



MINIMUM REQUIREMENTS DECISION GUIDE WORKBOOK

"...except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act..."

-- The Wilderness Act of 1964

Project Title: Burned Area Emergency Response (BAER)

MRDG Step 1: Determination

Determine if Administrative Action is Necessary

Description of the Situation

What is the situation that may prompt administrative action?

The Big Mountain Fire severely burned several areas within the Wild Wilderness area including the majority of two small un-named drainages that empty directly into developed areas. In the runoff source areas within wilderness, the vegetation, duff, and soil that once held water was eliminated or dramatically altered by the fire. As a result, most precipitation now runs off, dramatically increasing the size of the runoff response. This runoff is concentrating in low areas eroding the gullies that are threatening down slope values.

In an attempt to protect a home, grocery store, and restaurant, a berm was constructed outside the wilderness in a gully in an un-named drainage. However, this treatment does not solve the problem; it merely passes it on to the next landowner. With the berm in place, runoff now crosses a paved county road and impacts a pond, pasture, and several other homes. This illustrates the fact that down slope protection occurs too late to solve the problem. In addition, a second gully threatens a community of about 20 homes. This gully has piled debris up against houses, washed out roads and driveways, and threatens the community water system. Finally, a third emergency situation involves the county road. If this road were closed it would greatly increase the response time for emergency services and prevent escape.

To date, at least two large runoff and mudflow events in these areas have impacted private homes and businesses and closed the county road. Additional events pose a high risk to human life and property both directly (via water and mud) and indirectly (by closing the main emergency access road). There is a risk that heavy rains in the burned area will generate debris flows that could endanger individuals, private property, emergency response roads, and other developments outside the wilderness.

The purpose of this analysis is to first determine if any Burned Area Emergency Rehabilitation (BAER) action is necessary in wilderness (Step 1) and if so, then identify what the minimum required action is (Step 2).

Options Outside of Wilderness

Can action be taken outside of wilderness that adequately addresses the situation?

YES

NO

EXPLAIN & COMPLETE STEP 1 OF THE MRDG

Explain:

There is a real and ongoing high risk to lands outside wilderness that cannot be adequately addressed below the wilderness boundary. Treatments designed to block or divert flow away from developed area at or below the wilderness boundary will not, by themselves, be effective once a debris or mudflow begins at the source areas within wilderness. Some type of action is needed to address the problem at its source, in the wilderness.

Criteria for Determining Necessity

Is action necessary to meet any of the criteria below?

A. Valid Existing Rights or Special Provisions of Wilderness Legislation

Is action necessary to satisfy valid existing rights or a special provision in wilderness legislation (the Wilderness Act of 1964 or subsequent wilderness laws) that **requires** action? Cite law and section.

YES

NO

Explain:

The Wilderness Act, Section 4(d)(1): "In addition, such measure may be taken as may be necessary in the control of fire, insects, and diseases, subject to such conditions as the Secretary deems desirable."

This special provision does not require any specific actions to be taken to address the effects of fire in wilderness but it does allow for action to be taken related to the control of fire (and its effects) within wilderness.

The specific policy, objectives, and conditions that determine what actions may be taken are described in Step 2, Other Guidance.

B. Requirements of Other Legislation

Is action necessary to meet the requirements of other federal laws? Cite law and section.

YES

NO

Explain:

There are no requirements of other federal laws that are applicable.

C. Wilderness Character

Is action necessary to preserve one or more of the qualities of wilderness character including: Untrammeled, Undeveloped, Natural, Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation, or Other Features of Value?

UNTRAMMELED

YES

NO

Explain:

It is not necessary to take action to preserve this quality. The definition of the Untrammeled quality is the lack of manipulation or control of natural processes by humans, which if allowed to occur, would eventually affect wilderness character. This quality is typically preserved when no action is taken to control, hinder, or manipulate the natural functioning of the ecosystem.

Any action to effects of the fire in the wilderness would be a manipulation of the natural processes of wilderness, and a trammeling, even though the treatment may be necessary to protect adjacent non-wilderness lands and development. The potential impacts of any proposed treatment methods will be addressed in the Step 2 alternatives.

UNDEVELOPED

 YES NO

Explain:

It is not necessary to take action to preserve this quality. Preserving this quality keeps areas free from “expanding settlement and growing mechanization” and “with the imprint of man’s work substantially unnoticeable” as required by the Wilderness Act. The Undeveloped quality is preserved when wilderness retains its "primeval character and influence," and is essentially "without permanent improvements" or modern human occupation.

There is no need to take action to preserve the Undeveloped quality and prevent adverse impacts from installations, structures, motorized equipment, or the use mechanical transport devices. The potential impacts of any proposed treatment methods will be addressed in the Step 2 alternatives.

NATURAL

 YES NO

Explain:

It is not necessary to take action to preserve this quality. A wilderness area is to be "protected and managed so as to preserve its natural conditions" meaning that wilderness ecological systems are substantially free from the effects of modern civilization. To preserve this quality, and address the Scenic and Conservation public purposes of wilderness, it may be necessary to take action to correct unnatural conditions even if they were present at the time of designation.

The fire is a natural event and any effects to the wilderness in terms of erosion are part of the natural processes that occur in wilderness. Any impacts resulting from the influence of modern civilization (such as taking action to address threats to lands and development outside wilderness) affect both the Natural quality of wilderness character and the Scenic and Conservation public purposes.

The purpose of Step 1 of this analysis is to determine if any action should be taken in the wilderness. Specific proposals for actions and their impacts, if necessary, will be addressed in Step 2.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

 YES NO

Explain:

It is not necessary to take action to preserve this quality. The Wilderness Act defines wilderness as having “outstanding opportunities for solitude or a primitive and unconfined type of recreation.” This quality is about the *opportunity* for people to experience wilderness in terms of the visitor's sense of solitude, and their expectation for an undeveloped environment with minimal restrictions.

While some wilderness visitors may see the effects of the fire as less scenic both the fire and its effects are a natural event in wilderness and no action is necessary to preserve the opportunities for visitors to experience wilderness.

OTHER FEATURES OF VALUE

 YES NO

Explain:

It is not necessary to take action to preserve this quality. The fire and its effects are not a unique feature of value to the Wild Wilderness.

No Other Features of Value would be affected by any actions taken to address the effects of the fire within the wilderness.

Step 1 Determination

Is administrative action necessary in wilderness?

Decision Criteria

- A. Existing Rights or Special Provisions
- B. Requirements of Other Legislation
- C. Wilderness Character
 - Untrammeled
 - Undeveloped
 - Natural
 - Outstanding Opportunities
 - Other Features of Value

Summary Responses

Action IS NOT necessary to meet this criterion.

Is administrative action necessary in wilderness?

YES

EXPLAIN & PROCEED TO STEP 2 OF THE MRDG

NO

Explain:

The results of the Step 1 Decision Criteria analysis indicate that no action is necessary in wilderness to preserve wilderness character because the fire and the resulting effects are part of the natural processes that take place in wilderness. The loss of the soil resource in wilderness, while an adverse effect on water quality, vegetative cover, and habitat, is not “unnatural” because it was the result of fire, a natural event.

However, action may be taken because of Section 4(d)(1) of the Wilderness Act which allows for measures to be taken for the control of fire in wilderness. One of the major considerations in determining whether to take action related to the control of fire in wilderness is the threat to lives and adjacent non-wilderness lands. In this case the effects of the fire (erosion, mudslides, floods, etc.) threaten down slope lives and property outside wilderness.

The Burned Area Assessment, documented on Form FS-2500-8 Burned-Area Report, determined that treatments designed to block or divert flow away from developed areas at or below the wilderness boundary will not, by themselves, be effective once a debris or mudflow begins at the source areas within wilderness. Some type of action is needed to address the problem at its source, in the wilderness. Agency policy direction for this situation and alternative actions will be described and analyzed in Step 2.

