BURNED-AREA REPORT

FAWN PEAK COMPLEX (Farewell Fire)
OKANOGAN-WENATCHEE NATIONAL FORESTS

BURNED-AREA REPORT
(Reference FSH 2509.13, Report FS-2500-8)

PART I - TYPE OF REQUEST

A. Type of Report

[**X**] 1. Funding Request for Estimated FFF-FW22 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)

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

[ ] 3. Final report - following completion of work

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: **Fawn Peak Complex** B. Fire Number**: P68354**

C. State: **Washington** D. County: **Okanogan**

E. Region: **Region 6** F. Forest: **Okanogan-Wenatchee NFs**

G. District: **Methow Valley and Tonasket Ranger Districts**

H. Date Fire Started: **6-29-2003** I. Date Fire Controlled: **Unknown***

J. Suppression Cost: **$37,901,000 estimated (8-14-2003)****

* Containment @ 1800 on 8/12/2003
**Projected Final Cost = $38,500,000; 8/14/03 ICS Action Plan

K. Fire Suppression Damages Repaired with FFFS-PF12 Funds:

1. Fireline waterbarred (miles) **75**
2. Fireline seeded (miles) **5**
3. Other (identify) **8 Mile fire camp rehab**

**to be determined

L. Watershed Number: **1702000801, 1702000702, 1702000803(primary ws) and 1702000804**

M. NFS Acres Burned: **81,890** Total Acres Burned**: 81,890**
Ownership type: **(All NFS lands including: about 66,000 ac. Wilderness; 15,890 ac. Non-Wilderness).** (8/14/2003).

( )State ( )BLM ( )PVT

N. Vegetation Types: **: The majority of the fire area falls within the Subalpine fir zone (65%). In the lower elevations the Douglas-fir zone predominates (10%). In the upper elevations whitebark pine and/or subalpine larch predominates (15%). A portion of the valley bottoms support sedge/willow meadows (10%).**

O. Dominant Soils: **Shallow "coarse textured" skeletal soils; and Rocklands;.**

P. Geologic Types: **Igneous granitics**; **landforms --glacially oversteepend slopes**

Q. Miles of Stream Channels by Class:

I- 9.6 **II- 16.8** **III-19.1** **IV- 160.4**

R. Transportation System:

Trails: 74.4 miles Roads: 19.4 miles

PART III - WATERSHED CONDITION

A. Fire Intensity (*1) (acres): **45,329** (low-56%) **19,079** (moderate-24%) **16,484**(high-20%)

(*1) Fire intensity figures based on 8/15/03 survey information, LANDSAT satellite imagery (7/25/03). Low intensity contains some unburned areas

B. Water-Repellent Soil (acres): None observed

C. Soil Erosion Hazard Rating (acres):

20,472 (low) 20,472 (moderate 40,985 (high)

D. Erosion Potential: 64.5 tons/acre

E. Sediment Potential: 41,280 cubic yards / square mile (*4)

(*4) Assumptions for items D and E:

The erosion and sediment figures listed above reflect the contribution from the debris slides and channel scour based upon the hydrologic design factors. These figures are quite high. These debris slide prone areas represent approximately 13,370 acres or 16 percent of the fire. The debris slides and channel scour are the major sources of sediment delivery in the Fawn Peak complex. If these figures were spread over the entire fire area the Erosion Potential is estimated to be 4.2 Tons/Acre and Sediment Potential is 2,660 cubic yards/Square Mile.

The fire area occurs predominantly in high glacial U-shaped valley areas with over-steepened glacial trough-walls. Consequently most side slopes are very steep and rocky with a dense pattern of parallel, incised first-order tributary streams. Natural landform sediment delivery and routing efficiency is considered very high (90%) but episodic. Runoff is routed rapidly into these first order channels. Sediment delivery in the form of debris slides occurs frequently. These debris slides form fans that spread onto the valleys of Lake and Andrews Creeks and strongly influence stream alignment and gradient. Additional sediment delivery is expected from stream realignment and scour of fan margins. With exception of catchment basins, tributary streams, and debris chutes; hill slope erosion will be collected in very bouldery talus deposits that occur on lower slopes..

