accelerated soil erosion will be minimized with establishment of more effective vegetative ground cover (perennial basal area and litter).

2) To establish and maintain healthy, weed-resistant plant communities (few resources are available, e. g. soil nutrients and water, to potential invaders.

3) To remove the safety hazard associated with hazardous trees adjacent to roads.

4) To alert Forest users of the threat of unsafe passage across drainageways in the event of a high storm event.

5) To prevent cross country travel in the Padre Canyon Inventoried Roadless Area and reduce the threat of significant soil, vegetation and cultural site resource damage and degradation from unwanted cross country travel.

6) To prevent the threat of of significant soil, and vegetation resource damage and degradation from unwanted and unpermitted private, State, and Hopi cattle grazing on Forest lands from burned Forest boundary fences.

7) To prevent the loss of the concrete culvert bridge and FR 126 downstream of the confluence of Yellow Jacket Draw and Billy Back Draw.

C. Probability of Completing Treatment Prior to First Major Damage-Producing Storm:

Land **80** % Channel **65** % Roads **95** % Other **95** %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	80	85	85
Channel	65	60	10
Roads	95	95	95
Other (barriers, fences)	95	95	95

E. Cost of No-Action (Including Loss): $150,000 (includes loss of bridge at $100,000)

F. Cost of Selected Alternative (Including Loss): $73,000 (**$62,000 treatment cost)**

G. Skills Represented on Burned-Area Survey Team:

[x] Hydrology [x] Soils [ ] Geology [X] Range [ ]
[ ] Forestry [**X**] Wildlife [**X**] Fire Mgmt. [X] Engineering [ ]
[X] Contracting [x] Ecology [**x**] Botany [X] Archaeology [ ]
[ ] Fisheries [ ] Research [ ] Landscape Arch [X] GIS

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H. **Treatment Narrative :**

(Describe the emergency treatments, where and how they will be applied, and what they are intended to do. This information helps to determine qualifying treatments for the appropriate funding authorities. For seeding treatments, include species, application rates and species selection rationale.)

A. Emergency Treatments by Number

1. **Hydromulching:** The first type of treatment is a preventative seeding focusing on buffer strips near the heaviest sources of cheatgrass. This treatment should occur as soon as possible to take advantage of the monsoon season and ash layer present. Approximately 5 acres will be hydromulched in 3 separate sections (see treatment map). A relatively high seeding application rate (13 lbs/acre and 50 seeds/sq/ ft.) will be used in these areas. Additional seed is purchased for potential calibration error and total cost is about $655 for seed and delivery. We will use higher seeding rates in buffer strips on the perimeters of the burned area near potential invaders to allow the natives more opportunity to establish a healthy community. Species were selected from known local surveys based on their ability to compete with invasive weeds. These species were further refined through conversations with experts at NAU, RMRS, and Reggie Fletcher in last years similar fires.

Areas selected for hydromulching are adjacent to the powerline road and PJ type conversion along the north boundary of the fire (see treatment map). The hydromulch will include the recommended seed mixture and be blown out evenly over high burn severity patches only adjacent to highly infested cheatgrass locations. A strip of approximately 50 – 66 feet wide will be hydromulched between invasive weed infestations and within high burn areas. Areas unburned will not be hydromulched or areas with apparent sufficient grass cover in lower burn severity patches. Hose length of up to 200 foot tube will be used to blow the hydromulch from the nearby road eliminating further ground disturbance of archy sites and cross country travel across infested areas. Where the hose legth does not reach, on-site archaeological clearance will be necessary. A double level of tactifier (about 200 – 250 lbs/acre) will be used along with about 2000 lbs of mulch/acre. The machine will be cleaned before and after spraying to prevent any possible spreading of invasive weeds to other areas. Experience shows that invasive weeds including cheatgrass do regrow 2 to 3 times during the growing season and will likely invade burned areas if left untreated. A 2-pronged approach will be used to reduce invasive weed expansion and includes a follow up herbicide spraying in spring.

