

USDA-FOREST SERVICE

FS-2500-8 (7/00)
Date of Report: 091402

BURNED-AREA REPORT

(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

- ☒ 1. Funding request for estimated WFSU-SULT funds
☐ 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
☐ 3. Final Report (Following completion of work)

PART II - BURNED-AREA DESCRIPTIONA. Fire Name: Kraft SpringsB. Fire Number: MT-CNF-240C. State: MontanaD. County: Carter County, MT and Harding County, SDE. Region: 01F. Forest: CusterG. District: SiouxH. Date Fire Started: Aug. 31, 2002I. Date Fire Contained: Sept 8, 2002J. Suppression Cost: \$2,300,000

K. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): 149 (primarily dozer line)
 2. Fireline seeded (miles): 0
 3. Other (identify):

L. Watershed Number:

101102011501,(101102020601,101102030507,101102011502,101102020504,101102011304,101102011403,101102011402,101102011305,101102011401)

M. Total Acres Burned: 65,551

NFS Acres (40,711) Other Federal () State () Private (24,840)

N. Vegetation Types: Ponderosa Pine/grassy understory, grass, Maple, Green Ash

O. Dominant Soils: Borollic Camborthids, Aridic Haploborolls, Yawdim, Mowbray, Absher, Parchin, Dast, Belltower, Vebar

P. Geologic Types: level-bedded sandstone, siltstone, and shale with some limestone

Q. Miles of Stream Channels by Order or Class: 55 miles order 1 and 2 (ephemeral and intermittent); 5 miles order 2 (perennial)

R. Transportation System

Trails: 0 miles Roads: 186 miles (level 2 and 3)

PART III - WATERSHED CONDITION

A. Burn Intensity (acres): 40159 (low) 11493 (moderate) 13899 (high)

Burn Severity (acres): 65,043 (low) 0 (moderate) 508 (high)

Intensity refers to vegetation effects. Severity refers to soil and ecosystem effects.

B. Water-Repellent Soil (acres): 6,949

C. Soil Erosion Hazard Rating (acres):

 (low) (moderate) 1038 (high)

D. Erosion Potential: 20 tons/acre (estimate)

E. Sediment Potential: 3047 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 3

B. Design Chance of Success, (percent): 90

C. Equivalent Design Recurrence Interval, (years): 10

D. Design Storm Duration, (hours): 24

E. Design Storm Magnitude, (inches): 3

F. Design Flow, (cubic feet / second/ square mile): 24

G. Estimated Reduction in Infiltration, (percent): 30

H. Adjusted Design Flow, (cfs per square mile): 64

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency: This unit is an “island” of forested land in a sea of grazed grasslands. It has high road density and multiple grazed private inholdings. In addition, Forest land is extensively grazed. Grazing values are high. For example, costs to National Forest term permit holders of the recommended deferment described below is estimated at \$867,000. Significantly, the burned area represents 25 percent of the entire land base for the Sioux District.

Threats to Human Health and Safety

Field Review within the burn confirms that there is a risk to property and life. The extensive road system will be closed to use by the general public. However, system roads must provide access to private inholdings and for post fire monitoring and assessment activities by Forest Service personnel. Hazard trees along system roads without treatment would pose a serious threat as this portion of Montana commonly experiences wind gusts in excess of 40 mph. Also, loss of road warning signs throughout the fire area has been documented. The likelihood of road washout and culvert failure without emergency actions is high. This poses a risk to road users and a potential downstream threat to water quality.

Private lands within the fire boundary were evaluated and no emergency conditions were identified.

Threats to Plant communities and long term structure

Field reviews within the burn indicate there are threats to ecosystem integrity in most of the burned area. These threats are related to the potential for invasion of exotic species. The area is heavily roaded, and inventories indicate noxious weeds are present in the burned area. Noxious weeds (30 acres Leafy, Spurge, Spotted Knapweed, Hounds tongue, Canada and Musk Thistle) have the potential to spread and further degrade site potential / soil productivity. Spotted knapweed and leafy spurge spread is of immediate concern. These species will increase if vegetation is not re-established rapidly, and no control efforts are undertaken.

