

**BLM CALIFORNIA POST-FIRE RECOVERY PLAN  
EMERGENCY STABILIZATION AND BURNED AREA  
REHABILITATION**

**PLAN TEMPLATE 2010**

**VALLEY FIRE (J3H8)**

**BLM CENTRAL CALIFORNIA DISTRICT**

**CALIFORNIA STATE OFFICE**

**FIRE BACKGROUND INFORMATION**

Fire Name	Valley
Fire Number	LFESJ3H80000 / LFBRJ3H80000
District/Field Office	CENTRAL CALIFORNIA DISTRICT
Admin Number	LLCAC00000
State	CALIFORNIA
County(s)	LAKE, NAPA, SONOMA
Ignition Date/Cause	09/12/2015 Under Investigation
Date Contained	10/06/2015
Jurisdiction	<i>Acres</i>
State	3985
BLM	1888
Other	102
Private	68948
DOD	1144
Total Acres	76067
Total Costs	\$79,000
Costs to LF2200000 (2822)	\$42,000
Costs to LF3200000 (2881)	\$37,000

**Status of Plan Submission** (check one box below)

X	Initial Submission of Complete Plan
	Updating or Revising the Initial Submission

	Amendment
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## **PART 1 - PLAN SUMMARY**

### **BACKGROUND INFORMATION ON FIRE.**

The Valley Fire began on September 12, 2015 at 1:24pm in the community of Cobb in Lake County, CA and was declared contained on October 15, 2015. The cause of the fire is still under investigation. California Department of Forestry and Fire (Cal Fire) was the lead agency on the fire.

The fire spread at an incredible rate, burning a total of 76,067 acres; of which approximately 40,210 acres were burned within the first 12 hours. The fire destroyed the majority of several communities including Anderson Springs, Middletown, Hidden Valley Lake, and many more. Of the 76,067 acres burned, 1,888 acres are BLM managed lands, 68,948 acres are private lands, 3,985 acres are state/county/city lands, 1,144 acres are managed by the US Army Corps of Engineers, and 102 acres of other federally managed lands.

After the fire was contained, a total of 1,958 structures were destroyed including; 1,280 homes, 27 multi-family structures, 66 commercial properties, and 585 other minor structures. The fire resulted in four firefighters suffering major injuries and four civilians deaths. President Obama declared a major disaster and the fire ranks as the third most destructive wildfire in California history.

BLM lands that were burned in the Valley Fire include the Geysers Management Area (The Geysers) that borders Lake and Sonoma Counties and scattered parcels within southern Lake County (see attachment - Acreage by Ownership). The Geysers area is comprised of approximately 37,000 acres, of which 7,100 acres are public land. The surface and mineral use are leased out to two main geothermal projects: Calpine and the Northern California Power Agency (NCPA). The Geysers are the largest and most productive geothermal field in the world and produce 46 percent of the total royalties from federal geothermal leases in California BLM. Of the fourteen Calpine power plants, five sustained major damage to their cooling towers and one had damage to outbuildings. The Geysers' Administrative Center (GAC) outbuilding had fire related damage. BLM lands within the Geysers will be rehabilitated outside of ESR funds, using Sundry Notices to accomplish the emergency stabilization and rehabilitation.

The BLM lands are located within the Myacamas Mountain range with elevations up to 4,700 feet and an annual precipitation of 80 inches with limited snow falling in the winter. The Geysers are located in both the Russian River Watershed, which drains directly into the Pacific Ocean and the Putah Creek Watershed, which drains into the Sacramento-Bay Delta before entering the Pacific Ocean. The primary plant communities on BLM lands within the fire perimeter consist primarily of conifer forests (douglas fir, ponderosa pine) and chaparral scrubland (chamise, toyon, yerba santa).

One of the primary concerns that will be addressed in this plan is the stabilization of slopes to prevent soil loss and possible debris flows from occurring and impacting neighboring

private lands. The winter of 2015-2016 is expected to see heavy rains in a large El Niño event. If the event occurs, slopes are vulnerable to erosion on debris flows that could impact neighboring private properties. Treating these designated slopes will help to minimize impacts caused by heavy rains and protect lives and private property.

