Edited Jbruggink 7/2/04 BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report
[X] 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)
[X] 2. Interim Report #1
[X] 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: South Fork

B. Fire Number: P41960

C. State: Idaho

D. County: Valley

E. Region: Intermountain (R04)

F. Forest: Boise (F02)

G. District: Cascade (D04)

H. Date Fire Started: August 10, 2003

I. Date Fire Contained: August 23, 2003

J. Suppression Cost: $3,650,000 (estimate)

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 3.6 (handline)
2. Fireline seeded (miles): 0
3. Other (identify): 0

L. Watershed Number: 170602081001 (Two-bit-Roaring), 170602081002 (Warm Lake Creek)

M. Total Acres Burned: 6,980
NFS Acres (6,977) Other Federal (0) State (0) Private (3)

N. Vegetation Types: warm, dry subalpine fir, persistent lodgepole pine, warm dry Douglas-fir, moist ponderosa pine, and cool dry Douglas-fir.

O. Dominant Soils: shallow, non-cohesive, coarse textured sands and sandy loams. Soils are inherently infertile, have poorly developed profiles, and low water-holding capacities.

P. Geologic Types: Granitic (Idaho batholith)

Q. Stream Channels by Order or Class:
First Order: 8.4 miles Second Order: 3.8 miles

R. Transportation System
Trails: 0 miles Roads: 16.6 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 2,315 low (33%) 1,880 moderate (27%) 1,500 high (20%)

B. Water-Repellent Soil (acres): 2,065

C. Soil Erosion Hazard Rating (acres):
Low: 2,315 (33%) Moderate: 1,880 (27%) High: 1,500 (20%)

D. Erosion Potential (tons/acre): 0.76 tons/acre

E. Sediment Potential: 102 cubic years/square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period (years): 2 to 5

B. Design Chance of Success (percent): 50

C. Equivalent Design Recurrence Interval (years): 5

D. Design Storm Duration (hours): 0.25

E. Design Storm Magnitude (inches): 0.41

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

G. Estimated Reduction in Infiltration (percent): 32

H. Adjusted Design Flow (cfs per square mile): 32

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

The human-caused South Fork Fire ignited on August 10, 2003. The burned area is in the upper South Fork of the Salmon River basin. The landscapes in this basin overlie the Idaho batholith, a granitic intrusion that is comprised of non-cohesive coarse, single-grained sandy and sandy loam soils. The hillslopes within the burned area are steep (greater than 40 percent slope) and are moderately to strongly dissected by first and second order streams. The steep landforms have inherently high erosion potential and eroded material is efficiently transported to nearby streams. In the lower elevations of the southern part of the burned area, the streams become low gradient channels that meander through wide valley bottoms, sometimes up to 1 mile, before entering the South Fork Salmon River (SFSR). The first order tributaries on the west part of the burned area originate in small basins and maintain a steep descent directly into the SFSR.

The fire burned an estimated 850 acres the first afternoon and increased to 4,300 acres in 3 days. The high fire intensity and resulting high burn severity areas are in the southwest and eastern parts of the fire that burned during the first 3 days of the incident. After the initial high fire intensity runs, the Incident Management Team applied an indirect burnout strategy on the west and north flanks of the fire. The burnout was highly successful in containing the wildfire, equally important is the majority of the burnout resulted in low burn severity with small, isolated strips or fingers of moderate and high burn severity.

Because of the distinct behavior of this fire, the primary areas of concern lie in the eastern and southern sections of the burned area. Specifically, Cabin Creek on the east and two unnamed tributaries on the south and west flank are severely burned. In these locations, the fire burned almost all of the surface vegetation, litter, and duff and resulted in 95 percent mortality of the overstory vegetation. The fire did not consume most of the large, coarse woody debris that existed pre-fire, except in small (10 acres or less) patches. The coarse woody debris is still providing effective ground cover and structure to the hillslope, breaking up slope length to reduce continuous overland flow and providing storage for eroded soil. Protecting soil productivity by establishing surface vegetation and root material to keep the soil from eroding and maintain the nutrient cycle through the plant/soil interface has been identified as a concern in these high severity burned areas.