Project Title: Burned Area Emergency Response (BAER)

MRDG Step 2

Determine the Minimum Activity

Other Direction

Is there "special provisions" language in legislation (or other Congressional direction) that explicitly **allows** consideration of a use otherwise prohibited by Section 4(c)?

AND/OR

Has the issue been addressed in agency policy, management plans, species recovery plans, or agreements with other agencies or partners?

YES

DESCRIBE OTHER DIRECTION BELOW

NO

Describe Other Direction:

There is no special provision language in legislation or Congressional direction that explicitly allows consideration of a prohibited use for management of fire or the effects of fire in wilderness.

Forest Service Policy provides guidance for BAER activities in wilderness:

FSM 2523 - Burned Area Emergency Rehabilitation

2523.02 - Objectives

To determine the need for and to prescribe and implement emergency treatments to minimize threats to life or property or to stabilize and prevent unacceptable degradation to natural and cultural resources resulting from the effects of a fire.

2523.03 - Policy

2. Undertake stabilization treatments only when an analysis shows that planned actions are likely to substantially reduce risks and are compatible with land and resource management plans and wilderness management objectives (FSM 2323 and FSH 2509.13, sec. 26.6).
6. Propose treatments in wilderness only if necessary to protect life or property (inside or outside wilderness) or resource values outside wilderness, or to prevent an unnatural loss of wilderness resources (FSM 2323.43b).

2523.2 - Emergency Stabilization Treatments

3. Appropriate Measures. Use appropriate measures as follows: (*Note - a number of measures are listed*)
 - f. Wilderness. When prescribing treatments in wilderness, refer to FSM 2326 for guidance on the use of motorized equipment and mechanical transport.

FSM 2320 - Wilderness Management

2323.43b - Emergency Burned Area Rehabilitation. Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of the wilderness resource or to protect life, property, and other resource values outside of wilderness. Normally use hand tools and equipment to install selected land and channel treatments

Time Constraints

What, if any, are the time constraints that may affect the action?

Any treatment actions should be done as soon as possible and before late fall snow prevents accomplishment.

Components of the Action

What are the discrete components or phases of the action?

Component X	<i>Example: Transportation of personnel to the project site</i>
Component 1	Transportation of personnel to project sites.
Component 2	Transportation of materials to project sites.
Component 3	Treatment method.
Component 4	Tools and materials to be used on-site.
Component 5	Conditions of sites after project.
Component 6	
Component 7	
Component 8	
Component 9	

Proceed to the alternatives.

Refer to the [MRDG Instructions](#) regarding alternatives and the effects to each of the comparison criteria.

Project Title: Burned Area Emergency Response (BAER)

MRDG Step 2: Alternatives

Alternative 1: Log Erosion Barriers

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

Down logs would be used or, if necessary, dead trees would be felled using cross-cut saws to form infiltration basins. BAER experts consider this type of treatment effective for steep slopes.

The logs would be staked in place using dead and down tree limbs to minimize the use of non-local materials. A trench would be dug using hand tools and dirt would be used to seal the underside of the logs. The logs would be installed approximately 20 feet apart with gaps between logs. Gaps would be staggered in a pattern like bricks.

This alternative would treat 112 acres in the wilderness. This equates to .02% of the entire wilderness and 1.9% of the burned wilderness area. The project would take approximately 60 work days to complete.

Work crews, tools, and materials will be transported on foot or by pack stock to and from the project locations. Crews will camp at existing campsites designated by the Forest Service and follow LNT practices to minimize impact. Any temporary trails created to access project sites will be restored when the project is completed.

A public information program would be developed and implemented through forest websites, trailhead information boards, wilderness rangers and office contacts.

Temporary area closures would be used to restrict the public from entering the project areas while the work is on-going. The closures will be timed to avoid peak use periods (weekends and holidays).

A project safety plan and/or Job Hazard Analysis (JHA) will be developed to address all potential risks and prescribe training and personnel protective equipment (PPE) needs. Project implementation will not proceed unless all safety requirements are met.

Component Activities

How will each of the components of the action be performed under this alternative?

	Component of the Action	Activity for this Alternative
X	<i>Example: Transportation of personnel to the project site</i>	<i>Example: Personnel will travel by horseback</i>
1	Transportation of personnel to project sites.	Travel by foot or pack stock.
2	Transportation of materials to project sites.	Travel by foot or pack stock.
3	Treatment method.	Cut and place logs for erosion barriers.
4	Tools and materials to be used on-site.	Cross-cut saws, shovels, pulaskis, digging/rock bars, hammers, hand winch, axe, etc.
5	Conditions of sites after project.	112 acres treated.
6		
7		
8		
9		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

Component Activity for this Alternative	Positive	Negative	No Effect
X <i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1 Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2 Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 Cut and place logs for erosion barriers.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Cross-cut saws, shovels, pulaskis, digging/rock bars, hammers, hand winch, axe, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5 112 acres treated.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals	0	1	NE
Untrammeled Total Rating	-1		

Explain:

Neither the transportation or tools to be used impacts the Untrammeled quality.

The treatment (cutting and placing log barriers) affects the Untrammeled quality because it controls a natural process.

The Untrammeled quality is impacted when there is manipulation or control of the natural processes in wilderness. The effects of the fire are a natural process in wilderness but actions taken to mitigate these impacts are a trammeling even if the actions are necessary to protect lives and property outside wilderness.

UNDEVELOPED

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Cut and place logs for erosion barriers.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Cross-cut saws, shovels, pulaskis, digging/rock bars, hammers, hand winch, axe, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	112 acres treated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	1	NE
Undeveloped Total Rating		-1		

Explain:

Travel by foot and pack stock, and use of non-motorized hand tools are not an impact to the Undeveloped quality. Note - Using traditional, non-motorized tools (or no tools) does not make the wilderness less developed (which would be a positive impact), it merely keeps the wilderness from becoming more developed (a negative impact).

The log barriers are temporary installations and have a negative impact on this quality.

The conditions (erosion control) after the treatment is not an impact to this quality.

NATURAL

Component Activity for this Alternative	<input type="checkbox"/> Positive	<input type="checkbox"/> Negative	<input checked="" type="checkbox"/> No Effect
X <i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1 Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2 Travel by foot or pack stock.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 Cut and place logs for erosion barriers.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 Cross-cut saws, shovels, pulaskis, digging/rock bars, hammers, hand winch, axe, etc.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 112 acres treated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9			
Totals	0	2	NE
Natural Total Rating	-2		

Explain:

Travel by foot and pack stock and the use of non-motorized hand tools are not impacts to the Natural quality.

Cutting logs (and standing trees) is an adverse impact to the Natural quality.

Treating 112 acres by digging trenches and placing log erosion barriers is an adverse impact to the Natural quality because the natural conditions resulting from the fire (a natural event) are altered by human actions. The logs will eventually decompose naturally but the impact caused by their placement may last for decades.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

Component Activity for this Alternative	<input type="checkbox"/> Positive	<input type="checkbox"/> Negative	<input checked="" type="checkbox"/> No Effect
X <i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1 Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2 Travel by foot or pack stock.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 Cut and place logs for erosion barriers.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 Cross-cut saws, shovels, pulaskis, digging/rock bars, hammers, hand winch, axe, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5 112 acres treated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals	0	1	NE
Solitude or Primitive & Unconfined Recreation Total Rating	-1		

Explain:

There are no impacts to this quality from the use of non-motorized tools or the transportation of personnel and materials via pack stock.

The necessary area closures during log placement operations will temporarily impact the opportunity for visitors to experience primitive recreation in those areas.

The effect of the treatment of 112 acres is a negative impact to the Natural quality and any resulting impact on the wilderness visitors experience is because of the change in natural conditions.

