

Date of Report: Aug 9, 2013

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 Response Action Recommendation

B. Type of Action

- ☒ 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 DESCRIPTIONA. Fire Name: Jaroso FireB. Fire Number: NM-SNF-00169C. State: New MexicoD. County: Mora, Santa Fe, San MiguelE. Region: 03F. Forest: Santa FeG. District: Espanola (06) Pecos-Las Vegas (05) H. Fire Incident Job Code: P3HJ7CI. Date Fire Started: 06/10/2013J. Date Fire Contained: 08/05/2013K. Suppression Cost: \$1,700,000

L. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): 0 – None Constructed
2. Fireline seeded (miles): 0 – None Constructed
3. Other (identify): _____

M. Watershed Number:

<u>HUC6 Number</u>	<u>HUC6 Name</u>	<u>Area (acres)</u>
130600010201	Panchuela Ck	5,080
130201011001	Rio Frijoles	1,176
130201011002	Rio Medio	3,300
130600010203	Rio Mora-Pecos River	1,584

N. Total Acres Burned: 11,149 (latest figure from 7/11/13. Analysis still reflects the 11,140 figure.)

NFS Acres(11,149) Other Federal () State () Private ()

O. Vegetation Types:

Vegetation Type	Acres
Aspen	170
Douglas Fir	448
Engleman Spruce	10,280
Grassland	225
Oak Woodland	0.5
White Fir	16.6

P. Dominant Soils:

Soil Types	Area (ac)
Alfisols	5,849
Inceptisols	4,782
Mollisols	205
Rock Outcrop	304

Q. Geologic Types:

Geology	Area (ac)
Granitic	5,086
Mixed	
Sedimentary	5,932
Mixed Alluvium	122

R. Miles of Stream Channels by Order or Class:

Stream Type	Length (mi)
Perennial	13
Intermittent	10.9

S. Transportation System

Trails: 8.7 miles Roads: 0 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 3,785 (low/unburned) 1,182 (moderate) 6,173 (high)

B. Water-Repellent Soil (acres): 7,385

C. Soil Erosion Hazard Rating (acres):
1,490 (low) 1,410 (moderate) 8,240 (high)

D. Erosion Potential: 27.6 tons/acreE. Sediment Potential: 9,874 cubic yards / square mile**PART IV - HYDROLOGIC DESIGN FACTORS**A. Estimated Vegetative Recovery Period, (years): 5-10B. Design Chance of Success, (percent): 75C. Equivalent Design Recurrence Interval, (years): 25D. Design Storm Duration, (hours): 1 hrE. Design Storm Magnitude, (inches): 2F. Design Flow, (cubic feet / second/ square mile): 200G. Estimated Reduction in Infiltration, (percent): 65H. Adjusted Design Flow, (cfs per square mile): 422**PART V - SUMMARY OF ANALYSIS**

A. Describe Critical Values/Resources and Threats:

The Jaroso Fire ignited on June 10, 2013 and burned 11,149 acres east of the community of Espanola and North of the village of Pecos. The fire burned entirely on National Forest System (NFS) lands within the Pecos Wilderness. Elevations range from 9200 feet where Rio Frijoles leaves the burned area to almost 12,200 feet on the slopes of Pecos Baldy Mountain. The west side of the burned area drains to the Rio Medio and Rio Frijoles. The Rio Frijoles flows through the community of Cundiyo before these rivers join together just above the Highway 503 Bridge and form the Santa Cruz River. This river flows into Santa Cruz Reservoir before flowing to the west through the community of Chimayo. The east side of the burned area is drained by Panchuela Creek, Jack's Creek, and the Pecos River. Panchuela and Jack's Creek are tributaries to the Pecos River above the community of Cowles. The Pecos River drains south through a mixture of NFS, state, and private lands before reaching the Village of Pecos. Other communities border the river below Pecos.

The fire burned parts of four 6th-level (HUC12) watersheds through primarily spruce-fir forest. Approximately 1,288 acres of the fire burned through an area of spruce-fir blowdown that occurred sometime in 2006-7. This area burned with high severity. Burn severity and soil erosion hazard ratings are displayed by watershed in the table below.

