



**U.S. Department of the Interior  
Bureau of Land Management**



**Elko Field Office  
3900 E. Idaho Street  
Elko, NV 89801**

**September 2004**

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## **ELKO AND WELLS RESOURCE MANAGEMENT PLANS**

# **APPROVED FIRE MANAGEMENT AMENDMENT AND DECISION RECORD**



Cross Ranch Prescribed Burn, Elko County, NV

Photo by Mark Coca

## MISSION STATEMENT

The Bureau of Land Management is responsible for the stewardship of our public lands. It is committed to manage, protect, and improve these lands in a manner to serve the needs of the American people for all times. Management is based upon the principles of multiple use and sustained yield of our nations resources within the framework of environmental responsibility and scientific technology. These resources include recreation, rangelands, timber, minerals, watershed, fish and wildlife, wilderness, air and scenic, scientific and cultural values.



## United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
Elko Field Office  
3900 East Idaho Street  
Elko, Nevada 89801  
<http://www.nv.blm.gov>



In Reply Refer To:  
1610/9210 (NV-010)  
SEP 29 2004

Dear Reader:

Enclosed is the *Approved Elko and Wells Resource Management Plans Fire Management Amendment and Decision Record*. The amended resource management plans cover public lands in northeastern Nevada that are administered by the Bureau of Land Management, Elko Field Office. This document summarizes and completes the planning process for this planning action. The amendment incorporates current direction for responding to wildfires and using fire to achieve resource management objectives.

This document contains two parts. Part 1 is the Decision Record and Part 2 is the Fire Management Amendment, as it was approved by the State Director on September 29, 2004.

An environmental assessment on the proposed amendment was prepared and circulated for public review and comment on October 14, 2003. Based on the assessment, the State Director determined that the proposed plan will not result in significant impacts to the human environment. No substantive changes to the plan amendment resulted from review of the proposed amendment. Therefore, the approved amendment is essentially the same as the proposed action alternative, as it was described and analyzed in the environmental assessment.

Copies of this document, and the proposed amendment and environmental assessment, are available upon request to the Elko Field Office, at the letterhead address. The documents may be also viewed from the Elko Field Office webpage at [www.nv.blm.gov/elko](http://www.nv.blm.gov/elko). All interested parties on the distribution list for this planning action are being mailed copies.

For additional information, please contact Joe Freeland, Fire Management Officer at the Elko Field Office, telephone 775-753-0200. Thank you for your interest in fire management on public lands in northeastern Nevada.

Sincerely,

Helen M. Hankins  
Field Manager

Enclosure  
As Stated Above

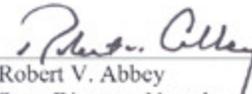
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**ELKO AND WELLS RESOURCE MANAGEMENT PLANS**

**APPROVED  
FIRE MANAGEMENT AMENDMENT  
AND  
DECISION RECORD**

Prepared by  
Department of the Interior  
Bureau of Land Management  
Elko Field Office  
[www.nv.blm.gov/elko](http://www.nv.blm.gov/elko)

**Approved:**

  
\_\_\_\_\_  
Robert V. Abbey  
State Director, Nevada

Date 9-29-04

This document outlines the approved amendment to the 1987 Elko Resource Management Plan and 1985 Wells Resource Management Plan for fire management. It covers lands administered by the Bureau of Land Management, Elko Field Office, in northeastern Nevada. The planning area is in Elko County and portions of Eureka and Lander counties. The approved plan amendment provides direction consistent with current policies of the 2001 "Review and Update of the Federal Wildland Fire Management Policy and Program Review." It provides for an integrated approach for responding to wildfires, rehabilitating burned areas, and reducing hazardous fuels loads. The plan incorporates applicable procedures for the protection of resources and uses, consistent with meeting objectives of the resource management plans.

For further information contact: Joe Freeland, Fire Management Officer, Bureau of Land Management, 3900 East Idaho Street, Elko, NV 89801, telephone (775) 753-0200.

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# TABLE OF CONTENTS

Title Cover Sheet	
Introduction.....	1
<u>Figure 1</u> : Planning Area Map.....	2
<b>Part 1 Decision Record</b>	
1.1. Major Decisions .....	1
<u>Table 1.1</u> : Extent of Fire Management Categories and Polygons .....	4
<u>Figure 2</u> : Fire Management Categories and Polygons Map .....	5
1.2. Alternatives.....	6
<u>Table 1.2</u> : Alternative Comparison .....	6
1.3 Rationale .....	7
1.4 Compliance and Monitoring.....	8
1.5 Public Involvement.....	8
1.6 Approval.....	10
<b>Part 2 Fire Management Amendment</b>	
2.1. Management Actions .....	11
2.1.1 General Fire Management Component .....	11
<u>Table 2.1</u> : FMC-- Polygon Types (acres) .....	13
2.1.2 Fire Prevention Component .....	13
<u>Table 2.2</u> : Fire Prevention Activities .....	15
2.1.3 Fire Response Component .....	17
<u>Table 2.3</u> : Fire Response Strategies .....	18
2.1.4 Fire Rehabilitation Component .....	20
2.2. Standard Operating Procedures .....	23
<b>Appendices</b>	
<u>Appendix 1</u> Fire Management Category and Polygon Descriptions (15 pages) .....	A1-1
<u>Appendix 2</u> Standard Operating Procedures (22 pages).....	A2-1
Part A – SOPs for Species Protection.....	A2-1
Part B – Fire Management Guidelines for Sage Grouse .....	A2-15
Part C – SOPs for Fire Management in Aspen and Cottonwood Stands .....	A2-17
Part D – SOPs for Cultural Resource Protection .....	A2-19
Part E – SOPs for Fire Management in Mining Areas.....	A2-21
<b>Acronyms (Back Cover)</b>	

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# ELKO AND WELLS RESOURCE MANAGEMENT PLANS

## APPROVED FIRE MANAGEMENT AMENDMENT AND DECISION RECORD

### INTRODUCTION

This amendment to the 1987 Elko and 1985 Wells resource management plans (RMPs) provides direction for the management of fire on public lands in northeastern Nevada that are administered by Bureau of Land Management (BLM), Elko Field Office (*see map*, Figure 1). The 1987 Elko RMP planning area covers the western portion, and the 1985 Wells RMP planning area covers the eastern portion, of the Elko district. Almost 11 million acres of public and private lands are in the combined areas.

The plan amendment was prepared under the regulations implementing the Federal Land Policy and Management Act of 1976 (43 CFR part 1600) and the National Environmental Policy Act of 1969 (40 CFR parts 1500-1509). This includes completion of the *Proposed Elko/Wells Resource Management Plans Fire Management Amendment and Environmental Assessment* (Proposed FMA/EA, BLM/EK/PL-2003/026-1610/9211) in October 2003, which is incorporated by reference. This document and the Proposed FMA/EA is available to the public upon request to the Elko Field Office, and is posted on their website at <http://www.nv.blm.gov/elko>.

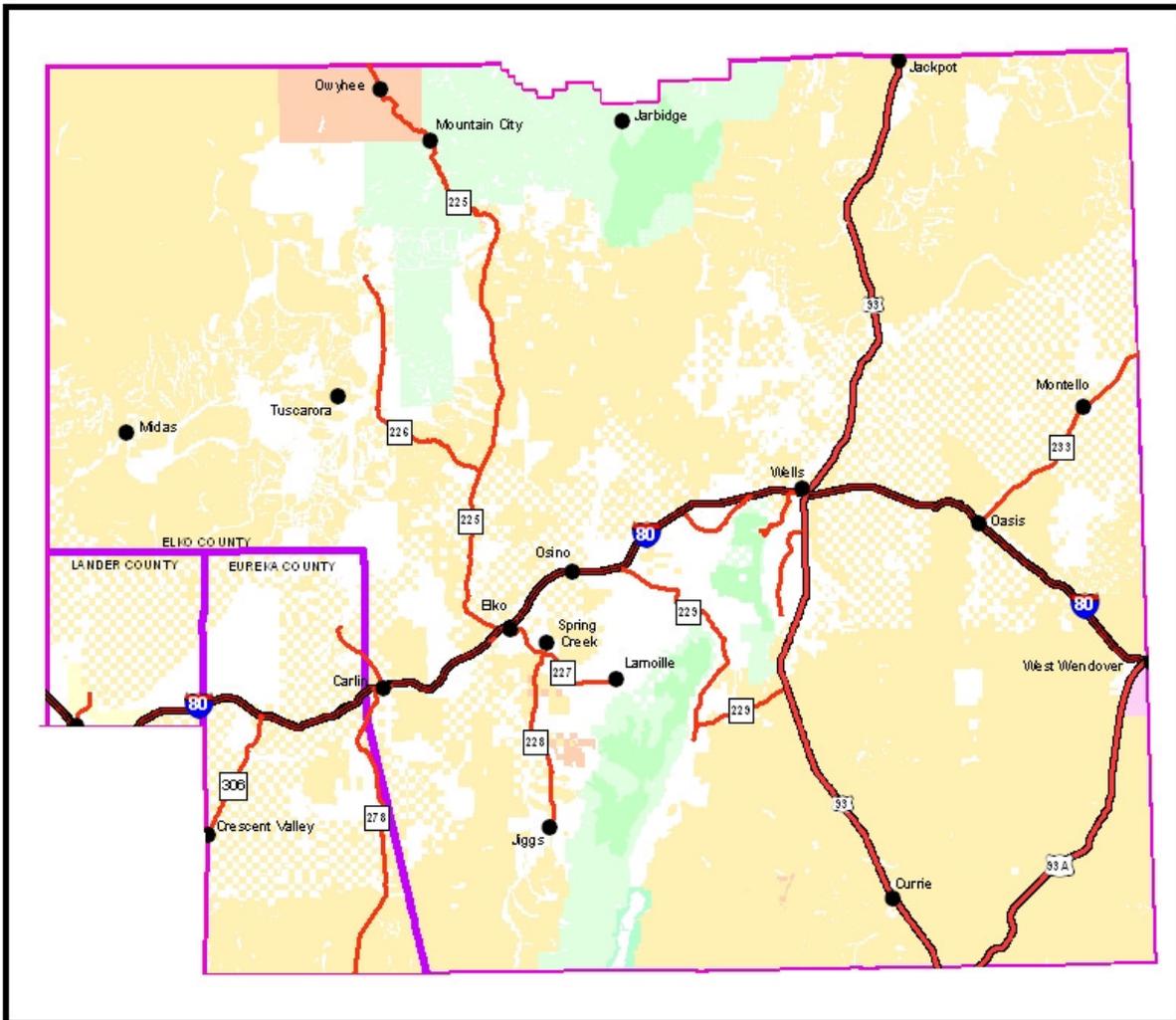
### PART 1 -- DECISION RECORD

The decision is hereby made to approve the *Elko and Wells Resource Management Plans Fire Management Amendment* (FMA), as provided in Part 2 of this document. The approved FMA is nearly identical to the Proposed Action alternative, as it was described and analyzed in the October 2003 Proposed FMA/EA.

#### 1.1 Major Decisions

The following four components embrace the strategies for fire management on public lands in the Elko district that are administered by the Elko Field Office.

- **General Fire Management:** Follow general guidance of this FMA and other guiding documents to protect and maximize the safety of fire operational personnel and the public, achieve resource management objectives and improve the long-term management of fire.



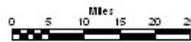
**Figure 1 - Elko and Wells Resource Management Plans  
Fire Management Amendment**

- |                       |                                     |
|-----------------------|-------------------------------------|
| Public (Admin by BLM) | Native American Reservation         |
| Bureau of Reclamation | Private                             |
| Department of Defense | U.S. Forest Service                 |
| Department of Energy  | U.S. Forest Service Wilderness Area |
|                       | U.S. Fish & Wildlife Service        |



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Data is published in the  
NORTH AMERICAN DATUM 1983 (NAD83)  
UNIVERSAL TRANSVERSE MERCATOR (UTM)  
Zone 11, Meters

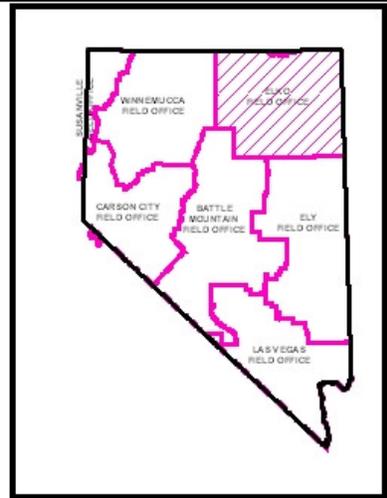


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- **Fire Prevention:** Use prescribed burning, mechanical, chemical and biological (including grazing) treatments to reduce wildfire fuel hazards. Annual target acreage levels to reduce hazardous fuels are 24,000 to 60,000 acres.
- **Fire Response:** Responses to wildfires should be maximized in most areas and still provide the flexibility and range of options available to managers to appropriately use fire to meet long-term resource management objectives.
- **Fire Rehabilitation:** Conduct fire rehabilitation activities to emulate historic or pre-fire ecosystem structure, functioning, diversity and to restore a healthy stable ecosystem.

BLM's General Fire Management framework and strategy is represented by four Fire Management Categories (FMCs A through-D). Activities described for the prevention, response and rehabilitation components may be applicable to other components. For example, some actions described in the fire prevention component may be equally applicable to suppression activities in the fire response component.

*FMC A – Full Suppression.* This strategy for maximum suppression activity applies to areas where wildland fire is not desired at all. These include the urban interface, active mining operations, oil and gas fields, recreation sites, critical watersheds, and areas of significant weed infestation. Fuels reduction activities are acceptable, but prescribed fire opportunities will be limited due to the close proximity of structures and improvements.

*FMC B – High Suppression.* This category applies to areas where wildfire is likely to cause negative effects, but these effects could be mitigated or avoided through fuels management, prescribed fire or other strategies. The strategy includes a less strict acreage guideline than FMC A and vegetative treatments to reduce fuel loading as a management technique to a greater degree than in FMC A. Unplanned ignitions will be managed using the most appropriate and cost-effective suppression response based on threats to life, safety, structures, developments and other resource values. Where streams, riparian areas, or watersheds exist that provide habitat for federally listed threatened, endangered, or candidate species, suppression tactics will include appropriate standard operating procedures (SOPs) for species protection, except when a threat to human life exists. Mechanized equipment use will be consistent with applicable guidelines, including current guidelines for sage grouse and sagebrush ecosystems.

