File Code: 2520-3 **Date:** October2, 2006
Route To:

Subject: Burned Area Report – Heavens Gate Complex

To: Regional Forester

Enclosed is the initial Heaven's Gate Fire Complex Burned Area Report Funding request for estimated WFSU-SULT funds. This request is a combined report for the four named fires in the complex; Black Butte Fire, Green Acres Fire, McCrea Fire, and the Horse Heaven Fire. This report also contains two Table 6 - funding spreadsheets, one for the requested BAER funds for the Nez Perce Forest and another for the BAER work on the Wallowa-Whitman National Forest. The BAER Team from the Nez Perce, with assistance from the Wallowa – Whitman evaluated the fires within the Heaven's Gate complex. BAER work that was requested for funding for Region 6 will be implemented by the Wallowa-Whitman National Forest.

The request for National Forest lands on the Nez Perce forest is for $145,320, primarily for BAER evaluation, one culvert replacement, 76 acres of weed treatments, 50 miles of trail postfire preventative maintenance: including water bars, drain dips, ditch cleaning, trail safety and protection signing, a small weed spraying effectiveness monitoring component, and monitoring of a heritage site affected by fire.

The request for National Forest lands on the Wallowa-Whitman Forest is for $24, 210 for 10 miles of trail postfire preventative maintenance: including water bars, drain dips, ditch cleaning, and stabilization treatment on fillslopes such as cribbing.

Please contact Marci Nielsen-Gerhardt at 208-983-1950 if you have any questions or concerns regarding this matter. She will gladly assist you.

/s/ JANE COTTRELL
Forest Supervisor

Enclosure

Cc:
Bruce Sims, Northern Regional Office
Marci Nielsen-Gerhardt, Nez Perce National Forest
Mike McNamarra-BAER Coordinator-Wallowa-Whitman National Forest
Cathy Conover-Hells Canyon National Recreation ARea

Date

USDA-FOREST SERVICE FS-2500-8 (6/06)

Date of Report:

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[ ] 1. Funding request for estimated emergency stabilization funds
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action

[**X]** 1. Initial Request (Best estimate of funds needed to complete eligible stabilization 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 DESCRIPTION

A. Fire Name: **Heaven's Gate Complex(Black Butte, Green Acres, Horse Heaven, and McCrea Fires)**

B. Fire Number**: IDP-NPF-200618 (Heaven's Gate Complex**)

C. State:**Idaho** D. County:**Idaho**

E. Region**: 1**

F. Forest:**Nez Perce Forest – Black Butte, Green Acres, Horse Heaven. Wallowa-Whitman Forest-Green Acres, McMcrea, and Horse Heaven**

G. District**: Salmon River Ranger District, Nez Perce Forest and Hells Canyon National Recreation Area, Wallowa Whitman National Forest**

H. Fire Incident Job Code: **P1C4VU**

I. Date Fire Started**:8/1/2006** J. Date Fire Contained:projected **11/15/2006**

K. Suppression Cost: to date **9/20/2006 - $6, 610,000**

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): **Black Butte – Machine lines 4.2 miles obliteration and waterbars, handlines 6 miles obliteration and waterbars, roads opened and reclosed with water bars installed 7 miles, Green Acres – handline 1.5 mile,Horse Heaven-.5 miles**

2. Fireline seeded and mulched (miles):**Black Butte- Roads 7 miles, machine lines 4 miles, handlines 1 mile**

3. Other (identify**): 1 acres of rehabilitation on parking and pumpkin sites, seeding and mulch**

M. Watershed Number: **Black Butte- 17060207-01, 17060209-03,Green Acres- 17060210-01, 1706010101-06, 1706021004-03**

N. Total Acres Burned: **Black Butte – 33,376, Green Acres,- 6714, Horse Heaven/McCrea 3092**
NFS Acres( ) Other Federal ( ) State ( ) Private (**Black Butte Low-528, Unburned 54)**
NFS (acres)