## **LAND USE PLAN CONSISTENCY**

### **S6 - Soil Stabilization (Other than seedling, planting) ES Issue 1**

This treatment is in compliance with the Ukiah Field Office Resource Management Plan (RMP 2006) based on the following:

#### "Goals

- Maintain or improve soil health and fertility.
- Prevent or minimize soil erosion, compaction.
- Minimize and monitor the amount of suspended sediment entering the waterways within the planning area.

#### Objectives

- Reduce the possibility of mass wasting on unstable soils by avoiding uses and management activities in sensitive areas, when possible.
- Minimize the loss of topsoil, soil conditions, soil types, and their influence on a case-by-case basis." (RMP 2006 Sec. 2.18)

### **S10 - Tree Hazard Removal ES Issue 1**

This action is consistent with the 2006 Ukiah Field Office RMP. The RMP provides public safety management and interpretation.

Authority: 485 DM 1, 1.3 Policy: It is the policy of the Department to: A. Provide safe and healthful working conditions to protect employees and the visiting public from injuries/illnesses and property from accidental damage.

### **R6 - Soil Stabilization (Other than seedling, planting) BAR Issue 1**

The proposed treatments are in conformance with the Ukiah Field Office Resource Management Plan (RMP) as stated in Section 2.18 Soil Resources

#### "Goals

- Maintain or improve soil health and fertility.
- Prevent or minimize soil erosion, compaction.
- Minimize and Monitor the amount of suspended sediment entering the waterways within the planning area.

#### Objectives

- Reduce the possibility of mass wasting on unstable soils by avoiding uses and management activities in sensitive areas, when possible.
- Minimize the loss of topsoil, soil conditions, soil types, and their influence on a case-by-case basis."

# COST SUMMARY TABLES

## Emergency Stabilization (LF2200000)

Action/ Spec #	ES Issue #	Planned Action	Unit (Acres, WMs, Number)	# Units	Unit Cost (If Appl.)	FY 2016	FY 2017	FY 2018	FY 2019	Totals by Spec.
S1		Planning (Project Management)		0		\$6,000.00	\$0.00	\$0.00	\$0.00	\$6,000.00
S2										
S3										
S4										
S5										
S6	1	Soil Stabilization (Other than seedling, planting)	Acres	260	\$115.38	\$30,000.00	\$0.00	\$0.00	\$0.00	\$30,000.00
S7										
S8										
S9										
S10	1	Tree Hazard Removal	Acres	100	\$60.00	\$6,000.00	\$0.00	\$0.00	\$0.00	\$6,000.00
S11										
S12										
S13										
S14										
<b>TOTAL COSTS (LF2200000)</b>						<b>\$42,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$42,000</b>
<b>OTHER FUND CODE TOTALS:</b>										
TOTAL COSTS (???)										
TOTAL COSTS (???)										
TOTAL COSTS (???)										

## Burned Area Rehabilitation (LF3200000)

Action/ Spec #	BAR Issue #	Planned Action	Unit (Acres, WMs, Number)	# Units	Unit Cost (If Appl.)	FY 2016	FY 2017	FY 2018	FY 2019	Totals by Spec.
R1		Planning (Project Mgmt)		0		\$0.00	\$4,000.00	\$4,000.00	\$0.00	\$8,000.00
R2										
R3										
R4										
R5										
R6	1	Soil Stabilization (Other than seedling, planting)	Acres	260	\$110.77	\$0.00	\$15,000.00	\$14,000.00	\$0.00	\$29,000.00
R7										
R8										
R9										
R10										
R11										
R12										
R13										
R14										
<b>TOTAL COSTS (LF3200000)</b>						<b>\$0</b>	<b>\$19,000</b>	<b>\$18,000</b>	<b>\$0</b>	<b>\$37,000</b>
OTHER FUND CODE TOTALS:										
TOTAL COSTS (???)										
TOTAL COSTS (???)										
TOTAL COSTS (???)										

## **PART 2 - POST-FIRE RECOVERY ISSUES**

### **EMERGENCY STABILIZATION ISSUES**

#### **1 - Human Life and Safety**

In many areas, the Valley Fire burned rapidly and with great intensity, exposing large expanses of soil to future erosion events. Human life and safety may be put to risk in the area during storm events that can cause erosion and even landslides. Parcels located in the Cobb area (See Attachments - Valley Treatment Locations) are located on steep slopes close to residential areas. Slopes could wash out into adjacent private lands and neighborhoods if a large enough rain event occurs. This could lead to the loss of property or create safety hazards for local residents who are currently in the process of rebuilding homes and structures lost in the fire.