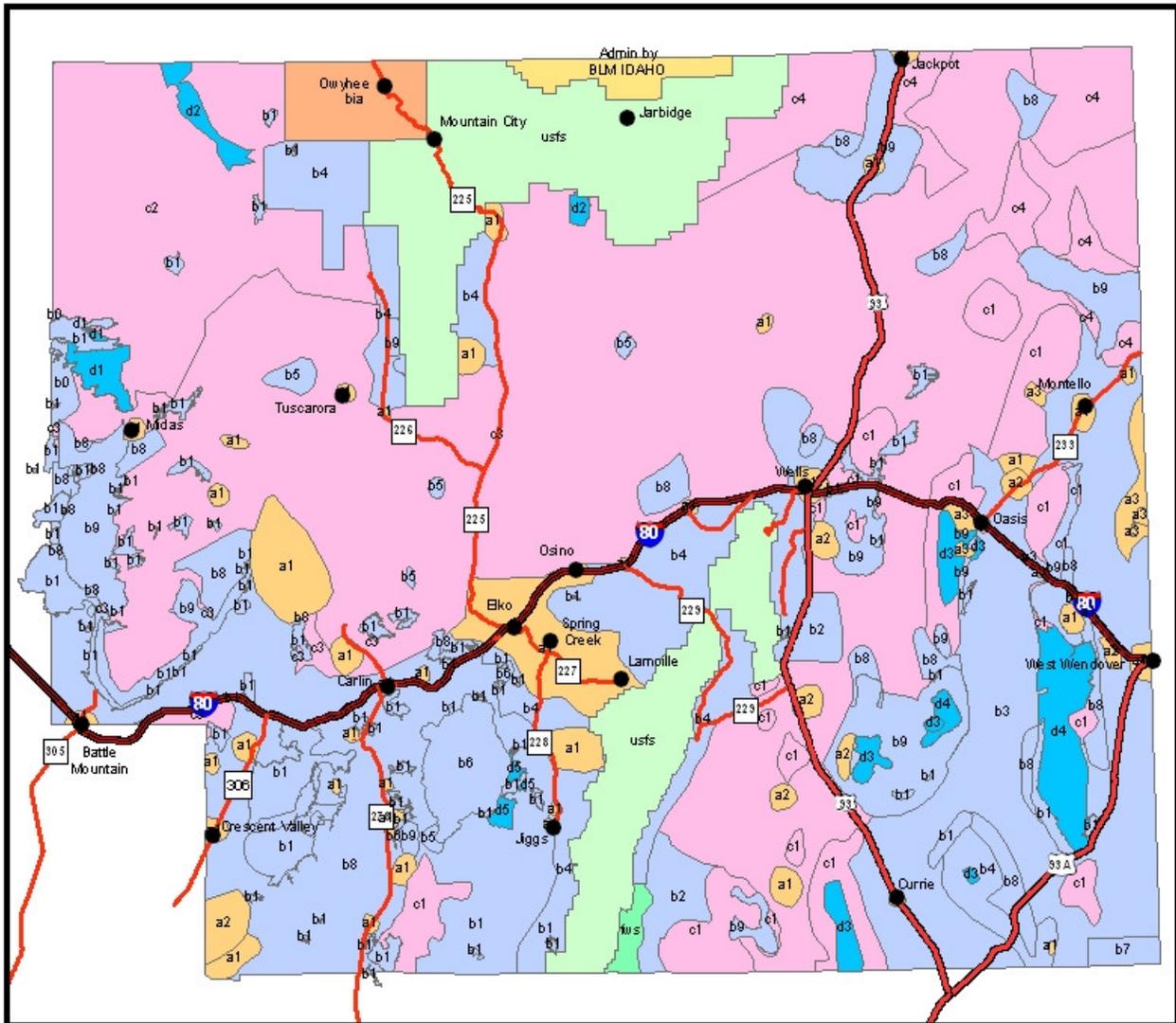
*FMC C – Moderate Suppression.* This applies to areas where fire may be desirable to manage ecosystems, but where various factors place constraints on fire use for resource benefit. These areas may have larger acreage guidelines than FMC B and can include increased use of vegetation manipulation. Unplanned ignitions will be managed using the most appropriate and cost-effective suppression response based on threats to life, safety, structures, developments, and other resource values. Where streams, riparian areas, or watersheds exist that provide habitat for federally listed threatened, endangered, or candidate species, suppression tactics will include appropriate SOPs for species protection, except when a threat to life exists. Mechanized equipment use will be consistent with applicable guidelines, such as for sage grouse and sagebrush ecosystems.

*FMC D – Limited Suppression.* This strategy applies to areas where fire is desired under various environmental conditions and there are few constraints associated with resources or social, economic or political considerations. These areas will receive the least level of suppression, some level of fire use for resource benefit and can include the extensive use of prescribed fire. Mechanized equipment use will be consistent with applicable guidelines, including the Interim Management Policy for Lands under Wilderness Review. For the Elko Field Office these areas would be limited to Wilderness Study Areas (WSAs) and the Cherry Creek Range.

The FMCs are further subdivided into 21 polygon types to provide resource management direction for specific areas. Descriptions of each polygon type are in Appendix 1, and further refine the general strategy for specific areas based on resource value, vegetative response, potential for invasive weeds and public safety. Table 1.1 below summarizes the acres and percent composition of the polygons, as they were mapped for this FMA (Figure 1).

**Table 1.1  
Extent of Fire Management Categories and Polygons\***

<b>Map Label</b>	<b>FMC and Polygon Name</b>	<b>Acres</b>	<b>% of Area</b>	<b>Subtotal Acres</b>
	<b>FMC A –(Full Suppression)</b>		<b>6%</b>	<b>627,809</b>
A-1	Urban Interface/ Mining/ Development Areas	497,725	4.5	
A-2	Cultural Sites, Historic and Protohistoric	79,654	0.7	
A-3	Municipal Watersheds	50,430	0.5	
	<b>FMC B (High Suppression)</b>		<b>40%</b>	<b>4,331,234</b>
B-1	District-wide Areas of Exotic Weed Invasion	331,082	3.0	
B-2	Ruby Marsh, Franklin Lake, Snow Water Lake	110,236	1.0	
B-3	Low Sagebrush & Desert Shrub	1,023,813	9.3	
B-4	Primarily Private Land & Urban Interface	814,118	7.4	
B-5	Aspen Areas	30,905	0.3	
B-6	Dixie	113,346	1.0	
B-7	Badlands Allotment	25,809	0.2	
B-8	Early Seral Sagebrush Grasslands	1,281,898	11.7	
B-9	Crucial Deer Winter Range	600,027	5.5	
	<b>FMC C (Moderate Suppression)</b>		<b>52%</b>	<b>5,669,359</b>
C-1	Woodlands	518,903	4.7	
C-2	Owyhee Desert	821,097	7.5	
C-3	Sage/Mountain Brush/ Perennial Grass	3,907,351	35.6	
C-4	Intermixed Woodlands, NE Corner	422,008	3.9	
	<b>FMC D (Limited Suppression)</b>		<b>2%</b>	<b>340,857</b>
D-1	Little Humboldt WSA	42,213	0.4	
D-2	Owyhee WSAs	45,828	0.4	
D-3	Mixed Conifer	68,435	0.6	
D-4	Goshute, South Pequop & Bluebell WSAs	166,525	1.5	
D-5	Cedar Ridge and Red Springs WSAs	17,856	0.2	
	*Acres are based on GIS tabulations . The assignment of polygons and acreages are subject to change as resource conditions change and this RMP amendment is implemented.	<b>TOTAL</b>		<b>10,969,259</b>



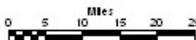
**Figure 2 - Fire Management Categories and Polygons**

- |   |                              |   |                  |
|---|------------------------------|---|------------------|
|  | FMC A - Full Suppression     |  | MGT by USFWS     |
|  | FMC B - High Suppression     |  | MGT by USFS      |
|  | FMC C - Moderate Suppression |  | MGT by IDAHO BLM |
|  | FMC D - Limited Suppression  |  | MGT by BIA       |

Data is published in the  
**NORTH AMERICAN DATUM 1983 (NAD83)**  
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**Zone 11, Meters**



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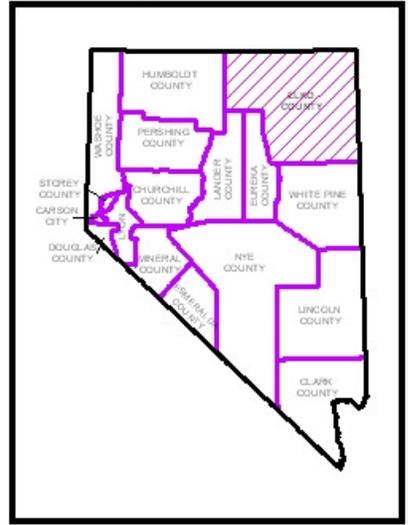


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## 1.2 Alternatives

The 2003 Proposed FMA/EA described and analyzed four alternatives for fire management in the Elko and Wells planning areas. All alternatives were described and analyzed in the same way for the four components of the plan amendment (general fire management, prevention, response and rehabilitation). The first alternative, representing the current level of fire protection, was identified as the “No Action” alternative (Proposed FMA/EA, section 2B). The second alternative was based on strategy for “Full Suppression” (section 2C), and the third on a “Limited Suppression” strategy (section 2D). The fourth alternative, referred to as the “Proposed Action” is described in the section 2E. Table 1.2 below is from section 2F (Proposed FMA/EA, page 2-42). It compares the estimated area of wildfire impact, area expected to be rehabilitated, and acreage for target treatment per year for each alternative over a 20-year timeframe.

**Table 1.2  
Alternative Comparison\***

	No Action	Full Suppression	Limited Suppression	Proposed Action
<b>Wildfire Acreage Expected (per year avg)</b>	65,000	<b>0-5 year:</b> 62,000 to 65,000  <b>5-10 year:</b> 72,000 to 78,000  <b>10-20 year:</b> 78,000 to 91,000	<b>0-5 year:</b> 65,000 to 130,000  <b>5-10 year:</b> 130,000 to 163,000  <b>10-20 year:</b> 163,000 to 195,000	<b>0-5 year:</b> 52,000 to 58,000  <b>5-10 year:</b> 49,000 to 52,000  <b>10-20 year:</b> 26,000 to 49,000
<b>Rehabilitation Acreage Expected (per year avg)</b>	19,000	<b>0-5 year:</b> 18,000 to 19,000  <b>5-10 year:</b> 21,000 to 23,000  <b>10-20 year:</b> 23,000 to 27,000	<b>0-5 year:</b> 1,000 to 2,000  <b>5-10 year:</b> 2,000 to 2,400  <b>10-20 year:</b> 2,400 to 3,000	<b>0-5 year:</b> 15,000 to 17,000  <b>5-10 year:</b> 14,000 to 15,000  <b>10-20 year:</b> 8,000 to 14,000
<b>Target Treatment Acreage (per year)</b>	24,000	Less than 4000	Less than 4,000	24,000 to 60,000
<small>Source: BLM Elko Field Office, 2002 *The estimates reported in this table are based on the past 22 fire seasons in the district. Assumptions used to consistently predict outcomes of the alternatives are listed in the October 2003 Proposed FMA/EA, page 2-42, Table 2F-1.</small>				

It is expected that in the long-term, implementation of the integrated approach to fire management provided by the FMA alternative selected (the Proposed Action), as compared to the other alternatives, will reduce the size and intensity of fires, and therefore reduce the amount of acreage in which rehabilitation is necessary. Actual acreages and associated annual costs would vary widely depending on the severity of a fire season, the area-specific fire and resource management objectives to be met by rehabilitation or hazardous fuels reduction activities, and the method used to treat an area.

### 1.3 Rationale

As discussed on page 2-3 of the Proposed FMA/EA, the BLM preferred the Proposed Action alternative because it is based on an integrated approach toward accomplishing the purposes of the amendment for fire management. Purposes include:

- Provide an integrated, balanced approach for fire management that addresses fire prevention, fire response and fire rehabilitation.
- Provide for the protection of life and property.
- Provide for the protection of habitat required by special status species.
- Provide for effective resource protection and enhancement.
- Reduce hazardous fuels.
- Accomplish resource objectives.

The need statement in the Proposed FMA/EA (page 1-2) recognizes that, “Severe fire seasons have affected not only the number of acres burned, but also the number of firefighters mobilized, amount of tax dollars spent on emergency suppression and damage to private property.” Using an integrated approach that addresses rehabilitation in combination with suppression and prevention should reduce the danger to fire fighters, improve the productivity of public lands, protect public and private property from devastating fire, and reduce fire suppression costs over the long term.

The fire suppression and vegetative treatment strategies for each alternative would be applied, in conjunction with the standards and guidelines for public safety and resource protection (Proposed FMA/EA, page 2-2, Actions Common to all Alternatives). This includes designing all activities in the realm of fire prevention, response and rehabilitation to maintain, enhance and benefit natural and sensitive resources, protect lives and property, and overall reduce impacts from catastrophic and damaging wildfire.

Upon issuing the Proposed FMA/EA, I found that no significant impact to the human environment would result from implementation of the Proposed Action (Finding of No Significant Impact dated 10/14/2003, BLM/EK/PL-2003/026). The action includes standard operating procedures (SOPs), including those developed specifically for adoption with this amendment for fire management (see Appendix 2). All practicable means to avoid or minimize environmental harm have been adopted.

The No Action alternative (continue current management) was not selected because the 1987 Elko and 1985 Wells RMPs and 1998 Fire Management Plan on which is it based do not provide adequate direction to implement the integrated approach envisioned by current policy, including increased emphasis on fire prevention in conjunction with the fire response and rehabilitation components. Congress, through the FY 2001 Interior and Related Agencies Appropriations Act (P.L. 106-291) to support the August 2000 National Fire Plan, has directed agencies to focus efforts on fire prevention and fuels reduction to mitigate the high costs of fire suppression. The Proposed Action alternative best responds to that direction. The investment in treatment of hazardous fuels is expected to result in lower long term suppression and rehabilitation costs, thus reducing the expenditure of taxpayers dollars over the 20-year period of analysis.

The Full Suppression and Limited Suppression alternatives were not selected because they stress one component over another. For example, the Full Suppression alternative focuses primarily on the immediate suppression of every wildfire, irrespective of climatic condition and location. This reduces the flexibility and tools available for effective long-term fire management toward limiting the size and severity of fires and protecting critical resources.

This amendment for fire management does not conflict with other resource management actions of the Elko and Wells RMPs. Its approval allows for the future preparation of interdisciplinary fire management plans, in collaboration with other federal, state and local agency fire management partners and the public, that are linked closely to land and resource management plans. Development of such plans is consistent with direction in the 1995 Federal Wildland Fire Management Policy and the 2000 National Fire Plan.

The fire management amendment was developed with the participation of interested agencies and Tribes, and has been determined to be consistent with other federal, state, local and Tribal policies and plans to the maximum extent possible. No conflicts were identified in the Governor's Consistency Review of the Proposed FMA/EA.

## **1.4 Compliance and Monitoring**

Where conflicting direction involving the management of the public lands may occur between this plan amendment and those of state and local governments, this amendment will comply with the laws and statutes enacted by Congress to protect the interests of the citizens of the United States.

Implementation of this FMA in accordance with interdisciplinary activity plans may require development of site-specific project and monitoring plans, and associated NEPA compliance documentation, for specific key actions. The project plans will address issues at the ecological or vegetative site level.

Implementation of this amendment for fire management will be monitored and evaluated to coincide with the implementation of the existing Elko and Wells RMPs.

## **1.5 Public Involvement**

Public scoping and review activities are summarized in the Proposed FMA/EA (Chapter 5 and Appendix 1). The planning process for this amendment began with the publication of a Notice of Intent in the *Federal Register* on April 24, 2001 (Volume 66, Number 80, pages 20830-20831). The Elko Field Office mailed newsletters to 730 individuals, agencies and groups, issued a news release and ran radio announcements to notify the public of scoping meetings. The meetings were held September 25, 26, 27 and 28, 2001, in Elko, Eureka, Jackpot and Wells. Newsletters and media releases were also used to notify the public of a second round of meetings to refine the Proposed Action. These meetings were held in the same locations, on May 20, 21, 22 and 23, 2002.

In September 2002, a Draft FMA/EA was circulated for public review. Comments received were considered in preparing the Proposed FMA/EA, which was released in October 2003. A report entitled “Public Comment Letters and Responses” is available at the Elko Field Office. Eight letters were received; they are included in the Proposed FMA/EA (Appendix 1, Part B). The letters were from:

- U. S. Fish and Wildlife Service (F&WS)
- Nevada Division of Wildlife
- Nevada Division of Environmental Protection
- Nevada State Historic Preservation Office
- Goods From The Woods
- Committee for the High Desert and Western Watersheds Project
- Wildlife Management Institute
- Mark Belles

The October 2003 Proposed FMA/EA included additional information describing the relationship between pinyon and juniper woodlands, riparian areas and fire. Sage grouse SOPs were added and modifications were made to rehabilitation procedures. A range condition class was provided to further describe rangelands. Maps were also improved.

Consultation with Native Americans will remain ongoing as actions are planned to implement this FMA. Due to the sensitivity and sacred nature of Native American religious activities and sites, traditional practitioners are reluctant to release information until there exists a direct and immediate threat to a practice or area of concern.