Un-burned wooded draws are important habitat for wildlife, and may be damaged by cattle if concentrated use occurs due to lack of grass on uplands. Boundary and critical interior fencing was largely burned in the fire.

Threats to Watershed Integrity

This area is moderately at risk for post-fire debris flows, and other sediment-producing events. Most drainageways have ephemeral channels, but slopes are moderate, as is soil erosion potential over most of the area. Increased flow from post-fire storms may overtop some system culverts and fill ditches. Roads were deeply rutted during fire suppression when rains fell on the fire area. An increased in post fire sediment is likely from existing roads. Damage to the road system as well as small reservoirs located downstream on private land is anticipated.

Threats to Heritage Resources

There are numerous pre-historic and historic inventoried sites, most now exposed by the fire or suppression activities, with some needing stabilization from further damage. This area was heavily occupied by prehistoric and historic people. It is an important cultural area to six Indian tribes and is used for a variety of purposes by local residents. The Civilian Conservation Corps built all the main collector roads in the 1930's and many of the original stone drainage structures are still in use today, some of which are at risk with increased post-fire stormflows.

Threats to Long Term Soil Productivity

This portion of the Custer National Forest is a small mountain range surrounded by private agricultural lands. It is an island forest that was almost entirely burned. Normally, the area is grazed season-long. The area is not in a resilient condition. The draught cycle for the past four years put the area under stress before the fire. Though soils were not directly affected seriously by the fire, if grazed, compaction and erosion would increase. If the drought were to continue possible impacts from grazing would be further compounded.

B. Emergency Treatment Objectives:

- Reduce erosion and compaction on burned areas by deferring grazing on burned areas
- Protect crews on rehabilitation and post fire assessment projects and increase public safety (contractors doing BAER projects and access to private inholdings) by removing hazard trees
- Prevent expansion of noxious weeds into burned areas
- Reduce concentration of water and subsequent erosion on Forest system roads
- Protect heritage resources exposed, damaged, or at risk for damage by the fire

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

Land 90 % Channel na % Roads 80 % Other na %

D. Probability of Treatment Success

Years after Treatment			
	1	3	5
Land	80	80	90
Channel			
Roads	80	90	100
Other			

E. Cost of No-Action (Including Loss): **see attached kraft_fire_cost_risk_analysis 9-12-02.doc**

F. Cost of Selected Alternative (Including Loss): **see attached kraft_fire_cost_risk_analysis 9-12-02.doc**

G. Skills Represented on Burned-Area Survey Team:

<input checked="" type="checkbox"/> Hydrology	<input checked="" type="checkbox"/> Soils	<input checked="" type="checkbox"/> Geology	<input checked="" type="checkbox"/> Range	<input type="checkbox"/>
<input checked="" type="checkbox"/> Forestry	<input type="checkbox"/> Wildlife	<input type="checkbox"/> Fire Mgmt.	<input checked="" type="checkbox"/> Engineering	<input type="checkbox"/>
<input type="checkbox"/> Contracting	<input checked="" type="checkbox"/> Ecology	<input type="checkbox"/> Botany	<input checked="" type="checkbox"/> Archaeology	<input type="checkbox"/>
<input type="checkbox"/> Fisheries	<input type="checkbox"/> Research	<input type="checkbox"/> Landscape Arch	<input checked="" type="checkbox"/> GIS	

Team Leader: Henry F. Shovic, Gallatin National Forest

Email: hshovic@fs.fed.us

Phone: 406 587 6714

FAX: 406 587 6758

H. Treatment Narrative:

Land Treatments:

Hazardous Tree Treatment

Methods

Conduct Hazard Tree removal along Forest System Roads that are heavily forested and those that experienced moderate and high burn intensities. Felling of fire-damaged trees will reduce the threat to public safety and health. Hazard tree treatment will be conducted prior to implementation of projects to ensure health and safety of the workers. (Note, this is a very windy part of Montana. Approximately 13,899 acres burned with high and 11,493 acres burned with moderate intensity. These factors combined to create serious potential blowdown risk along system roads.)