O. Vegetation Types**: Black Butte Fire – grand fir and Douglas fir, upper elevations of fire and annual grasses and weeds, native grasses, ponderosa pine, Douglas-fir on steep breaklands**
Green Acres, McCrea and Horse Heaven fires –subalpine fir, whitebark pine, spruce, and high elevation shrubs and forbs

P. Dominant Soils: **Black Butte- Ultic haploxerolls, with mixed volcanic as surface layers**
Green Acres-Andic Cryochrepts and Cryumbrepts, Dystric Cryochrepts and rock outcrop/talus

Q.Geologic Types:**Black Butte – Idaho Batholith Granitic**
Green Acres – Seven Devil's Formation
Horse Heaven – Seven-Devils Formation
McCrea – Seven-Devils Formation

R. Miles of Stream Channels by Order or Class:
Black Butte- Stream Order 1-90.4 miles, 2-19.5 miles, 3-11.2 miles, 4-8.6 miles, 5-2.5 miles
Horse Heaven- Stream Order 1-1.4 miles, 2-2.9 miles, 1.5 miles
McCrea-Stream Order 1.5 miles, 2-.1 miles

S. Transportation System –**Green Acres roads-4.0 miles, trails 5.1, Horse Heaven -3 miles trails, McCrea-trails 7 miles**

Black Butte Trails:**50.5 miles** Roads:**31.4 miles**

PART III - WATERSHED CONDITION

A. Burn Severity (acres): ___ (low) ___ (moderate) ___ (high)

Fire Name	Black Butte	Green Acres	Horse Heaven/McCrea
Unburned (acres)	6,818	347	166
Low Severity (acres)	18,194	3,332	398
Moderate-Severity (acres)	4,494	1,161	355
High Severity (acres)	3,289	1,874	2,173
Total Acres FS	32,794	6,714	3,092

B. Water-Repellent Soil (acres): **Black Butte-2491 acres, Green Acres – 1120 acres, Horse Heaven/McCrea - 902 acres**

C. Soil Erosion Hazard Rating (acres):

Black Butte	**1552**	(low)	**22,691**	(moderate)	**9122** (high)
Horse Heaven	**0**		**799**		**1047**
Green Acres			**1816**		**4886**
McCrea					

D. Erosion Potential**:** **Black Butte 0.16 tons/acre, Green Acres 0.16 tons/acre, Horse Heaven 0.24 tons/acre**

E. Sediment Potential: Black **Butte 24.3 Tons/mi^2/yr Green Acres, 22.7 Tons/mi^2/yr ,Horse Heaven 23.4 Tons/mi^2/yr**

PART IV - HYDROLOGIC DESIGN FACTORS

	Black Butte	Green Acres	Horse Heaven
A. Estimated Vegetative Recovery Period, (years):	**2**	**2**	**2**
B. Design Chance of Success, (percent):	**80**	**80**	**80**
C. Equivalent Design Recurrence Interval, (years):	**10**	**10**	**10**
D. Design Storm Duration, (hours):	**24**	**24**	**24**
E. Design Storm Magnitude, (inches**):**	**2.7**	**2.8**	**3.2**
F. Design Flow, (cubic feet / second/ square mile):	**23.1**	**25.9**	**19.8**
G. Estimated Reduction in Infiltration, (percent):	**8**	**16**	**29**
H. Adjusted Design Flow, (cfs per square mile):	**27.7**	**33.7**	**27.9**

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

Threat to Ecosystem Integrity-Black Butte Fire

Invasive Weeds

Recent weed inventories conducted along the Salmon River River Canyon have identified a number of Idaho noxious and invasive weeds occurring within the perimeter of the Black Butte fire. Inventories have found Spotted knapweed (*Centaurea maculosa*), Scotch thistle (*Onopordum acanthium*) and Rush skeletonweed (*Chondrilla juncea)* within the fire perimeter.