Early coordination with the F&WS resulted in the development of procedures to protect fish and wildlife species and their habitat (Appendix 2). To meet consultation responsibilities of Section 7 of the Endangered Species Act, the BLM prepared and submitted a biological assessment to the F&WS. It addressed potentially significant impacts to three threatened or endangered fish species that occur in the planning area, and also assessed the impacts for another candidate for listing, the Columbia spotted frog. The biological opinion rendered by the F&WS on December 5, 2003, concluded that the Proposed Action will not jeopardize the continued existence of the three listed species, nor lead the F&WS to list the Columbia spotted frog (Biological Opinion, page 29).

The October 2003 Proposed FMA/EA was available for a 60-day Governor’s consistency review. No recommendations were received from this review.

The Proposed FMA/EA was also available for a 30-day public protest period. Two protests were filed, by the Goods From The Woods and the Western Watersheds Project.

Issues of concern to the Goods From The Woods included:

- Fuels reduction projects targeting pinyon pine would further cheatgrass infestations, thus perpetuating hazardous fuels. A related concern was for the value of the commercial pinyon pine nut resource that would be “squandered in deforesting pinyon under the fallacious reasoning of fuels reduction.”

- The analysis does not consider impacts on the pinyon jay, a species that was added to the BLM Nevada list of sensitive species on July 29, 2003 (Information Bulletin NV-2003-097).
- Where cheatgrass and other invasive plants adjoin pinyon ranges, BLM should consider removing the lower limbs of pinyon pine trees to enhance pine nut production.

Issues or comments common to both protest letters were:

- The Proposed FMA/EA fails to provide and examine current and basic information on the resources (soils, watersheds, native vegetation, wildlife habitats and populations).
- The economic value of pine nuts has not been assessed.

Protest points from the Western Watersheds Project included:

- An environmental impact statement should have been prepared; BLM erred in its issuance of a Finding of No Significant Impact.
- There will be significant impacts to sage-steppe dependent species and pinyon-juniper dependent species, including habitat fragmentation.
- BLM has failed to collect and analyze information on special status species, their habitat needs and populations.
- BLM fails to evaluate uncertainty associated with treatments such as greenstrips and harmful impacts of soil depletion caused by seeding exotics like crested wheatgrass, and Nevada BLM has gone way overboard in its use of forage kochia.
- BLM has not determined the risk of actions in causing weed increase and spread.
- BLM has never considered the economic impacts of this major expenditure of taxpayer dollars that would occur under the proposed action.
- Direct, indirect and cumulative impacts of livestock grazing have not been adequately addressed.
- The old Elko and Wells RMPs do not contain a modern day inventory or scientific analysis of livestock grazing and its impacts on native vegetation, ecological processes, etc., and cannot be considered a current document to splice this amendment onto.

The Director of the BLM responded by letter dated September 16, 2004. Both protests were dismissed in their entirety. No changes to the proposed plan amendment resulted.

## 1.6 Approval

The *Elko and Wells Resource Management Plans Fire Management Amendment*, as follows in Part 2, is approved. This decision is not subject to administrative appeal. In accordance with regulations at 43 CFR 1610.5-5, the amendment is effective for implementation 30 days after issuance of a public notice of this decision.

## **PART 2 -- FIRE MANAGEMENT AMENDMENT**

The Federal Wildland Policy, developed in 1995 by nine different federal agencies, has recognized the need for fire management plans as the primary tool to manage fire. Severe fire seasons have affected not only the number of acres burned, but also the number of firefighters mobilized, amount of tax dollars spent on emergency suppression and damage to private property. To address these conditions, the Federal Wildland Policy states that:

"Federal agencies will develop Fire Management Plans for all areas subject to wildland fires. These plans will address all potential wildland fire occurrences and include a full range of fire management actions; use new knowledge and monitor results to revise fire management goals, objectives and actions; and be linked closely to land and resource management plans."

The 1987 Elko and the 1985 Wells Resource Management Plans (RMP) do not specifically address fire management. In 1998, the Elko Field Office developed a Fire Management Plan that focuses on the logistical aspects of responding to and suppressing a wildfire and rehabilitation of the burned area immediately following the fire. This RMP amendment has been prepared to be consistent with current policies for an integrated approach to fire management, to include increased emphasis on actions to reduce hazardous fuels and prevent the occurrence of devastating wildlives. Approval of this amendment allows for interdisciplinary preparation of future fire management plans that determine the operational framework and funding mechanisms necessary to implement activities linked to it, to meet multi-resource management objectives on public lands administered by the BLM Elko Field Office (see Figure 1 on page 2).

### **2.1 Management Actions**

The following sections will discuss determinations for each component for fire management. The actions are essentially the same as described for the Proposed Action in chapter 2 of the October 2003 *“Proposed Elko/Wells Resource Management Plans Fire Management Amendment and Environmental Assessment”* (Proposed FMA/EA).

#### **2.1.1 General Fire Management Component**

Follow general guidance of this FMA and other guiding documents to protect and maximize the safety of fire operational personnel and the public, achieve resource management objectives and improve the long-term management of fire.

General fire management provides a framework to achieve resource objectives and describe the overall strategy for fire management, based on the guidance from this FMA. The main consideration for fire management is to maximize the safety of fire operational personnel and the public. Secondly, to meet the management objectives outlined in the following four Fire Management Categories (FMC A through D). The FMCs represent the BLM’s general fire management framework and strategy for this FMA.

*FMC A – Full Suppression.* This category for maximum suppression activity applies to areas where wildland fire is not desired at all. These include the urban interface, active mining operations, oil and gas fields, recreation sites, critical watersheds, and areas of significant noxious weed infestation. Fuels reduction activities are acceptable, but prescribed fire opportunities will be limited due to close proximity of structures and improvements.

*FMC B – High Suppression.* This category applies to areas where wildfire is likely to cause negative effects, but these effects could be mitigated or avoided through fuels management, prescribed fire or other strategies. These areas include a less strict acreage guideline than A and include vegetative treatments to reduce fuel loading as a management technique to a greater degree than A. Unplanned ignitions will be managed using the most appropriate and cost-effective suppression response based on threats to life, safety, structures, developments and other resource values. Where streams, riparian areas, or watersheds exist that provide habitat for federally listed threatened, endangered, or candidate species, suppression tactics will include appropriate standard operating procedures for species protection, except when a threat to human life exists. Mechanized equipment use will be consistent with the District’s Guidelines. Unplanned ignitions will also be managed using current guidelines for sage grouse and sagebrush ecosystems.

*FMC C – Moderate Suppression.* This applies to areas where fire may be desirable to manage ecosystems, but where various factors place constraints on fire use for resource benefit. These areas may have larger acreage guidelines than B and can include increased use of fuels/vegetation manipulation. Unplanned ignitions will be managed using the most appropriate and cost-effective suppression response based on threats to life, safety, structures, developments, and other resource values. Where streams, riparian areas, or watersheds exist that provide habitat for federally listed threatened, endangered, or candidate species, suppression tactics will include appropriate standard operating procedures for species protection, except when a threat to life exists. Mechanized equipment use will be consistent with District Guidelines. Unplanned ignitions will also be managed using current guidelines for sage grouse and sagebrush ecosystems.

*FMC D – Limited Suppression.* This strategy applies to areas where fire is desired under various environmental conditions and there are few constraints associated with resources or social, economic or political considerations. These areas will receive the least level of suppression, some level of fire use for resource benefit and can include the extensive use of prescribed fire. Mechanized equipment use will be consistent with District Guidelines and the Interim Management Policy for Lands under Wilderness Review. For the Elko Field Office these areas would be limited to Wilderness Study Areas and the Cherry Creek Range.

The four FMCs are further subdivided into 21 polygon types, which provide resource management direction for specific areas. These polygons further refine the general strategy associated with each category by area based on resource value, vegetative response, potential for invasive weeds and public safety. The acreage of each polygon

type, as shown on the map on page 5 (Figure 2), is summarized in Table 2-1 below. Appendix 1 provides descriptions of the polygons for each FMC. The polygon descriptions identify *current conditions*, *future desired conditions* and *constraints* applicable to each polygon type.

<b>Table 2.1 FMC – Polygon Types (acres)</b>			
<b>Polygon Label and Name</b>	<b>Acres</b>	<b>Polygon Label and Name</b>	<b>Acres</b>
A-1 Urban Interface/ Mining Areas/ Areas of Development	497,725	B-8 Early Seral Sagebrush Grasslands	1,281,898
A-2 Cultural Sites, Historic and Protohistoric	79,654	B-9 Crucial Deer Winter Range	600,027
A-3 Municipal Watersheds	50,430	C-1 Woodlands	518,903
B-1 District-wide Areas of Exotic Vegetation Invasion	331,082	C-2 Owyhee Desert	821,097
B-2 Ruby Marshes, Franklin Lake and Snow Water Lake	110,236	C-3 Sage /Mountain Brush/ Perennial Grass	3,907,351
B-3 Low Sagebrush & Desert Shrub	1,023,813	C-4 Intermixed Woodlands, NE Corner	422,008
B-4 Areas of Primarily Private Land and Urban Interface	814,118	D-1 Little Humboldt WSA	42,213
B-5 Aspen Areas	30,905	D-2 Owyhee Canyon WSA' (includes Owyhee Canyon, South Fork Owyhee, Rough Hills and Badlands WSAs)	45,828
B-6 Dixie	113,346	D-3 Mixed Conifer	68,435
B-7 Badlands Allotment	25,809	D-4 Goshute, South Pequop, and Bluebell WSA's	166,525
		D-5 Cedar Ridge and Red Springs WSA's	17,856

The acreage of the polygons are subject to updates as deemed necessary in the future, based on changes in the condition of resources as this FMA is implemented. Under the guidance of this FMA, managers have a range of options for appropriate responses to wildland fires. This is reflected by the distribution of acreage in the four FMCs and 21 polygon types. As shown by the number of acres comprised by the FMC A and B and C polygons, the suppression of unplanned ignitions is the highest priority in most areas. The amount of area in the most restrictive category, FMC A reflects the protection of key resources.

### 2.1.2 Fire Prevention Component

Vegetative manipulation, fuels reduction, greenstrips, fuel breaks and thinning should be maximized through the use of prescribed burning, mechanical, chemical and biological (including grazing) treatments to reduce wildfire fuel hazards.

Annual target acreage levels to reduce hazardous fuels are 24,000 to 60,000 acres.

This FMA acknowledges the benefits of vegetative manipulation and fuels reduction. Single focus policies based solely on full fire suppression have had an impact on the landscape causing fuel loads and suppression costs to increase with no notable improvement in the attainment of resource objectives. In areas where fires have not

occurred for many years, fuel loading can increase the intensity of fire causing atypical burn results. Timing, intensity, and frequency of fire can critically influence vegetation recovery, leading to potentially long-term changes in vegetation and flammability. Because wildlife succession typically follows vegetation succession, some wildlife species are often negatively affected when intense fire causes a vegetation type conversion.

Actual acreage would vary by year, dependent on project planning, funding and staffing levels. Fire prevention measures are generally discussed below, and Table 2.1.2 generally describes the preferred option by polygon type.

#### Fuel Load Reduction Treatments

Reduction of the fuel load can be achieved through prescribed fire, mechanical (chaining, masticating, mowing, disking) methods, chemical treatments (herbicides such as tebuthron) and biological treatments (including grazing). These options should give consideration to fire management objectives and also the resource goals of the area.

Prescribed burning is one of the primary methods of reducing fuel loads. Prescribed burns are the planned and controlled burning of an area and could include managing some naturally occurring wildland fires to achieve resource management objectives. Ignitions, including natural occurring would only occur or be managed within prescription parameters set within individual burn plans. Prescribed fires could be conducted during the period from spring to winter except for the mixed conifer. Prescribed fires would primarily be conducted in the mixed conifer stands during mid-July to mid-September when these fuels are dry enough to burn.

The design and planning processes of a prescribed burn would begin with a survey of the proposed prescribed fire site. If the desired management objectives can be met by prescribed fire, the project area boundaries and the individual burn units would be mapped. The appropriate NEPA documentation and the Prescribed Burn Plan would be developed for the specific site. After the adequate technical review, the Burn Plan would be submitted to the State of Nevada Bureau of Air Quality for approval and issuance of a burn permit. The burn would be conducted dependent on weather conditions and availability of resources. Managed naturally occurring ignitions in wildland fire use areas would require a plan completed for the specific area prior to allowing the ignitions to burn. More information is contained in the May 2000 *Vegetation Treatment by Fire Environmental Assessment* (BLM/EK/PL-98-026).

#### Fire Access Roads

Fire access roads are roads strategically located throughout a fire-prone area to provide vehicular access by fire fighting and emergency crews. A key to attacking wildfires is minimizing the response time, or the amount of time it takes the fire fighters to arrive at the scene of the fire. Fire and access roads that are readily accessible and passable greatly enhance fire suppression capabilities. Roads may also stop or slow the spread of lower intensity fires and can be used as points to burn out from or to begin cutting containment lines from.

## Fuelbreaks and Greenstrips

Fuelbreak and greenstrips are strategically located blocks or strips of land on which a cover of dense, heavy, or flammable vegetation has been permanently changed to one of lower fuel volume or reduced flammability as an aid to fire control. They may also have an access road through the middle of them, which provides fire suppression access. A fuelbreak has a low-growing ground cover to protect the soil against erosion and prevent the spread of low-intensity fire as it burns. Fuelbreaks also provide areas for starting backfires for suppression burn out activities. Fuelbreaks also provide a safety area for fire fighters to attack wildfires from. Placing fire-resistant greenstrips along the borders of annual rangelands can also protect the adjacent native rangelands from being consumed by future wildfire that originate within these annual rangelands. This helps prevent the spread of high frequency wildfire in areas of invasive vegetation into other areas that would have a low vegetative response in these conditions. Fuel reduction methods described above would be used to create the m.

<b>Table 2.2 - Fire Prevention Activities</b>	
<b>Category/Polygon</b>	<b>Action</b>
<b>A-1 Urban Interface/ Mining Areas/ Areas of Development</b>	Use planned ignitions and other vegetation management tools to reduce fuel loadings. Most of the mining areas (Carlin Trend) and urban interface are within Nevada Division of Forestry protection zones. Work with NDF and the mining companies to do hazard fuel reduction (either mechanical or planned ignitions) around critical sites. Area also has great potential for green stripping projects to create buffers around critical areas. The small towns in greatest risk from wildfire are Midas and Tuscarora and are priority for green stripping or other fuels modification treatments.
<b>A-2 Cultural Sites, Historic and Protohistoric</b>	None at this time.
<b>A-3 Municipal Watersheds</b>	Green stripping and prescribed burns around municipal watersheds to reduce fuel loads are recommended. The watersheds above the springs for Wendover, Utah and West Wendover are wooded and may need to be thinned to reduce the risk of a hot fire. Chemical treatments options should be avoided in this polygon.
<b>B-1 District-wide Areas of Exotic Vegetation Invasion</b>	Prescribed fire is to be used in a selective manner in these areas, usually in conjunction with mechanical or chemical treatments designed to convert these areas to perennial vegetation. Planned ignitions can be used in a limited way to accomplish specific management objectives within areas of native vegetation. Chainings and seedings within this polygon will be maintained through the use of planned ignitions. These ignitions will not be considered part of the decadal burn targets since they are maintenance of existing developments.
<b>B-2 Ruby Marshes, Franklin Lake and Snow Water Lake</b>	Prescribed fire can be considered as a management tool in portions of this area. Use prescribed fire in sagebrush and woodlands to accomplish specific management objectives. Chainings and seedings within this polygon will be maintained through the use of planned ignitions. These ignitions will not be considered part of the decadal burn targets since they are maintenance of existing developments.
<b>B-3 Low Sagebrush &amp; Desert Shrub</b>	Prescribed fire should be a very minor component in these areas and then only to achieve site specific resource objectives within the context of the larger area.
<b>B-4 Areas of Primarily Private Land and Urban Interface</b>	Prescribed fire should be used to reduce fuel loadings in the urban interface and, to a limited extent, to improve the native vegetation. Actively work with NDF to accomplish fuels reduction through prescribed fire and mechanical means to lessen wildfire threat to developed areas. Work with private landowners and NDF to do collaborative prescribed fires where public lands abut private lands and opportunities exist to cross-jurisdictional boundaries to improve vegetative conditions.
<b>B-5 Aspen Areas</b>	Prescribed fire may be necessary to rejuvenate decadent stands that lack reproduction. However, post-fire protection is needed due to the sprouts' palatability to livestock and wildlife. Use planned ignitions to regenerate decadent stands in conjunction with appropriate post-fire grazing management.