The purpose of this treatment is to prevent the unacceptable degradation of the vegetative and soil resource due to the invasion, establishment, and expansion of invasive weeds into burned areas and to establish and maintain healthy, weed-resistant plant communities to maintain site productivity. Research and experience indicates an effective preventative measure to reduce invasive weed expansion is to seed disturbed areas with native and annual seed mixes that will out compete cheatgrass establishment. The hydromulching should improve germination success by providing a mulch to ensure soil moisture longevity, and protection from wind and water erosion. **Estimated total cost, inlcuding Forest contract implementation is about $13,500 including seed and water.**

Seed Mix

COMMON NAME	SCIENTIFIC NAME (Genus – Species; Vatiety)	% by Weight	seeds per pound	Planting Rate (PLS) 11 lbs/acre	Seeds/sq/ft	
Needle and Thread	Stipa comata	2	115,000	.26 lbs/acre	.69 seeds/sq. ft	
Blue Grama	Bouteloua gracilis; Hatchita	5	825,000	.65 lbs/acre	12 seeds/sq. ft	
Side Oats Grama	Boutelous curtipendula,	17	191,000	1.95 lbs/acre	9 seeds/sq.ft	
Indian rice grass	Achnathrum hymenoides	20	141,000	2.34 lbs/acre	8 seeds/sq.ft	
Sand dropseed	Sporobolus cryptandrus	1	5,298,000	.08 lbs/acre	16 seeds/sq. ft	
Galleta grass	Hilaria jamesii; Viva caryopsis?	5	470,000	1.3 lbs/acre	2.4 seeds/sq.ft	
Squirreltail	Sitanion hystrix	5	192,000	.65 lbs/acre	2.9 seeds/sq.ft	
Quick Guard	Wheat X Rye (sterile hybrid)	45	13,000	5.59 lbs/acre	1.8 seeds/sq.ft%	
Seed Cost/Acre				**$65.25**		

2. **Herbicide Treatment (Original proposal):** This treatment includes an early spring spraying of cheatgrass on about 4.5 acres where the hydromulch machine cannot access. Spring treatment targets mainly cheatgrass and reduces threat of death to other late cool and warm season grasses. It also includes follow-up spraying of the 5 acres hydromulched to create a **two-pronged invasive weed treatment strategy**. The purpose of this treatment is the same as treatment one. **Estimated cost is about $1460 for contract spraying and $1440 for COR Forest contracting on about 9.5 acres for a total of $2900.**

3. **Scotch thistle Treatment:** The third type of treatment involves manual eradicating all Scotch thistle populations on the perimeter of the burn site in the fall of 2004 and in the spring of 2005. Treatments on about 5 acres located in three areas (see treatment map) will be needed to prevent seed set and weed expansion over the next calendar year. These populations are patchy and will require individual spot treatment. This includes manually chopping all visible plants, including adults and rosettes, but should focus on this treatment should focus on eliminating the seeds being produced by adult thistles on the site. Adult thistles will be chopped into short pieces and seed heads bagged and removed from the site. It is suggested that this treatment be carried out by Forest Service range crews, depending on availability. The purpose of this treatment is the same as treatment one. **Estimated total cost is about $2000.**

4. **Roads and Trail Treatments:** Hazardous trees were identified in the ground survey and to pose a safety threat to travel within the burn perimeter. There are approximately 40 - 60 burned trees (19 miles) fallen across a few roads (FR 126, and FR 9119Q) or hanging across the roads and likely to fall. It is estimated hazardous tree removal can be accomplished in 3 days by a 3 person fire crew. Trees will be removed and scattered across burned areas seeded and on closed roads. **Cost is estimated at about $1200.** Also included in this category is **Storm Patrol.** Purpose is to maintain channel capacity at box culvert structures along FR 126 at Yellow Jacket and possibly Elliott Canyons. The order 2 drain has a concrete box culvert (bridge

crossing) on FR 126 located in Yellow jacket Draw with a 25 - 50 year storm event beyond the culvert designed capacity. Potential sediment and high volumns of water delivered in such a storm could damage the culvert, bridge crossing and FR 126 beyond reasonable repair and cost more than $100,000 left untreated. **5 visits at a cost of $4000.**