Approximately 80% of the Black Butte Fire area on National Forest land is classified as high susceptibility to invasive weeds. Highly susceptible lands risk loss of ecological integrity from further spread of invasive weeds. Fire intensities were generally low to moderate. Most grasses and shrubs in or near infested sites should regenerate because roots and crowns remained intact. However highly

susceptible habitat, existing infestations and exposed mineral soils along roads, trails, fire lines and camps greatly increase the risk of invasive weed spread as a result of fire disturbance. The risk of weed spread has increased within the Black Butte Fire due to the interaction of the weed expansion factors.

Most of the previously identified weed infested sites within the fire were either burned or occur adjacent to burned areas. The warm and dry habitats within the Black Butte fire contain know infestations of Rush skeletonweed and Scotch thistle. Small spot infestations of spotted knapweed are scattered along forest road # 394 which runs through the fire perimeter. Other discrete or small populations continue to be identified along roads leading into the burned area. Spotted knapweed rush skeletonweed and Scotch thistle are invasive weeds that can readily out compete native plants and dominate disturbed sites.

Trails, roads and firelines within and adjacent to the fire are corridors for weed dispersal. Habitats highly susceptible to weed invasion have burned within the Black Butte fire increasing the risk of weed spread.

Threat to Federal property:

Trails

Black Butte Fire

The threat to federal property is loss of trails due to increased runoff and erosion in the Black Butte Fire area. The trails in this area are located on grussic granitic soil of the Idaho Batholith Formation. One small storm event that was the season ending event for this fire caused much sluffing and sediment movement on these fires already, with the trails located in moderate and high severity burns having the most damage from the small storm. Future storms create a high loss of trail tread on these trails.

There are several trails that have been impacted by the Black Butte Fire. These trails include both motorized and non-motorized, Wilderness and general forest area trails. Use of the trails varies from light to heavy. The use period for trails in this area can occur from Mid-March through December. Trails are used by both outfitted and non-outfitted public. The trails are located within the Salmon River breaklands on slopes between 40 and 70 percent. Soils and therefore trail tread is derived from granitic parent material. Normally, these soils have high erosion potential however, when coupled with the effects of wildfire the erosion potential becomes severe. Cribbing is commonly used to stabilize trails in this setting. Trail maintenance is conducted annually on most of the trails in the affected area using Forest Service, contract and volunteer crews. Trail drainage and erosion control measures within the area were in good to excellent shape prior to the Black Butte Fire.

Green Acres Fire

- **Potential loss of ~~trail tread or~~ drainage structures due to increased runoff or sloughing will likely concentrate runoff and create unwanted gully erosion and downslope sedimentation. This risk is high around Heaven's Gate National Recreation Trail #73. The fire burned at high severity above and below this trail which leads from the parking lot to the lookout and has 200 visitors using it per day in the summer.**

- **The Seven Devil's Trail #53, and the Sheep Creek trail#53, are all located within the fire area, and most of the trail mileage is located in the ~~tread~~ in moderate and severely burned headwaters of Sheep Creek. There is a risk of increased runoff, which will put at risk: 2 undersized culverts, and a steep section with close switchbacks on highly erodible soils.**

- **There is also a threat to ~~loss of trail tread due~~ to increased unwanted concentration of runoff and erosion along the Boise Trail #101 because of damage to waterbars or simply the overwhelming of existing drainage structures because of increased runoff. The fire also burned**

at high severity along this trail removing all vegetation. There is an increase in hydrophobic soils decreasing infiltration along this trail.

Horse Heaven Fire

The threat to federal property is loss of trails due to increased runoff and erosion on the Nez Perce National Forest on the Horse Heaven Fire. The trails are located within or adjacent to the Rapid River Wild and Scenic River on slopes between 20 and 50 percent. Normally, these soils have moderate erosion potential however, when coupled with the effects of wildfire, it become more severe. Trail maintenance is conducted annually on the affected trails using Forest Service, contract and volunteer crews. Trails within the area were in good to excellent shape prior to the Horse Heaven Fire.