Multiple abandoned mercury mines are located throughout the Myacamas Range. The Contact Mine is located immediately adjacent to the southwestern perimeter of the fire in Sonoma County (See Attachments - Valley Treatment Locations). Though the mine was not burned, the land upslope of the mine was burned and lost significant vegetation. Without vegetation and ground cover, there is the potential for larger amounts of water to enter the mine site at a higher velocity. In 2011, mine reclamation work was completed to cover mercury and other mine wastes with a cap to prevent the wastes from being exposed to erosion forces and entering the watershed. Mercury becomes potentially dangerous when it enters waterways and is converted into methylmercury, which is easily absorbed into invertebrates and fish and bioaccumulates in the food chain. Erosion control and ground cover will need to be placed in order to protect the mine from slope failure and prevent the addition of mercury and other wastes from entering the watershed and potentially affecting the drinking water supply.

The fire occurred in an area that is dominated by larger timber trees, such as, douglas fir (*Pseudotsuga menziesii*), ponderosa pine (*Pinus ponderosa*), and sugar pine (*Pinus lambertiana*). With many of these large trees being damaged or destroyed in the fire, they are more susceptible to falling or losing limbs. Trees will need to be removed in order to protect people on BLM from these falling hazards. Some trees will be salvaged logged, however, this will occur outside of ES&R.

#### **2 - Soil/Water Stabilization**

N/A

#### **3 - Habitat for Federal/State Listed, Proposed, or Candidate Species**

N/A

#### **4 - Critical Heritage Resources**

N/A

#### **5 - Invasive Plants and Weeds**

N/A

### **BURNED AREA RECOVERY ISSUES**

#### **1 - Lands Unlikely to Recover Naturally**

An assessment of the burned area will need to be conducted in the late summer, one year after the fire to determine vegetation die off and plan for additional soil stabilization. Soil stabilization treatments that occurred during the ES phase in year one will be analyzed for success; if treatments failed, additional treatments might be needed to ensure slope stability. Areas that cannot recover naturally are more susceptible to erosion and plant community alterations. These areas will need to be inventoried and monitored in order to determine if additional treatments for soil stabilization and native plant regrowth will be needed. This will help to ensure the safety of neighboring residents and their property as well as provide for a functioning and healthy ecosystem.

#### **2 - Weed Treatments**

N/A

#### **3 - Tree Planting**

N/A

#### **4 - Repair/Replace Fire Damage to Minor Facilities**

N/A

## **PART 3 - DESCRIPTION OF TREATMENTS**

### **Issue 1 - Human Life and Safety**

#### ***S6 Soil Stabilization (Other than seedling, planting)***

##### **A. Treatment/Activity Description**

The treatment will consist of the placement of various erosion control structures on parcels that, if slope failure occurs, will have negative and potential harmful affects to life and property. Three parcels are located near the town of Cobb. All had houses and structures downslope from BLM. Erosion control structures such as wattles and certified weed free straw will be placed on the slopes to assist with soil stabilization. Trees that are cut for hazard removal will be either placed and anchored on slope contours to act in a similar manner as wattles or will be chipped and spread over the ground to help protect bare soil from raindrop erosion and slope water velocity.

One parcel located on the western edge of the Valley Fire perimeter is in need of erosion to protect an abandoned mercury mine (Contact Mine) located immediately down slope from the burn area. Wattles, straw, and slash will be used to help slow water velocity as it enters the mine.

See attachments, "Valley Fire Treatments Location" for the location of soil stabilization treatments.

##### **B. How does the treatment relate to damage or changes caused by the fire?**

The fire exposed bare mineral soil to erosion factors such as rain events. Placing straw, slash, or wood chips on the soil will help to slow water velocity and prevent erosion from rain impacts. Placing wattles or downed trees on the slopes will help to hold the soil in place and slow water velocity. Placing erosion control on slopes immediately adjacent to mercury mines will help to slow water that could damage the cap covering mining wastes, thus preventing/limiting the release of mercury into the watershed.

