

(Reference FSH 2509.13)

### P. Geologic Types: Metasedimentary

Q. Miles of Stream Channels by Order or Class: 2.04 miles of first and second order intermittent or dry ephemeral draws and gulches

R. Transportation System

Trails:      miles      Roads: 4.2 miles

**PART III - WATERSHED CONDITION**

A. Burn Severity (acres): 423.8 (low) 508.7 (moderate) 115.5 (high)

B. Water-Repellent Soil (acres): Less than 5% (52 acres)

C. Soil Erosion Hazard Rating (acres):  
         (low)    524 (moderate)    524 (high)

D. Erosion Potential: 10-50 tons/acre

E. Sediment Potential: 700 cubic yards / square mile (Sediment potential low since there are no perennial streams in the area)

**PART IV - HYDROLOGIC DESIGN FACTORS**

A. Estimated Vegetative Recovery Period, (years):     3    

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

C. Equivalent Design Recurrence Interval, (years):     10    

D. Design Storm Duration, (hours):     1    

E. Design Storm Magnitude, (inches):     0.81    

F. Design Flow, (cubic feet / second/ square mile):     68    

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

H. Adjusted Design Flow, (cfs per square mile):     65    

**PART V - SUMMARY OF ANALYSIS**

A. Describe Watershed Emergency: The Jimtown fire burned approximately 1048 acres on the Helena National Forest. Approximately 11% of the fire was of high severity, 40% low severity and the remaining 49% moderate severity. Very little hydrophobicity was noted in the burned area. There is one small catchment (12 acres) which has a high severity rating and is poised above private property. One small storage shed/out building is located at the mouth of this catchment. During a high intensity thunderstorm it is projected that water will once again start to flow in this draw and possibly flood the out building carrying with it a significant amount of debris/mud. While there are other draws that are expected to have accelerated erosion and runoff they are positioned in places where there will be no loss of life or property.

B. Emergency Treatment Objectives: The objective of the proposed berm is to direct anticipated flood flows in one small catchment away from storage shed/out building. In addition the objective is to reduce erosion and increase infiltration in burned area above private land.

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

Land 80 % Channel 100 % Roads     % Other     %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	80	90	90
Channel	100	100	100
Roads			
Other			

E. Cost of No-Action (Including Loss): \$15,000

F. Cost of Selected Alternative (Including Loss): \$7,000

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

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#### H. **Treatment Narrative:**

Land Treatments: Hydromulch small catchment area with native seed mix and remove hazard trees from high traffic roads in burned area. Place weed free straw mulch in catchment area adjacent to private land where hydromulcher can not get to.

Channel Treatments: treatment will consist of constructing small earthen berm at the bottom of a small catchment to direct any flood flows away from small outbuilding into adjacent field.

Roads and Trail Treatments: None

Structures: None

H. **Monitoring Narrative:** Monitoring will consist of no more than four site visits after major storms to determine if berm is properly functioning and to determine effectiveness of hydromulch and straw mulch.

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

Line Items	Units	Unit Cost	NFS Lands		Other \$	Other Lands			All Total \$
			# of Units	WFSU SULT \$		# of units	Fed \$	# of Units Non Fed \$	
<b>A. Land Treatments</b>									
Hydromulch w/native	acres	1500	1	\$1,500			\$0	\$0	\$1,500
Straw mulch	acres	1500	1	\$1,500			\$0		
Remove hazard trees	days	201	2	\$402			\$0	\$0	\$402
				\$0			\$0	\$0	\$0
<i>Subtotal Land Treatments</i>				\$3,402			\$0	\$0	\$1,902
<b>B. Channel Treatments</b>									
Placement of berm	each	225	1	\$225			\$0	\$0	\$225
				\$0			\$0	\$0	\$0
				\$0			\$0	\$0	\$0
				\$0			\$0	\$0	\$0
<i>Subtotal Channel Treat.</i>				\$225			\$0	\$0	\$225
<b>C. Road and Trails</b>									
				\$0			\$0	\$0	\$0
				\$0			\$0	\$0	\$0
				\$0			\$0	\$0	\$0
				\$0			\$0	\$0	\$0
<i>Subtotal Road &amp; Trails</i>				\$0			\$0	\$0	\$0
<b>D. Structures</b>									
				\$0			\$0	\$0	\$0
				\$0			\$0	\$0	\$0
				\$0			\$0	\$0	\$0
				\$0			\$0	\$0	\$0
<i>Subtotal Structures</i>				\$0			\$0	\$0	\$0
<b>E. BAER Evaluation</b>									
Team	days	281	7	\$1,967			\$0	\$0	\$1,967
				\$0			\$0	\$0	\$0
<b>G. Monitoring Cost</b>	days	281	4	\$1,124			\$0	\$0	\$1,124
<b>H. Totals</b>				<b>\$6,718</b>			<b>\$0</b>	<b>\$0</b>	<b>\$5,218</b>

**PART VII - APPROVALS**

1. /s/ Dwight Chambers for  
Forest Supervisor (signature)

07/25/2003  
Date

2. \_\_\_\_\_  
Regional Forester (signature)

\_\_\_\_\_  
Date