Cabin Creek is in the Warm Lake Creek subwatershed, which contains stream habitats that support summer run chinook salmon, steelhead trout, bull trout, resident redband, and brook trout. Chinook salmon, steelhead, and bull trout are federally listed species protected under the Endangered Species Act. An Idaho Power transmission line is located along Forest Road 467, which winds through the bottom of the Cabin Creek drainage. Tower structures supporting the powerline burned during the fire, cutting off electricity to the backcountry community of Yellow Pine. In addition, a fiber-optic cable that provides telephone service to Yellow Pine is buried along the road corridor. The downstream aquatic resources, power and telephone services, and the transportation system provide an intricate mix of important resources to address. The fire increased the potential for higher than normal stream flows and increased sediment delivery. Increased surface runoff and stream flows could damage the road and the buried fiber-optic network, and transport eroded material to Cabin Creek affecting fish habitat. Tower structures located in the runout areas of first order drainages are subject to damage from debris flows should a severe weather event occur. Human life and safety might be compromised considering the public may be traveling the road, unaware that severe weather could be approaching.

B. Emergency Treatment Objectives:

The overall objective is to locate areas where emergency conditions exist and identify possible treatments to prevent or mitigate the emergency. Specifically,

- Protect human lives traveling on Forest Road 467;
- Locate and, where practical, apply feasible treatments to severely burned slopes that pose a threat to human life, property, or critically important natural resources; and
- Provide monitoring recommendations designed to measure the success of rehabilitation efforts.

C. Probability of Completing Treatment Prior to First Major Damage-Producing Storm:
Land: 90% Channel: NA Roads: 90% Other: NA

D. Probability of Treatment Success

Years after Treatment

	1	3	5
Land			
Alternative 1	80	85	90
Alternative 2	85	85	90
Channel			
None Prescribed	NA	NA	NA
Roads			
Alternative 1	80	85	90
Alternative 2	80	85	90
Structures			
Alternative 1	95	95	95

E. Cost of No-Action (Including Loss): $972,000

F. Cost of Selected Alternative (Including Loss): $371,171

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: Terry Hardy, Soils Scientist, Boise National Forest
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Team Members: Marc Munch, Archeologist, Boise National Forest
Darin Vrem, Archeologist, Boise National Forest
Gary Harris, Hydrologist, Cascade Ranger District, Boise National Forest
Michael Dimmett, Forester, Cascade Ranger District, Boise National Forest
Jeff Hunteman, Forester, Cascade Ranger District, Boise National Forest
Melissa Yenko, Hydrologist, Emmett Ranger District, Boise National Forest
Charlie Luce, Hydrologist, Rocky Mountain Research Station, Boise Sciences Lab.

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

Aerial Straw Mulch or "HeliMulching"

Description: Straw mulch is applied to the ground by helicopter as a continuous cover to replace ground cover lost in the fire.

Location (Suitable) Sites: Specified slopes between 20 and 50 percent with high to moderate burn severity.

Design/Construction Specifications:

Site Selection: Suitable sites are designated on the Burned Area Treatment map and in the field by either watershed or operations staff. Treat 350 acres by helicopter mulching:

1) Slopes between 20 and 70 percent; and 2) where needle cast is not expected;
2) Straw must conform to Idaho State Department of Agriculture (ISDA) Certified Noxious Weed Free Standards. Suitable straw includes barley, rice, and wheat grasses; and
3) The straw should be dry for easier application. Straw bales should be delivered the staging area (Knox Ranch) 2 or 3 days before application. This may require use of canvas or plastic tarps to protect the straw from precipitation and condensation.
4) The rate of application is determined by qualified individuals who have been trained in the principles of BAER treatments. The rate of application is 2,000 pounds per acre. This is about 35 - 40 straw bales per acre, spread 1/4 inch deep, if evenly distributed (approximately 3 straw shafts deep).
5) Special ground support and equipment needs: Straw bales can vary from 50-80 pounds in weight. A loading crew of five people can be used to help load cargo nets and, if necessary, an additional 15 people can distribute clumped straw on the hillside.

Purpose of Treatment: The purpose of straw mulch is to stabilize the steep slopes by replacing the natural ground cover consumed by the fire. Straw mulch provides immediate soil protection from erosion and loss of nutrient capital, and reduces the transport of sediment to nearby streams. Mulching also helps reduce downstream peak flows by absorbing and slowly releasing accelerated overland runoff due to loss of vegetation, water repellent soils, and compacted/crusted soils. Mulching even small areas at the source of floodwaters and other areas critical to slope stabilization can often protect much larger downstream areas from the cumulative effects of hill slope runoff. Mulching helps to secure seeds that are either stored in the soil or applied as an emergency treatment that may otherwise be eroded off-site and also maintains a favorable moisture and temperature regime for seed germination and growth.

Treatment Effectiveness Monitoring: Visually inspect effectiveness of treatments and repair as needed.

FlowCheck Log Erosion Barriers

General Description: Install FlowCheck log erosion barriers in designated locations to reduce transport of eroded soil.

Location (Suitable) Sites: Specified slopes with high burn severity on the west-facing slope in the Cabin Creek drainage, directly above the stream. Reaches of Cabin Creek downstream of the site support habitat for critical natural resources (chinook salmon, steelhead trout, and bull trout).

Design/Construction Specifications:

1. Site Selection: Five acres of suitable land is designated on the BAER Watershed Treatment Map and confirmed in the field by either watershed or operations staff.
2. Installation: Installation design is determined by qualified individuals who have been trained in the principles BAER treatments.

Purpose of Treatment: The purpose of the FlowCheck structures is to stabilize the lower slopes above Cabin Creek by keeping eroded soil from leaving the hillsides and being transported into the stream. FlowChecks act as erosion control structures by:

1. Reducing overland flow allowing for increased infiltration;
2. Preventing mobilization of soil particles; and
3. Trapping sediment to minimize downslope or downstream impairment.

Treatment Effectiveness Monitoring: Visually inspect effectiveness of treatments and repair as needed.

Channel Treatments

None recommended.

Roads and Trail Treatments

Interim 1 Request **Culvert Replacement and Repair** (edited June 10, 2004)

General Description:

Replace two 18-inch diameter culverts and one 24-inch diameter culvert.

Location (Suitable) Sites:

Three locations on unnamed tributaries crossing FDR 474 (see attached map and photographs).

Design/Construction Specifications:

Forest Service specifications for construction of roads and bridges.

Purpose of Treatment: Culverts were not observed as being damaged during initial BAER assessment. During road condition survey in spring of 2004, District Engineering personnel identified where soil material had been eroded from around culverts. Upon closer inspection, it was observed the plastic culverts had been burned by the fire. Culvert replacements are necessary to prevent collapse of the road fill and release of sediment to adjacent anadromous fish-bearing stream.

Treatment Effectiveness Monitoring: Annual road condition survey conducted by District Engineering personnel.

Improve Road Drainage and Crossings

General Description:

1. Construct drivable dips armored with angular rock.
2. Culverts in areas at risk to flooding and/or debris flows should be cleaned to ensure maximum flow capacity.
3. Blade road to restore template, clean ditches and remove berms. Construct drivable dips or ensure template is outsloped 50 feet down the road and down slope from culverts.

Location (Suitable) Sites:

Armored Fords: Improve two existing fords and construct three new armored, drivable dips on FDR 467.

Culvert Cleaning: Five locations on FDR 401.

Roads and Ditches: Several locations on FDR 467. Specifically, reconstruct and harden road ditch from Point 10 to Point 11 on FDR 467 (location where engine was stuck off of road).

Design/Construction Specifications:

Armored Dips

1) Site Selection: Suitable sites are identified on the BAER treatment map and designated in the field by either watershed or engineering staff.
2) Improve two existing fords by armoring approaches.
3) For new construction, a minimum of two Sedimat sediment control structures will be placed across each channel immediately below each crossing before construction. Sedimats are to remain in place a minimum of 1 year after construction to allow revegetation of disturbed soils after construction. Sedimat material is available from the District warehouse in Cascade, ID.
4) Dips are to be armored with 2-4-inch angular rock in the bottom of the ditch. Fillslopes will be armored with 12-inch rip-rap. Angular Basalt rock and rip-rap material is available locally.
5) Each ford shall be constructed to contain the five-year design flow. At a minimum, the hydraulic bottom of the ford shall be a minimum of 300 millimeters below the original grade line on the downhill slope of the road template on the downhill slope of the road template on the roadfill shoulder. The hydrologic bottom of the ford shall be a minimum of 150 millimeters below the original grade line on the downhill slope of the road template on the upper roadbank of the road template.

Culvert Cleaning

1) Mechanically shovel and flush debris from culverts and place outside of channel where it cannot re-enter stream.
2) Manually remove woody debris around catchbasin and in channel for 25 feet upstream from culvert.
3) If necessary, use backhoe and dump truck to remove and end-haul debris and fill from channel and around culvert inlet basin.

Roads and Ditches

1) Blade and shape existing traveled way, shoulders and ditches (including turnouts) to remove minor surface irregularities and debris.
2) Pull berm material into traveled way and maintain existing cross slope or crown to ensure surface water flows off of road. Establish a blading pattern that will retain the surfacing on the roadbed.

Purpose of Treatment: Future road maintenance is expected to be low. Implementing these treatments are intended to control surface water flows that may exceed culvert capacities, restore road template drainage and the ability of the road to process the expected increase in runoff.

Treatment Effectiveness Monitoring: Annual road condition survey conducted by District Engineering personnel.

Structures

Powerline Structure Protection Evaluation

General Description: Gather GPS data for the location of powerline structures.

Location (Suitable) Sites: In the burned area along the Cabin Creek Road (FDR 467). A total of 19 powerline structure locations will be evaluated.

Design/Construction Specifications: Provide services for:

1. Inventory of powerline structure locations.
2. Assess potential for debris flow events in Cabin Creek drainage.

Purpose of Treatment: Several powerline structures were replaced immediately after the fire and may be located in debris flow areas. This evaluation includes conducting an inventory privately owned powerline structures, including GPS locations, and assessing the potential hazards to the powerline should a debris flow event occur. During the initial on-the-ground BAER assessment, Idaho Power crews were working to replace or repair tower structures that were damaged during the fire. Due to safety concerns and timelines the BAER team was unable to inventory and evaluate powerline structure locations during the initial field assessment. This evaluation will determine if emergency protection treatments (flow diversion structures) are needed to protect the powerline structures and necessitate the need for an interim funding request.

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.)

Cultural Resources Monitoring and Consultation

General Description: Cultural resources monitoring and consultation is designed to help Boise National Forest Heritage Program personnel meet federal legal requirements with regards to cultural resources. Boise National Forest Heritage Program personnel will monitor and consult with crews and crew leaders who are conducting on-the-ground implementation of proposed BAER treatments.

Location (Suitable) Sites: Boise National Forest Heritage Program personnel will monitor and consult with crews and crew leaders which are conducting on-the-ground implementation of proposed BAER treatments throughout the entire burn area. Priority will be given to those areas where archaeological site locations are, or more likely to be present (i.e., slopes and flats where flow check structures may be placed, rather than culvert replacements locations).

Design/Construction Specifications: Only cultural resources monitoring and consultation will be conducted. No design or construction specifications are necessary.

Purpose of Treatment: The purpose of the cultural resources monitoring and consultation is to help Boise National Forest Heritage Program personnel meet federal legal requirements with regards to cultural resources. In addition, consultation with crews and crew leaders will be used to educate and inform them of the possible presence of cultural resources that may exist within the specific BAER treatment implementation areas.

Treatment Effectiveness Monitoring: A report will be produced that documents to the Idaho State Historic Preservation Office (SHPO) the results of the cultural resources monitoring and consultation (i.e., if new cultural resources are identified or not identified, and the significance of any cultural resources encountered.

FlowCheck Effectiveness Monitoring

General Description: Monitor the first year effectiveness of FlowCheck structures placed to reduce transport and delivery of sediment.

Location (Suitable) Sites: Specified slopes with high burn severity on the west-facing slope in the Cabin Creek drainage, directly above the stream.

Design/Construction Specifications: Monitoring will consist of photopoints and actual depth measurement of eroded material compared to similar untreated locations in the same area.

Purpose of Treatment: The purpose of the monitoring is to identify if the designed treatment is effective in meeting the objectives for the burned conditions in the locations selected.

Treatment Effectiveness Monitoring: A report will be produced that documents findings of the monitoring activities. The information will be used to identify and design emergency treatments in future BAER efforts.

Part VI – Emergency Rehabilitation Treatments and Source of Funds by Landownership

Recommended Alternative 1

			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										
Aerial Straw Mulch	acres	862	350	$301,700	$0		$0		$0	$301,700
FlowChecks	acres	7,756	5	$38,780	$0		$0		$0	$38,780
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$340,480	$0		$0		$0	$340,480
B. Channel Treatments										
none prescribed				$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										
Road Improvements	lump su	10,236	1	$10,236	$0		$0		$0	$10,236
Culvert Replacement	each	7,000	3	$21,000	$0		$0		$0	$21,000
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road & Trails				$31,236	$0		$0		$0	$31,236
D. Structures										
Warning Signs	each	265	3	$795	$0		$0		$0	$795
Tower Protection Eval.	lump su	495	1	$495	$0		$0		$0	$495
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$1,290	$0		$0		$0	$1,290
E. BAER Evaluation										
Assessment Team	report	15,000	1	$15,000	$0		$0		$0	$15,000
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Evaluation				$15,000	$0		$0		$0	$15,000
F. Monitoring										
Cultural Res. Mon.	report	2,165	1	$2,165	$0		$0		$0	$2,165
FlowCheck Effectivene	report	2,000	1	$2,000	$0		$0		$0	$2,000
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$4,165	$0		$0		$0	$4,165
G. Totals				**$392,171**	**$0**		**$0**		**$0**	**$392,171**

PART VII - APPROVALS

1. /s/ Richard A. Smith — 8-29-2003
   Forest Supervisor (signature) — Date

2. /s/ William P. LeVere for — 7/6/04
   Regional Forester (signature) — Date

Alternative 2 - Land Treatments

Alternative 2 includes those treatments identified in Alternative 1 plus an additional 1,240 acres of aerial straw mulching and an additional 5 acres of severely burned area treated with FlowCheck structures.

Aerial Straw Mulch or "HeliMulching"

Description: Straw mulch is applied to the ground by helicopter as a continuous cover to replace ground cover lost in the fire.

Location (Suitable) Sites: Specified slopes between 20 and 70 percent with high to moderate burn severity. Refer to Burned Area Treatment Map.

Design/Construction Specifications:

Site Selection: Suitable sites are designated on the Burned Area Treatment map and in the field by either watershed or operations staff. Treat 1,590 acres by helicopter mulching:

1. Slopes between 20 and 70 percent; and 2) where needle cast is not expected;
2. Straw must conform to Idaho State Department of Agriculture (ISDA) Certified Noxious Weed Free Standards. Suitable straw includes barley, rice, and wheat grasses; and
3. The straw should be dry for easier application. Straw bales should be delivered the staging area (Knox Ranch) 2 or 3 days before application. This may require use of canvas or plastic tarps to protect the straw from precipitation and condensation.
4. The rate of application is determined by qualified individuals who have been trained in the principles of BAER treatments. The rate of application is 2,000 pounds per acre. This is about 35-40 straw bales per acre, spread 1/4 inch deep, if evenly distributed (approximately 3 straw shafts deep).
5. Special ground support and equipment needs: Straw bales can vary from 50-80 pounds in weight. A loading crew of 5 people can be used to help load cargo nets and an additional 15 people can spread straw on the hillside.

Purpose of Treatment: The purpose of straw mulch is to stabilize the steep slopes by replacing the natural ground cover consumed by the fire. Straw mulch provides immediate soil protection from erosion and loss of nutrient capital, and reduces the transport of sediment to nearby streams. Mulching also helps reduce downstream peak flows by absorbing and slowly releasing accelerated overland runoff due to loss of vegetation, water repellent soils, and compacted/crusted soils. Mulching even small areas at the source of floodwaters and other areas critical to slope stabilization can often protect much larger downstream areas from the cumulative effects of hill slope runoff. Mulching helps to secure seeds that are either stored in the soil or applied as an emergency treatment that may otherwise be eroded off-site and also maintains a favorable moisture and temperature regime for seed germination and growth.

FlowCheck Log Erosion Barriers

General Description: Install FlowCheck log erosion barriers in designated locations to reduce transport of eroded soil.

Location (Suitable) Sites: Specified slopes with high burn severity in the Cabin Creek drainage, directly above the stream. Refer to Burned Area Treatment Map.

Design/Construction Specifications:

1. Site Selection: Five acres of suitable land is designated on the BAER Watershed Treatment Map and confirmed in the field by either watershed or operations staff.

2. Installation: Installation design is determined by qualified individuals who have been trained in the principles BAER treatments.

Purpose of Treatment: The purpose of the FlowCheck structures is to stabilize the lower slopes above Cabin Creek by keeping eroded soil from leaving the hillsides and being transported into the stream. FlowChecks act as erosion control structures by:

1. Reducing overland flow allowing for increased infiltration;
2. preventing mobilization of soil particles; and
3. trapping sediment to minimize downslope or downstream impairment.

Treatment Effectiveness Monitoring:Visually inspect effectiveness of treatments and repair as needed.

Part VIa – Emergency Rehabilitation Treatments and Source of Funds by Landownership

Alternative 2

			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										
Aerial Straw Mulch	acres	855	1,590	$1,358,980	$0		$0		$0	$1,358,980
FlowChecks	acres	7,756	10	$77,560			$0		$0	$77,560
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$1,436,540	$0		$0		$0	$1,436,540
B. Channel Treatments										
none prescribed				$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										
Road Improvements	lump su	10,236	1	$10,236	$0		$0		$0	$10,236
Culvert Replacement	each	7,000	3	$21,000	$0		$0		$0	$21,000
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road & Trails				$31,236	$0		$0		$0	$31,236
D. Structures										
Warning Signs	each	265	3	$795	$0		$0		$0	$795
Tower Protection Evalu	lump su	495	1	$495	$0		$0		$0	$495
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$1,290	$0		$0		$0	$1,290
E. BAER Evaluation										
Assessment Team	report	15,000	1	$15,000	$0		$0		$0	$15,000
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Evaluation				$15,000	$0		$0		$0	$15,000
F. Monitoring										
Cultural Res. Mon.	report	2,165	1	$2,165	$0		$0		$0	$2,165
FlowCheck Effectivene	report	2,000	1	$2,000	$0		$0		$0	$2,000
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$4,165	$0		$0		$0	$4,165
G. Totals				**$1,488,231**	**$0**		**$0**		**$0**	**$1,488,231**