5. **Barriers:** The Padre Canyon Inventoried Roadless Area was burned and now opens once closed PJ stands to unauthorized vehicular travel. There are 3 closed Forest roads entering the area that now will require barriers and signage alerting Forest users to the closure. 5 sites (see treatment map) require a worm fence type barrier and is composed of a 2 rail, zig-zag pole peeled barrier. The Forest has a pole peeler and can make and install the 50 – 100 foot barriers at about $700/site. **Total cost including installation is about $3500.**

6. **Signage:** The first Forest strategy used to accompany BAER treatments is administrative closures of roads leading into the Roadless Area and temporary closures within the burn area. Up to 100 informative carsonite posts with stickers will be posted alerting Forest users to potential flood hazards in the burned perimeter near stream road crossings. Signage installed will cost about $500. Two single panel kiosks will inform users of road closures and restricted entry into the Roadless Area to protect resources burned by the fire with an additional 120 -25 wooden signs and kiosks will be posted in strategic locations (see treatment map). Wooden signs will be made on the Forest using volunteers and can be installed for about $1500. **Total signage cost is about $ 2000 installed.**

7. **Fence Replacement:** Approximately 4 miles of Forest boundary were burned along the eastern edge of the fire (see treatment map). This fence had divided grazing pastures between the Forest Service, private land, State and Hopi land. Fencing is needed to prevent unacceptable resource degradation and vegetation recovery from unauthorized and unpermitted grazing from State, Hope and Private cattle operations. Temporary solar powered fencing on 3 separate sections costs $22,000 for materials and labor. The Forest is willing to partner the remaining balance (cost at about $30,000 for permanent fence) to install a permanent fence with the use of the BAER temporary fence cost of $22,000.

B. Post-Treatment Narrative Descriptions and Accomplishments (6/10/2005). This section describes what treatments were accomplished (numbers 1-7) and preliminary results of effectiveness, where appropriate.

1. Hydromulching: A total of 4.5 acres were hydromulched in 2 major areas on August 3rd and August 4th, 2004. 5 acres were planned to be hydromulched in 3 locations but one location was inaccessible to the hydromulcher and the BAER implementation team decided not to risk soil, road and equipment damage for .5 acres. A relatively high seeding application rate (13 lbs/acre and 50 seeds/sq/ ft.) was used in these areas. The hydromulcher mixed about 5 lbs/acre and we ground seeded about 8 – 10 lbs/acre before the hydromulcher applied the mulch. Species were selected from known local surveys based on their ability to compete with invasive weeds. Areas hydromulched were adjacent to the powerline road and PJ type conversion along the north boundary of the fire. The hydromulch included the recommended seed mixture and was blown out evenly over high burn severity patches only adjacent to highly infested cheatgrass locations. A strip of approximately 50 – 66 feet wide was hydromulched in weed infestations and within high burn severity areas. Areas unburned were not hydromulched. A double level of tactifier (about 200 – 250 lbs/acre) was used along with about 2000 lbs of mulch/acre. The actual thickness of the mulch ranged from about ¼ to 1 inch was made from paper and tactified with a bonded fiber matrix. The machine was cleaned before and after spraying to prevent any possible spreading of invasive weeds to other areas.

Effectiveness: The mulch stuck very well to the soil from August through late November except for minor areas that were trampled by mule deer. Recent May 2005 monitoring show more than half of the mulch had been removed (through wind, water and deer trampling) since late November monitoring. Where mulch was present on slopes greater than about 5 %, it was evident that the mulch was effective in preventing accelerated wind and water erosion and stabilizing the soil (evidenced by lack of sheet and rilling as seen in unmulched slopes). Visual observation and plot monitoring (see attached monitoring report) indicate seeded, hydromulched areas showed little growth response of seeded species and native species regeneration in the first year. However, native regeneration responded slightly better than unmulched areas in high burned severity areas. The annual quickguard germinated and persisted through the first year better than other seeded species while needle and threadgrass did second best followed by squirreltail. Other seeded species were not readily visible or too small to identify at the time of monitoring in May.