OTHER FEATURES OF VALUE

Component Activity for this Alternative		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Cut and place logs for erosion barriers.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Cross-cut saws, shovels, pulaskis, digging/rock bars, hammers, hand winch, axe, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	112 acres treated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	0	NE
Other Features of Value Total Rating		0		

Explain:

No Other Features of Value would be affected within the wilderness.

Summary Ratings for Alternative 1

Wilderness Character	
Untrammeled	-1
Undeveloped	-1
Natural	-2
Solitude or Primitive & Unconfined Recreation	-1
Other Features of Value	0
Wilderness Character Summary Rating	-5

Project Title: Burned Area Emergency Response (BAER)

MRDG Step 2: Alternatives

Alternative 2: Excelsior wattles

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

Excelsior wattles would be installed as erosion barriers. Excelsior is made from shredded aspen logs and is encased in plastic netting. BAER experts consider this type of treatment effective for steep slopes.

The wattles would be anchored in place using plastic stakes. A trench would be dug using hand tools and dirt would be used to seal the underside of the wattles. The wattles would be installed approximately 20 feet apart with gaps between each wattle. The gaps would be staggered in a pattern like bricks. The wattles would be transported into the wilderness by pack stock. Stakes and netting can be packed out after 2 to 3 years.

This alternative would treat 112 acres in the wilderness. This equates to .02% of the entire wilderness and 1.9% of the burned wilderness area. The installation of the wattles would take 45 work days to complete in the first year with another 15 days required after 2-3 years to remove the netting and stakes.

Monitoring crews would travel on foot or by pack stock to and from the project locations. If needed, crews will camp at existing campsites designated by the Forest Service and follow LNT practices to minimize impact. Any temporary trails created to access project sites will be restored when the project is completed.

A public information program would be developed and implemented through forest websites, trailhead information boards, wilderness rangers and office contacts.

Temporary area closures would be used to restrict the public from entering the project areas while the work is on-going. The closures will be timed to avoid peak use periods (weekends and holidays).

A project safety plan and/or Job Hazard Analysis (JHA) will be developed to address all potential risks and prescribe training and personal protective equipment (PPE) needs. Project implementation will not proceed unless all safety requirements are met.

Component Activities

How will each of the components of the action be performed under this alternative?

	Component of the Action	Activity for this Alternative
X	<i>Example: Transportation of personnel to the project site</i>	<i>Example: Personnel will travel by horseback</i>
1	Transportation of personnel to project sites.	Travel by foot or pack stock
2	Transportation of materials to project sites.	Travel by foot or pack stock
3	Treatment method.	Excelsior wattles
4	Tools and materials to be used on-site.	Wattles, shovels, pulaskis, digging/rock bars, hammers, hand saws.
5	Conditions of sites after project.	112 acres treated
6		
7		
8		
9		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

Component Activity for this Alternative	Positive	Negative	No Effect
X <i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1 Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2 Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 Excelsior wattles	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Wattles, shovels, pulaskis, digging/rock bars, hammers, hand saws.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5 112 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals	0	1	NE
Untrammeled Total Rating	-1		

Explain:

Neither the transportation nor the tools to be used impacts the Untrammeled quality.

The treatment (cutting and placing log barriers) affects the Untrammeled quality because it controls a natural process.

The Untrammeled quality is impacted when there is manipulation or control of the natural processes in wilderness. The effects of the fire are a natural process in wilderness but actions taken to mitigate these impacts are a trammeling even if the actions are necessary to protect lives and property outside wilderness.

UNDEVELOPED

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Excelsior wattles	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Wattles, shovels, pulaskis, digging/rock bars, hammers, hand saws.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	112 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	1	NE
Undeveloped Total Rating		-1		

Explain:

Travel by foot and pack stock, and use of non-motorized measuring and recording tools are not an impact to the Undeveloped quality. Note - using traditional, non-motorized tools (or no tools) does not make the wilderness less developed (which would be a positive impact), it merely keeps the wilderness from becoming more developed (a negative impact).

The wattles are temporary installations and have a negative impact on this quality during the time they are present in the wilderness.

The conditions (erosion control) after the treatment is not an impact to this quality.

NATURAL

Component Activity for this Alternative	<input type="checkbox"/> Positive	<input type="checkbox"/> Negative	<input checked="" type="checkbox"/> No Effect
X <i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1 Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2 Travel by foot or pack stock	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 Excelsior wattles	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 Wattles, shovels, pulaskis, digging/rock bars, hammers, hand saws.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 112 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals	0	2	NE
Natural Total Rating	-2		

Explain:

Travel by foot and pack stock and the use of non-motorized hand tools are not impacts to the Natural quality.

Treating 112 acres by digging trenches and placing non-native excelsior wattles in the burned area are adverse impacts to the Natural quality because the natural conditions resulting from the fire (a natural event) are altered by human actions. The excelsior will naturally deteriorate and its presence is a short term impact.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

Component Activity for this Alternative	<input type="checkbox"/> Positive	<input type="checkbox"/> Negative	<input checked="" type="checkbox"/> No Effect
X <i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1 Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2 Travel by foot or pack stock	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 Excelsior wattles	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 Wattles, shovels, pulaskis, digging/rock bars, hammers, hand saws.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5 112 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals	0	1	NE
Solitude or Primitive & Unconfined Recreation Total Rating	-1		

Explain:

There are no impacts to this quality from the use of non-motorized tools or the transportation of personnel and materials via pack stock.

The necessary area closures during project work will temporarily impact the opportunity for visitors to experience primitive recreation in those areas.

The effect of the treatment of 112 acres is a negative impact to the Natural quality and any resulting impact on the wilderness visitors experience is because of the change in natural conditions.

OTHER FEATURES OF VALUE

Component Activity for this Alternative		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Excelsior wattles	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Wattles, shovels, pulaskis, digging/rock bars, hammers, hand saws.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	112 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	0	NE
Other Features of Value Total Rating		0		

Explain:

No Other Features of Value would be affected within the wilderness.

Summary Ratings for Alternative 2

Wilderness Character	
Untrammeled	-1
Undeveloped	-1
Natural	-2
Solitude or Primitive & Unconfined Recreation	-1
Other Features of Value	0
Wilderness Character Summary Rating	-5

Project Title: Burned Area Emergency Response (BAER)

MRDG Step 2: Alternatives

Alternative 3: Discontinuous contour trenches

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

Trenches would be dug using hand tools approximately 20 feet apart with small gaps in between. The gaps would be staggered in a pattern like bricks. BAER experts consider this technique to be moderately effective on steep slopes.

This alternative would treat 112 acres in the wilderness. This equates to .02% of the entire wilderness and 1.9% of the burned wilderness area. The project would take approximately 30 work days to complete.

Work crews would travel on foot or by pack stock to and from the project locations. Crews will camp at existing campsites designated by the Forest Service and follow LNT practices to minimize impact. Any temporary trails created to access project sites will be restored when the project is completed.

A public information program would be developed and implemented through forest websites, trailhead information boards, wilderness rangers and office contacts.

Temporary area closures would be used to restrict the public from entering the project areas while the work is on-going. The closures will be timed to avoid peak use periods (weekends and holidays).

A project safety plan and/or Job Hazard Analysis (JHA) will be developed to address all potential risks and prescribe training and personal protective equipment (PPE) needs. Project implementation will not proceed unless all safety requirements are met.

Component Activities

How will each of the components of the action be performed under this alternative?