Threat to Water Quality Deterioration

The purpose of this set of treatments is to reduce the erosional effects of post-fire runoff on natural resources and facilities. There is one set of double culverts, on Shingle Creek that are inadequately sized on the Seven Devils Road # 517 downstream from a high severity burn in upper Shingle Creek. There is a risk of stream diversion and water overtopping the road. A spur road on the Seven Devil road sthat leads to an outfitter camp has a low water ford that is also at risk of stream diversion in a runoff event.

Threat to Health/Safety

Threat to trail users safety due to unstable trails in poor condition due to fire damage.

B. Emergency Treatment Objectives:

Weed Treatment

The purpose of this treatment is to maintain ecosystem integrity in areas where the fire has induced expansion of noxious weeds. Burned sites where fire has eposed soil on burned areas and included nearby roads, ATV trails, dozer lines, hiking trails, etc. will be treated. Spotted knapweed and rush skeleton weed are the invasive weeds that pose the greatest threat to native plant populations.

Trails

Black Butte Fire

The objectives are to treat portions of the trails that are at high risk to damage from the additional runoff and erosion from the post fire conditions. The threat from increased surface flow and upland slopes erosin will occur within the fire area. This will result in erosion to the trail tread and fill-slope.

Green Acres Fire

- **The objective for the trail treatment on the Heaven's Gate National Recreation Trail #73 is to replace burned waterbars, and construct more waterbars to control drainage from increased runoff. This trail gets such heavy use that it is entrenched, and the trail tread has had gravel placed on it in the past to control erosion from heavy use and runoff. The objective in spot placement of gravel is that is will decrease entrenchment and loss of more soil, with increased runoff from burned slopes.**

- **The Boise Trail #101, Sheep Creek Trail #53, and the Seven Devils Trail #124 all have about the same objectives. The trails need to have increased capacity to handle runoff and increased erosion due to hot burn above and on the trail, by repairing waterbars, upsizing culverts, and stabilizing trails in areas where fire burned out roots below and trail tread is sluffing out.**

Horse Heaven Fire

The objectives are to treat portions of the trails that are at high risk to damage from the additional runoff and erosion from the post fire conditions. The threat from increased surface flow and upland slopes erosin will occur within the fire area. This will result in erosion to the trail tread and fill-slope

Culvert and Road Treatment

The objective of this set of treatments is to reduce the erosional effects of post-fire runoff on natural resources and facilities. In one case, a pair of culverts (single installation) on the Seven Devils Road #517 is at risk of stream diversion and overtopping the road. In the other case, a ford on a spur road leading to an outfitter camp is also at risk of stream diversion. Both of these are located on upper Shingle Creek. Beneficial uses at risk downstream on Shingle Creek include resident and anadromous fisheries, hydroelectric power, domestic, irrigation and stockwater. Shingle Creek is a tributary to Rapid River, which is an important spawning and rearing stream for spring chinook salmon, steelhead trout, westslope cutthroat trout and bull trout.

Warning Signs for Trails

The objective of this treatment is to inform trail users that trails are in poor condition due to fire damage during the 2006 fire season.

C. Probability of Completing Treatment Prior to Damaging Storm or Event:

Land **90** % Channel ___ % Roads/Trail **80** % Protection/Safety ___ %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	85	90	
Channel			
Roads/Trails	90	90	
Protection/Safety			

E. Cost of No-Action (Including Loss): **This would include costs of the lossof native plant communities on the Black Butte Fire area on up to 5,000 acres. The Salmon River breaklands are all rated high risk for invasive species. This would cost 5,000 acres X $250 per acre for one weed treatment at a total of $625,000. This would be the cost of not treating satellite weed populations that we currently have and letting them spread. If culverts were not upsized or removed, replacement would be estimated at $50,000 due to loss of road and stream crossing from stream diversion down the road, instead of $12,000 to replace the current double culvert to prevent diversion of the stream. Trail tread loss on all fires could be a cost of > $1,000,000 to reconstruct or replace trails if current trails do not receive postfire treadment to improve drainage to protect tread and fill-slopes.**

F. Cost of Selected Alternative (Including Loss):

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader:**Marci-Nielsen-Gerhardt**
Team Members
Nick Gerhardt-Hydrology
Joe Bonn-Engineering
John Warofka-Weeds
Greg Harris-GIS
John Fantini-Trails
Randall Walker-Forestry
Steve Armstrong-Archeology

Email:**mgerhardt@fs.fed.us** Phone**:209-982-1950 Ext. 4214** FAX:

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.)