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period: 10 years

B. Design Chance of Success: **90** percent

C. Equivalent Design Recurrence Interval: 25 years

D. Design Storm Duration: 1 hour

E. Design Storm Magnitude: 0.8 inches

F. Design Flow: **39** cubic feet/second/square mile

G. Estimated Reduction in Infiltration: 0 percent

H. Adjusted Design Flow **39** * cubic feet/second/square mile

* Based on no reduction in infiltration.

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

The Fawn Peak Fire Complex and potentially impacted areas downstream exhibit many important characteristics that were considered in determining the proposed course of response. The summary describes the conditions that warrant emergency rehabilitation actions.

1. ***Threats to Human Life and Property*---**

Threats to human life are mostly associated with snag blow down along system trails and dispersed campgrounds inside the burn area. Also exposure to debris slides along systems trails, dispersed campgrounds, and trailheads will be an elevated threat to human safety. A threat that will be difficult to manage will be the risk of debris dams collapsing with tremendous force and without much warning.

Values at risk include homes, bridges, campgrounds, hatchery ponds, roads, trails, and cultural sites. Many of these developments are downstream and are in the existing flood plains exposed to the risk of flood damage. Due to the amount of the watersheds in high or moderate burn intensity, peak stream flows are expected to increase also increasing flows downstream. Bedload sediment and debris are expected to shift causing some stream realignment that may elevate the risk of flooding within active floodplains.

Forest Service facilities at risk include: **mainline trails** in Lake, Andrews, and Little Andrews Creeks; **trail head facilities** in Lake Creek, Andrews Creek, and Crystal; **dispersed campgrounds** at Black Lake and numerous sites along the Chewuch River and Andrews and Lake Creeks; **developed campgrounds** at Camp Four, Chewuch, and Falls Creek; and **system roads** in Doe Creek, Lake Creek, and East side of Chewuch. Constructing new drainage structures and improving existing facility drainage systems will be the emphasis of the Fawn Peak Fire Complex BAER plan.

Annual flooding along the Chewuch main stem is common but significant effects to downstream values are much less frequent. The annual peak flow is normally related to rapid spring snowmelt (the largest flood over the past 60 years was during the normal spring time snow melt, but was added to by early summer rain-on-snow conditions). Wintertime rain-on-snow events are rare and are not likely to be the peak stream flow of the year.

Even though there are likely to be larger peak stream flows inside the burned area, these higher flows are expected to be moderated in the Chewuch River. Higher flows from the burned area would spread out over the relatively gentle flood plain of the Chewuch River immediately downstream of Andrews Creek. Large wood debris will remain inside the burned area or deposited just down stream of Lake Creek or Andrews Creek. Large woody debris influences on stream flow are not expected to increase the threats to human life and property downstream of the burned area because the Chewuch floodplain can disperse flood flows. The post- risk to down stream dwellings is very similar to pre-fire risks in the existing floodplains.

Cultural resource sites are known to have been impacted and may require treatment to protect heritage values. The Forest Archeologist will be funded to complete appropriate surveys and assessments. In compliance with 36 CFR 800, tribal consultation concerning BAER activities will occur.

2. ***Loss of Site Productivity*** -

The natural inherent soil productivity is low for the fire area. Soils are derived from igneous bedrock units (granitic) that have weathered into very coarse "sandy soils". Soil moisture (except in valley bottoms) is often a limiting factor along with low soil fertility. Soil depths are very shallow on hill slopes and moderately deep in valley bottoms. Along with continental weather characteristics (cool, short growing seasons), the overall site productivity is low for the fire area. Hence, this fire will not have a significant effect on inherent soil productivity.

The Fawn Peak Fire Complex has a natural history of frequent debris slides from steep slopes during storm events. Fires have also been a common historical disturbance. Natural large wildland fires in the upper elevations are normally infrequent but with high intensity resulting in stand replacement. In the lower elevations, forest stands historically had frequent but low intensities; however due to higher than natural stand densities, even these stands have shifted to high intensity fires. Vegetation recovery in much of the Fawn Peak Complex would be slow, allowing erosional processes to occur at an accelerated rate. The repetitive cycle of fires when followed by rain and rapid snow melt on these steep landscapes can result in attendant flooding and debris slides. These natural disturbance processes have likely helped to maintain the relatively low productivity of the uplands.