	Component of the Action	Activity for this Alternative
X	<i>Example: Transportation of personnel to the project site</i>	<i>Example: Personnel will travel by horseback</i>
1	Transportation of personnel to project sites.	Travel by foot or pack stock.
2	Transportation of materials to project sites.	Travel by foot or pack stock.
3	Treatment method.	Discontinuous contour trenches
4	Tools and materials to be used on-site.	Shovels, pulaskis, digging/rock bars.
5	Conditions of sites after project.	112 acres treated
6		
7		
8		
9		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

Component Activity for this Alternative	Positive	Negative	No Effect
X <i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1 Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2 Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 Discontinuous contour trenches	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Shovels, pulaskis, digging/rock bars.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5 112 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals	0	1	NE
Untrammeled Total Rating	-1		

Explain:

Neither the transportation or tools to be used impacts the Untrammeled quality.

The treatment (discontinuous contour trenches) affects the Untrammeled quality because it controls a natural process.

The Untrammeled quality is impacted when there is manipulation or control of the natural processes in wilderness. The effects of the fire are a natural process in wilderness but actions taken to mitigate these impacts are a trammeling even if the actions are necessary to protect lives and property outside wilderness.

UNDEVELOPED

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Discontinuous contour trenches	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Shovels, pulaskis, digging/rock bars.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	112 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	1	NE
Undeveloped Total Rating		-1		

Explain:

Travel by foot and pack stock, and use of non-motorized measuring and recording tools are not an impact to the Undeveloped quality. (Note - using traditional, non-motorized tools (or no tools) does not make the wilderness less developed (which would be a positive impact), it merely keeps the wilderness from becoming more developed (a negative impact).)

The trenches are temporary human caused developments and have a negative impact on this quality during the time they are present in the wilderness.

The conditions (erosion control) after the treatment is not an impact to this quality.

NATURAL

Component Activity for this Alternative		<input type="checkbox"/> Positive	<input type="checkbox"/> Negative	<input checked="" type="checkbox"/> No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot or pack stock.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Discontinuous contour trenches	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Shovels, pulaskis, digging/rock bars.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	112 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	2	NE
Natural Total Rating		-2		

Explain:

Travel by foot and pack stock and the use of non-motorized hand tools are not impacts to the Natural quality.

Treating 112 acres and digging trenches in the burned area are adverse impacts to the Natural quality because the natural conditions resulting from the fire (a natural event) are altered by human actions. The trenches may eventually fill in with transported sediment and revegetate.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

Component Activity for this Alternative	<input type="checkbox"/> Positive	<input type="checkbox"/> Negative	<input checked="" type="checkbox"/> No Effect
X <i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1 Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2 Travel by foot or pack stock.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 Discontinuous contour trenches	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 Shovels, pulaskis, digging/rock bars.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5 112 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals	0	1	NE
Solitude or Primitive & Unconfined Recreation Total Rating	-1		

Explain:

There are no impacts to this quality from the use of non-motorized tools or the transportation of personnel and materials via pack stock.

The necessary area closures during project operations will temporarily impact the opportunity for visitors to experience primitive recreation in those areas.

The effect of the treatment of 112 acres is a negative impact to the Natural quality and any resulting impact on the wilderness visitors experience is because of the change in natural conditions.

OTHER FEATURES OF VALUE

Component Activity for this Alternative		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot or pack stock.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Discontinuous contour trenches	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Shovels, pulaskis, digging/rock bars.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	112 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	0	NE
Other Features of Value Total Rating		0		

Explain:

No Other Features of Value would be affected within the wilderness.

Summary Ratings for Alternative 3

Wilderness Character	
Untrammeled	-1
Undeveloped	-1
Natural	-2
Solitude or Primitive & Unconfined Recreation	-1
Other Features of Value	0
Wilderness Character Summary Rating	-5

Project Title: Burned Area Emergency Response (BAER)

MRDG Step 2: Alternatives

Alternative 4: Sand bags

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

Sand bags would be filled with dirt on-site. BAER experts consider this type of treatment effective for steep slopes.

Lines of bags would be placed in a pattern as erosion barriers and installed just below the trenches used to excavate the dirt used to fill the bags. The bags would be packed out after two to three years.

This alternative would treat 112 acres in the wilderness. This equates to .02% of the entire wilderness and 1.9% of the burned wilderness area. The project would take approximately 45 work days to complete.

Work crews would travel on foot or by pack stock to and from the project locations. Crews will camp at existing campsites designated by the Forest Service and follow LNT practices to minimize impact. Any temporary trails created to access project sites will be restored when the project is completed.

A public information program would be developed and implemented through forest websites, trailhead information boards, wilderness rangers and office contacts.

Temporary area closures would be used to restrict the public from entering the project areas while the work is on-going. The closures will be timed to avoid peak use periods (weekends and holidays).

A project safety plan and/or Job Hazard Analysis (JHA) will be developed to address all potential risks and prescribe training and personal protective equipment (PPE) needs. Project implementation will not proceed unless all safety requirements are met.

Component Activities

How will each of the components of the action be performed under this alternative?

	Component of the Action	Activity for this Alternative
X	<i>Example: Transportation of personnel to the project site</i>	<i>Example: Personnel will travel by horseback</i>
1	Transportation of personnel to project sites.	Travel by foot or horseback
2	Transportation of materials to project sites.	Travel by foot or horseback
3	Treatment method.	Sand bags as erosion control barriers
4	Tools and materials to be used on-site.	Shovels, pulaskis, digging/rock bars, sand bags.
5	Conditions of sites after project.	112 acres treated
6		
7		
8		
9		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

Component Activity for this Alternative	Positive	Negative	No Effect
X <i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1 Travel by foot or horseback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2 Travel by foot or horseback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 Sand bags as erosion control barriers	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Shovels, pulaskis, digging/rock bars, sand bags.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5 112 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals	0	1	NE
Untrammeled Total Rating	-1		

Explain:

Neither the transportation or tools to be used impacts the Untrammeled quality.

The treatment (placing sandbags) affects the Untrammeled quality because it controls a natural process.

The Untrammeled quality is impacted when there is manipulation or control of the natural processes in wilderness. The effects of the fire are a natural process in wilderness but actions taken to mitigate these impacts are a trammeling even if the actions are necessary to protect lives and property outside wilderness.

UNDEVELOPED

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot or horseback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot or horseback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Sand bags as erosion control barriers	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Shovels, pulaskis, digging/rock bars, sand bags.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	112 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	1	NE
Undeveloped Total Rating		-1		

Explain:

Travel by foot and pack stock, and use of non-motorized measuring and recording tools are not an impact to the Undeveloped quality. (Note - using traditional, non-motorized tools (or no tools) does not make the wilderness less developed (which would be a positive impact), it merely keeps the wilderness from becoming more developed (a negative impact).)

The sand bags and excavated holes are temporary installations and have a negative impact on this quality during the time they are present in the wilderness.

The conditions (erosion control) after the treatment is not an impact to this quality.

NATURAL

Component Activity for this Alternative		<input type="checkbox"/> Positive	<input type="checkbox"/> Negative	<input checked="" type="checkbox"/> No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot or horseback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot or horseback	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Sand bags as erosion control barriers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Shovels, pulaskis, digging/rock bars, sand bags.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	112 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9				
Totals		0	2	NE
Natural Total Rating		-2		

Explain:

Travel by foot and pack stock and the use of non-motorized hand tools are not impacts to the Natural quality.

Treating 112 acres by excavating holes and placing sand bags in the burned area are adverse impacts to the Natural quality because the natural conditions resulting from the fire (a natural event) are altered by human actions. The bags will be removed after 2 or 3 years and the trenches may eventually fill in with transported sediment and revegetate.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

Component Activity for this Alternative		<input type="checkbox"/> Positive	<input type="checkbox"/> Negative	<input checked="" type="checkbox"/> No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot or horseback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot or horseback	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Sand bags as erosion control barriers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Shovels, pulaskis, digging/rock bars, sand bags.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	112 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	1	NE
Solitude or Primitive & Unconfined Recreation Total Rating		-1		

Explain:

There are no impacts to this quality from the use of non-motorized tools or the transportation of personnel and materials via pack stock.