Land Treatments:

Invasive Plant Treatment – Black Butte Fire

Weed management strategy within the Clearwater River Basin Weed Management Area, an interagency cooperative, is currently in place. Concurrence of a BA for Noxious Weed Control has been received from Fish and Wildlife Service and is pending from National Marine Fisheries Service. Herbicide application will follow the requirements and mitigation outlined in the Biological Assessment.

Weed control with herbicides, monitoring of weed spread and effectiveness monitoring are recommended for the area affected by the Black Butte fire.

- **Treat fire caused satellite infestations of spotted knapweed along Roads 9911,9913,9916,9917,9919,&2010 leading into the burned area, along with Helispot 260 and Drop Points 12-20 & 270 used during the fire. The knapweed population along the road system is contributing a seed source and the road system is acting as a spread corridor for further expansion into the burned areas.**

- **Treat the Spotted knapweed infestation spread at the trailhead to forest trail #312. The infestation is still small (approx. 2 acres) which burned after seed set and will contribute viable seed to adjacent burned areas.**

- **Treat all new invasive weeds within and adjacent to the fire perimeter.**

- **Monitor weed spread within the fire perimeters to determine if the combination of fire disturbance and susceptible habitat facilitates weed spread or increases weed densities.**

Channel Treatments:**none**

Roads and Trail Treatments:

Black Butte Fire

Green Acres Fire

- **Heavens Gate National Recreation Trail #73 – This trail is .7 miles long and is the public access to the Heaven's Gate Lookout with visitor use being 200 people/day in the summer. Treatments on this trail will be ~~r~~eplacement of spot gravel on the entrenched trail tread, and replacement of 6 burned waterbars.**

- **The Boise Trail #101 was burned with high severity fire for the steep first mile of the trail. This section will need repair or rebuilding of 30 waterbars, and 3 check dams in eroded sections.**

- **The Sheep Creek trail #53 is located along the stream in Sheep Creek. Both sides of the stream along the trail burned at high severity. The trail needs additional waterbars to prevent erosion from runoff from the slopes above, that were all burned at high severity, and to protect water quality and fish values below.**

- **The Seven Devil's trail #124 crossed the head of East Fork Sheep on contour. The complete headwaters of Sheep Creek burned at high severity. There are 2 culverts on the trail that are undersized and will not handle increased runoff. Trail sluffing on the fillslope of the trail needs to be stabilized and waterbars need to be repaired and replaced.**

Horse Heaven Fire

Culvert and Road Treatment

Green Acres Fire

The twin culverts on Road #517 would be replaced with a single, properly sized pipe arch. A rolling dip would be added on the road down-gradient of the stream crossing as added protection against stream diversion. The ford on the outfitter spur would be improved to prevent stream diversion. Waterbars would be added to the road for improved surface drainage and as added protection against stream diversion.

Protection/Safety Treatments:

Place trail warning sign safety signs where trails have potential to slide or are in poor condition due to fire damage.

I. **Monitoring Narrative:**

(Describe the monitoring needs, what treatments will be monitored, how they will be monitored, and when monitoring will occur. A detailed monitoring plan must be submitted as a separate document to the Regional BAER coordinator.)

Invasive Weed Spraying-Black Butte Fire
Objective : Determine if spraying has been effective in reducing invasive weeds in areas within and tributary to burns.

Methods: A two person crew will spend 2 days fall of FY 2007 and summer 2007.

Heritage Resource Treatment Effectiveness Monitoring Plan:

It is not necessary to monitor the effectiveness of the rehabilitation treatments at any of these sites given the above stipulations. However, monitoring of Heritage Resource site 10-IH-360 described above is recommended over the next year. It is recommended that an archaeologist monitor this site several times throughout the coming year to observe any negative impacts upon this significant resource. The site condition/integrity would be examined throughout the year and consultation with the SHPO would also take place.

