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

Date of Report:

8/27/2015

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[x] 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: Walker

B. Fire Number:CA- INF-001319

C. State:CA

D. County: Mono

E. Region: R5

F. Forest: Inyo

G. District: Mono Lake

H. Fire Incident Job Code: P5J1TW

I. Date Fire Started: 8/14/2015

J. Date Fire Contained: 8/26/2015

K. Suppression Cost: 5M

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): Approximately 5 miles rehabed.
2. Fireline seeded (miles):
3. Other (identify):

M. Watershed Number: Rush Creek/Walker Creek (180901010303) and Lower Horse creek/Mono Lake (180901010500)

N. Total Acres Burned: 3706
NFS Acres(3282) Other Federal ( ) State ( ) Private (LADWP) (424)

O. Vegetation Types: Sage, bitterbrush, Jeffery Pine, Pinyon Pine, Aspen

P. Dominant Soils:Corbet-Railcity; Wrango-Torriorthentic Haploxerolls,Aquatic Haploxerolls (Bohler Canyon)

Q. Geologic Types: Granitic and metamorphic glacial till from Sherwin and Tahoe and Tioga glaciation. , Biotite bearing quartzite (Williams Butte).

R. Miles of Stream Channels by Order or Class:
Perennial: 3.1; Intermittent: 6.2, Ephemeral: 4.8

S. Transportation System

Trails: .2 miles Roads:2.6 miles(NFS)

PART III - WATERSHED CONDITION

A. Burn Severity (acres): _231_ V. Low 1664 (low) 1681 (moderate) 129 (high)

B. Water-Repellent Soil (acres): 633

C. Soil Erosion Hazard Rating (acres):
152 (low) 749 (moderate) 2811 (high)

D. Erosion Potential: 13.9 tons/acre

ERMiT allows users to predict the probability of a given amount of sediment delivery to the base of a hillslope following variable burns on forest, rangeland, and chaparral conditions in each of five years following wildfire. The ERMiT model can be accessed at http://forest.moscowfsl.wsu.edu/fswepp/
ERMiT Model Assumptions and Inputs:

- Slope length was 300 feet for all ERMiT runs, except for high burn severity forest around Bohler Canyon, we used 200 feet.
- Soil surface texture was sandy loam
- Soil Rock Content was 20%/Volume
- There is a low (20%) probability the rates of erosion will exceed the amounts shown in the preceding table in the first year following the fire.

Dry ravel may also occur on loosely consolidated soils on steep slopes (>50%) under dry conditions immediately after a fire. It can often produce higher soil loss rates than that created by rainfall events, especially during a low rainfall year. Dry ravel is an ongoing process that increases after a fire because the vegetation that was holding the soil in place on the hillside is removed. Dry ravel in steep in-gorge areas can "super charge" sediment loading in stream channel, greatly increasing the amount of available sediments for transport.

Wind erosion in the Eastern Sierra is a major erosion process. Wind erosion mobilizes ash and fine sediment and deposits them in swalls and drainages. This was observed during the BAER assessment. This material is highly mobile and avaiable for transport during storm events.

Conclusions:

- There is a high probability that rates of soil erosion and sediment delivery to stream channels will be significantly higher in moderate and high soil burn severity areas.
- High intensity, short duration summer thundershowers are storm events of concern. Additionally, longer duration medium intensity storms over the winter months are like to generate erosion and flooding within and downstream from the burned area.
- In addition to fire, existing ground disturbance (roads, trails, etc) influence soil erosion and watershed response to precipitation events within the burned area.

Soil Burn Severity and ancilliary characteristics:

Forested: Burned forested areas were mapped ranged from low to high soil burn severity. Extensive removal of forest floor ground cover occurred in moderate and high soil burn severity areas. Generally, soil heating effects were low over most of the area. Some needle cast is likely to occur in the low and moderate soil burn severity polygons and recovery of slope stability and watershed hydrologic response will be accelerated where this occurs.

Shrub: Most of the shrub vegetation within the burned area was mapped as low or moderate soil burn severity. Although these areas had areas of bare ground before the fire, removal of ground cover was often high and it is expected that erosion and sediment delivery to stream channels from these slopes will be high. Vegetative recovery is likely to occur through sprouting of shrubs and establishment of grasses and herbaceous vegetation. Recovery of watershed hydrologic response depends on many factors and is likely to take at least 3-5 years.

Grass, Bare Ground and Rock Outcrop: Grass, bare ground and rock outcrop areas within the burn were mapped as unburned or low burn severity. Soil heating in these areas was very low and, although minimally affected by the fire, recovery of watershed response is expected to occur rapidly.

E. Sediment Potential: 765 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years):	3-5
B. Design Chance of Success, (percent):	90
C. Equivalent Design Recurrence Interval, (years):	5
D. Design Storm Duration, (hours):	2
E. Design Storm Magnitude, (inches):	.797
F. Design Flow, (cubic feet / second/ square mile):	44.5
G. Estimated Reduction in Infiltration, (percent):	30
H. Adjusted Design Flow, (cfs per square mile):	See below

PART V - SUMMARY OF ANALYSIS

Introduction:
The Walker Fire started the afternoon of August 14,2015 near Walker Lake on the Mono Lake Ranger District. The fire burned approximately 3,676 acres mostly in the Bohler Canyon and Horse meadow areas.

The soil burn severity (SBS) map shows approximately 58% burned at high and moderate soil burn severity. The rest of the fire was either low soil burn severity or unburned. It is very important to understand the difference between *fire intensity* and *burn severity*, and *soil burn severity* as defined for watershed condition evaluation in Burned Area Emergency Response BAER analyses. Fire intensity or burn severity as defined by fire, fuels, or vegetation specialists may consider such parameters as flame height, rate of spread, fuel loading, thermal potential, canopy consumption, tree mortality, etc. For BAER analyses, mapping is not simply

vegetation mortality or above-ground effects of the fire – soil burn severity considers additional surface and below-ground factors that relate to soil hydrologic function, runoff and erosion potential, and vegetative recovery. Areas of high and moderate soil burn severity are present throughout the fire. Areas of high and moderate soil burn severity are at risk due to flooding and sedimentation affecting roads, water quality, and downstream infrastructure.

Based on historic precipitation patterns, it can be expected that fall rains are the first runoff producing events following the Walker Fire. The risk of flooding and erosional events will increase as a result of the fire, creating hazardous conditions within and downstream of the burned area. These hazardous conditions may be worsened in the case of a rain-on-snow event, where long-duration rainstorms falling on a shallow snowpack can produce very high peak flows.

The fire was divided into sub-watersheds with "pourpoints" established at the bottom of burned watersheds, or where values at risk were located. Watershed runoff response is referenced to these points.

Soils/Erosion Response

Soils in the fire area have a sandy non-cohesive surface texture, with various amounts of gravel and cobble. Erosion response is heavily influenced by soil burn severity, hillslope geomorphology, slope and surface texture. The burn affected soil aggregate stability, canopy cover, ground cover and infiltration rates. Before the fire, most of the forest areas had protective ground cover in the form of litter, duff or ground vegetation. Shrub dominated areas had ground cover mainly within the "dripline" of the shrubs, withbare ground between the shrubs and grasses. Riparian areas had protective ground cover consisting of leave and needle litter and duff. In areas of moderate and high burn severity , it is highly likely that increased rates of soil erosion and sediment delivery to stream channels will occur, for two or three years after the fire, particularly on steep slopes that contained shrubs and are slow to recover.

Pre-fire slope stability and recovery of watershed hydrologic response is dependent on many factorsand typicaly occurs within 3-5 years following the fire. Recovery of high burn severity areas is generally slower because little or no ground cover remains, the potential for needle cast is low and soils may be impacted by fire effects. High burn severity in riparian areas should recover faster than hillslopes given the higher water table and the ability of riparian vegetation to rapidly ressprout.

Watershed Response:

The fire occurred mostly within the Rush Creek/Walker Creek watershed and partially within the Lower Horse Meadow/Mono Lake watershed Hydrologic units (HUC 12). Bohler Canyon, along with its small ephemeral tributaries within the Walker Creek watershed, experienced a high percentage of watershed burned and Lower Horse Meadow/Mono Lake watershed with a low percentage burned. Sub watersheds in the fire area were delineated 1- 4 for geographical reference and hydrologic modeling during the BAER assessment.

Walker Creek at the southern perimeter of the fire is a perennial stream, and Bohler Canyon also has perennial streamflow. The City of Los Angeles Department of Water and Power has stream flow gauging weirs and infrastructure on both streams, Bohler Canyon gage station is within the fire area. The Mono Basin aqueduct is placed along the base of the watersheds to transport water from Mono Basin streams to Grant Lake Reservoir. The base flow in Walker Creek ranges from about 3-5 cubic feet per second (cfs) on average, peak flows usually occur from seasonal snowmelt runoff in the spring and early summer months up to 35 cfs. Bohler Canyon streamflow is mostly sustained by springs and seeps, with smaller base flows (< 1.0 cfs) and does not see high increases of flow from snowmelt because the watershed is relatively small and is not influenced by high elevation snow runoff. Thus, the flow in this small perennial stream is steady.

Hydrologic modelling was Hydrologic modeling was conducted for the fire area and all the watersheds modeled have an expected increase in the Q5 discharge compared to pre-fire conditions. In one watershed

Walker Fire

Design Flow for 5 year storm (South Lahontan/Colorado Desert Region)

			Pre-fire Peak Flow in cubic feet per second (cfs)				Soil Burn Severity (acres)				In Cubic Feet per Second (cfs)						
HU_12 Drainage	Drainage Acres	Drainage Area (mi2)	Q2	Q5	Q10	Q25	Unburned	Low	Moderate	High	Pre fire Q5	Q from unburned	Q from low	Q from moderate	Q from high	Post fire total Q5	Change in Q5 flow
Bohler Canyon watershed 1	23.8	3.62	20	115	290	773	369	591	1252	115	115	16	29	196	38	274	77
Watershed 2 Hmsll watershed at road xing	25*	0.40	6	38	85	254	0	52	339	11	38	0	7	72	11	93	111
Watershed 3 Ion road xing	334	1.40	12	71	179	477	57	410	335	13	71	7	32	79	7	125	55
Watershed 4 Hobbs Home Meadow Rd culvert	120	0.19	4	26	65	173	26	65	7	0	26	3	16	4	0	29	3

(watershed 3 in table below) we expect an increase in Q5 discharge by 111% more than the pre-fire conditions. This is due to the amount of high and moderate soil burn severity in the watershed. See Table 1 for the results of the hydrologic modeling.

Table 1. Hydrologic modeling for select watershed in the Walker Fire.

From: Methods for Determining Magnitude and Frequency of Floods in California, Based on Data through Water Year 2006 by Anthony J. Gotvald, Nancy A. Barth, Andrea G. Veilleux, and Charles Parrett, 2012

Table 2 displays the amount of burn severity and the percentage of watershed burned throughout the fire area.

Water Quality

The perennial stream Bohler Creek along with short perennial spring fed-streams in the fire area will have periods of water quality degradation after significant precipitation events occur, most likely during the first year after the fire. Ash, fine soils and organic debris will enter the streams and create high levels of turbidity and dissolve sediment in the water. These episodes will be at a peak when storm runoff from slopes is occurring. As storm runoff slows and ceases, water quality will improve. This effect can continue for 1-2 days after a large storm event

Table 2: Burn Severity per watershed

Watersheds	Acres						% watershed burned
	Unburned/ Very Low	Low	Moderate	High	burned area (acres)	Total watershed area (acres)	
Watershed 1 (Bohler Creek)	333	580.9	1251.8	115.3	1984.3	2318	86%
Watershed 2 (Small watershed)	0	50.6	195.2	11.2	257	257	100%
Watershed 3 (on road)	86.6	399.8	394.7	12.5	862.6	894	96%
Watershed 4 (above horse mdw)	28.4	84.7	6.7	0	119.8	120	100%

Geology/geologic response:

Strong glacial influence as evidenced by the classic lateral moriane on the North side of Walker lake and the large moraine of Gibbs creek. The Walke r Lake lateral moriane is basically devoid of drainages given the relative young age of the formation and high infiltration rates. Small debris flows were evident in Bohler Canyon, mostly on LADWP lands. Debris flows likely came from the ephemeral channels that drain into Bohler Creek from the north.

A. Describe Critical Values/Resources and Threats:

*The risk matrix below, Exhibit 2 of Interim Directive No.: **2520-2010-1** was used to evaluate the Risk Level for each value identified during Assessment. Only values at risk that had a risk of Intermediate or above are discussed.*

Probability of Damage or Loss	**Magnitude of Consequences**		
	Major	Moderate	Minor
	RISK		
Very Likely	**Very High**	**Very High**	**Low**
Likely	**Very High**	**High**	**Low**
Possible	**High**	**Intermediate**	**Low**
Unlikely	**Intermediate**	**Low**	**Very Low**

Threats to Life/safety and Property

National Forest Roads: There are approximately 2.6 miles of system roads and .2 miles of motorized trails in the fire perimeter. Roads within the fire are maintenance level (ML) 2 with the motorized trails also managed at a maintenance level 2. These roads are native surface on decomposed granite or glacial outwash which are very susceptible to erosion. Uncontrolled runoff can result in off-site damage and potential negative impacts to the transportation system.

Forest Road 01N106 has multiple ephemeral stream crossings that drain the fire area. The surrounding hillslopes in the area of concern burned at high and moderate severity (see table 2 above). In addition, nearly all the watershed burned above the crossings. Watershed 2 and watershed 3 contain ephemeral drainages that cross the road through unimproved low water crossing. Post-fire conditions and predicted watershed response indicate increased runoff, excessive sedimentation, will occur on this road impacting existing roadway function.

A secondary consequence of post-fire runoff to the transportation system is increase adverse effect of storm water runoff and decreased control of storm water runoff delivering high volumes of sediment into adjacent stream channels. In some cases, roads can become "hydrologically connected" to stream channels creating an efficient mechanism for delivering excessive sediment to the stream channels

Emergency Determination:

Imminent hazards to the road system vary from minor sloughing and rilling to overwhelming the road and incision on the stream crossing, leading to a partial or total loss of the road template.

Probability of Damage or Loss: Likely

Magnitude of consequences: Moderate

Risk Level: High

Bohler Canyon: The road into Bohler Canyon is situated where slope runoff can concentrate and could cause erosion and sedimentation to Bohler Canyon creek. The road is unauthorized but currently open to motorized traffic. Many dangerous burned hazard trees exist along the unauthorized route that present a threat to human safety The open meadows upstream on Forest lands in Bohler Canyon could be susceptible to OHV incursion that could inhibit vegetation and soil recovery post-fire. There are spring fed stream channels that cross theroad that have the potential to divert onto the trail f not treated and could cause additional soil erosion and impact hydrologic function of the meadow. Approximately 86% of Bohler canyon watershed burned with 59 % burning at high and moderate severity.

Emergency Determination:

Imminent hazards to people from hazard trees and to the road from accelerated runoff and sedimentation causing additional erosion and impacting hydrologic function of the meadow This could also lead to a partial or total loss of the road template in places.

Probability of Damage or Loss: Likely

Magnitude of consequences: Major

Risk Level: Very high

Threats to Natural and Cultural Resources

Off Highway Vehicles (OHV's) are a threat to natural recovery from invasion if noxious weed spreading into the fire area, reduction in soil productivity, and damage to heritage sites from Off-Highway Vehicle incursion. OHV's can cause erosion, compaction and alter hydrologic function which precludes or reduces vegetation re-establishment after a fire. OHV's can act as a vector for invasive species introduction when seeds are attached to tires and deposited on bare ground. Heritage resources can be negatively affected by OHV's through mechanical disturbance in the site.

Vegetative recovery, soil productive and meadow hydrologic function are at risk from OHV incursion along the the Forest system roads, especially 01n106, 1N16 and 1N16A where natural vegetative barriers burned. As mentioned above OHV incursion is also a concern on the Bohler Canyon road. The area of greatest incursion potential burned at moderate soil burn severity, with all the vegetation consumed and a low gradient making it easily traversed by an OHV. Suppression operations created dozer lines and pull offs off-road on creating highly visible areas of disturbance. These areas are currently being rehabilitated as part of suppression rehabilitation. However, the disturbance will be highly visible even after the rehabilitation.

Emergency Determination:

Probability of damage or loss: Likely

Magnitude of Consequences: Moderate

Risk Level: High

Big Horn Sheep habitat: On the western side of the fire, approximately 397 acres of Sierra Nevada bighorn sheep critical habitat was consumed. Fire intensity within the critical habitat was low to moderate. Coincidently, the Forest Service and California Department of Fish and Wildlife had previously identified this area as a desirable location for a prescribed burn to improve bighorn sheep winter range. The effects of the Walker fire are likely to be beneficial to bighorn sheep in both the short and long term through removal of cover for predators and propagation of forage.

Emergency Determination:

Probability of damage or loss: Possible

Magnitude of Consequences: Minor

Risk Level: Low

Ecosystem Stability and Vegetation Recovery

Invasive weeds: A washing station was set up during the fire, but was not in place for the first several days of the fire. The fire vehicles were most likely not washed before entry to the fire area during that time. There were a total of 6 dozers used on the fire, 4 from outside the local area. Several invasive species are known from the forest, particularly cheatgrass, which is common especially in the lower elevation parts of the fire. It will likely spread into the recovering shrub and pinyon vegetation in the fire area, but there is no effective control for this species, so no treatment is proposed. New species of weeds may have been introduced by unwashed fire suppression vehicles, but these will not be evident for at least several months when the seeds germinate

The California Invasive Plant Council has published a list of species not currently known in the fire area, but with a high risk of invasion (CalIPC , 2011). Because the fire vehicles and equipment were not washed before entering Forest Service land, these species could possibly invade: Russian knapweed, musk thistle, diffuse knapweed, spotted knapweed, yellow starthistle, rush skeletonweed, Scotch thistle, Dyer's woad, Dalmatian toadflax, and yellow toadflax.

Cheatgrass, mullein, dandelion, and salsify are known from Forest Service land.

Emergency Determination:

Probability of damage or loss: Likely

Magnitude of Consequences: Moderate

Risk Level: High

Cultural Resources:

No threat to cultural resources exists due to the post-fire environment. Cultural resources will be evaluated during project implementation.

B. Emergency Treatment Objectives:

Threats to Life and Property
Protect route infrastructure by minimizing erosion of the road surface, provide for water control and reduce excessive flooding and sediment delivery on Forest Road 1n106 and Blocking Bohler Canyon Road.

Threats to Critical Natural and Cultural Resources

To prevent OHV incursions from damaging critical values along 01N106 and into Bohler Canyon and provide for native vegetative recovery.

Threats to Ecosystem Stability

Determine if new invasive species have been introduced due to suppression activities or escape from local gardens and eradicate small infestations.

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

Land N/a % Channel ___ % Roads/Trails 80 % Protection/Safety 85 %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	70	80	90
Channel			
Roads/Trails	80	90	95
Protection/Safety	85	95	100

E. Cost of No-Action (Including Loss): See Spread sheet below (actions are justified)

F. Cost of Selected Alternative (Including Loss):

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: Todd Ellsworth

Email: tellsworth@fs.fed.us Phone: 760-937-2033 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:

Noxious/invasive weed early detection and rapid response: Survey 6 miles of dozer line,,2.24 miles of hand line, plus 1.0 mile of improved roads, the stream crossings in Bohler Canyon, and other disturbed areas (area unknown) in the fire area for species listed above and eradicate small infestations by pulling weeds by hand. Plants will be disposed of in large plastic bags, and taken off site.

Weed Surveys and Rapid Response Costs				
Item	**Unit**	**Unit Cost**	**# of Units**	**Cost**
1 GS-11 botanist	Days	$355	5	$1775
1 GS-7 weed technicians	Days	$196	5	$980
Supplies	Each	$500	1	$500
Vehicle gas mileage	Miles	$0.50	500	$250
Total Cost				**$3500**

Channel Treatments:

N/a

Roads and Trail Treatments:

Improve drainage by installing rolling dips (3-5) along approximately ¾ mile section of 01n106 – Install rock aprons (by hand) on the downhill side of the stream crossing to prevent incision of the road during runoff events.

Road	Risk	Treatment	Cost
01N106	High	Restore drainage function, remove outside berm in critical areas, place rock apron on downhill side of ephemeral stream crossings	$3,500 (includes Heritage clearances)

Bohler Canyon Road – block and improve road drainage in one spot

Road	Risk	Treatment	Cost
Bohler Canyon	Very High	Block and fix drainage, hazard tree removal around treatment areas.	$4,500 (includes Heritage clearances)

Protection/Safety Treatments:

OHV patrol: OHV incursion on 01N106, 01N16 and 01N16a will be reduced by providing for increased OHV patrol in this area, especially on high use weekend the rest of the summer and fall. Contacts with the public will emphasize the need to stay on existing roads and motorized trails to facilitate fire recovery. Strategic placement of carsonsite closed area signs will help keep motorized traffic on system routes. Enforce closure on Bohler Canyon Road. $2,300

Road Signs (Hazard and closure) Install two signs on 01N106 cautioning people their entering a burned watershed. Install one road closure sign on Bohler canyon road. Road temporarily closed due to hazardous conditions post-fire.

Road signs				
Item	**Unit**	**Unit Cost**	**# of Units**	**Cost**
2 GS-5 Tech	Days	$150	2	$600
1 GS-9 OHV technician	Days	$285	2	$530
Supplies(signs, posts)	Each	$300	3	$900
Vehicle gas mileage	Miles	$0.50	200	$100
Total Cost				**$2,130**

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.)

Forest personnel will conduct a Level 1 Effectiveness monitoring of the road treatments to check that treatments are present and functioning properly. The purpose is to ensure the action is meeting site-specific objectives or if there is a need for follow-up or re-treatment. Monitoring will be conducted after storm events. The report would include photographs and a recommendation on whether additional treatments are necessary. If the monitoring shows the treatment to be ineffective at stabilizing the road and there is extensive loss of road bed or infrastructure an interim report will be submitted. A several page monitoring report would be completed after the site visit.

Part VI – Emergency Stabilization Treatments 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										
Weed detection	days	700	5	$3,500	$0		$0		$0	$3,500
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$3,500	$0		$0		$0	$3,500
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										
01N106	Mi	3500	1	$3,500	$0		$0		$0	$3,500
Bohler Canyon	EA	4500	1	$4,500	$0		$0		$0	$4,500
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road & Trails				$8,000	$0		$0		$0	$8,000
D. Protection/Safety										
OHV Patrol	day	230	10	$2,300	$0		$0		$0	$2,300
Road Signs	ea	710	3	$2,130	$0		$0		$0	$2,130
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$4,430	$0		$0		$0	$4,430
E. BAER Evaluation										
BAER Team	ea	7000	1	$7,000			$0		$0	$0
BAER implementation	day	400	2	$800						
Insert new items above this line!				—	$0		$0		$0	$0
Subtotal Evaluation				$800	$0		$0		$0	$0
F. Monitoring										
Road	day	500	1	$500	$0		$0		$0	$500
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$500	$0		$0		$0	$500
G. Totals				$17,230	$0		$0		$0	$16,430
Previously approved										
Total for this request				$17,230						

PART VII - APPROVALS

1. _____ 8/28/15
Forest Supervisor (signature) Date

2. for Bonnie J. Dyant 9/4/2015
Regional Forester (signature) Date

Appendix A.

Fire Name	Walker Fire
Location	Inyo National Forest
Date	8/27/2015

SUMMARY	**Total Treatment Cost**	**$ 13,800**
	Expected Benefit of Treatment	**$ 27,000**
	Implied Minimum Value (IMV)	**#VALUE!**

	Value Type	Value at Risk	Implied Value and/or Benefit Cost
MAP ZONE A	Life and Safety	No	
	Non-Market: Cultural Values	No	
	Non-Market: Ecological Values	**Yes**	
	Market Values: Direct	**Yes**	$ 15,000
	Market Values: Loss of Use	**Yes**	$ 15,000
	Total Market Resource Value		$ 30,000
	Proposed Treatment		$ 3,500
	Reduction in Probability of Loss		0.60
	Expected Benefit of Treatment		$ 18,000
	Exp B/C Ratio of Treatment for Market Resources Only		5.1
	Implied Minimum Value (IMV) of Protecting Non-Market Resource Values		**Justified**

	Value Type	Value at Risk	Implied Value and/or Benefit Cost
MAP ZONE B	Life and Safety	**Yes**	
	Non-Market: Cultural Values	No	
	Non-Market: Ecological Values	**Yes**	
	Market Values: Direct	**Yes**	$ 9,000
	Market Values: Loss of Use	No	$ -

Total Market Resource Value	$ 9,000
Proposed Treatment	$ 6,800
Reduction in Probability of Loss	0.50
Expected Benefit of Treatment	$ 4,500
Exp B/C Ratio of Treatment for Market Resources Only	0.7
Implied Minimum Value (IMV) of Protecting Non-Market Resource Values	**$ 4,600**

MAP ZONE C

Value Type	Value at Risk	Implied Value and/or Benefit Cost
Life and Safety	No	
Non-Market: Cultural Values	No	
Non-Market: Ecological Values	**Yes**	
Market Values: Direct	**Yes**	$ 15,000
Market Values: Loss of Use	No	$ -
Total Market Resource Value		$ 15,000
Proposed Treatment		$ 3,500
Reduction in Probability of Loss		0.30
Expected Benefit of Treatment		$ 4,500
Exp B/C Ratio of Treatment for Market Resources Only		1.3
Implied Minimum Value (IMV) of Protecting Non-Market Resource Values		**Justified**