HUC6 Watershed	Watershed (acres)	Burned Area (acres)	Burn Severity (acres)			Erosion Hazard	
			Low/unchanged	Moderate	High	Moderate (ton/ac)	High (ton/ac)
Panchuela Creek	14,387	5080	2460	438	2182	106	4975
Rio Frijoles	24,047	1176	595	69	512	252	924
Rio Medio	34,952	3300	592	193	2515	265	3034
Rio Mora-Pecos	37,113	1584	138	482	963	23	1561

River							
Total	110,499	11140	3785	1182	6173		

Total burned area within the Pecos River watershed is 6,664 acres. The Tres Lagunas Fire burned 10,219 acres in the Pecos River watershed just prior to the Jaroso Fire. Runoff, sediment, and debris from the Jaroso Fire compounds the effects of the Tres Lagunas Fire on the Pecos River. The cumulative increase in peak flows from watersheds burned in the Tres Lagunas Fire where they enter the Pecos River range from 16 to 25 percent for the 25, 50 and 100-year 6-hour storms. Cumulative increases in peak flows expected from the Jaroso Fire and the Tres Lagunas Fire near the Windy Bridge site is approximately 10 percent for these storms.

Human Life and Safety

There is a very high risk for loss of life on NFS lands within and downstream of the burned area. Threats to human life and safety within the burned area include falling trees and limbs (hazard trees), rolling rocks, flash floods, and debris flows. Threats downstream of the burned area on NFS lands include flash floods and debris flows in stream channels draining from the burned area and flooding along the Pecos River. Roads crossing or passing through the floodplain of streams and rivers affected by increased runoff from upstream burned areas are at risk of flooding or washout during storm events and represent a hazard to users of these roads. Occupants of residences within the floodplain of fire affected streams and rivers are at risk from increased peak flows. Residences at risk on NFS lands include leased cabins near the confluence of Jack's Creek and the Pecos River, and downstream of the Cowles ponds along the Pecos River. The table below displays changes in peak flows expected from the 25-year 1-hour thunderstorm at selected sites in watersheds affected by the Jaroso Fire. These flows have been modeled using the Wildcat 5 Peakflow computer program and should be interpreted as ballpark estimates of changes expected rather than absolute changes in peak flows.

Peak Flows at Selected Sites in Watersheds
Affected by Jaroso Fire

Watershed	25-year prefire (cfs)	25-year Post-fire (cfs)	Percent increase
Panchuela Creek	2065	4894	137%
Pecos River below Beatty	1088	2033	87%
Jack's Creek	934	2028	117%
Rio Medio Tributary Sec 29	698	3228	362%
Upper Frijoles	446	1395	213%
Rio Medio West Tributary	359	2567	615%
Rio Frijoles SE Tributary	335	361	8%

There is also a high probability that life and safety will be threatened by post-fire storm events on private and State lands on the Pecos River downstream from the burned area and on private lands downstream of the burned area on Rio Frijoles and Rio Medio. The probability that streams and rivers downstream of the burned area could be contaminated by hazardous materials and household chemicals from commercial and private properties, and by septic systems and vault toilets during a flood event adds to threats to human life and safety.

Post-fire peak-flows were calculated at Windy Bridge on the Pecos River for both the Tres Lagunas and the Jaroso fires. The Tres Lagunas Fire analysis showed a peak-flow increase of 25%. The Jaroso Fire analysis (which includes both fire scars) showed a peak-flow increase of 8%. The reason

for the decrease from 25 to 8% was due to monsoonal thunderstorm inputs and the channel lengths. Monsoonal thunderstorms are not likely to simultaneously form and input over both burn areas. Also, time taken for water to travel downslope and down the stream channel (time-of-concentrations) are significantly different which will produce un-synchronized arrival of peak-flows. For the peak-flows to be cumulative, one storm would have to form over the Jaroso fire hours before forming over the Tres Lagunas burn area. Clearly, if the scenario of synchronized arrival was to happen, the peak-flows generated would be nearly the sum of both (Tres Lagunas and Jaroso) fires. Instead of floods being doubled in size, it is more likely that there will be more individual floods down the Pecos due to having two fires.