##### **C. Why is the treatment/activity reasonable, within policy, and cost effective?**

These activities are essential in implementing the stabilization effort. The treatment is worthy of the investment and expense to assure that soil loss can be reduced by slowing sediment flow with the use of erosion control structures. By using slash and trees that are already on site, costs for other erosion control structures, such as straw, will be significantly lowered as less material will need to be purchased. Protecting rehabilitated mercury mines will help to prevent the addition of mercury and other mine related wastes from entering the watershed and harming the public. By slowing the velocity of water flowing into the area, large scale erosion can be prevented, saving greater amounts of money that will need to be used to fix

the damage caused by erosion and prevent additional mine wastes from entering the waterways.

### ***S10 Tree Hazard Removal***

#### **A. Treatment/Activity Description**

Trees damaged or killed by the fire that are hazardous to human safety will be identified and removed along frequently traveled roads and steep slopes where there is the potential for the downed logs to roll down hills into private lands. Trees will be evaluated using the USFS Hazard Tree Rating system (in attachments under the same name) and flagged for removal by a certified arborist. Trees will be felled by BLM or BLM supervised crews. Felled trees will be recorded and left to aid in erosion control.

#### **B. How does the treatment relate to damage or changes caused by the fire?**

Due to the fire, hazard trees pose an immediate threat to human safety due to structural damage of trees that could result in injury or death. Removal of these trees will eliminate health and safety hazards.

#### **C. Why is the treatment/activity reasonable, within policy, and cost effective?**

Removal of hazard trees is reasonable to eliminate potential risk to human life and property. Using BLM crews and volunteers is cost effective due to minimal costs and supplies. It is BLM policy to reduce risks to human life.

### **Issue 1 - Lands Unlikely to Recover Naturally**

#### ***R6 Soil Stabilization (Other than seedling, planting)***

#### **A. Treatment/Activity Description**

Treatments put in place in the first year will be assessed for damage and success of slope stabilization. If they have failed and erosion occurred, the erosion control structures will be repaired or replaced. Areas in which no erosion control measures were taken and damage has occurred after the first winter will be analyzed to determine if erosion control needs to be placed to protect resources. Methods used to prevent erosion will be the same as those mentioned in ES Issues 1.

#### **B. How does the treatment relate to damage or changes caused by the fire?**

The fire exposed bare mineral soil to erosion factors such as rain events. Placing straw, slash, or wood chips on the soil will help to slow water velocity and prevent erosion from rain

impacts. Placing wattles or downed trees on the slopes will help to hold the soil in place and slow water velocity. Placing erosion control on slopes immediately adjacent to mercury mines will help to prevent the release of mercury and other mine wastes into the watershed. The treatments used will slow runoff, reducing the effects of water erosion, thereby limiting soil loss and excessive sediment deposits off site.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

These activities are essential in implementing the stabilization effort. The treatment is worthy of the investment and expense to assure that soil loss can be reduced by slowing sediment flow with the use of erosion control structures. By using slash and trees that are already on site, costs for other erosion control structures, such as straw, will be significantly lowered as less material will need to be purchased. Protecting rehabilitated mercury mines will help to prevent the addition of mercury and other mine related wastes from entering the watershed and harming the public. By slowing the velocity of water flowing into the area, large scale erosion can be prevented, saving greater amounts of money that will need to be used to fix the damage caused by erosion and prevent additional mine wastes from entering the waterways.