MAP ZONE D

Value Type	Value at Risk	Implied Value and/or Benefit Cost
Life and Safety	No	
Non-Market: Cultural Values	No	
Non-Market: Ecological Values	No	
Market Values: Direct	No	$ -

Market Values: Loss of Use	No	$ -
Total Market Resource Value		$ -
Proposed Treatment		$ -
Reduction in Probability of Loss		0.00
Expected Benefit of Treatment		$ -
Exp B/C Ratio of Treatment for Market Resources Only		0.0
Implied Minimum Value (IMV) of Protecting Non-Market Resource Values		$ -

MAP ZONE E

Value Type	Value at Risk	Implied Value and/or Benefit Cost
Life and Safety	No	
Non-Market: Cultural Values	No	
Non-Market: Ecological Values	No	
Market Values: Direct	No	$ -
Market Values: Loss of Use	No	$ -
Total Market Resource Value		$ -
Proposed Treatment		$ -
Reduction in Probability of Loss		0.00
Expected Benefit of Treatment		$ -
Exp B/C Ratio of Treatment for Market Resources Only		0.0
Implied Minimum Value (IMV) of Protecting Non-Market Resource Values		$ -

MAP ZONE F

Value Type	Value at Risk	Implied Value and/or Benefit Cost
Life and Safety	No	
Non-Market: Cultural Values	No	
Non-Market: Ecological Values	No	

Market Values: Direct	No	$ -
Market Values: Loss of Use	No	$ -
Total Market Resource Value		$ -
Proposed Treatment		$ -
Reduction in Probability of Loss		0.00
Expected Benefit of Treatment		$ -
Exp B/C Ratio of Treatment for Market Resources Only		0.0
Implied Minimum Value (IMV) of Protecting Non-Market Resource Values		$ -

MAP ZONE G

Value Type	Value at Risk	Implied Value and/or Benefit Cost
Life and Safety	No	
Non-Market: Cultural Values	No	
Non-Market: Ecological Values	No	
Market Values: Direct	No	$ -
Market Values: Loss of Use	No	$ -
Total Market Resource Value		$ -
Proposed Treatment		$ -
Reduction in Probability of Loss		0.00
Expected Benefit of Treatment		$ -
Exp B/C Ratio of Treatment for Market Resources Only		0.0
Implied Minimum Value (IMV) of Protecting Non-Market Resource Values		$ -

MAP ZONE H

Value Type	Value at Risk	Implied Value and/or Benefit Cost
Life and Safety	No	
Non-Market: Cultural	No	

Values		
Non-Market: Ecological Values	No	$ -
Market Values: Direct	No	$ -
Market Values: Loss of Use	No	$ -
Total Market Resource Value		$ -
Proposed Treatment		0.00
Reduction in Probability of Loss		$ -
Expected Benefit of Treatment		0.0
Exp B/C Ratio of Treatment for Market Resources Only		$ -
Implied Minimum Value (IMV) of Protecting Non-Market Resource Values		

MAP ZONE I

Value Type	Value at Risk	Implied Value and/or Benefit Cost
Life and Safety	No	
Non-Market: Cultural Values	No	
Non-Market: Ecological Values	No	$ -
Market Values: Direct	No	$ -
Market Values: Loss of Use	No	$ -
Total Market Resource Value		$ -
Proposed Treatment		0.00
Reduction in Probability of Loss		$ -
Expected Benefit of Treatment		0.0
Exp B/C Ratio of Treatment for Market Resources Only		$ -
Implied Minimum Value (IMV) of Protecting Non-Market Resource Values		

MAP ZONE J

Value Type	Value at Risk	Implied Value and/or Benefit Cost
Life and Safety	No	
Non-Market: Cultural Values	No	
Non-Market: Ecological Values	No	
Market Values: Direct	No	$ -
Market Values: Loss of Use	No	$ -
Total Market Resource Value		$ -
Proposed Treatment		$ -
Reduction in Probability of Loss		0.00
Expected Benefit of Treatment		$ -
Exp B/C Ratio of Treatment for Market Resources Only		0.0
Implied Minimum Value (IMV) of Protecting Non-Market Resource Values		$ -