Fifty-two (52) miles of road will require hazard tree treatment. The treatment map identifies 900 acres using a 100-foot buffer on both sides of the road. Individual trees are determined as hazard trees when there is the potential that with fire damage they can fall or be blown down onto the road bed (average of 50 feet from edge of road). From this maximum area, acres estimated to have hazard tree treatment is 450 acres. The average number of hazard trees per acre is estimated to be 20 to 30 (9,000 to 13,500 total). Because of the lack of accuracy of this estimate and following conversations between Bruce Sims, Regional BAER Coordinator and Randy Davis, Acting National BAER Coordinator we have agreed to request authorization for 6,750 trees (half the maximum estimate) at this time. The time period for treatment is fall of 2002.

Objective

Experience from the Post Brewer Fire indicated that fire damaged trees (top damage, bole damage, and root damage) frequently experience snap offs and blow downs due to erratic, strong, gusty winds common to the area. Forest Service employees and contractors conducting BAER and other activities will be frequenting the area this fall. Permittees and landowners with inholdings will be allowed in the fire area this fall to work on developments and private property.

Slick Creek Heritage Site Mitigation

Method

Cover trails with woody debris to trap sediment and seed site to restore vegetative cover. The seed mix and rates are outlined in the BAER specialist report for the Kraft Springs fire, under rangeland.

Objective

This treatment will help protect the National Register Slick Creek Site from increased erosion due to water channeling across the site and lack of vegetative cover.

Heritage Sites Stabilization and Protection Measures

Method

Implement individualized site protection measures that include mulching, covering with organic debris, protecting with erosion netting, and log barriers.

Objective

Protect, stabilize and preserve sites found to be at risk.

Defer Grazing for Two Growing Seasons

Method

Grazing on burned pastures will be deferred for at least two growing periods (until seed set in year 2004,) to allow vegetative recovery in the burn area. This strategy also incorporates time for root recovery from previous years drought stress. Monitoring will be conducted to determine if two years of rest is sufficient recovery time.

Objective

To allow vegetation recovery as quickly as possible following both draught and wildfire. This will minimize soil loss, help maintain soil productivity, increase infiltration, and reduce runoff and expected increases in peak stream flows. Premature grazing would result in concentrated use on the few relatively un-impacted areas within the burned area.

Noxious Weed Treatment

Method

Evaluate accepted treatment methods (mechanical and chemical) to determine the most appropriate course of action. Any action must be in full compliance with NEPA. Herbicide application will require applicable risk assessments, compliance with the label recommendations on the container and Agency policy and direction. Only personnel who are adequately trained in the proper use of herbicides shall implement pesticide-use projects (FHS 2109.14, Section 34). In addition, Forest Service personnel using, or supervising the use of, restricted-use pesticides must be certified and licensed (FSM 2154.2).

Integrated Pest Management (IPM) will be used to control the spread of noxious weeds in the burn area for three years following the fire. A combination of biological, and chemical techniques will be used. The inclusion of Noxious Weed Management is to prevent the aggressive spread and competition of the weeds after fire. The species found are Spotted Knapweed, Leafy Spurge, Hound's tongue, Canada and Musk Thistle. Noxious weed treatments must occur annually over at least three years after the fire to be effective.

Objective

Due to disturbance by fire, weed expansion is likely. Treatments will reduce expansion into previously unpopulated areas.

Repair and Replace Fences between Forest and Non-forest land to prevent livestock movement on to Forest Lands (See PART VIII – Appendix Fence Repair/Replacement Cost Breakdown, pg. 10)

Method

Reconstruct (95.51 miles) burn-damaged fence in fire area. The Forest was able to allocate \$125,000 of program funds and \$61,000 from NRCS sources to supplement BAER authorization for this activity. This was done to allow replacement of burned fences with permanent fence rather than the temporary fences allowed under the BAER program. This will improve overall program efficiency as program funds at a later date will not be needed to remove and replace the temporary fences. Livestock use in burn area, even after one season of deferment, could cause excessive erosion and compaction, or interfere with vegetative recovery. Cattle may drift into National Forest burned area from private lands, especially in drought conditions.