The necessary area closures during project operations will temporarily impact the opportunity for visitors to experience primitive recreation in those areas.

The effect of the treatment of 112 acres is a negative impact to the Natural quality and any resulting impact on the wilderness visitors experience is because of the change in natural conditions.

OTHER FEATURES OF VALUE

Component Activity for this Alternative		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot or horseback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot or horseback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Sand bags as erosion control barriers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Shovels, pulaskis, digging/rock bars, sand bags.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	112 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	0	NE
Other Features of Value Total Rating		0		

Explain:

No Other Features of Value would be affected within the wilderness.

Summary Ratings for Alternative 4

Wilderness Character	
Untrammeled	-1
Undeveloped	-1
Natural	-2
Solitude or Primitive & Unconfined Recreation	-1
Other Features of Value	0
Wilderness Character Summary Rating	-5

Project Title: Burned Area Emergency Response (BAER)

MRDG Step 2: Alternatives

Alternative 5: Straw mulch applied by helicopter

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

Certified weed-free straw would be dropped from a helicopter to obtain a two inch cover (about 2,000 pounds per acre). BAER experts consider this type of treatment most effective for gentle slopes but it can be used on slopes from 40% to 50%.

This alternative would treat 215 acres in the wilderness. This equates to .04% of the entire wilderness and 3.6% of the burned wilderness area. The project would take approximately 15 work days to complete.

Monitoring crews would travel on foot or by pack stock to and from the project locations. If needed, crews will camp at existing campsites designated by the Forest Service and follow LNT practices to minimize impact. Any temporary trails created to access project sites will be restored when the project is completed.

A public information program would be developed and implemented through forest websites, trailhead information boards, wilderness rangers and office contacts.

Temporary area closures would be used to restrict the public from entering the project areas while the work is on-going. The closures will be timed to avoid peak use periods (weekends and holidays).

A project safety plan and/or Job Hazard Analysis (JHA) will be developed to address all potential risks and prescribe training and personal protective equipment (PPE) needs. Helicopters and pilots that meet agency standards would be used. Project implementation will not proceed unless all safety requirements are met.

Component Activities

How will each of the components of the action be performed under this alternative?

	Component of the Action	Activity for this Alternative
X	<i>Example: Transportation of personnel to the project site</i>	<i>Example: Personnel will travel by horseback</i>
1	Transportation of personnel to project sites.	Travel by foot or pack stock
2	Transportation of materials to project sites.	Air drop from helicopter
3	Treatment method.	Straw mulch for erosion control
4	Tools and materials to be used on-site.	Monitoring equipment (i.e. cameras, data recorders, measuring devices), straw mulch
5	Conditions of sites after project.	215 acres
6		
7		
8		
9		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

Component Activity for this Alternative	Positive	Negative	No Effect
X <i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1 Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2 Air drop from helicopter	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 Straw mulch for erosion control	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Monitoring equipment (i.e. cameras, data recorders, measuring devices), straw mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5 215 acres	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals	0	1	NE
Untrammed Total Rating	-1		

Explain:

Neither the transportation or tools to be used impacts the Untrammed quality.

The treatment (straw mulch applied by helicopter) affects the Untrammed quality because it controls a natural process.

The Untrammed quality is impacted when there is manipulation or control of the natural processes in wilderness. The effects of the fire are a natural process in wilderness but the actions taken to mitigate these impacts are a trammeling even if the actions are necessary to protect lives and property outside wilderness.

UNDEVELOPED

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Air drop from helicopter	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Straw mulch for erosion control	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Monitoring equipment (i.e. cameras, data recorders, measuring devices), straw mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	215 acres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	1	NE
Undeveloped Total Rating		-1		

Explain:

Travel by foot and pack stock, and use of non-motorized measuring and recording tools are not an impact to the Undeveloped quality. (Note - using traditional, non-motorized tools (or no tools) does not make the wilderness less developed (which would be a positive impact), it merely keeps the wilderness from becoming more developed (a negative impact).)

Forest Service regulations prohibit the use of a helicopter for air drops in the same manner as the landing of a helicopter (36 CFR 261.16 and 293.6) and this activity is a negative impact for the Undeveloped quality.

The straw mulch is not a development and has no impact on this quality.

The conditions (erosion control) after the treatment is not an impact to this quality.

NATURAL

Component Activity for this Alternative		<input type="checkbox"/> Positive	<input type="checkbox"/> Negative	<input checked="" type="checkbox"/> No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Air drop from helicopter	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Straw mulch for erosion control	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Monitoring equipment (i.e. cameras, data recorders, measuring devices), straw mulch	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	215 acres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9				
Totals		0	2	NE
Natural Total Rating		-2		

Explain:

Travel by foot and pack stock, use of non-motorized hand tools, and the air drops are not impacts to the Natural quality.

Treating 215 acres by placing non-native straw mulch in the burned area is an adverse impact to the Natural quality because the natural conditions resulting from the fire (a natural event) are altered by human actions. The straw will naturally deteriorate and its presence is a short term impact.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

Component Activity for this Alternative		<input type="checkbox"/> Positive	<input type="checkbox"/> Negative	<input checked="" type="checkbox"/> No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot or pack stock	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Air drop from helicopter	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Straw mulch for erosion control	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Monitoring equipment (i.e. cameras, data recorders, measuring devices), straw mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	215 acres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	1	NE
Solitude or Primitive & Unconfined Recreation Total Rating		-1		

Explain:

There are no impacts to this quality from the use of non-motorized tools or the transportation of personnel and materials via pack stock.

The necessary area closures during air drops will temporarily impact the opportunity for visitors to experience primitive recreation in those areas and the sight and sound of the helicopter will be an adverse experience for some wilderness visitors.

The effect of the treatment of 215 acres is a negative impact to the Natural quality and any resulting impact on the wilderness visitors experience is because of the change in natural conditions.

OTHER FEATURES OF VALUE

Component Activity for this Alternative		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Air drop from helicopter	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Straw mulch for erosion control	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Monitoring equipment (i.e. cameras, data recorders, measuring devices), straw mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	215 acres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8				
9				
Totals		0	0	NE
Other Features of Value Total Rating		0		

Explain:

No Other Features of Value would be affected within the wilderness.

Summary Ratings for Alternative 5

Wilderness Character	
Untrammeled	-1
Undeveloped	-1
Natural	-2
Solitude or Primitive & Unconfined Recreation	-1
Other Features of Value	0
Wilderness Character Summary Rating	-5

Project Title: Burned Area Emergency Response (BAER)

MRDG Step 2: Alternatives

Alternative 6: Loose excelsior mulch spread from a helicopter

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

This alternative would spread loose excelsior mulch using a helicopter. Excelsior is made from shredded aspen logs and is baled like straw but is curlier than straw. BAER experts consider this technique effective for gentle slopes but it can be used on slopes from 40% to 50% when combined with on the ground spreading to achieve even cover.

This alternative would treat 215 acres in the wilderness. This equates to .04% of the entire wilderness and 3.6% of the burned wilderness area. This project will take 15 work days to complete.

Work crews would travel on foot or by pack stock to and from the project locations. If needed, crews will camp at existing campsites designated by the Forest Service and follow LNT practices to minimize impact. Any temporary trails created to access project sites will be restored when the project is completed.

A public information program would be developed and implemented through forest websites, trailhead information boards, wilderness rangers and office contacts.

Temporary area closures would be used to restrict the public from entering the project areas while the work is on-going. The closures will be timed to avoid peak use periods (weekends and holidays).