## **PART 4 - DETAILED TREATMENT COST TABLE**

Action / Spec #	Action Description	Unit Type	# Units	Unit Cost	FY16	FY17	FY18	FY19	Total Cost
<b>S1</b>	<b>Planning (Project Management)</b>								
1	BLM Project Coordination	Hours	120	\$50.00	\$6,000.00	\$0.00	\$0.00	\$0.00	\$6,000.00
	<b>Total</b>			<b>\$50.00</b>	<b>\$6,000.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$6,000.00</b>
<b>S6</b>	<b>Soil Stabilization (Other than seedling, planting) ES Issue 1</b>								
1	Erosion Control Structures	Acres	100	\$150.00	\$15,000.00	\$0.00	\$0.00	\$0.00	\$15,000.00
2	Labor	Weeks	2	\$10,000.00	\$15,000.00	\$0.00	\$0.00	\$0.00	\$15,000.00
	<b>Total</b>			<b>\$10,150.00</b>	<b>\$30,000.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$30,000.00</b>
<b>S10</b>	<b>Tree Hazard Removal ES Issue 1</b>								
1	BLM Labor	Hours	40	\$50.00	\$2,000.00	\$0.00	\$0.00	\$0.00	\$2,000.00
2	Certified Arborist	Hours	40	\$100.00	\$4,000.00	\$0.00	\$0.00	\$0.00	\$4,000.00
	<b>Total</b>			<b>\$150.00</b>	<b>\$6,000.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$6,000.00</b>
<b>ES</b>	<b>Grand Total</b>			<b>\$10,350.00</b>	<b>\$42,000.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$42,000.00</b>
Action / Spec #	Action Description	Unit Type	# Units	Unit Cost	FY16	FY17	FY18	FY19	Total Cost
<b>R1</b>	<b>Planning (Project Mgmt)</b>								
1	BLM Project Coordination	Hours	160	\$50.00	\$0.00	\$4,000.00	\$4,000.00	\$0.00	\$8,000.00
	<b>Total</b>			<b>\$50.00</b>	<b>\$0.00</b>	<b>\$4,000.00</b>	<b>\$4,000.00</b>	<b>\$0.00</b>	<b>\$8,000.00</b>
<b>R6</b>	<b>Soil Stabilization (Other than seedling, planting) BAR Issue 1</b>								
1	Erosion Control	Acres	40	\$150.00	\$0.00	\$3,000.00	\$3,000.00	\$0.00	\$6,000.00
2	Labor	Weeks	2	\$10,000.00	\$0.00	\$10,000.00	\$10,000.00	\$0.00	\$20,000.00
3	BLM Labor - Treatment Monitoring	Hours	56	\$50.00	\$0.00	\$2,000.00	\$800.00	\$0.00	\$2,800.00
	<b>Total</b>			<b>\$10,200.00</b>	<b>\$0.00</b>	<b>\$15,000.00</b>	<b>\$14,000.00</b>	<b>\$0.00</b>	<b>\$29,000.00</b>
<b>BAR</b>	<b>Grand Total</b>			<b>\$10,250.00</b>	<b>\$0.00</b>	<b>\$19,000.00</b>	<b>\$18,000.00</b>	<b>\$0.00</b>	<b>\$37,000.00</b>
<b>Project</b>	<b>Grand Total</b>			<b>\$20,600.00</b>	<b>\$42,000.00</b>	<b>\$19,000.00</b>	<b>\$18,000.00</b>	<b>\$0.00</b>	<b>\$79,000.00</b>

**PART 5 - SEED LISTS**

**DRILL SEED**

**AERIAL SEED**

**SEEDLINGS**

Seedling Species	Scientific Name	Acres of Seedlings planted.	# of Seedlings per Acre	Total # of Seedlings	Cost / Seedling	Total Cost
TOTALS:		0.0	0	0		\$ 0.00

## **PART 6 - NATIVE/NON-NATIVE PLANT WORKSHEET**

### **A. Proposed Native Plants in Seed Mixtures (Both ES & BAR Treatments)**

**1. Are the native plants proposed for seeding adapted to the ecological sites in the burned area?**

Yes  No  Rationale:

N/A. Planting will not be a treatment for ES & BAR.

**2. Is seed or seedlings of native plants available in sufficient quantity for the proposed project?**

Yes  No  Rationale:

N/A. Planting will not be a treatment for ES & BAR.

**3. Is the cost and/or quality of the native seed reasonable given the project size and approved field unit management and Plan objectives?**

Yes  No  Rationale:

N/A. Planting will not be a treatment for ES & BAR.

**4. Will the native plants establish and survive given the environmental conditions and the current or future competition from other species in the seed mix or from exotic plants?**

Yes  No  Rationale:

N/A. Planting will not be a treatment for ES & BAR.

**5. Will the existing or proposed land management practices (e.g. wildlife populations, recreation use, livestock, etc.) maintain the seeded native plants in the seed mixture when the burned area is re-opened?**

Yes  No  Rationale:

N/A. Planting will not be a treatment for ES & BAR.

### **B. Proposed Non-native Plants in Seed Mixtures (Both ES & BAR Treatments)**

**1. Is the use of non-native plants necessary to meet objectives, e.g., consistent with applicable approved field unit management plans?**

Yes  No  Rationale:

N/A. Planting will not be a treatment for ES & BAR.

**2. Will non-native plants meet the objective(s) for which they are planted without unacceptably diminishing diversity and disrupting ecological processes (nutrient cycling, water infiltration, energy flow, etc.) in the plant community?**

Yes  No  Rationale:

N/A. Planting will not be a treatment for ES & BAR.