Monitoring Plan and Costs

NRHP eligible (Class I) prehistoric and historic site 10-IH-360 was burned over exposing numerous previously unknown artifacts and features of this site. The removal of the surface vegetation has exposed additional site features that now expands the known site to over two times its pre-fire boundary. Additionally, a fire line was constructed through a prehistoric feature of this site during suppression activity. Because this site area is used as a recreational site and also is located near a trail head with easy access to the Salmon River Road, it is recommended that an archaeologist monitor the site several times over the next year to determine if it is being negatively affected as a result of the fire and suppression tactics taken at this location.

The cost for this monitoring for FY2007 is: archaeologist, 5 days @ $300/day = $1500

Site photography/film = $100

Grand Total = $1600

Culvert Upgrade Effectiveness Monitoring for Storms

Culvert replacement on Seven Devils Road will be monitored for effectiveness of culvert upsize and effectiveness in preventing stream diversion of Shingle Creek, and effectiveness of low ford crossing repair on spur road in preventing stream diverson.

Methods: Cost for FY 07 for 2 monitoring trips are 2 days @ $300.day = $600

Part VI – Emergency Stabilization Treatments and Source of Funds for the Green Acres Fire on the Hells Canyon National Recreation Area, Wallowa Whitman National Forest Interim #

			NFS Lands				Other Lands			All
		Unit	# of		Other	# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	BAER $	$	units	$	Units	$	$
A. Land 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 Land Treatments				$0	$0		$0		$0	$0
B. Channel Treatments										
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Subtotal Channel Treat.				$0	$0		$0		$0	$0
C. Road and Trails										
Trail #73 - Water bars	each	100	6	$600	$0		$0		$0	$600
Trail gravel placement	each	2100	1	$2,100	$0		0		$0	2100
Trail #101 - Water bars	each	100	30	$3,000	$0		$0		$0	$3,000
Trail #101 - Check Dams	each	170	3	$510			$0		$0	$510
Trail #53 - Water bars	each	100	60	$6,000			$0		$0	$6,000
Trail #124-culverts	each	1000	2	$2,000			$0		$0	$2,000
Trail#125 - cribbing and fillslope stabilization	each	200	25	$5,000	$0		$0		$0	$5,000
Trail # 125 - waterbars	each	100	50	$5,000			$0		$0	$5,000
Insert new items above this line!				$0	$0	0			$0	$24,210
Subtotal Road & Trails				$24,210	$0	0			$0	
D. Protection/Safety						0			0	
				$0	$0	0			$0	
				$0	$0	0			$0	
				$0	$0	0			$0	
Insert new items above this line!				$0	$0	0			$0	
Subtotal Structures				$0	$0	0			$0	
E. BAER Evaluation						0			$0	
				---		0			#####	
Insert new items above this line!				---	$0	0			#####	
Subtotal Evaluation				---	$0	0			#####	
F. Monitoring						0			$0	
				$0	$0	0			$0	
Insert new items above this line!				$0	$0	0			$0	
Subtotal Monitoring				$0	$0	0			$0	
						0			$0	
G. Totals				$24,210	$0	**0**			**$0**	
Previously approved										
Total for this request				$24,210		Total for this request				$24,210

Part VI – Emergency Stabilization Treatments and Source of Funds
For the Nez Perce Forest Region 1 Interim #

			NFS Lands				Other Lands			All
Line Items	Units	Unit Cost	# of Units	BAER $	Other $	# of units	Fed $	# of Units	Non Fed $	Total $
A. Land Treatments										
Invasive Weed Trmt.	acres	250	76	$19,000	$0		$0		$0	$19,000
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$19,000	$0		$0		$0	$19,000
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										
Trail #62-clean drains	each	10	30	$300	$0		$0		$0	$300
replace waterbars	each	115	20	$2,300	$0		$0		$0	$2,300
repair fillslope	each	2000	1	$2,000	$0		$0		$0	$2,000
Trail #71-waterbars	each	115	40	$4,600	$0		$0		$0	$4,600
repair fillslope	each	4000	1	$4,000	$0		$0		$0	$4,000
Trail #113-clean drains	each	30	25	$750	$0		$0		$0	$750
replace and repair WB	each	115	20	$2,300	$0		$0		$0	$2,300
slump/slide repair	each	120	3	$360	$0		$0		$0	$360
fillslope crib loss repair	each	4000	2	$8,000	$0		$0		$0	$8,000
Trail#88-clean drains	each	30	100	$3,000	$0		$0		$0	$3,000
replace belt Waterbar	each	140	40	$5,600	$0		$0		$0	$5,600
replace log waterbar	each	145	40	$5,800	$0		$0		$0	$5,800
fillslope sloughing	each	120	6	$720	$0		$0		$0	$720
Trail#91-repair WB	each	115	25	$2,875	$0		$0		$0	$2,875
repair tread fillslope	each	1	2000	$2,000	$0		$0		$0	$2,000
Trail#99-add waterbars	each	10	115	$1,150	$0		$0		$0	$1,150
Trail #125-install WB	each	15	115	$1,725	$0		$0		$0	$1,725
Trail #163-clean drains	each	30	100	$3,000	$0		$0		$0	$3,000
replace waterbars	each	140	20	$2,800	$0		$0		$0	$2,800
upsize culvert	each	500	1	$500	$0		$0		$0	$500
repair slump/slide	each	125	15	$1,875	$0		$0		$0	$1,875
crib repair	each	650	1	$650	$0		$0		$0	$650
Trail #201-clean drains	each	30	15	$450	$0		$0		$0	$450
Trail #311-clean drains	each	30	40	$1,200	$0		$0		$0	$1,200
replace burned WB	each	115	30	$3,450	$0		$0		$0	$3,450
repair fillslope failure	each	700	2	$1,400	$0		$0		$0	$1,400
Trail #312-clean drains	each	30	40	$1,200	$0		$0		$0	$1,200
replace waterbars	each	115	100	$11,500	$0		$0		$0	$11,500
replace retaining wall	feet	25	600	$15,000	$0		$0		$0	$15,000
remove slide	miles	120	12	$1,440	$0		$0		$0	$1,440
repair fillslope failure	miles	4000	1.5	$6,000	$0		$0		$0	$6,000
Trail#333-clean drains	each	30	50	$1,500	$0		$0		$0	$1,500

install waterbars	each	115	30	$3,450	$0			$0		$0	$3,450
					$0			$0		$0	$0
7 Devils Road-culvert upsize	each	12,000	1	$12,000	$0			$0		$0	$12,000
				$0	$0			$0		$0	$0
				$0	$0			$0		$0	$0
				$0	$0			$0		$0	$0
				$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 Road & Trails				$114,895	$0			$0		$0	$114,895
D. Protection/Safety											
trail safety signs	each	25	12	$300	$0			$0		$0	$300
				$0	$0			$0		$0	$0
				$0	$0			$0		$0	$0
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Structures				$300	$0			$0		$0	$300
E. BAER Evaluation											
Baer Assessment	day	300	35	---	$6,500			$0		$0	$6,500
Insert new items above this line!				---	$0			$0		$0	$0
Subtotal Evaluation				---	$6,500			$0		$0	$6,500
F. Monitoring											
Weed Spray Eff.	day	400	6	$2,400	$0			$0		$0	$2,400
Culvert Upsize Effectiveness	day	300	2	$600	$0			$0		$0	$600
Heritage Site Monitoring	day	325	5	$1,625	$0			$0		$0	$1,625
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Monitoring				$ 4,625							
G. Totals				138,820	$6,500			**$0**		**$0**	**$145,320**
Previously approved											
Total for this request				**$138,820**	**$6,500**						**$145,320**

PART VII - APPROVALS

1. _____ _____
Forest Supervisor (signature) Date

2. _____ _____
Regional Forester (signature) Date