A project safety plan and/or Job Hazard Analysis (JHA) will be developed to address all potential risks and prescribe training and personal protective equipment (PPE) needs. Helicopters and pilots that meet agency standards would be used. Project implementation will not proceed unless all safety requirements are met.

Component Activities

How will each of the components of the action be performed under this alternative?

	Component of the Action	Activity for this Alternative
X	<i>Example: Transportation of personnel to the project site</i>	<i>Example: Personnel will travel by horseback</i>
1	Transportation of personnel to project sites.	Travel by foot or pack stock
2	Transportation of materials to project sites.	Air drop from helicopter
3	Treatment method.	Loose excelsior mulch
4	Tools and materials to be used on-site.	Monitoring equipment (cameras, data recorders, measuring devices), excelsior mulch
5	Conditions of sites after project.	215 acres treated
6		
7		
8		
9		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

Component Activity for this Alternative	Positive	Negative	No Effect
X <i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1 Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2 Air drop from helicopter	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 Loose excelsior mulch	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Monitoring equipment (cameras, data recorders, measuring devices), excelsior mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5 215 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals	0	1	NE
Untrammed Total Rating	-1		

Explain:

Neither the transportation or tools to be used impacts the Untrammed quality.

The treatment (loose excelsior mulch spread from a helicopter) affects the Untrammed quality because it controls a natural process.

The Untrammed quality is impacted when there is manipulation or control of the natural processes in wilderness. The effects of the fire are a natural process in wilderness but the actions taken to mitigate these impacts are a trammeling.

UNDEVELOPED

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			
1	Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Air drop from helicopter	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Loose excelsior mulch	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Monitoring equipment (cameras, data recorders, measuring devices), excelsior mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	215 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	1	NE
Undeveloped Total Rating		-1		

Explain:

Travel by foot and pack stock, and use of non-motorized measuring and recording tools are not an impact to the Undeveloped quality. (Note - using traditional, non-motorized tools (or no tools) does not make the wilderness less developed (which would be a positive impact), it merely keeps the wilderness from becoming more developed (a negative impact).)

Forest Service regulations prohibit the use of a helicopter for air drops in the same manner as the landing of a helicopter (36 CFR 261.16 and 293.6) and this activity is a negative impact for the Undeveloped quality.

The excelsior mulch is not a development and has no impact on this quality.

The conditions (erosion control) after the treatment is not an impact to this quality.

NATURAL

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			
1	Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Air drop from helicopter	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Loose excelsior mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Monitoring equipment (cameras, data recorders, measuring devices), excelsior mulch	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	215 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		<input type="checkbox"/> 0	<input type="checkbox"/> 2	<input type="checkbox"/> NE
Natural Total Rating		-2		

Explain:

Travel by foot and pack stock, use of non-motorized hand tools, and the air drops are not impacts to the Natural quality.

Treating 215 acres by placing non-native excelsior mulch in the burned area is an adverse impact to the Natural quality because the natural conditions resulting from the fire (a natural event) are altered by human actions. The straw will naturally deteriorate and its presence is a short term impact.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			
1	Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Air drop from helicopter	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Loose excelsior mulch	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Monitoring equipment (cameras, data recorders, measuring devices), excelsior mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	215 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> NE
Solitude or Primitive & Unconfined Recreation Total Rating		-1		

Explain:

There are no impacts to this quality from the use of non-motorized tools or the transportation of personnel and materials via pack stock.

The necessary area closures during air drops will temporarily impact the opportunity for visitors to experience primitive recreation in those areas and the sight and sound of the helicopter will be an adverse experience for some wilderness visitors.

The effect of the treatment of 215 acres is a negative impact to the Natural quality and any resulting impact on the wilderness visitors experience is because of the change in natural conditions.

OTHER FEATURES OF VALUE

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			
1	Travel by foot or pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Air drop from helicopter	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Loose excelsior mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Monitoring equipment (cameras, data recorders, measuring devices), excelsior mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	215 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		<input type="checkbox"/> 0	<input type="checkbox"/> 0	<input type="checkbox"/> NE
Other Features of Value Total Rating		0		

Explain:

No Other Features of Value would be affected within the wilderness.

Summary Ratings for Alternative 6

Wilderness Character	
Untrammeled	-1
Undeveloped	-1
Natural	-2
Solitude or Primitive & Unconfined Recreation	-1
Other Features of Value	0
Wilderness Character Summary Rating	-5

Project Title: Burned Area Emergency Response (BAER)

MRDG Step 2: Alternatives

Alternative 7: Seeding of annual grasses

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

This alternative would seed annual grasses in the burned areas for soil protection and erosion control. This work would likely be done with hand crews on the ground. BAER experts consider this treatment to be moderately effective but vegetation must become established before benefits are realized.

This alternative would treat 215 acres in the wilderness. This equates to .04% of the entire wilderness and 3.6% of the burned wilderness area. The work would be accomplished in 10 work days.

Work crews would travel and transport materials on foot or by pack stock to and from the project locations. Crews will camp at existing campsites designated by the Forest Service and follow LNT practices to minimize impact. Any temporary trails created to access project sites will be restored when the project is completed.

A public information program would be developed and implemented through forest websites, trailhead information boards, wilderness rangers and office contacts.

Temporary area closures would be used to restrict the public from entering the project areas while the work is on-going. The closures will be timed to avoid peak use periods (weekends and holidays).

A project safety plan and/or Job Hazard Analysis (JHA) will be developed to address all potential risks and prescribe training and personal protective equipment (PPE) needs. Project implementation will not proceed unless all safety requirements are met.

Component Activities

How will each of the components of the action be performed under this alternative?

	Component of the Action	Activity for this Alternative
X	<i>Example: Transportation of personnel to the project site</i>	<i>Example: Personnel will travel by horseback</i>
1	Transportation of personnel to project sites.	Travel by foot and pack stock
2	Transportation of materials to project sites.	Travel by foot and pack stock
3	Treatment method.	Seeding annual grasses
4	Tools and materials to be used on-site.	Annual grass seed and hand seeders
5	Conditions of sites after project.	215 acres treated
6		
7		
8		
9		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot and pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot and pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Seeding annual grasses	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Annual grass seed and hand seeders	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	215 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	1	NE
Untrammed Total Rating		-1		

Explain:

Neither the transportation or tools to be used impacts the Untrammed quality.

The treatment (seeding of annual grasses) affects the Untrammed quality because it controls a natural process.

The Untrammed quality is impacted when there is manipulation or control of the natural processes in wilderness. The effects of the fire are a natural process in wilderness but the actions taken to mitigate these impacts are a trammeling.

UNDEVELOPED

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			
1	Travel by foot and pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot and pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Seeding annual grasses	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Annual grass seed and hand seeders	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	215 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		<input type="checkbox"/> 0	<input type="checkbox"/> 0	<input type="checkbox"/> NE
Undeveloped Total Rating		0		

Explain:

Travel by foot and pack stock, and use of non-motorized tools are not an impact to the Undeveloped quality. (Note - using traditional, non-motorized tools (or no tools) does not make the wilderness less developed (which would be a positive impact), it merely keeps the wilderness from becoming more developed (a negative impact).)

The annual grass seed is not a development and has no impact on this quality.

The conditions (erosion control) after the treatment is not an impact to this quality.

NATURAL

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			
1	Travel by foot and pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot and pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Seeding annual grasses	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Annual grass seed and hand seeders	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	215 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		<input type="checkbox"/> 0	<input type="checkbox"/> 2	<input type="checkbox"/> NE
Natural Total Rating		-2		

Explain:

Travel by foot and pack stock and use of non-motorized hand tools are not impacts to the Natural quality.