Analysis of the Santa Cruz watershed response (using a 25-year, 6-hour storm) to the Jaroso Fire shows a peak flow of 3,926-cfs, 13% peak-flow increase, and delivery of 2,633 acre-feet. The Cundiyo bridge on New Mexico State Highway 503 will pass a maximum of approximately 2,970-cfs. However, due to the confluence and channel shapes of the Rio Frijoles and Rio Medio, it is likely the bridge will plug with debris and overflow at flows less than the 2,970-cfs.

NM Highway 63 is currently the only escape route out of Pecos Canyon. In the event of a catastrophic fire or flood, the highway could be a limiting factor in successfully evacuating this canyon. Consideration of the number of cars that can safely travel and park along NM Highway 63 without causing traffic jams during an emergency evacuation is crucial to the safety of Pecos Canyon residents and visitors. The NM Highway 503 bridge over the Santa Cruz River has been overtopped in the past and is at risk of being overtopped again from potential peak flows and debris from the Rio Medio and and Rio Frijoles watersheds. This bridge provides important access to services in Chimayo for residents of Cundiyo.

Property

Property on NFS lands with high and very high risk ratings include approximately 16 miles of trails within the burned area and an additional 35 miles of trails along channels draining the burned area or downslope of burned areas, a campground and appurtenant facilities (well, toilets) at Panchuela Creek, a footbridge across Panchuela Creek at the Forest Trail 259 trailhead, an inlet control structure, headgate, and beginning of the ditch that irrigates the horse pasture at the Panchuela Creek administrative site, facilities at the Cowles Pond recreation site including; the parking area, toilets, weather station, pump house, handicap accessible trails, and the lower pond. The Forest Road 555 road crossing of Jack's Creek and the well and pump house down gradient from the road crossing that provide water to the Jack's Creek campground are threatened by flood flows and debris in Jack's Creek. The concrete box culvert crossing of the Pecos River by FR 555 is also threatened by peak flows and debris.

Natural Resources

Water

Perennial streams within the Pecos Wilderness have been designated as Outstanding Natural Resource Waters (ONRWs) by the state of New Mexico. Eight miles of streams are identified as ONRWs on the Forests GIS layers within the burn perimeter. Designation as an ONRW triggers the Tier 3 Antidegradation water quality standard (the most stringent of the antidegradation standards). The objective is to maintain the highest water quality possible in these streams. The ONRW's within and below the burned area will experience reduced water quality as a result of the fire.

A 20.5 mile section of the Pecos River, from its headwaters in the Pecos Wilderness to the town site of Terrero, NM, was designated as a Wild and Scenic River (WSR). Maintaining or improving water

quality in Wild and Scenic Rivers is a key objective of the Wild and Scenic Rivers Act. A small portion of the far eastern end of the fire burned into the Wild and Scenic corridor and runoff from burned areas within the Panchuela Creek and Rio Mora-Pecos River HUC6 watersheds will degrade water quality in the reach of the wild and scenic river from Beatty Creek to Terrero.

Water draining from the west side of the burned area into the Rio Frijoles and Rio Medio are used for irrigation near the community of Cundiyo and by irrigators in the Santa Cruz Irrigation District who receive water deliveries from Santa Cruz Reservoir. Water draining from the east side of the burned area into the Pecos River is also used for agriculture throughout the Pecos River Basin. Damage to headgates and ditches from floods and debris from the burned area and degraded water quality can be expected.

Soil Productivity and Hydrologic Function

Areas of high and moderate burn severity have impacted soil productivity by removing effective ground cover, organic matter within the topsoil and on the forest floor, and by creating water repellent conditions within the soils themselves. Consumption of the organic layer on the forest floor and severe heating of the upper layer of soil has degraded the seed bank stored in the soil. The most important physical characteristic that affects hydrologic function and stability in the soil is the presence of organic matter, responsible for maintaining soil structure. This loss of structure due to volatilization of organic matter can drastically reduce soil stability. The loss of soil structure increases the bulk density of the soil and reduces its porosity, thereby reducing infiltration and soil productivity and making the soil more vulnerable to erosion post-fire. Removal of effective ground cover and organic layers combined with loss of soil structure and increased water repellency will further increase erosion. Soil loss occurs through surface, rill, and gully erosion processes. Loss of the soil seed bank, loss of soil structure, and soil loss through erosion processes retards vegetative recovery which, in turn, further impairs soil productivity and watershed conditions.