The main objective of this treatment was to prevent unacceptable degradation of the vegetative and soil resource due to the invasion, establishment, and expansion of invasive weeds, mainly cheatgrass. The secondary objective was to stabilize the soil. Cheatgrass density increased over time in the treated and control areas, but the increase is probably largely attributable to the increase in winter and spring precipitation over previous years. Cheatgrass density in the severely burned area was lower than in the untreated area. Monitoring and visual observations indicated the effect of fire in burned areas with or without mulch reduced cheatgrass and associated expansion while unburned areas showed cheatgrass was present and expanded in patch size (may be due to wet winter and spring conditions). We conclude that direct fire effectively reduced cheatgrass populations in the first year.

The overall success of hydromulching for invasive weed control was low in the short-term (1 year) and unknown in the longer term. In the short term and within the I year window for measuring success, this treatment did not successfully fulfill our measures of success we outlined in Section D above. Over the next 2 - 5 years, more seeded species may germinate, establish and out compete and prevent cheatgrass expansion. One year of monitoring was not sufficient to draw any longer term conclusions.

Hydromulching was effective in erosion control on both slopes and flats.

2. Herbicide Treatment: As orginally proposed, this treatment included a spring spraying (May 25 – May 28th) of cheatgrass on the 4.5 acres where the hydromulch machine could not access. Spring treatment targeted cheatgrass to reduce the threat of death to other late cool and warm season grasses. It also included follow-up spraying of the 5 acres hydromulched to create a **two-pronged invasive weed treatment strategy**. The purpose of this treatment is the same as treatment one. The actual herbicide used was Roundup and application method was by ATV and ground application using pumps.

Additional Herbicide Treatment per Interim BAER Action Request: An on-site assessment was made on May 18, 2005 by BAER Team member Laura Moser to validate areas requiring treatment. An early spring spraying was not possible due to the fact that the Forest Weed EIS was appealed (and eventually upheld) causing untimely delays. Additionaly, a very wet winter and windy spring caused extensive and largely unpredictable expansion of cheatgrass from the 9.5 acres originally assessed to over 60 acres now. These additional 50 infected acres are located directly adjacent to the previously assessed acres and have expanded toward the east into moderate and high burned severity areas. It was imperative to treat the entire 60 infected acres to prevent further expansion of cheatgrass and loss of on-site soil and vegetative productivity. For this reason, we submitted an interim BAER report (2500-8) on 5/19/2005 proposing additional herbicide spraying treatments at a cost of $11,000 or about $220/acre. It was

approved and additional acres were sprayed during the same time frame mentioned above (May 25 – May 28th). All spraying was accomplished by contract.

Based on monitoring plot data, (see attached monitoring plan and report), herbicide spraying killed between 60 – 89.5% of cheatgrass present. The range is due primarily to the time in spraying. Earlier spraying (late May) resulted in higher cheatgrass kill than later spraying (early March) because the cheatgrass seedhead became harder and less penetrable by the herbicide.

The BAER team Botanist thinks the treatment was effective and will make a significant difference becaue less cheatgrass seed will be produced this year, less competition for soil moisture and nutrients and will allow more natives to establish in burned areas.

3. Scotch thistle Treatment: 1st treatment was completed on 8/18/2004 for scotch thistle by handgrubbing and bagging thistel. Most treatment occurred along old pushes. 2nd treatment was completed in late spring, 2005. It appears as though the spot populations were eliminated.

4. Roads and Trail Treatments:

Hazardous Trees: About 19 miles of roads were inspected and hazardous trees removed on 8/16/2004 – 8/18/2004.

Storm Patrol: 1st treatment on FR 126 began on 7/26/05 following the first major storm. Culverts were cleaned and debris removed along about .2 miles of road. Most burned, coarse woody debris left in or adjacent to the stream channel high flow mark was deposited after the 1st two storms. A second patrol and as of 11/23/2004, indicated all culverts were clean and functioning to their respective potential.