<b>Table 2.2 - Fire Prevention Activities</b>	
<b>Category/Polygon</b>	<b>Action</b>
<b>B-6 Dixie</b>	Prescribed fire use should be limited in this area to achieving site-specific management objectives. Planned ignitions will be limited in this area and will be curtailed if unplanned ignitions meet management objectives. Chainings and seedings within this polygon will be maintained through the use of planned ignitions. These ignitions will not be considered part of the decadal burn targets since they are maintenance of existing developments. Due to existing conditions, biological fuels reduction options should be avoided in this polygon. The preservation of riparian areas in these areas should be a priority.
<b>B-7 Badlands Allotment</b>	None at this time.
<b>B-8 Early Seral Sagebrush Grasslands</b>	Prescribed fire use should be limited in this area to achieving site-specific management objectives. An evaluation of historical unplanned ignitions and their impacts will be considered when developing prescribed fire goals for this polygon. Planned ignitions will be limited in this area and will be curtailed if unplanned ignitions meet management objectives. Chainings and seedings within this polygon will be maintained through the use of planned ignitions. These ignitions will not be considered part of the decadal burn targets since they are maintenance of existing developments.
<b>B-9 Crucial Deer Winter Range</b>	Prescribed fire use should be limited in western regions of the county to achieving site-specific management objectives. Prescribed fire in eastern regions of the county can be used to meet resource objectives while maintaining big game habitat and woodland integrity. Prescribed fire goals will be evaluated against the history of unplanned ignitions and associated resource impacts. Planned ignitions will be curtailed if unplanned ignitions meet management objectives. Chainings and seedings within this polygon may be maintained through the use of planned ignitions. These ignitions will not be considered part of the decadal burn targets since they are maintenance of existing developments.
<b>C-1 Woodlands</b>	Mechanical vegetation treatments are preferred to change the vegetation age structure and composition. Prescribed fire should be used in a limited role to accomplish multiple use management goals and objectives while maintaining woodland resource values. When mechanical treatments cannot meet wildlife habitat management goals, use prescribed fire (both planned and unplanned ignitions) to create openings of 10 to 50 acres.
<b>C-2 Owyhee Desert</b>	Make extensive use of planned ignitions to accomplish management objectives. Curtail planned ignitions if unplanned ignitions accomplish management objectives. Develop and apply fire prescription guidelines to allow for management of unplanned ignitions through monitoring and/or minimal suppression efforts in these areas if prescription guidelines are met. Chainings and seedings within this polygon will be maintained through the use of planned ignitions. These ignitions will not be considered as part of the decadal burn targets since they are maintenance of existing developments.
<b>C-3 Sage/Mountain Brush/Perennial Grass</b>	Prescribed fire via planned or unplanned ignitions may be used to accomplish site specific management objectives. Prescribed fire management goals will be evaluated against unplanned wildfire history and resource impacts. Planned and/or unplanned prescribed fire ignitions would be curtailed if resource objectives are met by unplanned wildfire events. Chainings and seedings within this polygon may be maintained through the use of planned ignitions. These ignitions would not be considered part of the decadal burn targets since they would be maintenance of existing developments.
<b>C-4 Intermixed Woodlands, NE Corner</b>	Prescribed fire can be used to meet resource objectives while maintaining the big game habitat and woodland integrity. The Wells RMP identified approximately 6,500 acres of prescribed burning in this area to achieve resource objectives. In heavily forested areas mechanical vegetation treatments may be preferable. Use mechanical treatments in areas of heavy forest cover. Chainings and seedings within this polygon will be maintained through the use of planned ignitions. These ignitions will not be considered part of the decadal burn targets since they are maintenance of existing developments.
<b>D-1 Little Humboldt WSA</b>	Use planned and unplanned ignitions to reintroduce fire into the ecology of the areas. Develop and apply fire prescription guidelines to allow for management of unplanned ignitions through monitoring and/or minimal suppression efforts in these areas if prescription guidelines are met. Planned ignitions will be curtailed if unplanned ignitions meet management objectives. Use MIST in all suppression actions.
<b>D-2 Owyhee Canyon WSA's. Includes Owyhee Canyon, South Fork Owyhee, Rough Hills and Badlands WSA's.</b>	Use planned and unplanned ignitions to reintroduce fire into the ecology of the areas. Develop and apply fire prescription guidelines to allow for management of unplanned ignitions through monitoring and/or minimal suppression efforts in these areas if prescription guidelines are met. Planned ignitions will be curtailed if unplanned ignitions meet management objectives. Use MIST in all suppression actions.

Table 2.2 - Fire Prevention Activities	
Category/Polygon	Action
<b>D-3 Mixed Conifer</b>	Prescribed fire should play a large part in this process. Because of the fuels build-up in these areas, a series of low -intensity prescribed fires should be done to reduce fuel loadings, open up mineral soil for seedling germination, and increase nutrient recycling and create a mosaic of uneven aged pockets within the stand while avoiding total destruction of the stand as a whole. Prescribed fire can be used in conjunction with thinning projects to reduce the number of stems per acre. Planned ignitions will be used in these areas to meet the management objective of maintaining a healthy stand. Planned ignitions will be low -intensity surface fires with allowable torching of pockets of heavy fuels and will be planned in cycles (five years prior to reentry) to gradually reduce fuel loadings and create a mosaic of different aged stands. The entire polygon will be put into a planned ignition plan. Develop and apply fire prescription guidelines to allow for management of unplanned ignitions through monitoring and/or minimal suppression efforts in these areas if prescription guidelines are met. Planned ignitions will be curtailed if unplanned ignitions meet the decadal acreage target.
<b>D-4 Goshute, South Pequop, and Bluebell WSA's</b>	Develop and apply fire prescription guidelines to allow for management of unplanned ignitions through monitoring and/or minimal suppression efforts in these areas if prescription guidelines are met. Planned ignitions will be curtailed if unplanned ignitions meet management objectives. Use MIST in all suppression actions.
<b>D-5 Cedar Ridge and Red Springs WSA's</b>	Planned ignitions will be curtailed if unplanned ignitions meet management objectives. Use MIST in all suppression actions.

### 2.1.3. Fire Response Component

Responses to wildfires should be maximized in most areas and still provide the flexibility and range of options available to managers to appropriately use fire to meet long-term resource management objectives.

Fire response describes fire suppression strategy. Fire response based on the single principle of full suppression of all fires, rather than on an integrated strategy for long-term fire management, has resulted in a strain on fire management resources with no notable improvement in the attainment of resource objectives. Based on the FMA guidance, management actions focus primarily on suppression of most all fires, but allows for some flexibility necessary for effective fire management. This flexibility is illustrated by a greater balance in acreage assigned to each FMC. For example, fires in mountainous areas within Wilderness Study Areas under low fire intensity conditions may not be immediately suppressed if the area was designated for future prescribed burning with an approved burn plan in place. This integrated approach may reduce the danger to fire fighters, improve the productivity of public lands, protect public and private property from devastating fire, and over the long term, may reduce fire response costs.

Fire response is based on a cooperative effort between the BLM, the Nevada Division of Forestry (NDF), U.S. Forest Service (USFS), the Bureau of Indian Affairs, the U.S. Fish and Wildlife Service and other agencies. The Elko Interagency Dispatch Center (EIDC) is staffed by the BLM, NDF and the USFS, and works as an “all risk” dispatch center. There are cooperative initial attack agreements with the NDF and the Battle Mountain, Winnemucca, Ely, Salt Lake and Upper Snake River Field Offices of the BLM to streamline initial attack and reduce duplication of effort.

A fire danger rating system assists the response strategy by identifying current fire danger conditions, which help the BLM and other agencies with planning. The system is currently based on the climatic conditions (i.e., wind speed and direction, fuel moisture content, humidity, temperature) for that time period.

Fire response strategy is also based on FMC's previously described, which represent general management strategies for the Elko Field Office. Within each fire management category is a wide range of resource considerations defined by smaller polygons. FMC's and polygons provide a strategy for fire response.

Polygons strategies are based on resource value, vegetative response, and potential for invasive weeds and public safety. Strategies described in the polygons provide a full range of fire response strategies ranging from aerial monitoring to low-impact confinement to full-scale containment and control strategies. Specific actions by polygons are described in Table 2.-3. In addition to FMC's and polygons, standard operating procedures also guide incident commanders of the fire fighting crews when attacking fires. Standard operating procedures are discussed in the next section. They are existing federal, state and local regulations that protect environmentally and culturally sensitive areas.

<b>Table 2.3 - Fire Response Strategies</b>	
<b>Category/Polygon</b>	<b>Action</b>
<b>A-1 Urban Interface/ Mining Areas/ Areas of Development</b>	Hold unplanned ignitions to minimal acreage within this polygon. Fire history is minimal because of their size, however, many can be easily threatened by wildfire. In particular, the towns of Midas, Tuscarora, and Spring Creek have been threatened in the past.
<b>A-2 Cultural Sites, Historic and Protohistoric</b>	Generally all fires will be kept to the minimum possible acreage based on firefighter safety and restrictions on mechanized equipment usage
<b>A-3 Municipal Watersheds</b>	All fires will be kept to minimum possible acreage based on firefighter safety.
<b>B-1 District-wide Areas of Exotic Vegetation Invasion</b>	Hold unplanned ignitions to 300 acres at least 90 percent of the time. The Battle Mountain Field Office has their adjacent areas in a "B" category. They will prevent the spread of fire in their "B" polygon into this polygon. Large acreage fast- burning fires that often exceed 20,000 acres dominate fire history in these areas. They are dependent on the amount of winter/spring precipitation and the resultant amount of invasive vegetation growth. These fires expand the annual vegetation areas by burning into native vegetation, which allows the exotics to colonize the burned areas in the year after the fire.
<b>B-2 Ruby Marshes, Franklin Lake and Snow Water Lake</b>	Hold unplanned ignitions to 2,000 or less at least 90 percent of the time. Use MIST in desert shrub areas. At low fire activity levels (Manning Class 1 and 2) monitor unplanned ignitions in desert shrub if this will cause less resource damage than suppression. At higher fire activity levels (Manning Class 3 or higher) suppress all unplanned ignitions using MIST. Fire history for these areas show an average of 0.6 fires per year burning 0.2 acres.
<b>B-3 Low Sagebrush &amp; Desert Shrub</b>	Hold unplanned ignitions to 100 acres at least 90 percent of the time. All human caused fires will be fully suppressed using minimal impact suppression techniques (MIST). At low fire activity levels, natural ignitions may be monitored if this will cause less ecological impact than suppression. All fires will be fully suppressed using MIST. Ely Field Office has an acreage target for unplanned ignitions of 50 acres for adjacent areas (Steptoe Valley) in the same vegetative community. Elko Field Office will suppress all fires within two (2) miles of the boundary to the higher Ely standard. Fire history in these areas show an average of 6.5 fires per year burning 513 acres.

**Table 2.3 - Fire Response Strategies**

Category/Polygon	Action
<b>B-4 Areas of Primarily Private Land and Urban Interface</b>	Hold unplanned ignitions to 300 acres at least 90 percent of the time. Use planned ignitions to accomplish management objectives with the cooperation of adjacent landowners. Chainings and seedings within this polygon will be maintained through the use of planned ignitions. These ignitions will not be considered part of the decadal burn targets since they are maintenance of existing developments. This direction only applies to BLM lands within this polygon. All private lands will receive suppression effort as per Nevada Division of Forestry and Nevada Revised Statutes policy and law. These areas are within Nevada Division of Forestry protection zones. Fire history in this area for the BLM shows a low to moderate number of wildfires with most being small (0-10 acres). There is a high fire occurrence on the private lands within this polygon, with large 5,000+ acre fires common. This vegetation type is conducive to large, wind-driven fires of 5,000 to 15,000 acres. Fire history for this area (BLM records only) show an average of 3.5 fires per year burning 769 acres.
<b>B-5 Aspen Areas</b>	Hold unplanned ignitions to 100 acres at least 90 percent of the time. These areas have no history of ignitions. Normally fires start in other adjacent vegetation types (primarily sagebrush). If a wildfire is large enough it will burn through the stand if low fuel moisture conditions exist with sufficient fuel loads to carry the fire. If the wildfire burns into the stand when it is green or moist, the fire will dramatically change behavior and often stop. Fire history for these areas show an average of 0.2 fires per year burning 0.3 acres.
<b>B-6 Dixie</b>	Hold unplanned ignitions to 300 acres or less at least 90 percent of the time. This is a high fire occurrence area with the higher elevation fires mostly small (0-10 acres) in size. The lower elevations are prone to large fires with most being from 100 to 500 acres with occasional 5,000+ acre fires. This vegetation type is conducive to large wind-driven fires of 5,000 to 15,000 acres. Fire history for this area shows an average of 9.5 fires per year burning 1016 acres.
<b>B-7 Badlands Allotment</b>	Hold unplanned ignitions to 300 acres or less at least 90 percent of the time. Minimize mechanized equipment impacts during suppression activities. There is no recorded fire history for this area.
<b>B-8 Early Seral Sagebrush Grasslands</b>	Hold unplanned ignitions to 300 acres at least 90 percent of the time. Those portions of this polygon in the southwest portion of the district occur in a high fire occurrence area with higher elevation fires mostly small (0-10 acres in size). The lower elevations are prone to large fires with most being from 100-500 acres with occasional 5,000+ acre fires. This vegetation type is conducive to large wind-driven fires of 5,000-15,000 acres.
<b>B-9 Crucial Deer Winter Range</b>	Hold unplanned ignitions to 300 acres or less at least 90 percent of the time. Fire history indicates that portions of this area in western Elko County occur in a high fire occurrence area with lower elevation fires prone to large fire events with most being from 100-500 acres with occasional 5,000+ acre fires. The vegetation types and conditions in these lower elevation areas are conducive to large wind-driven fires of 5,000-15,000 acres. Fire history for higher elevations areas, particularly in eastern Elko County, indicates a high occurrence with about 75 percent of the fires being 0-10 acres in size and 25 percent burning between 100 and 5,000+ acres. The vegetative types in these higher elevations are conducive to wind-driven and plume-dominated fires ranging from 5,000-15,000 acres.
<b>C-1 Woodlands</b>	Hold unplanned ignitions to 300 acres at least 90 percent of the time. The Battle Mountain and Ely Field Offices adjacent pinyon-juniper areas are in "C" polygons with much higher acreage totals (ranging from 1,000 to 5,000 acres) to hold unplanned ignitions to. The Elko District will be responsible for suppression costs of fires occurring within two miles of the District boundary that will cross boundaries. Fire history in these polygons is that of isolated small (0-10 acres) fires. The vegetation type is conducive to large wind-driven or plume-dominated fires that can burn 500 to 5,000 acres in one to two burning periods. Fire history for these areas show an average of 4.5 fires per year burning 175 acres.
<b>C-2 Owyhee Desert</b>	Hold unplanned ignitions to 2,000 acres or less 90 percent of the time. Because of its isolated location, fire history in this area is incomplete. Documented fire activity shows a low to moderate number of fires with most being from 100 to 5,000+ acres. It is probable that many of the smaller fires burn out before they are reported. Both planned and unplanned ignitions can be managed to maintain fire as part of the natural ecology and to achieve management objectives. Fire history for this area shows an average of 3.9 fires per year burning 2,711 acres.
<b>C-3 Sage/Mountain Brush/Perennial Grass</b>	Hold unplanned ignitions to 300 acres or less at least 90 percent of the time. Limit use of mechanized equipment and retardant in critical watersheds and high cultural value areas to minimize damage. Fire history in these areas is moderate with most fires being less than 500 acres. However, this vegetation type is conducive to large wind-driven fires of 5,000+ acres, as experienced during the past three years. From 1950 to 2001, nearly 1.9 million acres of this vegetation type have been affected by wildfire.

Table 2.3 - Fire Response Strategies	
Category/Polygon	Action
<b>C-4 Intermixed Woodlands, NE Corner</b>	Hold unplanned ignitions to 300 acres or less at least 90 percent of the time. Fire history indicates that this is a high occurrence area with about 75 percent of the fires being 0-10 acres in size and 25 percent burning between 100 and 5,000+ acres. This vegetative type is conducive to wind-driven and plume-dominated fires ranging of 5,000 to 15,000 acres. Fire history for this area shows an average of 6.7 fires per year burning 2409 acres.
<b>D-1 Little Humboldt WSA</b>	<b>When 50% or more of this WSA has experienced wildfire in a ten-year period:</b> Hold unplanned ignitions to 300 acres or less at least 90 percent of the time. Planned ignitions can be managed to maintain fire as part of the natural ecology, to reduce fuel loadings and to meet specific management objectives. Use MIST tactics for suppression of the fire. Fire Use is not an option in this scenario. <b>When Less than 50% of the WSA has experienced wildfire in a ten-year period:</b> Fire use may be considered at Fire Intensity Level 1 (FIL), MIST Suppression will be used at FIL 2-5. Hold unplanned ignitions to 1,000 acres 90% of the time.
<b>D-2 Owyhee Canyon WSA's. Includes Owyhee Canyon, South Fork Owyhee, Rough Hills and Badlands WSA's.</b>	Hold unplanned ignitions to 500 acres or less at least 90 percent of the time. Planned ignitions can be managed to maintain fire as part of the natural ecology, to reduce fuel loadings and to meet specific management objectives. Use MIST tactics for suppression of the fire. Fire use may be considered at Fire Intensity Level 1-2 (FIL), MIST Suppression will be used at FIL 3-5.
<b>D-3 Mixed Conifer</b>	At FIL 1-2, combination of Fire Use and Suppression hold unplanned ignitions to 100 acres at least 90 percent of the time. At FIL 3-5 use Fire Suppression to hold unplanned ignitions to 50 acres 90% of the time. Fire history in these areas is that of occasional very small (0-1 acre) fires. The present stand composition would make any large wildfire (unplanned ignition) a lethal, stand replacement fire. Ely and Elko Field Offices will coordinate fire activity on the Cherry Creek Mountains. The districts will do a joint WFSAs if a wildfire may cross-jurisdictional boundaries. The Districts will also coordinate prescribed fire activities to cross district boundaries whenever appropriate
<b>D-4 Goshute, South Pequop, and Bluebell WSA's</b>	Hold unplanned ignitions to 2,000 acres or less at least 90 percent of the time. The fire histories in these areas range from low to high with most being small (0-10 acres). Occasional large (10,000+ acres) fires have occurred in some areas. Both planned and unplanned ignitions can be managed to maintain fire as part of the natural ecology, to reduce fuel loadings and to meet specific management objectives. Fire history for these areas show an average of 3.2 fires per year burning 66 acres.
<b>D-5 Cedar Ridge and Red Springs WSA's</b>	Hold unplanned ignitions to 300 acres or less at least 90 percent of the time. Planned ignitions can be managed to maintain fire as part of the natural ecology, to reduce fuel loadings and to meet specific management objectives.

#### 2.1.4. Fire Rehabilitation Component

Conduct fire rehabilitation activities to emulate historic or pre-fire ecosystem structure, functioning, diversity and/or to restore a healthy stable ecosystem.

The purpose of rehabilitation is to protect life and property, and to stabilize the site when the potential exists for substantial soils or resource damage. Another purpose for rehabilitation is to emulate historic or pre-fire ecosystem structure, functioning, diversity and dynamics consistent with approved land management plans; or if that is not feasible, to restore a healthy, stable ecosystem in which native species are well represented. Fire Rehabilitation is guided primarily by the *Interagency Burned Area Emergency Stabilization (ESR) Handbook*, 2001. The ESR Handbook provides operational guidance for the Department of the Interior for burned area emergency stabilization and rehabilitation activities, including grazing allotment closures standards. It provides a unified interpretation of the burned area emergency stabilization and rehabilitation policies objectives and standards. The ESR Handbook is supplemented by the *Burned Area Emergency Stabilization and Rehabilitation Technical Reference*. The Technical Reference contains information on the implementation of individual treatments.

The objectives of the ESR are:

- To prescribe cost effective post-fire stabilization measures necessary to protect human life, property, and critical cultural and natural resources.
- To promptly stabilize and prevent further degradation to affected resources on lands within the fire perimeter as well as to downstream areas, and mitigate damages caused by fire suppression operations in accordance with approved land management plans and polices and all relevant Federal, State, and local laws and regulations.
- To repair or improve lands unlikely to recover naturally from severe wildland fire damage by emulating historic or pre-fire ecosystem structure, function, diversity, and dynamics according to approved land management plans.
- Restore or establish healthy, stable ecosystems, even if these ecosystems cannot fully emulate historic or pre-fire conditions specified in approved land management plans.

The ESR stresses need for the following:

Timeliness – Swift action should be taken to rehabilitate burned lands. ESR treatments must be implemented to the extent possible before additional damage occurs. Treatments should occur at a time when treatments will have the highest probability of success.

Threatened, Endangered and Sensitive Species – All fire rehabilitation plans should be reviewed to determine if T&E species or their habitat would be adversely affected by the implementation of rehabilitation treatments. The BLM will consult with the U.S. Fish and Wildlife Service on all actions that may affect a listed species or its habitat to ensure compliance with Section 7 of the Endangered Species Act. The BLM policy on federally listed species, species proposed for listing, candidate species, sensitive species, and state-listed species is contained in Manual Section 6840.

Plan Coordination – All ESR activities will be conducted in a manner that is compatible with long-term goals and approved land management plans and in compliance with applicable laws and policies including; the National Environmental Policy Act; Endangered Species Act; Clean Water Act; Comprehensive Environmental Response and Liability Act; and the National Historic Preservation Act. Each plan prepared under the ESR guidance, including Normal Fire Rehabilitation Plans (NFRP), Emergency Stabilization and Rehabilitation Plans and Burned Area Emergency Rehabilitation (BAER) plans will contain a site-specific review for NEPA compliance. They should be tiered to existing NEPA analysis documents and conform with approved land use plans.

Wilderness Study Areas – Manual Handbook H-8550-1 includes BLM policy and guidance for management of wilderness study areas (WSAs) and should be consulted. WSAs are managed so as not to impair the area's suitability for preservation as wilderness. Rehabilitation work will use the methods least damaging to the wilderness

resource. Reseeding and planting under emergency conditions will utilize species native to the area and will minimize cross-country use of motorized equipment.

Recreation – Burned or seeded areas may be temporarily closed to the public by excluding vehicle, bicycle, horse, and foot use if unacceptable resource damage would occur, or if danger to the public is present due to fire damage or rehabilitation activities.

Visual Resources – Impact of rehabilitation practices on visual resources (see Visual Resource Inventory Manual Handbook H-8410-1) should be considered. A Visual Contrast Rating Worksheet (Form 8400-4) or a checklist is required for all rehabilitation projects (see Manual Handbook H-8431-1, Visual Resource Contrast Rating)

Treatment Specifications – All ESR treatments must comply with applicable BLM policy and standards (as specified in the Engineering Guide Specifications and Standard Drawing, and manual Section 9170). Treatments should be designed to be cost-effective and to meet rehabilitation objectives. In addition to ESR treatment specifications, the District should encourage seed mixes that meet the following criteria: preferably native species that will be the most successful in achieving rehabilitation objectives (with consideration given to seed cost and availability), species that will be fire resilient and/or resistant upon establishment, species that are the most adapted to local and ecological site conditions, and species that enhance wildlife habitat. In addition, public land managers should be encouraged to support local and commercial seed harvest for the purpose of fire rehabilitation.

Suppression Activity Damage – Damage to resources caused by fire suppression activities should be repaired:

- Replacement of soil and seeding vegetation fire control lines
- Construction of water bars on primary and secondary fire control lines
- Repair of structural improvements or facilities damaged by suppression activity.
- Repair of damage caused by operating the incident command base
- Repair/mitigate damage to cultural resources resulting from suppression activity.

Rangeland Health/Grazing Management – Exclusion of livestock is critical for the recovery of burned vegetation or the establishment and maintenance of new seedlings and use of these areas should not be permitted until the vegetation recovers or is established. Based on the ESR Handbook, both re-vegetated and, burned but not re-vegetated areas, will be closed to livestock grazing for at least two growing seasons following the season in which the wildfire occurred to promote recovery of burned perennial plants and/or facilitate the establishment of seeded species. Livestock permittees must be informed of the closure early during the plan preparation process, and livestock closures will be made a condition or term on the grazing license or permit through the issuance of grazing decision (43 CFR 4160).

Livestock closures for less than two growing seasons may be justified on a case-by-case basis based on sound resource data and experience. In some cases, the reduction of the closure period may be permitted if seedling establishment and native vegetation response

are achieved as long as negative impacts on aspen, riparian resources and rangeland under rehabilitation are prevented. Livestock permittees desire the flexibility to make use of forage allocated through their grazing permits while meeting the needs of resources under rehabilitation. Livestock management following seedling establishment and/or burned area recovery should maintain both non-native and/or native species to meet land use, activity plan and Standards for Rangeland Health and Guidelines for Grazing Management objectives. In other cases, livestock closures longer than two growing seasons may be necessary in order to meet rangeland health standards.

Once a fire closure is in place, non-use by livestock (through the fire closure) needs to be balanced with use by big game species and wild horses during the period of the closure. The concern is that big game and/or wild horse numbers could result in the significant impact of grazing and browsing resources under rehabilitation. Protection of grazing and browsing resources under rehabilitation is in the best interest of public land managers for the purpose of meeting future wildlife, wild horse and livestock habitat needs.

Other documents provide additional guidelines concerning post-fire rehabilitation. These documents include the Standards for Rangeland Health and Guidelines for Grazing Management (43 CFR 4180.1) and the September 2000 *Normal Fire Rehabilitation Plan Environmental Assessment* (BLM/EK/PL-2000-037).

When emergency stabilization and rehabilitation actions are anticipated, an ESR team is assembled to conduct fire damage assessments and begin the development of a rehabilitation plan. The team will review resource management plans and relevant step-down plans, fire suppression operation plans, the Wildland Fire Situation Analysis and other resource information before preparing the plan and beginning rehabilitation activities. Rehabilitation actions include seedings and treatments, fencing additions and repair, road and crossing structure repair, watershed structures, weed inventory and treatments and monitoring. Between 1999-2001 rehabilitation treatments, such as seedings, were applied to over 300,000 acres.

It is expected that in the long-term, an integrated approach might reduce the size and intensity of fires and therefore reduce the amount of acreage in which rehabilitation is necessary. The descriptions and analysis in the Proposed FMA/EA acknowledges the benefits of fire rehabilitation. Using an integrated approach that addresses rehabilitation in combination with suppression and prevention may reduce the danger to fire fighters, improve the productivity of public lands, protect public and private property from devastating fire, and over the long term, should reduce fire suppression costs.

## **2.2 Standard Operating Procedures (SOPs)**

The planning framework for this FMA begins with guidance found in the 1987 Elko RMP and the 1985 Wells RMP and other amendments that have since been approved. As such, SOPs in these documents apply. Each of the four fire management components are further guided by other agency policies and plans, such as:

- **General Fire Management** is guided by all documents, including the current policies of the *2001 Review and Update of the Federal Wildland Fire Management Policy and Program Review*.
- **Fire Prevention** is guided by decisions and supporting environmental analysis documents of the *Vegetation Treatment on BLM Lands in Thirteen Western States Environmental Impact Statement* (BLM, 1991) and the May 2000 *Vegetation Treatment by Fire Environmental Assessment* (BLM Elko Field Office, BLM/EK/PL-98 026).
- **Fire Suppression** is guided by the *Wildland Fire Suppression Tactic Reference Guide*, (National Wildfire Coordinating Group, 1996) and the 1998 *Elko Field Office Fire Management Plan*.
- **Fire Rehabilitation** is guided by current *Standards for Rangeland Health for the Northeastern Great Basin Area of Nevada*, the new *Departmental Manual 620 DM 3* (dated 5/20/2004); the draft *Interagency Burned Area Emergency Stabilization and Rehabilitation Handbook* (dated 3/01/02), and the *Normal Fire Rehabilitation Plan* (BLM Elko Field Office, BLM/EK/PL-2000-037). The draft *BLM Supplemental Emergency Stabilization and Rehabilitation Handbook* dated November 27, 2002; and *H-1742,-Emergency Fire Rehabilitation Handbook* (release 7/1999) shall be used, consistent with new Department of the Interior policies, until updated or superceded (BLM Washington Office, Instruction Memorandum No. 2004-184)

Many of the actions in this FMA may require regulatory coordination, consultation and/or permitting. Some of the actions may require additional NEPA documentation and commitments beyond that provided by completion of the environmental assessment for this FMA. These additional requirements would be met prior to implementation of the management actions.

SOPs generally provide for the protection of resources and uses, including:

- Protection of human safety and health, and the safety of wildland firefighters;
- Protection of private property and natural/cultural resources, including preventing the destruction of known cultural properties from suppression actions;
- Protection of riparian areas from devastating wildland fire effect;
- Protection of important wildlife habitat from devastating wildland fire effects;
- Protection of threatened and endangered species and their habitat (where appropriate, and where the species does not rely on fire for part of its life cycle), as well as other species and their habitat that are listed as BLM-sensitive;
- Protection of forage for livestock, wildlife, and horses in a sustainable manner that contributes to overall rangeland health.
- Protection of wilderness values. This includes the “light-hand-on-the-land” tactics for use in wilderness study areas (WSAs) found in the Interim Management Policy and Guidelines for Lands under Wilderness Review, Handbook H-8550-1, Manual Section 8560 and Handbook H-8560-1.

SOPs adopted as part of this FMA and found in Appendix 2 are summarized below:

**Appendix 2, Part A -- SOPs for Species Protection**

This part includes SOPs that apply to fire suppression activities and burned area rehabilitation measures for species below, which are either federally listed as threatened or endangered, or are candidates for listing, under the Endangered Species Act by the U.S. Fish and Wildlife Service.

- Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*) – These SOPs apply to all streams currently occupied by the Federally threatened Lahontan cutthroat trout, or native range identified as having recovery potential for the Humboldt Distinct Population Segment.
- Columbia spotted frog (*Rana Luteiventris*) – The SOPs apply to riparian and/or wetland habitats currently occupied by the Columbia spotted frog, Great Basin population, which is currently a candidate for federal listing.
- Independence Valley speckled dace (*Rhinichthys osculus lethoporus*) – These SOPs apply to the Independence Valley Warm Springs and ponds which supply water to outflow channels and marsh habitats occupied by the Independence Valley speckled dace, which is federally listed as endangered.
- Clover Valley speckled dace (*Rhinichthys osculus oligoporus*) – These SOPs apply to spring/pond areas occupied by the Clover Valley speckled dace, which is federally listed as endangered.

**Appendix 2, Part B – Fire Management Guidelines for Sage Grouse**

SOPs that are pertinent to vegetation treatment, fire management and emergency fire rehabilitation actions follow recommendations from the *Management Guidelines for Sage Grouse and Sagebrush Ecosystems in Nevada* (USDI BLM, 2001). Sage grouse (*Centrocercus urophasianus*) occurs throughout the Elko district, and is currently under status review by the U.S. Fish and Wildlife Service, in response to petitions for its listing under the Endangered Species Act.

**Appendix 2, Part C – SOPs for Fire Management in Aspen and Cottonwood Stands**

This part lists procedures pertinent to fire management/treatments and to emergency burned area rehabilitation and post-fire treatments.

**Appendix 2, Part D – SOPs for Cultural Resource Protection**

This part provides measures to protect against damage to highly sensitive cultural resources from suppression activities, and outlines conditions when a fire ignited by natural sources may be allowed to burn in a wildland fire use area without an area-specific prescribed fire management plan that has been reviewed by the State Historic Preservation Officer.

**Appendix 2, Part E – SOPs for Fire Management in Mining Areas**

These SOPs provide guidelines for letting a fire burn across closed or reclaimed mining facilities. Also included are guidelines for preventing damage from wildfire to facilities in the vicinity of the Valmy Power Plant.

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## Elko and Wells Resource Management Plans Fire Management Amendment

### Appendix 1 Fire Management Category and Polygon Descriptions

The following table identifies the acreage of 21 polygon types in four fire management categories (FMCs) for the *Elko and Wells Resource Management Plans Fire Management Amendment* (FMA), as approved on September 29, 2004. The acres are based on GIS or BLM recorded acreage, as shown on the map for the approved amendment (see FMA, page 5, Figure 2), and are subject to change as the amendment is implemented and resource conditions change. The table is followed by definitions of each FMC and descriptions of the polygons. The source of this information is the October 2003 *Proposed Elko/Wells Resource Management Plans Fire Management Amendment and Environmental Assessment* (BLM/EK/PL-2003/026-1610-9211).

#### Polygon Names and Acres

No.	Name	Acres	No.	Name	Acres
A-1	Urban Interface/ Mining Areas/ Areas of Development	497,725	B-9	Crucial Deer Winter Range	600,027
A-2	Cultural Sites, Historic and Protohistoric	79,654	C-1	Woodlands	518,903
A-3	Municipal Watersheds	50,430	C-2	Owyhee Desert	821,097
B-1	District-wide Areas of Exotic Vegetation Invasion	331,082	C-3	Sage /Mountain Brush/ Perennial Grass	3,907,351
B-2	Ruby Marshes, Franklin Lake and Snow Water Lake	110,236	C-4	Intermixed Woodlands, NE Corner	422,008
B-3	Low Sage brush & Desert Shrub	1,023,813	D-1	Little Humboldt WSA	42,213
B-4	Areas of Primarily Private Land and Urban Interface	814,118	D-2	Owyhee Canyon WSA's (includes Owyhee Canyon, South Fork Owyhee, Rough Hills and Badlands WSA's)	45,828
B-5	Aspen Areas	30,905	D-3	Mixed Conifer	68,435
B-6	Dixie	113,346	D-4	Goshute, South Pequop, and Bluebell WSA's	166,525
B-7	Badlands Allotment	25,809	D-5	Cedar Ridge and Red Springs WSA's	17,856
B-8	Early Seral Sagebrush Grasslands	1,281,898			

\*Includes some areas of private lands.

**FMC A – Full Suppression.** *This strategy for maximum suppression activity applies to areas where wildland fire is not desired at all. These include the urban interface, active mining operations, oil and gas fields, recreation sites, critical watersheds, and areas of significant noxious weed infestation. Fuels reduction activities are acceptable, but prescribed fire opportunities will be limited due to close proximity of structures and improvements.*

### **A-1 Urban Interface / Mining Areas / Areas of Development**

**Current Condition:** The primary vegetation type around these areas is sagebrush and perennial grasses with intrusions of cheatgrass and other annual vegetation. The management objective for these areas is to preserve and protect the developed features, life and property. This area also includes the rapidly growing urban interface around Elko and Spring Creek. Recreation sites may be developed or undeveloped, but are moderately to heavily used during the summer and fall months. This polygon is generally represented as Fire Regime 3 and in Fire Condition Class 3.

**Future Desired Condition:** Maintain or improve the native vegetation in the area. Use vegetation manipulation to create buffer areas around critical developed sites to provide for public safety.

**Constraints:** Construction of fire line within the recreation sites should be avoided. If necessary, the minimum line needed should be located outside of developed sites, areas of concentrated use or Special Recreation Management Areas. Efforts should be made to keep unplanned ignitions from reaching these areas. Power lines, communication sites and other critical sites within the mining and oil/gas sites need full protection. Problems associated with these areas include power lines and arcing and chemical and explosive storage areas. In and around streams identified as Lahontan cutthroat trout habitat (LCT), the stipulations for species protection identified in the biological assessment will be followed.

### **A-2 Cultural Sites - Historic, Prehistoric and Native American Heritage Resources**

**Current Condition:** These areas are of high cultural concern due to their susceptibility to damage from wildfire or to damage from fire suppression activities. A wide variety of cultural resources are represented. Some of the polygons represent historic towns, mining districts, cabins, wickiups, game drives or other sites with organic or heat sensitive artifacts and features that can be damaged or destroyed by wildfire. Other areas have high site densities or rare site types and while these are not highly sensitive to fire, they can be severely impacted by fire suppression activities, especially construction of fire line with mechanized equipment. They occur within vegetation types ranging from low sagebrush to pinyon-juniper woodlands. This polygon is generally represented as Fire Regime 3 and in Fire Condition Class 2.

**Future Desired Condition:** Maintain integrity of these cultural resources.

Constraints: Generally, fire suppression activity is considerably more detrimental to cultural resources than fire itself. Constraints vary depending on the type of cultural resources present. Specific fire suppression information and digital map plots of the most sensitive cultural resource locations will be available to BLM fire management officials and maintained by the cultural resources staff. Use of mechanized fire line construction is usually prohibited within the archaeological/historical/Native American heritage resource boundaries except when human life or property is in danger. However, full suppression is often prescribed up to the point where the fire reaches the resource and suppression tactics other than mechanized fire line construction are allowable within most sites.

In some cases the polygons represent areas of high site density rather than individual sites. Within these, construction of mechanized fire line is discouraged in the areas having highest site density, but usually allowable if an archaeologist works with the bulldozer to avoid sites or lessen the impacts to sites. Currently there are just over 30 polygons designated as A2. Most are smaller than one hundred acres. A few contain thousands of acres.

The largest polygon is the Browns Bench toolstone area. Evidence of prehistoric toolstone procurement is found over a very large area. The archaeological manifestations range from widely spaced knapping stations to large continuous scatters of obsidian debris. Generally, fire suppression activity is considered more detrimental to these resources than fire itself. Suppression tactics other than mechanized fire line construction are preferred for this area. An archaeologist must be notified any time earth moving equipment is ordered for fire suppression. Bulldozers are not to be used unless accompanied by an archaeologist or, if an archaeologist is not available, a District Archaeological Technician (DAT). The archaeologist/DAT is to route fire lines around archaeological resources whenever feasible. Should life or property be threatened, bulldozers or other earth-moving equipment may be used whether or not an archaeologist/DAT is available.

### **A-3 Municipal Watersheds and Wellhead Protection**

Current Condition: These watersheds include springs that provide drinking water for several small communities, including Carlin, Montello, West Wendover, and Wendover, Utah. Also included are Wellhead Protection Areas around municipal water wells for numerous communities. Several Wellhead Protection Plans have been written, or are in the process of being written, including: Elko, Carlin, Wells, West Wendover, Jackpot, Spring Creek, Lamoille, and Crescent Valley. Most of the A-3 polygons associated with wellhead protection areas are located within A-1 polygons. This polygon is generally represented as Fire Regime 3 and in Fire Condition Class 2.

Future Desired Condition: Maintain vegetative cover of these sites to protect the quality of water for these municipal sources.

Constraints: Keep surface disturbance to a minimum around surface water sources, and within the established Wellhead Protection Zones for the wells. The wellhead protection area for municipal drinking water wells where no plan has been written will be a one-mile radius. Use of chemicals will be avoided in these polygons except where life or property is threatened.

***FMC B – High Suppression.*** *This category applies to areas where wildfire is likely to cause negative effects, but these effects could be mitigated or avoided through fuels management, prescribed fire or other strategies. These areas include a less strict acreage guideline than A and include vegetative treatments to reduce fuel loading as a management technique to a greater degree than A. Unplanned ignitions will be managed using the most appropriate and cost-effective suppression response based on threats to life, safety, structures, developments and other resource values. Where streams, riparian areas, or watersheds exist that provide habitat for federally listed threatened, endangered, or candidate species, suppression tactics will include appropriate standard operating procedures for species protection, except when a threat to human life exists. Mechanized equipment use will be consistent with the District's Guidelines. Unplanned ignitions will also be managed using current guidelines for sage grouse and sagebrush ecosystems.*

## **B-1 District-wide Areas of Exotic Vegetation Invasion**

Current Condition: Cheatgrass and other annual invasive species dominate these polygons. Isolated areas of sagebrush in early to mid seral condition and native perennial grasses are also present. This polygon is generally represented as Fire Regime 2 and in Fire Condition Class 2.

Future Desired Condition: Resource management objectives for these areas are to restrict the expansion of cheatgrass and other invasive vegetation into surrounding native plant communities and to increase the amount of perennial native vegetation available for livestock grazing, wildlife habitat and improvement.

Constraints: If archaeological sites are present, special mitigation may be required. Primary emphasis is on preventing the spread of fire into areas of native vegetation. Mechanized equipment often helps to increase the spread of these non-native species. The use of mechanized equipment would be evaluated against potential long-term resource damage. Typically, mechanized equipment would be used to protect areas of high resource concerns or values, such as critical watersheds or streams and intermixed private property.

## **B-2 Ruby Marshes, Franklin Lake and Snow Water Lake**

Current Condition: For the most part, the primary vegetation types do not have fire as part of their ecology. Vegetation is dominated by greasewood, shadscale and white sagebrush. Some inclusions of black sagebrush and pinyon-juniper woodlands exist in the higher elevations east of the Ruby Marshes. Some lower elevation sagebrush

conversions to crested wheatgrass also exist. Primary management objectives for this area are to preserve sensitive cultural resources and to maintain the native vegetation for wildlife and livestock forage. This polygon is generally represented as Fire Regime 3 and in Fire Condition Class 1.

Future Desired Condition: Maintain native vegetation diversity. Reduce/prevent annual and non-native vegetation invasion.

Constraints: The main damage to the cultural sites does not come from the fire itself but from suppression activities. Use of mechanized equipment should be avoided. An archaeologist should be on-site during suppression activities. Fire history in this area is minimal with an occasional small fire of less than one acre.

### **B-3 Low Sagebrush and Desert Shrub**

Current Condition: These areas are dominated by plant communities that do not have fire as part of their natural ecology. Vegetation types are dominated by desert shrub and low sage communities with varying degrees of perennial grasses and forb composition. Management objectives in these areas are to maintain the native community, to provide for livestock and wildlife forage. Some of the areas are important for winter antelope habitat. This polygon is generally represented as Fire Regime 1 and in Fire Condition Class 1.

Future Desired Condition: Prevent annual vegetation or non-native plant incursion into this vegetation type resulting from disturbance of the existing community. Maintain native vegetation composition.

Constraints: Low vegetation response potential, limited precipitation and fragile soils mean that mechanized equipment will scar the land and make rehabilitation expensive. "Minimum Impact Suppression Tactics" (MIST, Wildland Fire Suppression Tactic Reference Guide, NFES # 1256, April 1996) should be followed to the extent practicable.

### **B-4 Areas of Primarily Private Lands**

Current Condition: The vegetation type of these polygons is primarily sagebrush and perennial grasses. Large acreages have been converted to crested wheatgrass seedings. The native vegetative response ranges from low to good. Due to low to moderate precipitation and current range conditions, previous wildfires have resulted in the invasion of annual vegetation. This demonstrates the potential for significant annual and non-native species invasion within portions of this polygon. The management objectives within these areas are to maintain and improve native vegetation conditions, maintain some crucial big game habitat, provide forage for livestock and protect private property. This polygon is generally represented as Fire Regime 3 and in Fire Condition Class 3.

Future Desired Condition: Maintenance.

Constraints: The high proportion of private lands in these areas requires a significant suppression response, but the travel distances involved increase response time to the outlying areas. Where streams, riparian areas, or watersheds exist that provide habitat for federally listed threatened, endangered, or candidate species, suppression tactics will include appropriate standard operating procedures for species protection, except when a threat to life exists.

### **B-5 Aspen Areas**

Current Condition: The primary vegetation in these areas is aspen with a mix of conifers and cottonwood. Desired management is the maintenance and restoration of the aspen stands. This polygon is generally represented as Fire Regime 6 and in Fire Condition Class 2.

Future Desired Condition: Maintain healthy aspen stands with appropriate stand age class diversity. Maintain and improve riparian integrity.

Constraints: Disturbance by mechanized equipment deeper than one to two inches may damage aspen clones and should be avoided. Use of mechanized equipment will be consistent with Field Office Guidelines. Vehicle access is fairly limited. Aerial delivery of resources may be the most effective method. Where streams, riparian areas, or watersheds exist that provide habitat for federally listed threatened, endangered, or candidate species, suppression tactics will include appropriate standard operating procedures for species protection, except when a threat to life exists.

### **B-6 Dixie**

Current Condition: The primary vegetation type in this area is sagebrush and perennial grasses with intrusions of cheatgrass at the lower elevations and Utah juniper and pinyon pine at the higher elevations. The management objectives for this area are to maintain and improve native vegetation conditions, limit the spread of cheatgrass, protect critical watersheds, provide wildlife and livestock forage and provide woodland products from the higher elevations. This polygon is generally represented as Fire Regime 1 and in Fire Condition Class 3.

A watershed management plan was written and approved in 1988 for Dixie Creek. Erosional damage in the watershed has been the result of heavy grazing and fires followed by large and frequent peak flows. The plan recommends designating the Dixie Creek watershed as a fire rehabilitation priority area. One of the objectives of the plan is to reduce the sediment yield into the South Fork of the Humboldt River by 50% by 2008. Conversion of vegetation from perennial grasses to annual grasses has increased the fire cycle and thus increased runoff and sediment yield following fire.

Future Desired Condition: Maintain sagebrush/perennial grass diversity. Reduce and prevent further encroachment of annual and non -native vegetation in the area. This area is targeted as a fire restoration priority area.

Constraints: The low to moderate response potential of this area means that any mechanized equipment will leave long-lasting scars. Where streams, riparian areas, or watersheds exist that provide habitat for federally listed threatened, endangered, or candidate species, suppression tactics will include appropriate standard operating procedures for species protection, except when a threat to life exists. Use of mechanized equipment will be consistent with Field Office Guidelines. Unplanned ignitions will be managed using current management guidelines for sage grouse and sagebrush ecosystems.

### **B-7 Badlands Allotment**

Current Condition: The primary vegetation type is old growth juniper with associated sagebrush and perennial grasses. Desert shrub communities also exist along the valley floor and lower alluvial areas. The management objective for this area is to protect the prehistoric structures associated with basalt quarries. This polygon is generally represented as Fire Regime 5 and in Fire Condition Class 1.

Desired Future Condition: Maintain existing vegetative diversity.

Constraints: Due to the density and sensitivity of cultural sites in this area, every effort will be made to have an archeologist on site to mitigate damage from mechanized equipment. However, if an archeologist is not available the resource advisor or Field Manager's Representative will make the determination on appropriate mechanized equipment use. This determination will be made based on current fuel, climatic, safety, and other conditions.

### **B-8 Early Seral Sagebrush Grasslands**

Current Condition: The primary vegetation type in this area is sagebrush and perennial grasses in lower elevations and Utah juniper and pinyon pine at the higher elevations. However, because of frequent fire history and other vegetative disturbances in these areas, intrusions of annual invasive species and noxious weeds exist but do not dominate the area. Because of the current early seral conditions and low response potentials within these areas, future fire occurrences could potentially increase the amount of undesirable and invasive species in these areas to the extent that they could dominate the site. The management objectives for this area are to maintain and improve native vegetation conditions, limit the spread of annual invasive species and noxious weeds, protect critical watersheds, provide wildlife and livestock forage and provide woodland products from higher elevations. This polygon is generally represented as Fire Regime 3 and in Fire Condition Class 3.

Future Desired Condition: Maintain and/or improve sagebrush/perennial grass diversity. Prevent further encroachment of annual and non-native vegetation in the area.