Hydrologic function within moderately and severely burned areas has also been impacted by loss of the vegetative canopy that intercepts some rainfall, by loss of the organic layer on the forest floor that absorbs some rainfall, by loss of soil structure which reduces infiltration and by development of water repellent soils which also reduces infiltration. Reduced interception and absorption, and reduced infiltration increase runoff from a given rainfall event. Increased runoff increases erosion and the magnitude of peak flows expected from a watershed. The increased magnitude of peak flows increases the threat of flood to downstream life and property.

Increases in erosion can occur on both uplands and in channels. Rills and gullies can form in uplands and channels can scour and downcut. Sediment delivered to channels from rill and gully erosion and eroded from channel banks during scouring and incision processes can deposit in areas of lower energy. Sediment, bedload, and debris deposits can plug culverts and bridges, deposit on floodplains, terraces and other low lying areas such as agricultural fields, clogging ditches, and water supply intakes that can generally adversely affect infrastructure in downstream areas.

Downcutting of stream channels can lower water tables in adjacent floodplain aquifers and result in drying of meadows and mortality of riparian vegetation. Downcutting of stream channels also separates the stream from its floodplain, alters the sediment transport characteristics of the channel, and causes erosion of the channel banks until the channel has widened sufficiently to permit development of a new floodplain at the lowered base level of the channel. Downcutting, widening and deposition processes can destabilize affected channels for many years.

Increases in runoff and erosion, changes in sediment transport characteristics, impacts to channels and floodplains, and impacts to water quality from ash, sediment, and temperature effects, combine to impair hydrologic function.

Impaired soil productivity and hydrologic function affect:

- Human life and safety on or in close proximity to burned NFS lands through increased flood threats,
- Property and infrastructure on or in close proximity to burned NFS lands through increased flooding, erosion, and debris threats,
- Water quality in the Pecos Wild and Scenic River and in Outstanding Natural Resource Waters within the Pecos Wilderness by increasing turbidity and suspended sediment, and by increased water temperature from loss of streamside vegetation due to channel incision and scouring.

Damage to soil productivity and hydrologic function in areas of moderate burn severity with highly erosive soils and areas of high burn severity is very likely to occur, may be irreversible, and is of long term duration.

Critical Habitat or Suitable Occupied Habitat

Federally listed threatened or endangered terrestrial, aquatic, or plant species do not occur within or below the burned area. The Rio Grande Cutthroat Trout, a candidate species for listing, occupies streams within and below the burned area. The populations within and below the burned area are hybridized populations that have interbred with nonnative rainbow trout. A conservation population (greater than 90% genetic purity) exists in Jack's Creek. Water quality impacts from erosion of ash and soil in the burned area and stream channel scouring from increases in peak flows will have adverse impacts on these populations.

Invasive Species

Small infestations of Bull Thistle may exist within the burn area and are likely to expand by 25-30% post fire as they out-compete native regeneration. However, as very limited 'on the ground' suppression activities took place new infestations are unlikely. Opportunities for monitoring and treatment of infestations will be very limited due to the ruggedness and remoteness of the area as well as the dangers presented by bug kill and burned hazard trees.

Cultural and Heritage Resources

The density of heritage resources within the fire perimeter is low. Five heritage resource sites have been previously documented within or immediately adjacent to the exterior boundary of the 11,149 acre Jaroso Fire. Of the five sites, one site is within the high severity burn areas, four are in the low to unburned severity areas. The fire or suppression related activities may have exposed additional sites that have not been previously documented, a complete survey of the burned area would be necessary to account for all sites on the Jaroso Fire.

B. Emergency Response Action Objectives:

1. Place key recreation sites in seasonal administrative closure status, and post warning signs to prevent injury to the public from hazard trees, flooding, debris flows, and potential entrapment within the burn area. Place specific flood prone areas in administrative closure status. Recreation sites recommended for closure include: Panchuela CG. This closure should remain in effect seasonally for a minimum of the next two monsoon seasons (June 30 to Sept 30 annually), after which conditions should be reassessed at the discretion of the District Ranger.
2. Install closure and hazard warning signs at key access points of the burn area to advise the public of the hazards inherent in entering the burned area.
3. Mitigate damage to NFS roads and recreation infrastructure downstream from the burn area by providing point protection, removing floatable assets, and debris removal as necessary.
4. Pump two vault toilets along streams that could be affected by post-fire flows. This is intended to

prevent contamination of waterways and prevent risk to public health.