Objective

Help insure that natural recovery will not be slowed due to animal damage.

Channel Treatments:

None

Roads and Trail Treatments:

Sign replacement

Methods

Replace damaged signs needed to protect public safety. Also, some heritage signs designed to inform the public regarding the safety and fire-exposed cultural sites are requested.

Objectives

This treatment will increase safety for administrative and other short term access to the burned area. It will also help protect cultural sites exposed by the fire.

Road Rehabilitation – Low Water Crossings

Methods

Construction of low water crossings (fords.)

Objective

Construction of low water crossings to pass anticipated high storm events and increase protection of watersheds.

Road Rehabilitation – Drainage Dips and Sags

Methods

Use of crushed aggregate to construct armored drainage dips and drainage sags on access roads.

Objective

Construction of armored drain dips and sags to pass post-fire stormflow

Road Rehabilitation – New CMP (culverts)

Methods

Installation of new ditch relief and road drainage culverts with a construction contract in areas where fire increased runoff is anticipated.

Objective

Protect road structure and reduce chances of watershed damage from post-fire stormflow.

Road Rehabilitation – Template Improvement

Methods

Improve the traveled way template of all collectors and percentage of other system roads. Objective

Improve safety of traveled way and to effectively remove water from road to drainage systems.

Road Rehabilitation – Ditch Cleaning

Methods

Clean all ditches and outlets. In some areas, enlarge catch basins.

Objective

improve the existing structure's ability to handle post-fire storm runoff.

Road Rehabilitation – CMP Cleaning

Methods

. Clean all drainage structures. In some areas, enlarge catch basins.

Objective

improve the existing structure's ability to handle post-fire storm runoff

Road Rehabilitation – Mobilization

Methods

Mobilize heavy equipment to site

Objective

To make equipment available on site.

Road Rehabilitation – Other Earthwork

Methods

Perform misc. earthwork.

Objective

Improve drainage capabilities of the roads while protecting CCC era drainage structures.

CCC Road Treatments for Speelman, Plum, Snow Creek, and Capital Rock Road

Method

Clean existing CCC built culverts. Should this not be successful, install new culverts adjacent to the CCC culverts to promote drainage and preserve the CCC culverts. These costs are included in road and culvert repair as shown above, but special heritage considerations are to be applied, such as protection from disturbance and consultation with heritage agencies.

Objective

Preserve and maintain features (such as culverts, stone ways, diversion ditches) within the identified CCC built roads.

Structures:**I. Monitoring Narrative:*****Noxious Weeds Monitor***

Methods

Fire suppression activities associated with the Kraft Springs Fire may have caused the introduction or spread of some invasive species. The District Ranger is directed (FSM 2523.04d) to “ *monitor burned areas to ensure rehabilitation treatments and other measures are functioning as planned and are effective. Monitor for the post-fire presence of invasive species. Maintain treatments to keep them functioning as designed. Use monitoring results to plan follow-up actions, including the control of invasive species.* ” The treatment of noxious weeds will prevent permanent impairment of ecosystem structure and function in compliance with FSM 2523.02. Contract crews will monitor effectiveness of treatments, along with monitoring and mapping of new infestations within the burn area. If new infestations are found during monitoring, treatment will be done.

Invasive Plants Monitoring Actions Recommended:

- GPS inventory of new infestations annually from 2003 through 2006
- Annual assessment of infestation magnitude includes:

- ✓ Map showing initial infestations and treatment areas during year one
- ✓ Map showing subsequent infestations and treatments during year two and three
- ✓ Ocular estimates of plants per square foot
- ✓ Appropriate pesticide-use approvals
- ✓ Dates of treatment
- ✓ Treatment methods and chemicals used
- ✓ All treatment information in the annual pesticide-use report
- ✓ Evaluation of treatment success using repeated site visits to ensure eradication of all noxious weeds

Objective

As awareness of the problems associated with the introduction of invasive plant species increases [see Executive Order 13112 in appendix], it becomes important to immediately evaluate the magnitude of any invasion as quickly as possible and then take aggressive control action. Monitor, map, and treat any new infestation during three-year monitoring cycle.