**3. Will non-native plants stay on the site they are seeded and not significantly displace or interbreed with native plants?**

Yes  No  Rationale:

N/A. Planting will not be a treatment for ES & BAR.

**C. Proposed Seed Species - Native & Non-Natives (Both ES & BAR Treatments)**

**PART 7 - COST-RISK ANALYSIS**

**A. Probability of Treatments Successfully Meeting Objectives**

<b>Action/ Spec #</b>	<b>ES Issue #</b>	<b>Planned ES Action (LF2200000)</b>	<b>Unit (acres, WMs, Number)</b>	<b># Units</b>	<b>Total Cost</b>	<b>% Probability of Success</b>
S6	1	Soil Stabilization (Other than seedling, planting)	Acres	260	\$30,000.00	75%
S10	1	Tree Hazard Removal	Acres	100	\$6,000.00	100%
					<b>\$36,000.00</b>	
<b>Action/ Spec #</b>	<b>BAR Issue #</b>	<b>Planned BAR Action (LF3200000)</b>	<b>Unit (acres, WMs, Number)</b>	<b># Units</b>	<b>Total Cost</b>	<b>% Probability of Success</b>
R6	1	Soil Stabilization (Other than seedling, planting)	Acres	260	\$29,000.00	75%
					<b>\$29,000.00</b>	

## B. Cost Risk Summary

1. Are the risks to natural resources and private property acceptable as a result of the fire if the following actions are taken?

Proposed Action Yes  No  Rationale for Answer:

There is a slight risk to private property if the following actions are taken due to the predicted heavy rain El Niño occurring this winter. However, implementing soil erosion treatments will significantly lower the risk of debris flow that could damage adjacent private property and injure residents.

No Action Yes  No  Rationale for Answer:

Implementing no action would create an un-acceptable risk to human safety and private property. By not providing any stabilization work to the burn areas, there is a high chance of debris flows damaging to surrounding private lands. If hazard trees are not removed, there is the likelihood that limbs or entire trees could fall and roll down hills, damaging property and injuring local residents.

Alternative(s) Yes  No  Rationale for Answer:

An alternative was discussed to include stabilization on BLM within the Geysers, however, it was determined that as the area is closed to the public, other funding sources will be used to provide stabilization in that area.

2. Is the probability of success of the proposed action, alternatives or no action acceptable given their costs?

Proposed Action Yes  No  Rationale for Answer:

The probability of success is high given their costs. Methods for erosion control include using as much material from on site to help aid in slope stabilization. By using this material on site, costs for materials that have to be purchased will be significantly less as fewer materials will also have to be purchased. Implementation of the treatments will utilize volunteers or workers funded through separate programs to place the treatments. Protecting visitors on public lands and residents living next to or near public lands from hazards created

from the fire is an acceptable use of costs to ensure safety of the public.

No Action Yes  No  Rationale for Answer:

It is not expected that there would be an immediate monetary cost associated with no action, but there would be an increased likelihood of damage to adjacent private properties. With no action, predicted heavy rains will have a large impact on the soils in the burned area. Ground that was once covered with vegetation and plant litter is now fully exposed to storm events, leading to a higher probability of debris flow. Repairing landslides and erosion once they have occurred is generally more difficult and costly than preventing debris flows initially.

Alternative(s) Yes  No  Rationale for Answer:

An alternative was discussed to include stabilization on BLM within the Geysers, however, it was determined that as the area is not open to the public, other funding sources will be used to provide stabilization in that area.

3. Which approach will most cost-effectively and successfully attain the objectives and therefore is recommended for implementation from a Cost/Risk Analysis standpoint?

Proposed Action

Alternative(s)

No Action

Comments:

The proposed action is the best solution for implementation of this project. The treatments will be able to protect the public from safety hazards and debris flows while using the most cost-effective solutions available to achieve this goal. Without implementation of these treatments, damage could occur that would ultimately cost more to repair than would cost to implement these treatments immediately.

### C. Risk of Resource Value Loss or Damage

#### No Action - Treatments not Implemented

Resource Value	N/A	None	Low	Med	High
Unacceptable Loss of Topsoil					X
Weed Invasion	X				
Unacceptable Loss of Vegetation Diversity	X				
Unacceptable Loss of Vegetation Structure	X				
Unacceptable Disruption of Ecological Processes				X	
Off-site Sediment Damage to Private Property					X
Off-site Threats to Human Life					X
Other-loss of Access Road Due to Plugged Culverts				X	

#### Proposed Action - Treatments Successfully Implemented

Resource Value	N/A	None	Low	Med	High
Unacceptable Loss of Topsoil			X		
Weed Invasion					
Unacceptable Loss of Vegetation Diversity					
Unacceptable Loss of Vegetation Structure					
Unacceptable Disruption of Ecological Processes			X		
Off-site Sediment Damage to Private Property			X		
Off-site Threats to Human Life			X		
Other-loss of Access Road Due to Plugged Culverts			X		

## **PART 8 - MONITORING PLAN**

### **S6 - Soil Stabilization (Other than seedling, planting) - ES Issue 1**

#### **Identify the objective of the treatment:**

The objective of the treatment is to stabilize slopes on BLM parcels that are adjacent to private lands and abandoned mines. This will help to ensure the safety of life and property in neighboring private lands and help to prevent the release of mercury and mining waste into watersheds where the wastes can get into drinking water.

#### **Describe how implementation will be monitored:**

Implementation of erosion control treatments will be monitored by Ukiah BLM staff. BLM staff will visit the treatment sites a minimum of twice a year to assess the success or failure of erosion control treatments.

#### **Describe how effectiveness will be monitored, how it will be measured, and within what time period:**

Effectiveness will be monitored using repeat photo monitoring. If treatments failed, they will be repaired or replaced. Indicators such as the amount of sediment leaving a treatment site and erosion features that formed after the implementation of the treatments will be used as criteria of success or failure. Issues that have developed will be analyzed to determine if additional treatments are needed to protect human health and safety. These sites will be monitored from the first rains in the fall of 2016 until 2018.

### **S10 - Tree Hazard Removal - ES Issue 1**

#### **Identify the objective of the treatment:**

The objective of this treatment is to remove all hazardous trees and tree material in the BLM parcels located near private property, residences, and treatment work areas. Some of the felled trees will be placed on slopes to assist with erosion control and slowing water velocity.

#### **Describe how implementation will be monitored:**

Project treatment will be monitored during the tree removal by each Crew Boss after an initial project briefing. Photos will be taken before and after removal to monitor treatment.

#### **Describe how effectiveness will be monitored, how it will be measured, and within what time period:**

Effectiveness will be monitored by BLM staff once treatment has been completed. BLM staff will monitor areas of concern to inspect proper tree removal and ensure all hazardous trees have been successfully removed.

## **R6 - Soil Stabilization (Other than seedling, planting) - BAR Issue 1**

### **Identify the objective of the treatment:**

See ES Issue 1 - Soil Stabilization in the Monitoring Plan.

### **Describe how implementation will be monitored:**

See ES Issue 1 - Soil Stabilization in the Monitoring Plan.

### **Describe how effectiveness will be monitored, how it will be measured, and within what time period:**

See ES Issue 1 - Soil Stabilization in the Monitoring Plan.

## **PART 9 - MAPS**

1. - Debris Flow Hazards 100 Year Storm
2. - Soil Stabilization Treatments
3. - Land Ownership Map
4. - Fire History Map

## **PART 10 - REVIEW, APPROVALS, and PREPARERS**

### **TEAM MEMBERS**

<b>Position</b>	<b>Team Member (Agency/Office)</b>	<b>Initial</b>	<b>Date</b>
Team Leader	Molly Nilsson (BLM Ukiah)		10/26/2015
Rangeland Mgt. Specialist	Briana Halstead (BLM Ukiah)		10/26/2015

### **PLAN APPROVAL**

The Agency Administrator is responsible for developing, implementing, and evaluating emergency stabilizations and rehabilitation plans, treatments and activities. 620 DM 3.5C

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FIELD OFFICE MANAGER

DATE

### **FUNDING APPROVAL**

The funding of ES treatments is approved through the appropriate administrative approval level in coordination with the National Office Budget Shop. As funding is available, ES funding requested within a plan that totals below \$100,000 may be approved by the State Director, while ES funding of \$100,000 and above must be approved by the WO. If the ES funding cap is reached, all ES funding will be approved through the National Office in coordination with State ES&R Coordinators to determine highest priority projects. Funding of all BAR treatments is accomplished through a scoring process and is dependent on accurate entries into NFPORS. All funding is approved and allocated on a year-by-year basis.