Even when vegetated, erosional processes are naturally high within the Fawn Peak Complex. With or without vegetation cover, these coarse-textured soils on steep rocky slopes will continue to have very high erosion potentials. Sediment loading in tributaries and debris chutes has been observed. The over-steepened glacial trough walls are highly efficient in delivering debris to stream channels. The loss of vegetation in the moderate and high intensity burn areas will greatly accelerate conditions favoring these debris slides. With these natural hydrologic and disturbance processes, it is unlikely that seeding and or fertilization would significantly reduce erosion or debris slide occurrence within these glacial oversteepened landscapes. As a result, upland seeding was not recommended because of the low likelihood of treatment success in reducing soil erosion.

One significant risk to site productivity is noxious weeds. The road and trailheads will serve as a beachhead for noxious weeds to rapidly increase in the area. Weed seed sources exist along roadways, trails staging areas, adjacent to the fire area, as well as at the Eight Mile Fire Camp. A regimen of weed management is critical to help preserve the productivity and character of this area.

3. ***Loss of Water Quality –***

Water draining from the Fawn Peak Fire Complex is critical for many uses including domestic, agricultural, aquatic habitat for the Threatened and Endangered species (spring Chinook salmon, steelhead, bull trout), and recreation use. Water quality parameters most affected by the Fawn Peak Fire Complex will be water temperature and sedimentation. The fire significantly reduced the vegetation cover over extended reaches of Disaster, Lake, and Andrews stream systems. Increased solar energy will elevate surface water temperatures. Sources of cooler water from adjacent springs or ground water recharge in glacial till deposits will help to buffer stream temperature increases. Mid to late July is normally when stream water temperature is the highest. Water temperature measurements during this period in the Chewuch River indicated that stream temperatures were about 57° F. The riparian shrubs along these drainages are expected to rapidly recover over the next few years and provide some cover to help keep water temperatures relatively low. The fire killed trees will provide little shade and large tree recovery is not expected for another 50 to 100 years.

Stream sediment loads in the Disaster, Lake, and Andrews Creek drainages are expected to dramatically increase as the occurrences of debris slides increase. Most of delivered sediment will initially be fine volcanic ash and wood ash that will increase some water nutrient levels. The bulk of the residual sediment delivery is expected to be very coarse sand, gravel, cobbles, and boulders during peak runoff. The debris fans at the mouths' of streams are expected to enlarge creating "nick points" in the receiving streams and rivers that will cause shifts in stream gradient and alignment. Sediment and large woody debris would accumulate upstream of fans where the channel gradients would be lower. Stream base levels upstream of these fans would rise, which lowers stream gradients. Streams would eventually scour fan margins on the down stream portion of the fans further contributing to in-channel sediment. Bedload sediment composed of coarse sand and cobbles are expected to be flushed downstream during spring flows. In Lake Creek the increased sediment loads are expected to accumulate in low gradient reaches and form a large delta in the upper end of Black Lake. These natural disturbance regimes and sediment delivery mechanisms have been occurring over time and streams have been adjusting accordingly.

Elevated levels of sediment will take years to be routed through these stream systems.

The anticipated increases in suspended and bedload sediment will also likely impact irrigation delivery systems (ditches, screens, pumps, etc.) partially plugging pipes and causing additional wear on sprinklers and irrigation systems.

Floatable woody debris will also move downstream during high flows. Small woody debris may leave the burned area and become a maintenance issue for downstream irrigation diversions. Large woody debris is anticipated to remain generally inside the fire area. The wood accumulations are expected to provide for sediment storage in the burned area. The Chewuch River channel below the burned area is in good to excellent condition down to Lake Creek and would provide additional stream sediment storage when the sediment eventually moves downstream from the burned area.

Most of the **system roads** in the Doe, Buck and Lake Creek drainages occur on mid to lower slopes with high burn intensities immediately upslope. With the exception of the Chewuch River Road, road surfaces were constructed with native "sandy" material which is quite erosive. Many road segments intercepted a fair amount of surface runoff prior to the Fawn Peak Fire Complex. Surface runoff will accelerate following this fire. Construction of emergency road drainage structures and reinforcement of existing structures will reduce the risk of accelerated runoff and sediment delivery from road surfaces. One sensitive road crossing is the Buck Creek Area. Upper Buck Creek forms a natural catchments chute that experienced high burn intensities. The natural drainage system in the lower portion of the chutes is entrenched in unconsolidated sandy glacial till material. Increase peak flows with debris are expected form this chute. The existing Buck Creek Crossing is grossly undersized. Subsequent overflow is expected from this structure which will trigger road failure redirecting flows and excess sediment into a bank of the Chewuch River. Construction of emergency road drainage structures will reduce the risk of sediment delivery from system roads.