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

Land 50 % Channel 75 % Roads/Trails 75 % Protection/Safety 90 %

D. Probability of Response Action Success

Years after Response action

	1	3	5
Land	50	75	75
Channel	80	75	65
Roads/Trails	90	90	90
Protection/Safety	90	95	95

E. Cost of No-Action (Including Loss): \$85,975,182

F. Cost of Selected Alternative (Including Loss): \$30,648,530

G. Skills Represented on Burned-Area Survey Core Team:

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

Team Leader: Grant Loomis

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Team Members: Rob Arlowe (Deputy Lead), Jim Snyder (Hydro), Bill Wells (Hydro), Kit MacDonald (Soils), Crystal Danheiser (Soils), Tim Downing (GIS), Cathleen Thompson (PIO). Several Forest resource specialists were on call for help with Wildlife, Fisheries, Heritage, Engineering, Recreation, and Water Quality.

H. Response Action Narrative:

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

Land Response Actions:

The Jaroso burn scar is the result from a remote, natural ignition which burned entirely in the wilderness. Spruce-Fir forests that have not been subjected to frequent fire, or have not had a fire within the last 100

years, typically burn at high severities that result in stand replacement conditions due to dense forest vegetation, including ladder fuels, and excessive fuel loads of coarse woody debris (Margolis et al. 2007, Fulé 2003). Long interval stand replacement fire is the natural fire regime for spruce-fir communities in the Southern Rockies. If there are not substantial Values-at-Risk **in close proximity** identified as a result of this fire, it is very unlikely that emergency response actions would be recommended. In this case, the burn scar is buffered by several miles of unburned wilderness. As stated in the *BAER Guidance Paper, Treatments in Wilderness* available in the Fire Management Toolbox on Wilderness.net “when wilderness is involved in burned area emergency stabilization assessments, ‘no treatment’ is always the preferred action. FS policy provides for two situations where further investigation may be warranted: 1) unnatural loss of the wilderness resource, or 2) to protect life, property or other resource values outside of wilderness.”

BAER directives for Emergency Response Actions (FSM 2523.2) give guidance to consider emergency response strategies prior to prescribing BAER actions and measures. Emergency response strategies are given in the following preferential order: natural recovery, administrative closures, and other measures. In light of these directives, the following emergency response actions for the Jaroso Fire are recommended: Threats to human life and safety on NFS lands can be mitigated by enacting forest closures, however in wilderness natural processes – even hazardous ones – are generally allowed to work without human intervention. Threats to NFS property can be minimized by implementing point protection response actions outside the wilderness area. Threats to water quality, soil productivity and hydrologic function can be seen as a part of natural recovery.

The Minimum Requirements Decision Guide was used to evaluate the appropriateness of land response actions on the Jaroso Fire. The determination of the analysis found that no administrative action was necessary in the wilderness as a response to the fire.

Channel Response Actions:

Channel response actions are necessary in order to reduce the threat to life and property downstream due to dislodged woody debris that could become projectiles during a flood event. In addition, actions are necessary to reduce the threat to downstream life and property due to breaches of debris jams, and reduce the threat of severe damage to valuable Forest Service resources and infrastructure, floatable woody debris will be removed from 1.5 miles of the Panchuela Creek and Jack’s Creek channels.

Roads and Trail Response Actions:

Remove trail bridge from Panchuela Creek CG. This bridge is at risk of washing out and being swept downstream causing more damage. The bridge could be dismantled and removed by a small crew of workers within two days.