Project Work Plan (3 years)

Labor	Rate	Misc. Expenses	Cost
50 GS-11 days	\$220/day	\$1,500	\$12,500

Fence Monitoring

Methods

Ride or travel along fences at least twice per grazing season.

Objective

Ensure fences are effective at controlling livestock

Project Work Plan (3 years)

Labor	Rate	Misc. Expenses	Cost
40 GS 7/9 days	\$171/day	\$1,560	\$7,400

Hazard Tree Assess/Monitor

Methods

Conduct a Hazard Tree Assessment along major road systems that experienced a high intensity fire during the 1988 Brewer Fire followed by the 2002 Kraft Fire to reduce the threat to public safety and health. Inventories will need to be done prior to commencing any of the proposed watershed stabilization projects to ensure safety of the workers during implementation.

- ✓ Identify, mark and count individual trees
- ✓ Evaluate effectiveness of treatment by reviewing treated areas following significant wind/storm events

Objective

- ✓ Twenty-eight (28) miles of road will require successful treatment of hazard trees. The time period for assessment is September of 2002.

Project Work Plan (1 year)

Labor	Rate	Misc. Expenses	Cost
9 GS-7/9 days	\$171/day		\$1,540

Soil Recovery Monitoring

Methods

- ✓ Evaluation of natural vegetative (and soil) recovery using repeated site visits to ensure appropriate ground cover is provided within the next two growing seasons. It is anticipated that there will be 50% effective ground cover by the end of the second growing season.

Objective

- ✓ stabilize severely burned soils to maintain long-term productivity and meet Regional and Forest Plan standards,
- ✓ prevent production and delivery of off-site erosion to the stream channel network that may impact values at risk,
- ✓ reduce overland flow caused by rain-drop splash that seals the soil surface, provide moisture to the natural seeds

Project Work Plan (1 year)

Labor	Rate	Misc. Expenses	Cost
9 GS-7/9 days	\$171/day		\$1,540

Heritage Recorded Site Review and Identification of Site Protection Measures

Method

- ✓ Each site will be field reviewed yearly to determine if the site was adequately protected. Presence of new rills or gullies in or near the sites will trigger additional measures.

Objectives

Thirty sites are identified as needing protection from erosion, objectives are similar to those under soil recovery monitoring outline above.