Most of the **system trails** are heavily used by both hikers and horse use. These trails are fairly entrenched by heavy use. These trails intercept a fair amount of surface runoff. After this fire, drainage structures which once provided drainage protection have been destroyed. Log drainage structures have been burned and are no longer functioning. Earthen drainage structures are expected to be marginally serviceable due to slope ravel filling drainage structures. The loss of log drainage structures will cause more of the earthen structures to fail resulting in accelerated erosion and down cutting of trail tread. Construction of emergency drainage in the trail tread will reduce the risk of gully development which should reduce the risk of sediment delivery from system trails

B. Emergency Treatment Objectives:

The application of the BAER treatments would minimize on-site and downstream damage to values at risk. The land treatments proposed are designed to inhibiting weed establishment and spread. Proposed structural treatments to roads, trails and campgrounds are intended to reduce the effects of accelerated erosion and sedimentation from Forest Service facilities and reduce the amount of sediment expected from FS facilities.. A primary objective of emergency treatment is to establish conditions that do not alter long-term natural recovery.

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

Land 80 % Channel NA % Roads 70 % Trails 85 %

D. Probability of Treatment Success

<----Years after treatment----->

	1	3	5
Land	80%	80%	80%
Channel	0 %	0%	0%
Roads	90%	90%	90%
Trails	90**%**	90 **%**	**90%**

E. Cost of No Action (Including Loss): **$10,695,000**

F. Cost of Selected Alternative (Including Loss): **$1,229,500**

G. Skills Represented on Burned-Area Survey Team:

[**X**] Hydrology	[**X**] Soils	[**X**] Geology	[**X**] Range
[ ] Timber	[ ] Wildlife	[ ] Fire Mgmt.	[**X**] Engineering
[ ] Contracting	[**X**] Ecology	[ ] Research	[**X**] Archaeology
[X] Recreation/Wilderness			[**X**] Fish Biologist

Team Leader: Carl Davis and Mel Bennett **\s**
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H. Treatment Narrative:

The following treatments have been proposed to mitigate the threats to life & property, and to reduce loss of site productivity and degradation of water quality as a result of the Fawn Peak Complex.

Overall Goal of Proposed BAER Treatments: To complete a combination of comprehensive treatments to reduce sediment delivery, protect water quality of the Chewuch River and protect the road and other Forest Service facilities within the burned area. In addition, the treatment will reduce noxious weed effects to site productivity in the area and enhance natural vegetative recovery of the riparian area. The land, channel, road and trail treatments form an integrated package.

Land Treatments

Purpose: Implement actions to-- (1) Reduce noxious weed reestablishment and infestation in the burned area by applying Integrated Weed Management. This would involve seeding, manual, chemical and biological treatments along the system roads, trailheads, and campgrounds to reduce existing weed infestations. (2) Mow weed infestations in areas below the fire to reduce transport of weed seeds into fire area. (3) Install Log Terraces to reduce sediment delivery to and from campground and trailhead area. Treatments are intended to maintain ecosystem health by encouraging natural vegetation recovery and protect facilities.

Treatment #L1-Manage noxious weeds along 23 miles of road systems, lower trails, campgrounds and administrative sites inside the burned area. Implement manual, herbicide, mechanical, and seeding control along the Doe, Lake, and Chewuch road system.

Road and Trail Treatments

Purpose: Implement actions to: (1) reduce the potential for accelerated surface runoff damaging Forest Service roads and trails within the Fawn Peak Complex area in the Chewuch Watershed. (2) reduce the potential for road/trail related surface/mass erosion and accelerated sediment delivery to high value fish habitat and downstream private water supplies. and (3) reduce road-related hazards related to the burned area. The nature of the emergency relating to roads and trails has been described in PART V (*Loss of Water Quality*). ***Treatments R2, R3, and R6, prescribed in the Initial BAER request, were deleted from the interim report due to more detailed site reviews.***

Roads

Treatment #R1a - Improve Ditch Relief: Construct rolling outsloped dips with surfacing to improve ditch relief and the ability of road to better handle anticipated increases in surface runoff. Armor dip inlets and outlets, especially on exposed fills. Several sites may require removal of existing undersized or damaged culvert and replaced with a low maintenance rolling dip. Log, Eco-log, rock, straw bale structures will be installed within run-out area to help further disperse runoff to further reduce sediment delivery from road surfaces.