Constraints: Primary emphasis is on preventing the spread of fire. However, the low to moderate response potential of this area means that any mechanized equipment will leave long-lasting scars. The use of mechanized equipment would be evaluated against potential long-term resource damage. Typically, mechanized equipment would be used to protect areas of high resource concerns or values, such as critical watersheds, threatened or endangered species habitat, and intermixed private property.

### **B-9 Crucial Mule Deer Winter Range**

Current Condition – The vegetation types in these crucial deer winter range areas vary from sagebrush and perennial grasses at lower elevations in western portions of the field office to pinyon pine, Utah juniper, bitterbrush and mountain mahogany with associated perennial grasses and sagebrush in eastern regions. Vegetation types and current conditions vary depending upon elevation and fire history. Many of the mule deer winter ranges in western Elko County, including some of these crucial deer winter ranges, have been impacted by wildfire in the past several years. Rehabilitation efforts have been implemented in many areas. However, due to varying degrees of aspect and elevation, range site potentials, and pre-fire ecological conditions, the shrub component on these western ranges is limited in many areas. Because of the severe impacts that wildfires have had on mule deer winter ranges in western Elko County the past several years, protection of seeded areas and the remaining intact portions of these crucial winter ranges from further fire impacts is critical. Because of current early seral conditions in some of these areas, future fire occurrences could potentially increase the amount of undesirable and invasive species, particularly within western regions of the county. The management objectives for these areas are to maintain and improve vegetative conditions, protect critical watersheds, provide wildlife and livestock forage and provide woodland products in pinyon/juniper areas. This polygon is generally represented as Fire Regime 5 and in Fire Condition Class 1.

Future Desired Condition – Improve shrub cover and densities in western regions affected by fire in recent years. Maintain big game habitat and woodland integrity at higher elevations. Maintain sagebrush/perennial grass diversity at lower elevations. Prevent annual non-native plant encroachment.

Constraints – Primary emphasis is on preventing the spread of fire. In some areas, long distances for vehicular travel areas make aerial delivery of resources an effective option. Lower elevations may have low to moderate response potential whereby use of mechanical equipment will leave long-lasting scars. Therefore, the use of mechanized equipment would be evaluated against potential long-term resource damage. Typically, mechanized equipment would be used to protect areas of high resource concerns or values, such as critical watersheds or streams, critical big game habitats, and intermixed private property.

Use of mechanized equipment will be limited in areas with high cultural values. An archaeologist will be consulted when mechanized equipment is used in these areas and will be consistent with Elko Field Office guidelines.

Where streams, riparian areas, or watershed exist that provide habitat for Federally listed threatened, endangered, or candidate species, suppression tactics will include appropriate standard operating procedures for species protection, except when a threat to human life exists.

Unplanned ignitions will also be managed using current management guidelines for sage grouse and sagebrush ecosystems.

***FMC C – Moderate Suppression.*** *This applies to areas where fire may be desirable to manage ecosystems, but where various factors place constraints on fire use for resource benefit. These areas may have larger acreage guidelines than B and can include increased use of fuels/vegetation manipulation. Unplanned ignitions will be managed using the most appropriate and cost-effective suppression response based on threats to life, safety, structures, developments, and other resource values. Where streams, riparian areas, or watersheds exist that provide habitat for federally listed threatened, endangered, or candidate species, suppression tactics will include appropriate standard operating procedures for species protection, except when a threat to life exists. Mechanized equipment use will be consistent with District Guidelines. Unplanned ignitions will also be managed using current guidelines for sage grouse and sagebrush ecosystems.*

### **C-1 Woodlands**

**Current Condition:** The primary vegetation type in these polygons is woody vegetation dominated by Utah juniper, pinyon pine, bitterbrush and mountain mahogany with associated perennial grasses and shrubs. Management objectives are for woodland products and big game habitat. This polygon is generally represented as Fire Regime 5 and in Fire Condition Class 1.

**Future Desired Condition:** Maintain woodlands.

**Constraints:** Every effort will be made to have an archeologist on site to mitigate damage from mechanized equipment. However, if an archeologist is not available the resource advisor or Field Manager’s Representative will make the determination on appropriate mechanized equipment use. This determination will be made based on current fuel, climatic, safety, and other conditions.

### **C-2 Owyhee Desert**

**Current Condition:** The primary vegetation in this polygon is sagebrush with perennial grasses. Due to the current ecological conditions this is a potentially high vegetative response area with most of the area receiving 8 to 14+ inches of precipitation per year. The management objectives are to maintain fire as part of the natural ecological process and to achieve desired plant communities for grazing and wildlife management. This polygon is generally represented as Fire Regime 3 and in Fire Condition Class 1.

Future Desired Condition: Maintain native vegetation diversity and prevent the encroachment of annual and non-native plant species.

Constraints: Some private lands, which will require different suppression strategies, are located within this large polygon. Mechanized equipment use must be evaluated against the potential for long-term resource damage. Mechanized equipment use will be consistent with Elko Field Office Guidelines. Unplanned ignitions will be managed using current guidelines for sage grouse and sagebrush ecosystems.

### **C-3 Sage/Mountain Brush/Perennial Grass**

Current Condition: Big sagebrush and perennial grasses dominate the vegetation in these areas. Lower elevation sites contain intrusions of cheatgrass. Bitterbrush and inclusions of mountain mahogany and aspen occur at higher elevations. The response potentials following fire is variable depending upon elevation and current ecological conditions. Lower precipitation areas (i.e. 8-10"/year precipitation zones below 6,000 ft. elevation) generally have lower response potentials and will need rehabilitation following fire events to restore the native community and ground cover. Areas above 6,000 ft. elevation (i.e. 10"+ /year precipitation zones) have higher response potentials due to increased available moisture and current ecological conditions. Prescribed fire to achieve site-specific resource management goals, whether planned or unplanned ignitions, should be limited in areas with low response potentials. Prescribed fire may be utilized more extensively as a management tool to achieve multiple use objectives at higher elevations where increased response potentials exist. Management objectives for these areas include the protection and maintenance of crucial big game habitat, protection of extensive cultural resources, protection of crucial watersheds, achieving desired plant communities for grazing and wildlife management, and limiting cheatgrass colonization into native vegetation. This polygon is generally represented as Fire Regime 1 and in Fire Condition Class 2.

Future Desired Condition: Maintain and/or improve age class diversity of sagebrush. Maintain and/or improve the diversity of sagebrush and perennial grasses and forbs. Prevent further encroachment of annual and non-native plant species. Improve and/or maintain riparian areas to achieve proper functioning condition and other site specific multiple use objectives.

Constraints: Mechanized equipment will leave short-term scars on the land and may without proper plant response or successful rehabilitation result in annual species spread or long-term scars in low to moderate response potential areas, thus increasing rehabilitation costs. The use of mechanized equipment would be evaluated against potential long-term resource damage. Typically, mechanized equipment would be used to protect areas of high resource concerns or values, such as critical watersheds or streams and intermixed private property. Use of mechanized equipment will be limited in areas with high cultural resource values. An archaeologist will be consulted when mechanized equipment is used in these areas. Where streams, riparian areas, or

watersheds exist that provide habitat for federally listed threatened, endangered, or candidate species, suppression tactics will include appropriate standard operating procedures for species protection, except when a threat to life exists. Use of mechanized equipment will be consistent with Field Office guidelines. Unplanned ignitions will be managed using current guidelines for sage grouse and sagebrush ecosystems.

#### **C-4 Intermixed Woodlands, NE Corner**

**Current Condition:** The vegetation in this area is characterized by pinyon-juniper woodlands at the higher elevations and native perennial grasses and sagebrush at lower elevations. The management objectives for this area include maintaining crucial big game habitat, maintaining the woodlands, providing livestock forage and protecting critical watersheds. Plant communities within this area have a high response potential following wildfire due to higher precipitation and current ecological conditions. There are various significant cultural sites in this polygon requiring mitigation during wildfire suppression. This polygon is generally represented as Fire Regime 5 and in Fire Condition Class 2.

**Future Desired Condition:** Maintain big game habitat and woodland integrity at higher elevations. Maintain sagebrush/perennial grass diversity at lower elevations by preventing juniper encroachment. Prevent annual non-native plant encroachment.

**Constraints:** Long distances for vehicular travel make aerial delivery of resources an effective option. Mechanized equipment will leave short-term scars on the land and may without proper plant response or successful rehabilitation result in annual species spread or long-term scars in low to moderate response potential areas, thus increasing rehabilitation costs. The use of mechanized equipment would be evaluated against potential long-term resource damage. Typically, mechanized equipment would be used to protect areas of high resource concerns or values, such as critical watersheds or streams and intermixed private property. Use of mechanized equipment will be limited in areas with high cultural resource values. An archaeologist will be consulted when mechanized equipment is used in these areas. Where streams, riparian areas, or watersheds exist that provide habitat for federally listed threatened, endangered, or candidate species, suppression tactics will include appropriate standard operating procedures for species protection, except when a threat to life exists. Use of mechanized equipment will be consistent with Field Office Guidelines. Unplanned ignitions will be managed using current management guidelines for sage grouse and sagebrush ecosystems.

***FMC D – Limited Suppression.*** *This strategy applies to areas where fire is desired under various environmental conditions and there are few constraints associated with resources or social, economic or political considerations. These areas will receive the least level of suppression, some level of fire use for resource benefit and can include the extensive use of prescribed fire. Mechanized equipment use will be consistent with District Guidelines and the Interim Management Policy for Lands under Wilderness*

*Review. For the Elko Field Office these areas would be limited to Wilderness Study Areas and the Cherry Creek Range.*

### **D-1 Little Humboldt Wilderness Study Area (WSA)**

**Current Condition:** The vegetation types in these areas vary from sagebrush and perennial grasses to pinyon-juniper woodlands to mixed conifer woodlands. Primary management objectives for these areas are to maintain their natural characteristics and to comply with the Interim Management Policy for Lands under Wilderness Review. This polygon is generally represented as Fire Regime 1 and in Fire Condition Class 2.

**Future Desired Condition:** Maintain the natural ecology of the areas including pre-settlement fire activity. Prevent the encroachment of annual and non-native vegetation into the areas.

**Constraints -** According to the 1995 Interim Management Policy for Lands Under Wilderness Review, suppression efforts associated with wildfire are considered an emergency. The WSA may be impaired when the wildfire poses an immediate threat to life or real property. Only the Field Manager, Associate Field Manager, or Acting Field Manager can authorize motorized transport off of inventoried\* vehicle routes for situations where life and property are threatened, but not immediately. Dozer use will not be allowed within a WSA unless there is an immediate threat to life or real property. In all cases, use of vehicle and mechanized equipment must be considered in the context of not impairing the suitability of the WSA for wilderness designation. All vehicular traffic will be restricted to the routes identified during the initial inventory. A Resource Advisor will be ordered for all fires within, or threatening a WSA. Present suppression methods may be used, including use of power tools, aircraft, and motorized fire-fighting equipment while strictly adhering to MIST and "light hand on the land" techniques. Rehabilitate any impacts created by suppression activities prior to releasing fire crews and equipment following fire containment.

\*Inventoried vehicle routes are those that were identified during the original wilderness intensive inventory from 1979-1981. Maps of these inventoried routes are provided in READ kits, with local fire personnel maps, and at Elko Interagency Dispatch Center.

### **D-2 Owyhee Canyon WSA**

**Current Condition:** The vegetation types in these areas vary from sagebrush and perennial grasses to riparian areas. Primary management objectives for these areas are to maintain their natural characteristics and to comply with the Interim Management Policy for Lands under Wilderness Review. This polygon includes; South Fork Owyhee WSA, Rough Hills WSA, Owyhee Canyon WSA, and Badlands WSA. This polygon is generally represented as Fire Regime 3 and in Fire Condition Class 1.

**Future Desired Condition:** Maintain the natural ecology of the areas including pre-settlement fire activity. Prevent the encroachment of annual and non-native vegetation into the areas.

Constraints - According to the 1995 Interim Management Policy for Lands Under Wilderness Review, suppression efforts associated with wildfire are considered an emergency. The WSA may be impaired when the wildfire poses an immediate threat to life or real property. Only the Field Manager, Associate Field Manager, or Acting Field Manager can authorize motorized transport off of inventoried\* vehicle routes for situations where life and property are threatened, but not immediately. Dozer use will not be allowed within a WSA unless there is an immediate threat to life or real property. In all cases, use of vehicle and mechanized equipment must be considered in the context of not impairing the suitability of the WSA for wilderness designation. All vehicular traffic will be restricted to the routes identified during the initial inventory. A Resource Advisor will be ordered for all fires within or threatening a WSA that may escape initial attack. Present suppression methods may be used, including use of power tools, aircraft, and motorized fire-fighting equipment while strictly adhering to MIST and "light hand on the land" techniques. Rehabilitate any impacts created by suppression activities prior to releasing fire crews and equipment following fire containment. Several critical streams and watersheds are within the WSA's' boundaries, including the South Fork Little Humboldt River.

\*Inventoried vehicle routes were identified during the original wilderness intensive inventory from 1979-1981. Maps of these inventoried routes are provided in READ kits, with local fire personnel maps, and at Elko Interagency Dispatch Center.

### **D-3 Mixed Conifer**

Current Condition: These are high elevation areas with the predominant vegetation type being white fir, limber pine, bristlecone pine and spruce. These stands isolated on the tops of the higher elevation mountain ranges in the eastern part of the district. Because of the lack of disturbance most of these stands are becoming even aged stands and are dominated by dead standing and down trees. There is a heavy fuel load associated with these areas, making them more susceptible to a large stand replacing fire. Desired management for this area is to restore the health of the forest community. Some areas are also crucial big game habitat (Cherry Creek Mountains). This polygon is generally represented as Fire Regime 5 and in Fire Condition Class 1.

Future Desired Condition: Healthy mosaic of uneven aged conifer stands with reduced fuel loadings.

Constraints: Limited access into these areas makes aerial delivery of resources the most effective tool. Critical watershed in this polygon is upper Taylor Creek in the Cherry Creek Mountains.

### **D-4 Goshute, South Pequop, and Bluebell WSAs**

Current Condition: The vegetation types in these areas vary from sagebrush and perennial grasses to pinyon-juniper woodlands to mixed conifer woodlands. Primary management objectives for these areas are to maintain their natural characteristics and to comply with the Interim Management Policy for Lands under Wilderness Review. This polygon is generally represented as Fire Regime 5 and in Fire Condition Class 2.

Future Desired Condition: Maintain the natural ecology of the areas including pre-settlement fire activity. Prevent the encroachment of annual and non-native vegetation into the areas.

Constraints - According to the 1995 Interim Management Policy for Lands Under Wilderness Review, suppression efforts associated with wildfire are considered an emergency. The WSA may be impaired when the wildfire poses an immediate threat to life or real property. Only the Field Manager, Associate Field Manager, or Acting Field Manager can authorize motorized transport off of inventoried\* vehicle routes for situations where life and property are threatened, but not immediately. Dozer use will not be allowed within a WSA unless there is an immediate threat to life or real property. In all cases, use of vehicle and mechanized equipment must be considered in the context of not impairing the suitability of the WSA for wilderness designation. All vehicular traffic will be restricted to the routes identified during the initial inventory. A Resource Advisor will be ordered for all fires within, or threatening a WSA. Present suppression methods may be used, including use of power tools, aircraft, and motorized fire-fighting equipment while strictly adhering to MIST and "light hand on the land" techniques. Rehabilitate any impacts created by suppression activities prior to releasing fire crews and equipment following fire containment.

\*Inventoried vehicle routes were identified during the original wilderness intensive inventory from 1979-1981. Maps of these inventoried routes are provided in READ kits, with local fire personnel maps, and at Elko Interagency Dispatch Center.

## **D-5 Cedar Ridge and Red Springs WSAs**

Current Condition: The vegetation types in these areas vary from sagebrush and perennial grasses to juniper woodlands. Much of these areas have considerable amounts of cheatgrass. Primary management objectives for these areas are to maintain their natural characteristics and to comply with the Interim Management Policy for Lands under Wilderness Review. This polygon is generally represented as Fire Regime 2 and in Fire Condition Class 3.