Treating 215 acres by seeding annual grasses in the burned area is an adverse impact to the Natural quality because the natural conditions resulting from the fire (a natural event) are altered by human actions. The annual grasses will not regenerate and their presence is a short term impact.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			
1	Travel by foot and pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot and pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Seeding annual grasses	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Annual grass seed and hand seeders	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	215 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> NE
Solitude or Primitive & Unconfined Recreation Total Rating		-1		

Explain:

There are no impacts to this quality from the use of non-motorized tools or the transportation of personnel and materials via pack stock.

The necessary area closures during and after seeding operations will temporarily impact the opportunity for visitors to experience primitive recreation in those areas.

The effect of the treatment of 215 acres is a negative impact to the Natural quality and any resulting impact on the wilderness visitors experience is because of the change in natural conditions.

OTHER FEATURES OF VALUE

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			
1	Travel by foot and pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Travel by foot and pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Seeding annual grasses	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Annual grass seed and hand seeders	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	215 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		<input type="checkbox"/> 0	<input type="checkbox"/> 0	<input type="checkbox"/> NE
Other Features of Value Total Rating		0		

Explain:

No Other Features of Value would be affected within the wilderness.

Summary Ratings for Alternative 7

Wilderness Character	
Untrammeled	-1
Undeveloped	0
Natural	-2
Solitude or Primitive & Unconfined Recreation	-1
Other Features of Value	0
Wilderness Character Summary Rating	-4

Project Title: Burned Area Emergency Response (BAER)

MRDG Step 2: Alternatives

Alternative 8: Combination of log erosion barriers and loose excelsior spread by helicopter

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

Unit 3 is a 36-acre unit that straddles the wilderness boundary with 10 acres in the wilderness. Log erosion barriers would be used throughout this unit. The logs would be staked in place using dead and down tree limbs to minimize the use of non-local materials. A trench would be dug using hand tools and dirt would be used to seal the underside of the logs. The logs would be installed approximately 20 feet apart with gaps between logs. Gaps would be staggered in a pattern like bricks. Unit 2 is a 205-acre unit located in the wilderness. Loose excelsior would be distributed by helicopter throughout this unit. BAER experts identify both of these techniques as effective or these units but hand spreading of the loose excelsior on the ground is necessary.

This alternative would treat 215 acres in the wilderness. This equates to .04% of the entire wilderness and 3.6% of the burned wilderness area. The entire project would take 30 work days to complete.

Work crews would travel on foot or by pack stock to and from the project locations. If needed, crews will camp at existing campsites designated by the Forest Service and follow LNT practices to minimize impact. Any temporary trails created to access project sites will be restored when the project is completed.

A public information program would be developed and implemented through forest websites, trailhead information boards, wilderness rangers and office contacts.

Temporary area closures would be used to restrict the public from entering the project areas while the work is on-going. The closures will be timed to avoid peak use periods (weekends and holidays).

A project safety plan and/or Job Hazard Analysis (JHA) will be developed to address all potential risks and prescribe training and personal protective equipment (PPE) needs. Helicopters and pilots that meet agency standards would be used. Project implementation will not proceed unless all safety requirements are met.

Component Activities

How will each of the components of the action be performed under this alternative?

	Component of the Action	Activity for this Alternative
X	<i>Example: Transportation of personnel to the project site</i>	<i>Example: Personnel will travel by horseback</i>
1	Transportation of personnel to project sites.	Travel by foot and pack stock
2	Transportation of materials to project sites.	Air drop of loose excelsior from helicopter
3	Treatment method.	Log barriers and excelsior mulch
4	Tools and materials to be used on-site.	Rakes, excelsior mulch, shovels, digging/rock bar, cross-cut saw, hammer
5	Conditions of sites after project.	215 acres treated
6		
7		
8		
9		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

Component Activity for this Alternative	Positive	Negative	No Effect
X <i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1 Travel by foot and pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2 Air drop of loose excelsior from helicopter	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 Log barriers and excelsior mulch	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Rakes, excelsior mulch, shovels, digging/rock bar, cross-cut saw, hammer	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5 215 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals	0	1	NE
Untrammeled Total Rating	-1		

Explain:

Neither the transportation or tools to be used impacts the Untrammeled quality.

The treatment (Combination of log erosion barriers and loose excelsior spread by helicopter) affects the Untrammeled quality because it controls a natural process.

The Untrammeled quality is impacted when there is manipulation or control of the natural processes in wilderness. The effects of the fire are a natural process in wilderness but the actions taken to mitigate these impacts are a trammeling.

UNDEVELOPED

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot and pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Air drop of loose excelsior from helicopter	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Log barriers and excelsior mulch	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Rakes, excelsior mulch, shovels, digging/rock bar, cross-cut saw, hammer	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	215 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	2	NE
Undeveloped Total Rating		-2		

Explain:

Travel by foot and pack stock, and use of non-motorized measuring and recording tools are not an impact to the Undeveloped quality. (Note - using traditional, non-motorized tools (or no tools) does not make the wilderness less developed (which would be a positive impact), it merely keeps the wilderness from becoming more developed (a negative impact).)

Forest Service regulations prohibit the use of a helicopter for air drops in the same manner as the landing of a helicopter (36 CFR 261.16 and 293.6) and this activity is a negative impact for the Undeveloped quality.

The excelsior mulch is not a development and has no impact on this quality. The log barriers are a temporary installation and a negative impact.

The conditions (erosion control) after the treatment is not an impact to this quality.

NATURAL

Component Activity for this Alternative		<input type="checkbox"/> Positive	<input type="checkbox"/> Negative	<input checked="" type="checkbox"/> No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot and pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Air drop of loose excelsior from helicopter	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Log barriers and excelsior mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Rakes, excelsior mulch, shovels, digging/rock bar, cross-cut saw, hammer	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	215 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9				
Totals		0	2	NE
Natural Total Rating		-2		

Explain:

Travel by foot and pack stock, use of non-motorized hand tools, and the air drops are not impacts to the Natural quality.

Treating 215 acres by placing non-native excelsior mulch and cut log barriers in the burned area are adverse impacts to the Natural quality because the natural conditions resulting from the fire (a natural event) are altered by human actions. Both the excelsior and logs will naturally deteriorate and their presence is a relatively short term impact.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

Component Activity for this Alternative	<input type="checkbox"/> Positive	<input type="checkbox"/> Negative	<input checked="" type="checkbox"/> No Effect
X <i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1 Travel by foot and pack stock	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Air drop of loose excelsior from helicopter	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 Log barriers and excelsior mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 Rakes, excelsior mulch, shovels, digging/rock bar, cross-cut saw, hammer	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5 215 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals	0	2	NE
Solitude or Primitive & Unconfined Recreation Total Rating	-2		

Explain:

There are no impacts to this quality from the use of non-motorized tools or the transportation of personnel and materials via pack stock.

The necessary area closures during air drops and log barrier installation will temporarily impact the opportunity for visitors to experience primitive recreation in those areas and the sight and sound of the helicopter will be an adverse experience for some wilderness visitors.

The effect of the treatment of 215 acres is a negative impact to the Natural quality and any resulting impact on the wilderness visitors experience is because of the change in natural conditions.

OTHER FEATURES OF VALUE

Component Activity for this Alternative		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1	Travel by foot and pack stock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Air drop of loose excelsior from helicopter	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Log barriers and excelsior mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Rakes, excelsior mulch, shovels, digging/rock bar, cross-cut saw, hammer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	215 acres treated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Totals		0	0	NE
Other Features of Value Total Rating		0		

Explain:

No Other Features of Value would be affected within the wilderness.

Summary Ratings for Alternative 8

Wilderness Character	
Untrammeled	-1
Undeveloped	-2
Natural	-2
Solitude or Primitive & Unconfined Recreation	-2
Other Features of Value	0
Wilderness Character Summary Rating	-7

MRDG Step 2: Alternatives Not Analyzed

Alternatives Not Analyzed

What alternatives were considered but not analyzed? Why were they not analyzed?

No Action

An alternative that required no action to be taken in wilderness was considered but not analyzed. Section 4(d)(1) of the Wilderness Act allows for action to be taken and Forest Service policy provides direction that BAER activities may be implemented in wilderness when lives and property are threatened outside the wilderness. The Burned Area Assessment, documented on Form FS-2500-8 Burned-Area Report, determined that there is a high and on-going risk to lives and property and that treatments designed to block or divert flow away from developed areas at or below the wilderness boundary will not, by themselves, be effective once a debris or mudflow begins at the source areas within wilderness. Some type of action is needed to address the problem at its source, in the wilderness.

Project Title: Burned Area Emergency Response (BAER)

MRDG Step 2: Alternative Comparison

Alternative 1: Log Erosion Barriers

Alternative 2: Excelsior wattles

Alternative 3: Discontinuous contour trenches

Alternative 4: Sand bags

Wilderness Character	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Untrammeled	0	1	0	1	0	1	0	1
Undeveloped	0	1	0	1	0	1	0	1
Natural	0	2	0	2	0	2	0	2
Solitude/Primitive/Unconfined	0	1	0	1	0	1	0	1
Other Features of Value	0	0	0	0	0	0	0	0
Totals	0	5	0	5	0	5	0	5
Wilderness Character Rating	-5		-5		-5		-5	

Alternative 5: Straw mulch applied by helicopter

Alternative 6: Loose excelsior mulch spread from a helicopter

Alternative 7: Seeding of annual grasses

Alternative 8: Combination of log erosion barriers and loose excelsior spread by helicopter

Wilderness Character	Alternative 5		Alternative 6		Alternative 7		Alternative 8	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Untrammeled	0	1	0	1	0	1	0	1
Undeveloped	0	1	0	1	0	0	0	2
Natural	0	2	0	2	0	2	0	2
Solitude or Primitive & Unconfined Rec.	0	1	0	1	0	1	0	2
Other Features of Value	0	0	0	0	0	0	0	0
Totals	0	5	0	5	0	4	0	7
Wilderness Character Rating	-5		-5		-4		-7	

Project Title: Burned Area Emergency Response (BAER)

MRDG Step 2: Determination

Refer to the [MRDG Instructions](#) before identifying the selected alternative and explaining the rationale for the selection.

Selected Alternative

- Alternative 1: Log Erosion Barriers
- Alternative 2: Excelsior wattles
- Alternative 3: Discontinuous contour trenches
- Alternative 4: Sand bags
- Alternative 5: Straw mulch applied by helicopter
- Alternative 6: Loose excelsior mulch spread from a helicopter
- Alternative 7: Seeding of annual grasses
- Alternative 8: Combination of log erosion barriers and loose excelsior spread by helicopter

Explain Rationale for Selection:

As documented in Step 1 of this analysis, some type of action is necessary related to the control of fire and its effects in the wilderness. In Step 2, Other Direction, Forest Service policy also indicates that action may be taken to address threats to lives and property caused by the effects of fire in the wilderness. The determination in Step 2 focuses on what type of action is the minimum necessary. All the feasible action alternatives provide for stabilization in the short-term and help promote regeneration of native vegetation in the long term. However all the alternatives also cause adverse impacts to wilderness character. The rationale for alternative selection prioritized avoiding adverse impacts while insuring that effective mitigation measures are implemented to minimize the effects to lives and property outside the wilderness.

The selected alternative is #6 Loose Excelsior Mulch Spread by Helicopter with the constraints and mitigations described in the alternative. This alternative best meets the combined needs of immediate protection of life and property by stabilizing the areas most susceptible to the erosion that threatens lives and property outside wilderness with minimal long term adverse impacts to wilderness character. A total of 215 acres would be treated in the wilderness, an area determined by the BAER team in The BAER Report (FS-2500-8) to be the bare minimum of acreage necessary for effective treatment. No maintenance is required. Once the material is properly distributed, it will be monitored but should be self-maintaining and will biodegrade.

Excelsior mulching has been found to be very effective in reducing rain splash erosion, retaining water, and creating surface roughness to break up water movement. A survey of 12 BAER projects reported 66.8% of respondents rated mulching at excellent while 16.6% rated it as good, and 16.6 % responded fair. This

If more space is needed, continue on the next page...

Explain Rationale for Selection, Continued:

83.4% good or better rating is the third best rating behind contour trenching (mechanical deep trenching), and ground seeding, which are treatments found to be inconsistent with wilderness values (see evaluation of other alternatives below). Excelsior mulching also has the advantage of containing no seed which could introduce non-native vegetation to the wilderness. Spreading the loose excelsior mulch by helicopter is the minimum required action that allows for timely accomplishment of the work prior to the fall rains and increased threat of erosion events. In addition, other less costly alternatives could not address the threats to life and property outside wilderness without causing adverse impacts to wilderness character.

Other alternatives were identified and analyzed but not selected for the following reasons:

Alternative 1 - Log Erosion Barriers, Alternative 2 - Excelsior wattles, Alternative 3 - Discontinuous contour trenches, Alternative 4 - Sand bags, Alternative 8 - Combination of log erosion barriers and loose excelsior spread by helicopter: These alternatives were not selected because of higher level and longer term adverse impacts to the Natural quality of wilderness character that would occur due to the excavation of trenches and (for Alternatives 1,2,4, 8) either cutting and placing logs to help mitigate erosion, or placing excelsior wattles or sand bags which are installations and negative impacts to the Undeveloped quality.

Alternative 5 - Straw mulch applied by helicopter: This alternative was not selected because, although an effective shorter term action, the weed free straw mulch may still contain non-native seed.

Alternative 7 - Seeding annual grasses: This alternative was not selected because the benefits of seeding would not be effective until the following growing season, too late to mitigation from rain events yet to come in the late summer and fall of this year.

A No Action alternative was identified but not analyzed. The analysis in Step 1 determined that action may be taken based on Section 4(d)(1) of the Wilderness Act and in Step 2 FS policy confirmed that action may be taken in wilderness when lives and property are threatened. The Burned Area Assessment, documented on Form FS-2500-8 Burned-Area Report, determined that there is a high and on-going risk to lives and property and that treatments designed to block or divert flow away from developed areas at or below the wilderness boundary will not, by themselves, be effective once a debris or mudflow begins at the source areas within wilderness. Some type of action is needed to address the problem at its source, in the wilderness.

All BAER activities will be implemented per guidance contained in the Interagency Burned Area Emergency Response Guidebook at: http://www.fws.gov/fire/ifcc/esr/Policy/es_handbook_2-7-06.pdf

Describe Monitoring & Reporting Requirements:

Ocular monitoring and walkthroughs will occur by forest and/or district staff.

Approvals

Which of the prohibited uses found in Section 4(c) of the Wilderness Act are approved in the selected alternative and for what quantity?

<u>Prohibited Use</u>	<u>Quantity</u>
<input type="checkbox"/> Mechanical Transport:	
<input type="checkbox"/> Motorized Equipment:	
<input type="checkbox"/> Motor Vehicles:	
<input type="checkbox"/> Motorboats:	
<input checked="" type="checkbox"/> Landing of Aircraft:	Approximately 400 air drops will be needed.
<input type="checkbox"/> Temporary Roads:	
<input type="checkbox"/> Structures:	
<input type="checkbox"/> Installations:	

Record and report any authorizations of Wilderness Act Section 4(c) prohibited uses according to agency policies or guidance.

Refer to agency policies for the following review and decision authorities:

Prepared	Name		Position	
	Signature		Date	
Recommended	Name		Position	
	Signature		Date	
Recommended	Name		Position	
	Signature		Date	
Approved	Name		Position	
	Signature		Date	

App		
-----	--	--