Treatment #R1b- Improve Ditch Relief (non-armored): Same as **R1a** but without aggregate surfacing and armoring.

Treatment #R2 - Reestablish Drainage Ways: Install armored fords on selected intermittent channels and debris flow tracks to reestablish more natural flow pattern. Fords will be designed to keep storm flow within the channel area. **[Not prescribed in interim report]**

Treatment #R3 – Pull Existing Culverts: Remove existing culverts to reestablish more natural flow patterns and reduce the risk of pipe failure. **[Not prescribed in interim report]**.

Treatment #R4 – Replace/Install Culvert – Remove and replace existing culverts with larger culverts and install new ditch relief culverts where existing road grades will not permit the construction of dips. Log, Eco-log, rock structures will be installed within run-out area to help further disperse runoff.

Treatment #R5 – Harden Existing Culvert Installations: Clear blockages from existing culvert installations. Install rock headwall, collar and apron to improve efficiency of structure and to minimize scour and slough. Log, Eco-log, rock structures will be installed within run-out area to help further disperse runoff.

Treatment #R6 - Stabilize Fill Slope: Spot placement of large rock to reduce the potential for fill slope erosion and accelerated sediment delivery to stream channel at selected sites. . **[Not prescribed in interim report]**

Treatment #R7 - Stabilize Roadbed: Spot rock with native pit-run and/or crushed aggregate to help reshape and stabilize road prism to improve surface drainage

Treatment #R8 - Manage Road Surface Water: Blade road surface, pull specific ditch line sections, remove outside berms and outslope where appropriate to improve road surface drainage. In-slope above selected switchbacks to utilize run-out ditch and reduce surface runoff through curve. Remove soil, rock and woody debris blocking selected ditch lines to improve drainage function.

Treatment #R9 – Sign for Hazard/Closure: Purchase and install closure and burned area hazard

notification signs to inform public of post-fire conditions and management actions taken to protect public safety (roads, trails. and trailheads).

Treatment #R10—Control Traffic: Plan for traffic control, install signs at points of closure and enforce closure. Will use appropriated funds, not BAER funds.

Treatment #11a—Modify Stream Crossing: Install additional large rip-rap to protect the Lake Creek Bridge abutments and footings from excessive stream scour. Improve Andrews Creek Bridge cross section by selective removal or rearrangement of several large boulders to improve flow passage and reduce risk of stream scour of bridge abutments and footings.

Treatment #11b—Improve Stream Crossings: Replace the existing undersized culvert at the Buck Creek crossing on the Chewuch River Road (5160) with a larger structure to improve ability of this crossing to handle increases in surface runoff and reduce the potential for accelerated sediment delivery. Failure of this crossing would result in flood flows being directed onto a large unstable bank of the Chewuch River immediately upstream of an important spawning area.

Treatment #R12—Install Water-bars: Construct water-bars (low standard drain dips) to improve ditch relief and enable maintenance level 1 roads to better handle expected increases in surface runoff.

Treatment #R13—Roadside Seeding: Seed selected road cut and fill-slopes where other road side BAER treatments have disturbed road surfaces. Vegetation cover will be needed to reduce the potential for sediment delivery as well as reducing noxious weed infestations from roads.

Trails

Treatment #T1 – Improve Trail Drainage: Install drain dips on 36 miles of trail to reduce the effects of accelerated surface erosion from anticipated fire effects. Dips will vary from rolling outslope dips to water-bars constructed from peeled and anchored native wood material. This treatment will occur on trail segments within moderate and high intensity burn areas where the risk of accelerated surface erosion is expected. This treatment will be implemented on the following trail systems: Lake Creek, Main Andrews, West Fork of Andrews, and Little Andrews.

Treatment #T2 – **Improve Trail Access—Down Trees**: A number of fire-killed trees are falling and blocking trail access. Trail log out will be necessary on 10 miles of trail in order to gain access to sections of trail that need trail drainage treatment (**T#1**). Only large downed trees or jack-strawed down trees will be logged-out with BAER funds. The remaining downed trees will be will be logged out with appropriated or fire recovery funds.