Project Work Plan

Labor	Rate	Misc. Expenses	Cost
9 GS-7/9 days	\$171/day		\$1,540

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

Part IV - Emergency, Rehabilitation, Treatments and Source of Funds by Land Ownership										
			NFS Lands			Other Lands				All
		Unit	# of	WFSU	Other	# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	SULT \$	\$	units	\$	Units	\$	\$
A. Land Treatments										
Hazard Trees Removal	ea	4.69	6,750	\$31,658	\$0	0	\$0		\$0	\$31,658
Slick Ck. Stab/Prot	ea	1000	1	\$1,000						\$1,000
Heritage Site Stab/Prot	ea	625	8	\$5,000						\$5,000
Defer grazing for two growing seasons				\$0						
Noxious Weeds Treat	acres	45	90	\$4,050						\$4,050
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Land Treatments				\$41,708	\$0		\$0		\$0	\$41,708
B. Channel Treatments										
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Channel Treat.				\$0	\$0		\$0		\$0	\$0
C. Road and Trails										
Sign replacement	ea	145.23	51	\$7,407	\$0		\$0		\$0	\$7,407
Low water crossings	ea	6405	16	\$102,480	\$0		\$0		\$0	\$102,480
Drainage dips and sags	ea	750	70	\$52,500	\$0		\$0		\$0	\$52,500
new culverts	ea	7021	10	\$70,210	\$0		\$0		\$0	\$70,210
Template improvement	miles	300	100	\$30,000			\$0		\$0	\$30,000
Ditch Cleaning	miles	200	50	\$10,000			\$0		\$0	\$10,000
Culvert Cleaning	ea	50	160	\$8,000			\$0		\$0	\$8,000
Mobilization	ea	30000	1	\$30,000			\$0		\$0	\$30,000
Misc. earthwork	ea	6000	1	\$6,000			\$0		\$0	\$6,000
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Road & Trails				\$316,597	\$0		\$0		\$0	\$316,597
D. Structures										
Repair Fences braces	miles	2438	63	\$153,594		miles		12.5	\$31,700	\$185,294
Replace Fences	mile	4352	32	\$139,264		miles		6.4	\$29,300	\$168,564
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Structures				\$292,858	\$0		\$0		\$61,000	\$353,858
E. BAER Evaluation										
BAER team direct costs	person/	600	56	\$33,600	\$0		\$0		\$0	\$33,600
BAER team direct costs - admin	person/	300	9	\$2,700	\$0		\$0		\$0	\$2,700
Indirect costs	item	4000	1	\$4,000	\$0		\$0		\$0	\$4,000
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Evaluation				\$40,300	\$0		\$0		\$0	\$40,300
F. Monitoring										
Noxious Weeds Monitoring	ea	4,167	1	\$4,167						\$4,167

PART VII - APPROVALS

1. NANCY T. CURRIDEN September 14, 2002
Forest Supervisor (signature) Date
2. _____
Regional Forester (signature) Date

PART VIII – APPENDIX Fence Repair/Replacement Cost Breakdown

Land Treatment – Fencing: About 96 miles of fence will need varying degrees of repair or replacement in order to exclude livestock from entering burn area from adjacent private lands and adjacent unburned grazing lands under permit. The BAER fencing proposal does not include interior fences (~ 57 miles) that only separate burned areas from other burned areas. Reconstruction and repair of these fences will be pursued under other funding sources. BAER request is for a total of \$292,908 (\$153,621 for wood post/brace replacement and \$139,287 for fence replacement). However, this only covers 61% of the total fencing cost. Other fund sources will contribute to the total need as follows:

	BAER	Cost Share	Other FS Funds	Total Cost
Cost	\$292,908	\$60,948	\$124,868	\$478,723
% of Total Cost	61%	13%	26%	100%

Other Forest Service non-BAER fencing needs within the burn perimeter totals \$247,275 for repair and replacement of 57 miles of additional fence that is not included in the BAER submittal since burned areas occur on both sides of the fence.

Aerial reconnaissance and ten person-days of field inspections were done after the fire was contained. Based upon a 20% on-the-ground field survey of the projected BAER fence treatment area (96 miles of fence) and aerial flights to determine areas of varying fire intensity. The estimate of whether a fence was deemed needing repair versus reconstruction of fence was based on ten person-days of field reconnaissance within the fire perimeter.

The following table is a preliminary estimate of damaged fence that needs immediate repair or reconstruction to prevent livestock from adjoining pastures from entering the burn and causing watershed damage during vegetation recovery. The total estimated cost of reconstructing all of the vital range improvements is \$7,400. This is derived from a 4-person crew with supervisor, ATV use for 10-day field reconnaissance. A cost of right-of-way (ROW) clearing of 10% of the needed BAER fencing is included in the fence cost and totals \$14,497. A cost of \$2,800 is estimated for field observation data compilation, contract preparation of specifications, contracting officer support, and contract inspections. These costs are incorporated into the total fencing estimated as outlined in the following table:

Immediate BAER Fencing Needs	Total Miles	% Replace Wood Posts / Braces Only	Miles of Wood Posts / Braces Replace	\$ / Mile Replace Wood Posts / Braces	Cost to Replace Wood Posts / Braces	~ 20% Offset from Cost Share with NRCS/FSA	% Replace Entire Fence	Miles of Fence Replace	BAER \$ / Mile Replace Entire Fence	Cost to Replace Fence	~ 20% Offset from Cost Share with NRCS/FSA	TOTAL BAER FENCE COST WITHOUT 20% OFFSET	TOTAL BAER FENCE COST WITH 20% Offset	Non-FS Cost-Share	Other FS Funds (i.e. RBF/NFP) to meet actual cost of fencing	Entire Cost for Fencing Needs
Boundary fence to separate Federal from Private to exclude non-deferred livestock in unburned from burned																
Northeast perimeter - South of Wood Gulch to Larry Licking's	21.92	30%	7	\$3,100	\$20,386	\$16,308	70%	15	\$5,000	\$76,720	\$61,376	\$97,106	\$77,685	\$19,421	\$45,817	\$142,923
East & Southeast perimeter - Licking's to Exie	19.47	80%	16	\$3,100	\$48,286	\$38,628	20%	4	\$5,000	\$19,470	\$15,576	\$67,756	\$54,205	\$13,551	\$11,627	\$79,383
West perimeter - Kennedy's to N burn (Direct boundary or slight interior)	13.11	80%	10	\$3,100	\$32,513	\$26,010	20%	3	\$5,000	\$13,110	\$10,488	\$45,623	\$36,498	\$9,124.56	\$7,829	\$53,452
subtotal	54.5															
Boundary fence to separate Federal from Private Inholdings to exclude non-deferred livestock in unburned from burned																
Inholding: Schell's	11.18	80%	9	\$3,100	\$27,726	\$22,181	20%	2	\$5,000	\$11,180	\$8,944	\$38,906	\$31,125	\$7,781	\$6,677	\$45,583
Inholding: Brewer Homestead	2.94	100%	3	\$3,100	\$9,114	\$7,291	0%	0	\$5,000	\$0	\$0	\$9,114	\$7,291	\$1,822	\$0	\$9,114
Inholding: Lost Farm Homestead	2.57	100%	3	\$3,100	\$7,967	\$6,374	0%	0	\$5,000	\$0	\$0	\$7,967	\$6,374	\$1,593	\$0	\$7,967
Inholding: Cabins	4.46	70%	3	\$3,100	\$9,678	\$7,743	30%	1	\$5,000	\$6,690	\$5,352	\$16,368	\$13,095	\$3,274	\$3,995	\$20,363
Inholding: Snow Creek	4.74	20%	1	\$3,100	\$2,939	\$2,351	80%	4	\$5,000	\$18,960	\$15,168	\$21,899	\$17,519	\$4,380	\$11,323	\$33,222
subtotal	25.89							0								
Interior Repair / Replacement to exclude non-deferred livestock in unburned from burned																
North Interior - From West to East Side	7.94	100%	8	\$1,000	\$7,940	\$7,940	0%	0	\$5,000	\$0	\$0	\$7,940	\$7,940.0	\$0.00	\$16,674	\$24,614
Southwest interior cut from Exie to Kennedy's	4.08	100%	4	\$1,000	\$4,080	\$4,080	0%	0	\$5,000	\$0	\$0	\$4,080	\$4,080.0	\$0.00	\$8,568	\$12,648
Southwest - Temporary Fence	3.1	0%	0	\$4,000	\$0	\$0	100%	3	\$4,000	\$12,400	\$12,400	\$12,400	\$12,400.0	\$0.00	\$12,357	\$24,757
subtotal	15.12															
ROW Clearing (10%)			6.3	\$1,526	\$9,614	\$9,614		3.2	\$1,526	\$4,883	\$4,883	\$14,497	\$14,497	\$0.00	\$0	\$14,497
Condition Validation Assessment					\$3,700	\$3,700				\$3,700	\$3,700	\$7,400	\$7,400	\$0.00	\$0	\$7,400
Contract Prep					\$1,400	\$1,400				\$1,400	\$1,400	\$2,800	\$2,800	\$0.00	\$0	\$2,800
Immediate Needs - Total Miles	95.51		63		\$185,342	\$153,621		32		\$168,513	\$139,287	\$353,855	\$292,908	\$60,948	\$124,868	\$478,723