5. Barriers: 5 wooden barricades (whole trees and downed logs) were installed over main travel routes over identifed closed routes between 8/18/2004 and 11/1/2004. The barriers were stolen and probably used as fire wood by local fuel gatherers. These barricades have lasted in some locations and proven successful, but more often have been removed by firewood cutters for firewood. Barricades were rebuilt on the east side of the closure.

6. Signage: 57 resource protection closure signs were installed from 8/18/2004 – 9/16/2004. 45 were made of carsonite, 10 were wooden birdcage signs and 2 kiosks were installed. A few signs were observed to be damaged from either by being shot at or removed so approximately 25 more were installed with no additional loss of signage to date.

7. Fence Replacement: Treatment approved with BAER funding was to be used on the 4 mile fence on the east side boundary. Approved funding does not cover the entire actual cost of fence and construction. BAER expenses can only be used for emergency fencing (e.g electric) so we opted to use the funding towards construction of a new, permanent fence. BAER funding would only cover about 2.5 miles so the District decided to provide labor for the last 1.5 miles. Contractors finished construction of the 4 mile east boundary fence on about 11/1/2004. Contractors were careful not to travel on roads in wet season or trample archy sites. No user conflicts identified and the treatment appears to be successful.

I. **Monitoring Narrative, Plan and Preliminary Results:**

A cheatgrass monitoring plan, results and report with photos is attached.

The objective of monitoring was to evaluate the effectiveness of the hydromulch treatments (described above in H 8-1) and decide if treatment was effective for future treatment options. The Forest Botany Specialist developed and implemented a 1 year monitoring plan and monitored success of manual and herbicide treatments.

Noxious weed management focuses upon density and rate of spread of invasive exotic plant species, and the effect these aggressive plants have on the native vegetative community. Detailed monitoring of plant presence by species in plots (transects) was done in the fall of 2004 and in the spring of 2005 after winter annuals are maturing. Return visits to the populations assessed rate of spread over one year.

Part VI – Emergency Rehabilitation Treatments and Source of Funds by Land Ownership

			NFS Lands					Other Lands		
		Unit	# of		WFSU	Other	# of	Fed	# of	Non Fed
Line Items	Units	Cost	Units		SULT $	$	units	$	Units	$
A. Land Treatments										
Aerial Seed	acres				$0			$0		$0
Ground Seed	acres	1200	0.5		$600					
Hydromulch Appl.	acres	2800	4.5		$12,600			$0		$0
Herbicide & COR	acres	233	60		$14,000					
Thistle Eradication	acres	400	5		$2,000			$0		$0
Subtotal Land Treatments					$29,200			$0		$0
B. Channel Treatments										
					$0			$0		$0
					$0			$0		$0
					$0			$0		$0
					$0			$0		$0
Subtotal Channel Treat.					$0			$0		$0
C. Road and Trails										
Hazard Tree Removal	miles	60	19		$1,140			$0		$0
Storm Patrol	each	1500	2		$3,000			$0		$0
					$0			$0		$0
					$0			$0		$0
Subtotal Road & Trails					$4,140			$0		$0
D. Structures										
Wooden Signs/Kiosks	each	125	12		$1,500			$0		$0
Carsonite Signs	each	15	45		$700			$0		$0
Barriers	each	650	5		$3,250			$0		$0
Fences	miles	5100	4		$20,400			$0		$0
Subtotal Structures					$25,850			$0		$0
E. BAER Evaluation										
	p.days	290	35		$10,150			$0		$0
					$0			$0		$0
F. Monitoring	p.days	320	9		$2,950			$0		$0
G. Totals					**$72,290**			**$0**		**$0**

PART VII - APPROVALS

1. /s/ Nora B. Rasure — 8/4/2005
   Forest Supervisor (signature) — Date

2. _____ ___
   Regional Forester (signature) — Date