Treatment #T3 – **Improve Trail Access—Burned Bridges**: Some of the trail bridges on the Main Fork of Andrews, West Fork of Andrews, Little Andrews, and Lake Creek have been consumed by the fire. Stream crossing will limit access and pose safety concerns. Install temporary trail bridges to provide access for trail drainage treatments **(#T1**). Only temporary bridge structures will be covered by BAER funds. Final bridge installations will be with appropriated or fire recovery funds.

Other Actions

Treatment # OA1 – **Protect cultural resources: Inventory, Evaluate and Treat Cultural Resources**: Tribal consultation; pedestrian survey of up to 10 miles of system road, up to 36 miles of trail; inventory, documentation and evaluation of cultural resource sites; and development and implementation of protective treatments as needed.

BAER Evaluation

BAER Survey and Implementation Plan. Support completion of BAER survey and development of the Fawn Peak Complex BAER Implementation Plan

BAER Treatment Monitoring: Monitor the effectiveness of Treatment # R3 (culvert replacement) and Treatment #L1 (Manage Noxious Weeds)

Long Term Monitoring: A variety of other monitoring projects are proposed ***not funded by BAER.*** These monitoring items include such things as: (1) Long term vegetation recovery; (2) Stream Temperature; (3) Water quality-fine sediment deposition and (4) Large Woody Debris (LWD) recruitment and (5) distribution, and noxious weed infestations

	Part VI - Emergency Rehabilitation Treatments and Source of Funds by Land Ownership 1/					
		Burned Area Emergency Rehabilitation				
No.	LINE ITEMS	UNITS	NUMBER OF UNITS	UNIT COST	WFSU-FW22 AMOUNT	OTHER 2/ FUNDING
	A. LAND TREATMENTS					
L1	Hand Seed, Pull, Spot Spray, noxious weed sites and road work areas	Ac	23	300	7.000	
	B. ROADS/TRAILS					
R1a	Improve Ditch Relief (armored)	Ea	1	1,000	1,000	
R1b	Improve Ditch Relief (no armor)	Ea	30	500	15,000	
R2	Re-establish Drainageways	Ea	0	0	0	
R3	Pull Existing Culverts	Ea	0	0	0	
R4	Replace / Install Culvert	Ea	10	2,400	24,000	
R5	Harden Existing Culvert Installations	Ea	200	200	8,600	
R6	Stabilize Fill Slope	Ea	0	0	0	
R7	Stabilize Roadbed	Ea	50	100	5,000	
R8	Manage Road Surface Water	Mi	10	750	7,500	
R9	Sign for Hazard/Closure	Ea	15	100	1,500	
R10	Control Traffic	Ea	1	1,500		1,500
R11a	Modify Stream Crossing	Ea	2	2,500	5,000	
R11b	Upgrade Stream Crossing	Ea	1	65,000	65,000	
R12	Install Waterbars	Ea	22	200	4,400	
R13	Roadside Seeding	Ea	10	40	400	
T1	Improve Trail Drainage	Mi	36	2,000	72,000	
T2	Provide Trail Access—Down Trees	Mi	10	300	3,000	
T3	Provide Trail Access—Temp Bridges	Mi	5	500	2,500	
	C. OTHER					
OA1	**Protect Cultural Resources**	Ea	1	1,000	1,000	
	D. BAER EVAL./ADMIN.					
	BAER Survey & Impl. Plan				20,000	
	Satellite Imag. Burn Intensity Map				1,100	
	BAER Land Treatment Monitoring (Weeds #L1 and roads #R3)	Year	20	50	1,000	
	BAER Cultural Surveys				3,000	
	Long Term Veg. Monitoring					10,000
	Stream & Water Qual. Monitoring					7,000
	Air Photos of Burned area and channel for effects monitoring					7,500
	E. TOTAL				248,000	26,000
	1/ All NF System lands - No other ownerships involved					
	2/ Other FS funding sources					

PART VII - APPROVALS

FAWN PEAK COMPLEX FIRE

1. /s/ DARREL KENOPS
   Forest Supervisor — Date: August 29, 2003

2.
   Regional Forester — Date: