



File Code: 2520

Date:

Subject: Burned Area Report – Malheur Complex Fire

To: Regional Forester, R6
Attn: Bruce McCammon

Attached is the initial 2500-8 for the Malheur Complex Fire that burned 26,700 acres in three separate fires – Easy, Flagtail and High Roberts. BAER Team member specialist reports are available on request if needed to supplement the 2500-8. Burn severity maps are attached to the document.

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

We request authority to spend \$143,668 to mitigate the emergencies caused by the fire and to cover reimbursement of the BAER Survey Team evaluation costs. If you have any questions please contact Bill Supulski at this office.

ROGER W. WILLIAMS
Acting Forest Supervisor

Attachment: Malheur Complex (Easy, Flagtail, High-Roberts) FS-2500-8

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



Date of Report: 8/10/02

BURNED-AREA REPORT
(Reference FSH 2509.13)**PART I - TYPE OF REQUEST**

A. Type of Report

- ☒ 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)
☐ 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: Malheur Complex
(Flagtail, Easy, and High Roberts Fires)
C. State: Oregon

B. Fire Number: OR-MAF-103D. County: GrantE. Region: 6F. Forest: MalheurG. District: Prairie CityH. Date Fire Started: July 12, 2002I. Date Fire Controlled: 9/1/02 (Estimated)J. Suppression Cost: \$19,508,994 (through 8/8/02)

K. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): 60
2. Fireline seeded (miles): 0
3. Other (identify):

L. Watershed Number: Easy Fire: 1707020301 (Upper Middle Fork John Day River); 1707020107 (Upper John Day River). Flagtail Fire: 1712000205 (Upper Silvies). High Roberts Fire: 1707020106 (Prairie City); 1707020107 (Upper John Day); 1705011617 (Malheur Headwaters); 1712000206 (Bear Creek).

M. Total Acres Burned: 26,700 (Easy, 5900; Flagtail, 8,175; High Roberts, 12,625)
NFS Acres(24,751) Other Federal () State () Private (1,949)

N. Vegetation Types: Easy: warm mixed conifer, Flagtail: warm mixed conifer, dry mixed conifer, hot dry pine, High Roberts: subalpine fir, warm mixed conifer, engelmann spruce

O. Dominant Soils: silt loam surface soils derived from volcanic ash over subsoils derived from volcanic, sedimentary, or glacial materials, and gravelly loam soils derived from sedimentary materials.

P. Geologic Types: Easy: volcanic, mostly basaltic andesite. Flagtail: sedimentary and volcanic rock. High Roberts: volcanic flow and glacial moraine.

Q. Miles of Stream Channels by Order or Class:

Fire Name	Category 1	Category 2	Category 4
Easy	2.4	2.3	9.9
Flagtail	7.4	5.1	11.3
High Roberts	11.0	1.5	19.0
Totals:	20.8	8.9	40.2

R. Transportation System

Trails:18 miles Roads:108 miles

Fire Name	Roads	Trails
Easy	46	0
Flagtail	54	0
High Roberts	8	18
Totals:	108	18

PART III - WATERSHED CONDITION

A. Burn Severity (acres):

Fire Name	Low	Moderate	High
Easy	3,647 (62%)	1,249 (21%)	1,004 (17%)
Flagtail	4,160 (51%)	2,266 (28%)	1,739 (21%)
High Roberts	6,699 (44%)	1,636 (13%)	4,290 (33%)
Totals:	14,506 (55%)	5,151 (19%)	7,033 (26%)

B. Water-Repellent Soil (acres):

Fire Name	Non-repellent	Low	Moderate	High
Easy	4400	1250	250	0
Flagtail	5000	1900	700	575
High Roberts	10125	2000	500	0
Totals:	19525	5150	1450	575

C. Soil Erosion Hazard Rating (acres):

Fire Name	Low	Moderate	High
Easy	2219	2910	350
Flagtail	525	2777	4873
High Roberts	8369	1629	2600
Totals:	11113	7316	7823

D. Erosion Potential: 1.0 tons/acre

E. Sediment Potential: 564 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 2

B. Design Chance of Success, (percent): 90

C. Equivalent Design Recurrence Interval, (years): 2

D. Design Storm Duration, (hours): 6

E. Design Storm Magnitude, (inches): 1.0

F. Design Flow, (cubic feet / second/ square mile): 25

G. Estimated Reduction in Infiltration, (percent): 5

H. Adjusted Design Flow, (cfs per square mile): 26

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

Easy Fire

Threat to Property:

- 1) Forest Development Roads – Forest Roads 2635 and 036 have numerous locations where there is a high risk of loss of function and that would likely degrade adjacent resource values.

Degradation of Natural Resources:

- 1) Plant Species Composition – There is a certainty of expansion of existing populations of noxious/invasive weeds within the fire area since there are numerous interior locations of several local weeds (i.e., spotted knapweed, toadflax, hounds tongue, yellow star 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.

Flagtail Fire

Threat to Life:

- 1) Bear Valley Guard Station – The fire burned around and partially within this site (including destroying two buildings). This former Forest Service work center is a long-standing recreational rental facility, particularly for winter recreation activities. There are dozens, if not more, fire-killed hazard trees in and around the site that can fall and kill recreational occupants, especially during winter wind and snow. The continued use of the Bear Valley Station is important to the economy and culture of the local community.
- 2) Dispersed Recreation Activity – Snowmobiling, snowshoeing and cross country skiing are important recreational activities to help sustain the local economy, and the Flagtail area is a principal heavy use

location of these activities. There is a high risk of injury or death by falling trees. In addition, summer and fall OHV use is heavy in the area and subject to the same risks.

Threat to Property:

- 1) Bear Valley Guard Station – This is an NRHP-eligible site that has been proposed for, and has a high likelihood of, listing on the National Register. It was constructed in the 1930's by the Civilian Conservation Corps and has been maintained in good condition. It is considered a significant component of the forest and regional heritage properties. It is at risk of damage from fire-killed hazard trees in and around the compound.

Degradation of Natural Resources:

- 1) Plant Species Composition – There is a certainty of expansion of existing populations of noxious/invasive weeds within the fire area since there are numerous interior locations of several local weeds (i.e., spotted knapweed, toadflax, hounds tongue, yellow star 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.

High Roberts Fire

Threat to Life:

- 1) Strawberry Mountain Wilderness Trails - There is a high risk of injury or mortality to users of the burned trail areas from falling hazard trees and unstable trail tread due to root consumption. This is a heavily used area during the hunting season from the end of August through Thanksgiving. Hunting is the principal recreational activity in Grant County, and a vital component to the local economy and culture. The population of the County nearly triples during the hunting season.
- 2) John Day River – The main channel of the John Day River downstream of the fire along County Road 62 may flood from higher water yield as a result of the fire. There are several buildings and occupants near the floodplain. These include residences and a commercial hot springs facility. The risk to life from flooding is low but nonetheless one that people in the floodprone area should be aware of.

Threat to Property:

Forest Development Roads –

- 1) Forest Development Roads – Forest Road 778 along Roberts Creek and numerous roads in the southern end of the fire along Lake Creek and Big Creek are at a high risk of loss of function and that would likely to degrade adjacent resource values. The latter two creeks have populations of Bull Trout that could be affected by increased sedimentation from road failures.

Degradation of Natural Resources:

- 1) 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). 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.

B. Emergency Treatment Objectives:

- 1) Prevent loss of life and risk to human safety.
- 2) Reduce threat to property – forest roads, cultural sites and water use facilities.
- 3) Reduce risk of degradation of important natural resources.

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

Land N/A % Channel N/A % Roads 90 % Other 90 %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	N/A		
Channel	N/A		
Roads	90%		
Other	90%		

E. Cost of No-Action (Including Loss):_ \$309,500

F. Cost of Selected Alternative (Including Loss):_ \$119,675

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: Jim Frazier, Stanislaus National Forest

Email: ifrazier@fs.fed.us

Phone: 209-532-3671 FAX: 209-533-1890

Forest Contact: Mike Tatum (Malheur NF) – Trainee Team Leader

Team Members:

Jeff TenPas (Stanislaus NF) – Trainee Team Leader; Soils
 Tom Friedrichsen (Malheur NF) – Hydrology/Fisheries
 Jim Soupir (Malheur NF) – Hydrology (trainee)
 Sharon Grant (Stanislaus NF) – Hydrology (trainee); GIS
 Larry Bright (Malheur NF) – Fisheries/Wildlife
 Bill McCarthur (Malheur) – Silviculture (including noxious weeds/hazard trees)
 Tim Unterwegner (Oregon Dept. of Fisheries and Wildlife) – Fisheries
 Mark Lysne (Malheur NF) – Engineering
 Donn Hann (Malheur NF) – Heritage Resources
 Tee Voight (Malheur NF) – Heritage Resources (trainee)
 Hersh McNeil (Malheur NF) - Soils

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:

None – The fires burned in a mosaic pattern that minimized large blocks of severe burn. This pattern provided buffers that reduced long, burned slope lengths. In addition, minimal hydrophobicity was found during the on-the-ground survey and a sufficient amount of down wood remained on the ground after the fire.

Channel Treatments:

None – Stream channels and their immediate sideslopes were minimally burned. Most streams are in proper functioning condition and can process the expected minor increase in sediment and water yield with little adverse effect.

Roads and Trail Treatments:

Easy Fire:

Roads 2635 and 036 – Restore functional drainage

Flagtail Fire: None

High Roberts Fire:

Area Closures – Temporary gates on Wilderness access roads. This is the preferred treatment to address the threat to life and human safety from hazard trees and trail damage in the Strawberry Mountain Wilderness. The forest has decided that closure of this area is the appropriate measure. Temporary gates will establish a visual and physical barrier, and in combination with hazard warning signs, mitigate the emergency.

Road 778 – Flood overflow structure at culverted stream crossing of Roberts Creek.

Road 1648 - Flood overflow structure at culverted stream crossing of Lake Creek.

Road 021 - Flood overflow structure at culverted stream crossing of Meadow Fork of Big Creek

Road 033 – Rolling dip to prevent streamflow being diverted down road.

Road 307 – Remove old, partially collapsed stringer bridge crossing LakeCreek.

All Three Fires:

Hazard Warning Signs to alert travelers that there are life/injury hazards of entering the fire areas.

Structures: None

Other:

Hazard Tree Removal – Falling and removing hazard trees that are at a high risk of falling on the Bear Valley Guard Station. These hazard trees pose a high risk of injury or death to people occupying the site as well as destroying a significant heritage site.

Advisory Letters - Preparation and delivery of 6 advisory letters to apprise people downstream of risks of flooding or damage to facilities. These are as follows:

- Grant County Public Works – Risk of damage to concrete arch over Roberts Creek on Road 62 caused by increased runoff. The crossing structure is currently in unstable condition.
- Helen and Russel Ricco – Risk of property damage and/or flooding along the John Day River downstream of the High Roberts fire.
- Terry Ritner - Risk of property damage and/or flooding along the John Day River of the High Roberts fire.
- Burns-Paiute Indian Tribe – Risk of damage to water diversion intake structure on Big Creek.
- Dick Fields – Risk of damage to water diversion intake structure on the John Day River.
- D.R. Johnson Lumber Company – Risk of road damage on road 778 and risk of road sediment to Roberts Creek and downstream in the John Day River.

H. 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 the fire and the lack of weed-free certification of fire suppression vehicles fighting the fires. There were approximately 60 miles of dozer line constructed to fight the fires plus numerous large bulldozed safety zones, 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 passes 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 in the fire area.

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

Line Items	Units	Cost	Units	SULT \$	\$	units	\$	Units	\$	\$
A. Land Treatments										
None				\$0			\$0		\$0	\$0
				\$0			\$0			
				\$0			\$0		\$0	\$0
				\$0			\$0		\$0	\$0
<i>Subtotal Land Treatments</i>				\$0			\$0		\$0	\$0
B. Channel Treatments										
None				\$0			\$0		\$0	\$0
				\$0			\$0		\$0	\$0
				\$0			\$0		\$0	\$0
				\$0			\$0		\$0	\$0
<i>Subtotal Channel Treat.</i>				\$0			\$0		\$0	\$0
C. Road and Trails										
Flood Overflow Struc.	ea	6125	4	\$24,500			\$0		\$0	\$24,500
Administrative Closure	ea	2000	5	\$10,000			\$0		\$0	\$10,000
Warning Signs	ea	1000	8	\$8,000			\$0		\$0	\$8,000
Crossing removal	ea	2300	1	\$2,300						\$2,300
Drainage Prep	mi	1500	4	\$6,000			\$0		\$0	\$6,000
<i>Subtotal Road & Trails</i>				\$50,800			\$0		\$0	\$50,800
D. Structures										
None				\$0			\$0		\$0	\$0
E. Other				\$0			\$0		\$0	\$0
Hazard Tree Removal	ea	5072	1	\$5,072			\$0		\$0	\$5,072
Advisory Letters	ea	250	6	\$1,500			\$0		\$0	\$1,500
<i>Subtotal Structures</i>				\$6,572			\$0		\$0	\$6,572
F. BAER Evaluation										
Salary				\$48,100			\$0		\$0	\$48,100
Travel				\$2,400			\$0		\$0	\$2,400
G. Monitoring Cost				\$0			\$0		\$0	\$0
Noxious/Invas. Weeds	ea	35796		\$35,796						\$35,796
H. Totals				\$143,668			\$0		\$0	\$143,668

X

PART VII - APPROVALS

1. _____
Forest Supervisor (signature) _____
Date

2. _____
Regional Forester (signature) _____
Date

Easy Fire - Burn Severity

6th Field Watersheds

Fire Perimeter 07-31-02

Streams

1

2

4

Burn Severity

High

Moderate

Low

1:35184

Stanislaus National Forest
Watershed/GIS sig
August 10, 2002







