

Forest Service Malheur National Forest

File Code: 2520 Date:

Subject: Burned Area Report – Monument Fire

To: Regional Forester, R6 Attn: Bruce McCammon

Enclosed is the initial 2500-8 for the Monument Fire that burned 17,322 acres. BAER Team member specialist reports are available on request if needed to supplement the 2500-8. The burn severity map is attached to the document.

The BAER Survey Team evaluated values-at-risk from these fires and determined that there were emergencies related to life and safety, aquatic/riparian, water quality and plant communities. Treatments to mitigate the emergencies are described in the 2500-8.

Because this fire burned on both the Malheur and Wallowa-Whitman National Forests, this is a coordinated response. Part VI has been divided to show which portion of the requested treatment and dollars will be spent by each Forest.

We request authority to spend \$239,975 to mitigate the emergencies caused by the fire and to cover reimbursement of the BAER Survey Team evaluation costs. If you have any questions or need more information please contact Bill Supulski at this office.

ROGER W. WILLIAMS **Acting Forest Supervisor**

Enclosure

cc:

Bruce McCammon, Regional BAER Coordinator John Schuyler, Wallowa-Whitman N.F.





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Date of Report:

BURNED-AREA REPORT

(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

Α.	Type	of	Report	

- [X] 1. Funding request for estimated WFSU-SULT funds
- [] 2. Accomplishment Report
- [] 3. No Treatment Recommendation
- B. Type of Action
 - [X] 1. Initial Request (Best estimate of funds needed to complete eligible rehabilitation 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: MONUMENT FIRE B. Fire Number: OR-MAF-120
- C. State: OR D. County: GRANT, BAKER
- E. Region: R6 F. Forest: Malheur N.F., Wallowa-Whitman N.F.
- G. District: 0404 Prairie City R.D., 0916 Unity R.D.
- H. Date Fire Started: July 12, 2002 I. Date Fire Controlled: Uncontrolled
- J. Suppression Cost: \$7,800,000 as of 08-16-2002
 - K. Fire Suppression Damages Repaired with Suppression Funds
 - 1. Fireline waterbarred (miles):
 - 2. Fireline seeded (miles):
 - 3. Other (identify):
 - L. Watershed Number: Swamp Creek/Spring Creek-170501162113, Horseshoe Creek/Flat Creek-170501162115, Anderson Creek-170501162203, Upper Little Malheur-170501162205, Camp Creek-170501162207, Squaw Creek-170501162209, South Fork Burnt River/Mile 9-1705020221E, South Fork Burnt River/Mile 12-1705020221G, Bullrun Creek-1705020221H, Upper West Camp Creek-1705020227C

M. Total Acres Burned:

NFS Acres(16.694) Other Federal () State () Private (628)

- N. Vegetation Types: (Listed in general order from low to high) Sagebrush 560 acres, Grass/Brush-276 acres, Juniper woodlands-374 acres, Hot dry pine-947 acres, Warm Douglas-fir/Mixed-2133 acres, Warm to cool mixed conifer-13,583 acres, Meadows-40 acres, Cold lodgepole-1546 acres, Subalpine fir-728 acres, Rock-73 acres. The burned area represents nearly the full range of environments found on these forests.
- O. Dominant Soils: silt loam surface soils derived from volcanic ash over subsoils derived from volcanic, volcanic breccia, or sedimentary materials. Much of the argillite materials lacks ash, and have gravelly to extremely gravelly loam to sandy loam surface soils.
- P. Geologic Types: In the Malheur: Strawberry volcanics mostly andesite, with some basalt and rhyolite. Clarno volcanics andesitic and rhyolitic flows predominate, with some breccia, tuff, and volcanic conglomerate. In the Wallowa-Whitman: sedimentary (argillite) rocks.
- Q. Miles of Stream Channels by Order or Class:

	Category 1	Category 2	Category 4
Malheur	15.91	11.73	31.92
Wallowa-Whitman	3.01	4.55	.30
Totals:	18.92	16.28	32.22

R. Transportation System

Trails:

Malheur 7.29 miles
Wallowa-Whitman .50 miles
TOTAL 7.79 miles

Roads:

Malheur N.F. 62 miles Wallowa-Whitman N.F. 20 miles TOTAL N.F. 82 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres):

Malheur	5968	_ (low)	3096_	_ (moderate)	4972	(high)
Wallowa-Whitman	1451	(low)	628	(moderate)	579	(high)
Private	107	(low)	228	(moderate)	282	(high)
TOTALS	7526	(low)	3953	(moderate)	5834	(high)

Malheur <u>8370</u> (low) <u>7480</u> (moderate) <u>4510</u> (high) Wallowa-Whitman <u>310</u> (low) <u>2440</u> (moderate) <u>1320</u> (high) TOTALS 8680 (low) 9920 (moderate) 5830 (high)

D. Erosion Potential: 2 tons/acre

E. Sediment Potential: 1 ton/acre

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years):	2-5 low to mod 5-15; mod to high
B. Design Chance of Success, (percent):	85-90
C. Equivalent Design Recurrence Interval, (years):	
D. Design Storm Duration, (hours):	6
E. Design Storm Magnitude, (inches):	1
F. Design Flow, (cubic feet / second/ square mile):	
G. Estimated Reduction in Infiltration, (percent):	<u>15</u>
H. Adjusted Design Flow, (cfs per square mile):	32

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

Threat to Life:

On both the Wallow-Whitman and Malheur National Forests the area within the Monument fire perimeter is used primarily for recreational activites of hiking, hunting and snowmobiling. Many miles of roads and trails, dispersed recreation sites and several trailheads exist within the fire perimeter. Were these roads, trails and dispersed sites to remain open there would be a threat to life represented by the hazard of falling trees and degraded road and trail surfaces/drainage. The two affected Ranger Districts (Prairie City on the Malheur, Unity on the Wallowa-Whitman) have implemented area closures for their portions of the Monument Fire. Both of these Ranger Districts intend to keep these areas closed until at least the spring of 2003. This closure will eliminate the risk of injury or mortality to users of the burned trails, roads and dispersed sites from falling hazard trees and unstable trail tread due to root consumption. The implemented area closure lacks complete signing of the closure and does not address the need to post signs visible during the winter by recreationist traveling on deep snow covering up closure signs. The emergency need related to this fire is then to post signs at trailheads, dispersed sites and likely entry points to alert users (with emphasis on winter users) to the administrative closure and unsafe conditions.

Threat to Property: No Emergency

Heritage Resources: No Emergency

Forest Development Roads and Trails:

Many of the roads within the fire perimeter could not be reviewed due to the uncontrolled/uncontained status of the fire. The Incident Command Fire Behavior Analyst recommended against field visitation of many areas needing review. Those roads that were visited in the field showed evidence of the need for culvert cleaning, armoring, overflow protection (dips), re-sizing of culverts, and improved road ditch conditions to allow for movement of water without damage to the roads or drainage structures.

Aquatic-Riparian:

Based upon observations, and conditions such as topography, burn intensity, soil erosion potential, and expected post-fire hydrologic response, combined with the geologic and hydrologic history of the area, an emergency situation exists within and downstream of burned areas in the Monument Fire in several areas. There is the possibility of channel and aquatic habitat modification from increased runoff, bedload movement and mud flows in many areas that could directly impact roads and structures. The Little Malheur River is a 303d listed stream for temperature. The Camp Creek drainage on the Malheur National Forest has Clarno geology, which is potenially unstable, although little sign of instability was observed. The West Camp Creek Drainage on the Wallowa-Whitman National Forest has a steeper stream gradient than the balance of the burned area. These two areas are the focus of land and channel treatments proposed.

Fish were seen in the Little Malheur River below the confluence with Camp Creek. No fish were seen in the lower 2.5 miles of Camp Creek; fish were seen in the unburned/partially burned headwaters of Camp Creek. However, the majority of the lower riparian area of Camp Creek, a tributary to the Little Malheur was severely burned. Instream LWD was consumed in areas of high fire severity. LWD is essential to maintaining complex, high quality habitat for fish.

Water Quality:

Dolloff (1994) stated the importance of large wood in influencing channel morphology and habitat formation by trapping or scouring sediments. This is crucial within Camp Creek and the Little Malheur River where there is ample sediment supply (Clarno geology) and the streams are extremely dynamic. Within these two drainages, the fire has damaged existing LWD critical to maintaining their proper plan and channel profile (Rosgen C4 and B4). This LWD backed up sediment and bedload, creating pool habitat and providing gradient control structures. In many locations, a majority of the larger logs burned leaving perched sediment deposits that will certainly move during the first large runoff event. In addition, some of the other logs are partially burned leaving the entire log vulnerable to movement with the next high water flow. The increased water yield expected from the high severity burn areas will increase the sediment entering the stream system, adding to the current mobile sediment levels. This increased amount of sediment and water yield has the potential to damage downstream culverts, arterial roads and private lands.

Without adequate LWD, the stream channels will likely widen increasing the stream surface area exposed to solar radiation. Pools could be filled in, leaving long, contiguous riffle morphology. Debris-created pools maintain water temperature during low flow conditions. This would further degrade water quality in a system that is already listed on the State's "303d" list for temperature.

Field visitation to Camp Creek confirmed evidence of a very dynamic system with constant channel movement. Downed logs, now mostly consumed, previously caught a regular amount of sediment and gravels generated by local storm events and spring runoff. This LWD is

essential for backing up sediment, creating pool habitat, providing gradient control structures and maintaining stream channel profile.

Degradation of Natural Resources:

Plant Species Composition – There is a certainty of expansion of existing populations of noxious/invasive weeds within the fire area since there are numerous locations of several local weeds (i.e., spotted knapweed, toadflax, hounds tongue, yellow star thistle, canada thistle, musk thistle, scotch thistle). In addition, there is a high likelihood of introduction of weeds as a result of fire suppression activities; dozers and support vehicles from outside locations were not certified to be weed free before fighting the fires. Spotted knapweed and white-top were located at the helispot at the original ICP in Unity, it is suspected that many firefighters carried seed into the fire.

BAER specialists reports are available upon request.

B. Emergency Treatment Objectives:

- 1) Prevent loss of life and risk to human safety. Emergency signing is necessary to support the area closures already in place.
- 2) Reduce threat to forest roads and drainage structures by implementing actions to ensure proper water passage thereby reducing risk to aquatic/riparian and water quality.
- 3) Reduce risk of degradation of important natural resources: aquatic/riparian, water quality and noxious weed spread.

C. Probability of Completing Treatment Prior to First Major Damage-Producing S
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Land **90** % Channel **90** % Roads **90** % Other **90** %

D. Probability of Treatment Success

	Yea	Years after Treatment						
	1	3	5					
Land	90%							
Channel	90%							
Roads	90%							
Other	90%							

- E. Cost of No-Action (Including Loss): \$449,787
- F. Cost of Selected Alternative (Including Loss): \$259,223
- G. Skills Represented on Burned-Area Survey Team:

[X] Hydrology	[X] Soils	[X] Geology	[X] Range	[X] Recreation
[X] Forestry	[X] Wildlife	[] Fire Mgmt.	[X] Engineering	[]

[] Contracting [X] Fisheries	[] Ecology [] Research	[X] Botany [] Landscape Arch	[X] Archaeology [X] GIS	[]			
Team Leader <u>:</u>							
Email: mtatum@fs.fed.us Phone: 541-575-3430 FAX: Forest Contact: Michael Tatum (Malheur NF) – Team Leader, Ecologist, Silviculturist							
Team Members: Tom Friedrickson (Malheur NF) – Trainee Team Leader; Hydrology/Fisheries Jim Soupir (Malheur NF) – Hydrology/GIS Bill McArthur (Malheur) – Silviculture (including noxious weeds/hazard trees) Ray Perkins (Oregon Dept. of Fisheries andWildlife) – Fisheries Mark Lysne (Malheur NF) – Engineering, Geology Tee Voigt (Malheur NF) – Heritage Resources Hersh McNeil (Malheur NF) – Soils, Hydrology Cheryl Bradford (Wallowa-Whitman N.F.) Archeology, Hydrology Tim Schommer (Wallowa-Whitman N.F.) Wildlife, fish Teena Ballard (Wallowa-Whitman N.F.) Hydrology Perry Edwards (Malheur N.F.) Fisheries							

H. Treatment Narrative:

Dee McConnell (Malheur N.F.) GIS

Carole Holly (Malheur N.F.) Forest Recreation Planner

(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:

A majority of the fire burned in a mosaic pattern that minimized large blocks of severe burn. This pattern provided buffers that with several exceptions reduced long, burned slope lengths. Generally minimal hydrophobicity was found during the on-the-ground survey and a sufficient amount of down wood remained on the ground after the fire. Three areas of high intensity burn with occurred in the 1) Little Malheur River drainage, 2) the Camp Creek (Malheur N.F.) and 3) the West Camp Creek drainage on the Wallowa-Whitman N.F. These three areas had portions with moderate hydrophobicity in sections of stream bottom and toe slopes associated with these high intensity burns.

Signing of Area Closures – The forests have decided that closure of the burned area is the appropriate measure and has already implemented this measure. This temporary closure has already been put into place by the forest while the fire is uncontained/uncontrolled and is expected to last at least until the spring of 2003. This is the preferred treatment to address the threat to life and human safety from hazard trees and road/trail damage within the perimeter of the fire. Hazard warning signs will be posted to establish a visual and physical barrier, and mitigate the emergency. Sign construction, materials and installation are estimated at \$2,550.

Wallowa-Whitman – Contour Felling Adjacent to Stream Channel:

Contour felling will be utilized to provide immediate protection from erosion and subsequent sedimentation. These areas are high intensively burned and are immediately adjacent to the stream channel in alluvial fans. Hand backfill will be used where the log does not touch the ground. Many of the high intensity burned areas adjacent to the stream channel will not be treated because they exceed 50% slopes and/or don't have a good supply of trees remaining. Contour felling will be at a rate of one row along the contour per 40 feet of elevation change. Rows of logs will be offsetting. Capturing sediment on the slopes behind the logs will allow time for vegetation to

occupy and stabilize soils. The amount recommended for both drainages total 27.3 acres. Total cost = \$11.870.

Channel Treatments:

Treatments were designed to stabilize a very dynamic system that shows signs of constant channel movement. Downed logs, now mostly consumed, previously caught a regular amount of sediment and gravels generated by local storm events and spring runoff. This LWD is essential for backing up sediment, creating pool habitat, providing gradient control structures and maintaining stream channel profile.

Wallowa-Whitman - Falling Trees in Stream Channel:

Woody material will be added to the stream channel by directional felling fire-killed standing trees perpendicular to the stream channel. Only high intensity burned areas will be treated. A goal of 100 trees per mile is to meet Infish requirements. Felled trees will be bucked level with the ground. Felled trees will serve to reduce the velocity of floodwaters, increase channel stability, reduce channel erosion, and speed riparian recovery. Total acres = 10.6. Total cost \$1,050.

Malheur - Instream Channel felling and placement in Category 1 stream channels:

Woody material will be added to the stream channel by placing downed trees or trees to be felled perpendicular to the stream channel. A spider-hoe or similar equipment will be used for placement within the stream channel and anchoring the logs. Only high intensity burned areas will be treated. A goal of 40 trees per mile is to meet Infish requirements. Felled trees not placed and anchored in the channel will be bucked level with the ground. Felled and placed trees will serve to reduce the velocity of floodwaters, increase channel stability, reduce channel erosion, and speed riparian recovery. Total of two stream miles. Total cost \$15,000.

Malheur - Hand felling of trees in Category 4 stream channels:

Woody material will be added to the stream channel by directional felling fire-killed standing trees perpendicular to the stream channel. Only high intensity burned areas will be treated. A goal of 40 trees per mile is to meet Infish requirements. Felled trees will be bucked level with the ground. Felled trees will serve to reduce the velocity of floodwaters, increase channel stability, reduce channel erosion, and speed riparian recovery. Total acres = 12. Total cost \$1,500.

Roads Treatments:

Forest Development Roads have numerous locations where there is a high risk of loss of function and that would likely degrade adjacent resource values. A combination of treatments have been identified to place roads within the fire into proper functioning condition to handle anticipated flows. Approximately 45 miles of road are within severely burned areas or downstream of severely burned areas. The repair of 70 culverts at an average cost of \$875 is necessary, this cost includes the removal of trees which have fallen across the roads which access the culverts needing work. Several culverts will be pulled and turned into armored dips, nearly all culverts require cleaning and many require armoring at the inlet to handle flows. Overflow dips are necessary adjacent to many culverts to provide for extra flow while preventing damage to the road and culvert structure. Drainage improvement is necessary on a total of 43 miles of roads at an average cost of approximately \$1600 per mile. One cattleguard had both timber support structures consumed and requires replacement for \$ 6,430. Felling of hazard trees to provide safe vehicle and personnel access for culvert repair for 36 road miles will cost \$600 per mile.

<u>Advisory Letters</u> - Preparation and delivery of approximately 12 advisory letters to apprise people downstream of risks of flooding or damage to facilities. Total cost \$600. Advisory letters will be sent to the following:

- Pine Tree Placer mining claim (Ray Andrews, Unity, Or) on lower Bullrun Creek, on N.F. land W-W
- Record Mine, (Jeff Young, Baker City) downstream in Bullrun Creek, N.F. land, W-W.
- Orion Mine on Amelia Creek, (Carlon McBroon, Baker City) N.F. land W-W.
- Andrews-Corley Ditch, (Brad Andrews, Unity, Or), Bullrun Creek, N.F. land, W-W.

- Bennett's, private residence/ranch/reservoir, (Mark and Paul Bennett, Unity, Or.), West Camp Creek, Adjacent to N.F. W-W.
- ODFW-West Camp Creek, (Baker City, Office) Higgins Reservoir, surrounded by private and BLM, W-W.
- Private property in Section 16, (Edith Derrick, Unity, Or) by beaver dams, no improvements.
- Bennett's (same) property in sections 8&9. Maybe co-own with John Hayes, Unity, OR.) W-W.
- Private land being logged, section 36, (Ellingson Lumber Co, Baker, City). Logger Wayne Wise)
 Private property on W-W side, active logging and hauling. Haul route under special permit, roads cleaned of snags by suppression crews. W-W.
- Baker County Water master gauging station confluence of South Fork Burnt River and Barney Creek, W-W.
- Kuhl Ranch, Bill Butler Jr. (downstream on Malheur side in Anderson Creek). Malheur.

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.)

Noxious/Invasive Weeds – Monitoring is proposed to determine the occurrence of weed expansion within the fire area and invasion of weeds from outside the fire area. There is a strong possibility of both of these due to the number of existing populations in close proximity of the fire and the lack of weed-free certification of fire suppression vehicles fighting the fires. The original Monument Fire I.C.P. helibase was located in an area with severe infestation of white-top and hounds tongue, we are certain these seeds were transported by firefighters (hounds tongue was seen on firefighters pants). There were machine lines constructed to fight the fire plus numerous drop points and staging areas, and a very large fire camp at Summit Prairie. Cost estimates for the monitoring are for the first year (2003) and for appropriate personnel to do the task. Two surveys will be needed during the season to evaluate weeds that appear at different times of the spring and summer. The cost of the weed monitoring is reflective of the very high amount of fire suppression activity and the high road density on the perimeter of the fire area. Total cost \$ 18,717.

Summary:

Monument Fire – Wallowa-Whitman Portion:

- No known sites of noxious weeds within the fire but three sites are adjacent to the area.
 (GIS Information)
- Miles of roads: 15 miles within fire area and 12 miles outside fire area used for fire suppression activities.
- Miles of fireline: 1 mile of machine line within the fire area and 2 miles outside fire area for fire suppression activities.

Monument Fire – Malheur National Forest portion:

- No known sites of noxious weeds occur within the fire area (GIS Information)
- Miles of roads: 25 miles within fire area and 28 miles outside fire area used for fire suppression activities.
- Miles of fireline: 12 miles of machine line within the fire area and 4 miles outside fire area for fire suppression activities.

Part VI – Emergency Rehabilitation Treatments and Source of Funds by Land Ownership

Part VI	– Eme	rgency					s and			nds by I	_and Own
			NFS Lands	1 🛚 🛭		Other Lands	ands	3	All		
		Unit	# of	WFSU	Other	Ø	# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	SULT \$	\$	Ø	units	\$	Units	\$	\$
						X					
A. Land Treatments						X					
W-W-Contour felling	ac	440	27	\$11,880		X		\$0		\$0	\$11,880
				\$0		X		\$0			
				\$0		X		\$0		\$0	\$0
				\$0		X		\$0		\$0	\$0
Subtotal Land Treatments				\$11,880		X		\$0		\$0	\$11,880
B. Channel Treatmen	ts			* ,				**		***	***,
MAL-felling/mech placemen	1	7500	2	\$15,000		X		\$0		\$0	\$15,000
MAL-hand felling	ac	125	12	\$1,500		X		\$0		\$0	\$1,500
W-W-hand felling	ac	125	10.6	\$1,325		X		\$0		\$0	\$1,325
,				\$0		×		\$0		\$0	\$0
Subtotal Channel Treat.				\$17,825		X		\$0		\$0	\$17,825
C. Road and Trails				¥ · · · , • = •		X		<u> </u>			•••••••••••••••••••••••••••••••••••••
Warning Signs (MAL to do a	all)			\$2,550		X		\$0		\$0	\$2,550
W-W-Culvert repair	ea	900	44	\$39,600		X		\$0		\$0	\$39,600
W-W-Drainage facility prep	miles	770	13	\$10,010		X		\$0		\$0	\$10,010
W-W-Hazard trees to culver	1	600	6	\$3,600		X		\$0		\$0	\$3,600
MAL-Culvert repair	ea	900	26	\$23,400		8		\$0		\$0	\$23,400
MAL-Cattleguard repair	ea	6430	1	\$6,430		8		\$0		\$0	\$6,430
MAL-Drainage facility prep	miles	2000	30.1	\$60,200		×		\$0		\$0	\$60,200
MAL-Hazard trees to culvert		600	30	\$18,000		8		\$0		\$0	\$18,000
Subtotal Road & Trails		000	- 00	\$163,790		X X		\$0		\$0	\$163,790
D. Structures				φ100,100		8		ΨΟ		ΨΟ	ψ100,100
21 011 4014100				\$0		X		\$0		\$0	\$0
				\$0				\$0		\$0	\$0
				\$0		X		\$0		\$0	\$0
				\$0		8		\$0		\$0	\$0
Subtotal Structures				\$0		X		\$0		\$0	\$0
E. BAER Evaluation				ΨΟ		X		ΨΟ		ΨΟ	Ψ
SALARY				\$24,663				\$0		\$0	\$24,663
TRAVEL				\$2,500		X		\$0		\$0	
INAVEL				φ∠,500				Φ0		Φυ	\$2,500
G. Monitoring Cost	 					X					
MAL-noxious weeds	ea			\$12,771		X		\$0		\$0	\$12,771
W-W-noxious weeds	ea			\$12,771		X		\$0 \$0		\$0 \$0	\$5,946
Advisory letters						X		\$0 \$0		\$0 \$0	
Subtotal Monitoring	ea			\$600 \$19,317		X		\$0 \$0		\$0 \$0	\$600 \$19,317
H. Totals	 	-		\$19,317 \$239,975		X		\$0 \$0		\$0 \$0	\$19,317 \$239,975
11. 10(a)3	 			φ 2 33,373				φυ		φυ	φ233,313
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PART VII - APPROVALS

1.		
	Forest Supervisor (signature)	Date
2.		
	Regional Forester (signature)	Date