Implementation of seasonal administrative closure orders for key trails accessing the burn area are recommended for at least two years depending on conditions. Portions of the following trails are recommended for seasonal closures: Cave Creek Tr 288, Rio Medio Tr 155, Frijoles Tr 154, and Capulin Tr 158. Warning and closure signs should be installed at wilderness trail heads to discourage use of all wilderness trails within the burn area. Install 3 closure signs on camp ground/roads and approximately 10 hazard warning signs at key trailheads around burn area. Closure and warning signs are designed to warn the public of the dangers of hazard trees, flood, and debris flows. Recreation sites recommended for seasonal closure include: Panchuela CG and Forest Rd 305 to the campground. This closures should remain in effect seasonally for a minimum of the next two monsoon seasons (June 30 to Sept 30 annually). Opening of the site should only be done after monitoring by the district/forest personnel, and monitored thereafter to assess any potential continuing flooding, debris and bulking threats due to intense rain events on the burn scar.

Construct and install two-wing deflectors to protect well heads from being sheered off by debris flows and seal wells to prevent infiltration during flood events.

Sand bags have been recommended for source point protection of adirondack shelters in Panchuela CG, and will be subject to out of channel water, ash, and sediment flows as well as potential debris. Sandbags should be an effective treatment for the expected sedimentation.

Remove picnic tables from Panchuela CG to the admin site to protect them from washing away.

Storm patrols will be scheduled for immediate monitoring after significant rain events targeting the culverts on FSR 555 for debris and sediment removal. Storm patrol for debris jams: 2 teams of 2 employees times 10 storm events.

I. Monitoring Narrative:

Jaroso BAER response actions will be monitored to determine 1) if response actions were successful (effective ground cover, recreation site damage minimization, resources protection, road damage minimization) and 2) if response actions resulted in undesirable results (i.e., introduction of noxious weeds). Final summaries will be provided annually.

1) Response Action effectiveness:

Point protection response actions should be monitored annually.

2) Monitoring undesirable results:

Monitoring for undesirable outcomes (i.e., noxious weed populations) will be limited to aerial surveys during effectiveness monitoring flights due to the remoteness and risk of entry into the area. Noxious weeds have been identified by the Chief of the Forest Service as one of the top four threats to National Forest System lands.

Part VI – Emergency Stabilization Response Actions and Source of Funds

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
Insert new items above this line!				\$0	\$0			\$0		\$0	\$0
Subtotal Land Treatments				\$0	\$0			\$0		\$0	\$0
B. Channel Treatments											
Channel Clearing	miles	20000	1.5	\$30,000	\$0		\$0			\$0	\$30,000
Insert new items above this line!				\$0	\$0		\$0			\$0	\$0
Subtotal Channel Treat.				\$30,000	\$0		\$0			\$0	\$30,000
C. Road and Trails											
Bridge removal	per	5000	1	\$5,000	\$0		\$0			\$0	\$5,000
				\$0	\$0		\$0			\$0	\$0
Insert new items above this line!				\$0	\$0		\$0			\$0	\$0
Subtotal Road & Trails				\$5,000	\$0		\$0			\$0	\$5,000
D. Protection/Safety											
Storm Patrol	days	1060	10	\$10,600	\$0		\$0			\$0	\$10,600
Road/CG closure sign	per	300	3	\$900	\$0		\$0			\$0	\$900
Hazard signs	per	150	10	\$1,500	\$0		\$0			\$0	\$1,500
Move Weather station	per	3000	1	\$3,000							
Well Head Pt protectio	per	500	2	\$1,000							
Panchuela protections	per	8000	1	\$8,000							
Insert new items above this line!				\$0	\$0		\$0			\$0	\$0
Subtotal Structures				\$25,000	\$0		\$0			\$0	\$13,000
E. BAER Evaluation											
				---	\$96,593		\$0			\$0	\$96,593
Insert new items above this line!				---	\$0		\$0			\$0	\$0
Subtotal Evaluation				---	\$96,593		\$0			\$0	\$96,593
F. Monitoring											
Effectiveness	per	5000	1	\$5,000	\$0		\$0			\$0	\$5,000
Insert new items above this line!				\$0	\$0		\$0			\$0	\$0
Subtotal Monitoring				\$5,000	\$0		\$0			\$0	\$5,000
G. Totals				\$65,000	\$96,593		\$0			\$0	\$149,593
Previously approved											
Total for this request				\$65,000							

PART VII - APPROVALS

1. /s/ Michael Frazier <for>
 MARIA T. GARCIA
 Forest Supervisor (signature)

8/9/2013
 Date

2. _____
 Regional Forester (signature)

 Date