Future Desired Condition: Maintain the natural ecology of the areas including pre-settlement fire activity. Prevent the encroachment of annual and non-native vegetation into the areas.

Constraints - According to the 1995 Interim Management Policy for Lands Under Wilderness Review, suppression efforts associated with wildfire are considered an emergency. The WSA may be impaired when the wildfire poses an immediate threat to life or real property. Only the Field Manager, Associate Field Manager, or Acting Field Manager can authorize motorized transport off of inventoried\* vehicle routes for situations where life and property are threatened, but not immediately. Dozer use will not be allowed within a WSA unless there is an immediate threat to life or real property. In all cases, use of vehicle and mechanized equipment must be considered in the context of not impairing the suitability of the WSA for wilderness designation. All vehicular traffic will be restricted to the routes identified during the initial inventory. A Resource Advisor will be ordered for all fires within, or threatening a WSA. Present suppression

methods may be used, including use of power tools, aircraft, and motorized fire-fighting equipment while strictly adhering to MIST and "light hand on the land" techniques. Rehabilitate any impacts created by suppression activities prior to releasing fire crews and equipment following fire containment.

\*Inventoried vehicle routes are those that were identified during the original wilderness intensive inventory from 1979-1981. Maps of these inventoried routes are provided in READ kits, with local fire personnel maps, and at Elko Interagency Dispatch Center.

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**Appendix 2**  
**ELKO AND WELLS RMPs FIRE MANAGEMENT AMENDMENT**  
**STANDARD OPERATING PROCEDURES**

**PART A – SOPS for SPECIES PROTECTION**

**LAHONTAN CUTTHROAT TROUT**

**Unless a threat to human life or property exists, the following standard operating procedures for species protection will apply to all streams occupied by Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*) (LCT) and native habitats identified as having recovery potential<sup>1</sup>:**

**SUPPRESSION ACTIVITIES:**

1. Avoid the application of retardant or foam within 300 feet of the stream channel or waterway<sup>2</sup>.

**Exceptions:**

- When alternative line construction tactics are not available due to terrain constraints, congested area, life and property concerns or lack of ground personnel, it is acceptable to anchor the foam or retardant application to the waterway. When anchoring a retardant or foam line to a waterway, use the most accurate method of delivery in order to minimize placement of retardant or foam in the waterway (e.g., a helicopter rather than a heavy airtanker).
- Deviations from these guidelines are acceptable when life or property is threatened and the use of retardant or foam can be reasonably expected to alleviate the threat.
- When potential damage to natural resources outweighs possible loss of aquatic life, the unit administrator may approve a deviation from these guidelines<sup>3</sup>.

**Emergency Consultation:**

Aerial application of retardant or foam outside 300 ft of a waterway is presumed to avoid adverse effects to aquatic species. If it is determined appropriate to apply retardant or surfactant foam within 300 feet of a waterway or stream channel based on one or more of

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<sup>1</sup> The Humboldt Distinct Population Segment (DPS) Team will use the 1995 LCT Recovery Plan and the most recent data to develop a list and/or map which specifically identifies stream segments currently occupied by LCT and native ranges identified as having recovery potential. This list and/or map will be reviewed and updated as necessary based on the most current species information.

<sup>2</sup> Aerial application and use of retardants and foams will be consistent with national policy guidelines established by the National Office of Fire and Aviation, as amended.

<sup>3</sup> This determination will be made on a case-by-case basis by the Field Manager or the designated Field Manager representative in consultation with the Fire Management Officer, Incident Commander, Resource Advisor, and Elko Field Office Fisheries Biologist through development of the Wildfire Situation Analysis.

the exceptions listed above, the unit administrator shall determine whether there have been any adverse effects to LCT.

If the action agency determines there were no adverse effects to LCT or their habitats, there is no additional requirement to consult with Fish and Wildlife Service (FWS).

If the action agency determines that there were adverse effects on LCT or their habitats then the action agency must consult with FWS, as required by 50 CFR 402.05 (Emergencies).

In the case of a long duration incident, emergency consultation should be initiated as soon as practical during the event. Otherwise, post-event consultation is appropriate. The initiation of the consultation is the responsibility of the unit administrator.

2. Do not draft fill engines that have surfactant foam mixes in tanks, directly from the stream channel.
3. A containment barrier will be constructed around all pumps and fuel containers utilized within 100 feet of the stream channel to prevent petroleum products from entering the stream. The containment barrier will be of sufficient size to contain all fuel being stored or used on site.
4. Do not dump engines filled with surfactant foam mixes within 600 feet of the stream channel.
5. Do not conduct retardant mixing operations within 300 feet of the stream channel.
6. Stream flow will not be impounded or diverted by mechanical or other means in order to facilitate extraction of water from the stream for fire suppression efforts.
7. The intake end of the draft hose will be screened to prevent entry of fish species. Screen opening size will be a maximum of 3/16 inch.
8. Before each fire assignment in the Elko District, all fire suppression equipment utilized to extract water from stream or spring sources (i.e. helicopter buckets, draft hoses and screens) will be thoroughly rinsed to remove mud and debris and disinfected with a chlorine solution (one part bleach to 32 parts water, or stronger). Rinsing equipment with disinfectant solutions will not occur within 100 feet of natural water sources (streams or springs).
9. Unless specifically identified as a restricted water source<sup>4</sup>, dipping water from streams currently occupied by LCT (including beaver ponds) by helicopter bucket is allowed only during initial attack operations (the first 24 hours following the initiation of suppression

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<sup>4</sup> The Humboldt Distinct Population Segment (DPS) Team will use the 1995 LCT Recovery Plan and the most recent data to develop a list and/or map which specifically identifies stream segments currently occupied by LCT where dipping water from streams (including beaver ponds) by helicopter is restricted due to specific meta-population concerns. This list and/or map will be reviewed annually and updated as necessary based on the most current species information.

actions). Beyond initial attack, additional water needed to control and/or contain the fire will be obtained by drafting into portable dipping tanks or drafting directly into the helicopter bucket in accordance with the above standard operating procedures. Water levels in the pond or pool will be monitored continuously. Water extraction will not exceed the ability of the stream inflow to maintain water levels which exist at the time initial attack efforts began. If the water level drops below this predetermined level, all water removal will cease immediately until water levels are recharged. For streams currently occupied by LCT, extraction of water from beaver ponds or pools will not be allowed if stream inflow is minimal (i.e. during drought situations) and extraction of water would lower the existing pond or pool level.

10. Fire control lines will not cross or terminate at the stream channel. Control lines will terminate at the edge of the riparian zone at a location determined appropriate to meet fire suppression objectives based on fire behavior, vegetation/fuel types, and fire fighter safety.
11. Access roads and/or fords will not be constructed across the stream channel.
12. New roads or mechanical fire control lines will not be constructed and existing roads will not be improved within 300 feet of the stream channel unless authorized by the Field Manager or the designated Field Manager representative.

#### **REHABILITATION MEASURES:**

1. An assessment of the impacts of fire and fire suppression activities to LCT habitat will be completed by an interdisciplinary team of resource specialists, including the Elko Field Office Fisheries Biologist and Hydrologist and representatives from the U.S. Fish and Wildlife Service and the Nevada Department of Wildlife. Based on this assessment, appropriate rehabilitation measures will be identified consistent with Departmental Emergency Stabilization and Rehabilitation Handbook guidance, including but not limited to some or all of the following:
  - a. Close the affected watershed and/or stream channel to livestock grazing for one or more years to allow for recovery of riparian vegetation. The appropriate length of time for closure to livestock grazing will be determined on a site specific basis based on resource data, scientific principles, and experience. Site specific monitoring will determine when resource objectives have been achieved on specific burned areas. Site specific vegetative recovery objectives will be identified by the interdisciplinary review team and included in the Notice of Closure to Livestock Grazing issued in accordance with 43 CFR 4110.3-3.
  - b. Reconstruct damaged fences and/or construct new fences to ensure protection of the stream channel from grazing. In Wilderness Study Areas, fence construction and/or reconstruction will be in accordance with Interim Management Policy Guidelines.

- c. Monitor stream and riparian habitats to allow for comparison of post-fire impacts to existing baseline information.
- d. Where determined necessary by the interdisciplinary review team, install appropriate erosion control structures (i.e. erosion matting and/or straw bale structures, straw wattles, etc.) to mitigate overland flow effects to the stream channel.
- e. Where determined necessary by the interdisciplinary review team, reseed and/or replant riparian/wetland areas with native plant species to facilitate re-establishment of perennial vegetation, minimize potential channel erosion, and allow for recovery of riparian functionality.
- f. Rehabilitate improved roads located within 300 feet of the stream channel as determined necessary to mitigate potential sedimentation into the stream channel.
- g. Implement appropriate integrated noxious weed control measures where determined necessary by the interdisciplinary review team and/or where determined appropriate through post-fire monitoring.
- h. Where determined necessary by the interdisciplinary review team, initiate temporary road closures for at least one year to protect and stabilize burned areas and associated watersheds. An interdisciplinary assessment will be conducted after the first year to determine if road closures are still needed.

## **COLUMBIA SPOTTED FROG**

**Unless a threat to human life exists, the following standard operating procedures for species protection will apply to riparian and/or wetland habitats currently occupied by Columbia spotted frog (*Rana luteiventris*):**

### **SUPPRESSION ACTIVITIES :**

1. Avoid the application of retardant or foam within 300 feet of the stream channel or waterway<sup>1</sup>.

#### **Exceptions:**

- When alternative line construction tactics are not available due to terrain constraints, congested area, life and property concerns or lack of ground personnel, it is acceptable to anchor the foam or retardant application to the waterway. When anchoring a retardant or foam line to a waterway, use the most accurate method of

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<sup>1</sup> Aerial application and use of retardants and foams will be consistent with national policy guidelines established by the National Office of Fire and Aviation, as amended.

delivery in order to minimize placement of retardant or foam in the waterway (e.g., a helicopter rather than a heavy airtanker).

- Deviations from these guidelines are acceptable when life or property is threatened and the use of retardant or foam can be reasonably expected to alleviate the threat.
  - When potential damage to natural resources outweighs possible loss of aquatic life, the unit administrator may approve a deviation from these guidelines<sup>2</sup>.
- If and when the Columbia spotted frog is listed as threatened or endangered, or proposed for listing, the following Emergency Consultation guidelines would apply:

Aerial application of retardant or foam outside 300 ft of a waterway is presumed to avoid adverse effects to aquatic species. If it is determined appropriate to apply retardant or surfactant foam within 300 feet of a waterway or stream channel based on one or more of the exceptions listed above, the unit administrator shall determine whether there have been any adverse effects to Columbia spotted frog.

If the action agency determines there were no adverse effects to Columbia spotted frog or their habitats, there is no additional requirement to consult with Fish and Wildlife Service (FWS).

If the action agency determines that there were adverse effects on Columbia spotted frog or their habitats then the action agency must consult with FWS, as required by 50 CFR 402.05 (Emergencies).

**In the case of a long duration incident, emergency consultation should be initiated as soon as practical during the event. Otherwise, post-event consultation is appropriate. The initiation of the consultation is the responsibility of the unit administrator.**

2. Do not draft fill engines that have surfactant foam mixes in tanks, directly from the stream channel or spring/pond.
3. A containment barrier will be constructed around all pumps and fuel containers utilized within 100 feet of the stream channel or spring/pond to prevent petroleum products from entering the stream. The containment barrier will be of sufficient size to contain all fuel being stored or used on site.
4. Do not dump engines filled with surfactant foam mixes within 600 feet of the stream channel or spring/pond.
5. Do not conduct retardant mixing operations within 300 feet of the stream channel or spring/pond.
6. Fire control lines will not cross or terminate at the stream channel or spring/pond.

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<sup>2</sup> This determination will be made on a case-by-case basis by the Field Manager/representative in consultation with the Fire Management Officer, Incident Commander, Resource Advisor, and Elko Field Office Fisheries Biologist through development of the Wildfire Situation Analysis.

Control lines will terminate at the edge of the riparian zone at a location determined appropriate to meet fire suppression objectives based on fire behavior, vegetation/fuel types, and fire fighter safety.

7. Stream flow will not be impounded or diverted by mechanical or other means in order to facilitate extraction of water from the stream for fire suppression efforts.
8. Access roads and/or fords will not be constructed across the stream channel.
9. The intake end of the draft hose will be screened to prevent entry of spotted frog tadpoles. Screen opening size will be a maximum of 3/16 inch.
10. When drafting from beaver ponds or spring/ponds, drafting will occur only in open water areas free of dense aquatic vegetation where egg masses or spotted frog tad poles may concentrate.
11. Dipping water from beaver ponds or spring/ponds by helicopter bucket is allowed only during initial attack operations (the first 24 hours following the initiation of suppression actions). Beyond initial attack, additional water needed to control and/or contain the fire will be obtained by drafting into portable dipping tanks or drafting directly into the helicopter bucket in accordance with the above standard operating procedures. Water levels in the beaver pond or spring/pond will be monitored continuously. Water extraction will not exceed the ability of the stream or spring inflow to maintain water levels which exist at the time initial attack efforts began. If the water level drops below this predetermined level, all water removal will cease immediately until water levels are recharged.
12. Extraction of water from beaver ponds or spring/ponds will not be allowed if stream or spring inflow is minimal (i.e. during drought situations) and extraction of water would lower the existing pond level.
13. Before each fire assignment in the Elko District, all fire suppression equipment utilized to extract water from stream or spring sources (i.e. helicopter buckets, draft hoses and screens) will be thoroughly rinsed to remove mud and debris and disinfected with a chlorine solution (one part bleach to 32 parts water, or stronger). Rinsing equipment with disinfectant solutions will not occur within 100 feet of natural water sources (streams or springs).

#### **REHABILITATION MEASURES:**

1. An assessment of the impacts of fire and fire suppression activities to Columbia spotted frog habitat will be completed by an interdisciplinary team of resource specialists, including the Elko Field Office Fisheries Biologist and Hydrologist and representatives from the U.S. Fish and Wildlife Service and the Nevada Department of Wildlife. Based on this assessment, appropriate rehabilitation measures will be identified consistent with Departmental Emergency Stabilization and Rehabilitation Handbook guidance, including but not limited to some or all of the following:

- a. Close the affected habitat area to livestock grazing for one or more years to allow for recovery of riparian vegetation. The appropriate length of time for closure to livestock grazing will be determined on a site specific basis based on resource data, scientific principles, and experience. Site specific monitoring will determine when resource objectives have been achieved on specific burned areas. Site specific vegetative recovery objectives will be identified by the interdisciplinary review team and included in the Notice of Closure to Livestock Grazing issued in accordance with 43 CFR 4110.3-3.
- b. Reconstruct damaged fences and/or construct new fences to ensure protection of the habitat area from grazing. In Wilderness Study Areas, fence construction and/or reconstruction will be in accordance with Interim Management Policy Guidelines.
- c. Monitor stream channel or spring/pond habitats to allow for comparison of post-fire impacts to existing baseline information.
- d. Where determined necessary by the interdisciplinary review team, install appropriate erosion control structures (i.e. erosion matting and/or straw bale structures, straw wattles, etc.) to mitigate overland flow effects to the stream channel or spring/pond.
- e. Where determined necessary by the interdisciplinary review team, reseed and/or replant riparian/wetland areas with native plant species to facilitate re-establishment of perennial vegetation, minimize potential channel erosion, and allow for recovery of riparian functionality.
- f. Rehabilitate improved roads located within 300 feet of the habitat area as determined necessary to mitigate potential sedimentation.
- g. Implement appropriate integrated noxious weed control measures where determined necessary by the interdisciplinary review team and/or where determined appropriate through post-fire monitoring.
- h. Where determined necessary by the interdisciplinary review team, initiate temporary road closures for at least one year to protect and stabilize burned areas and associated watersheds. An interdisciplinary assessment will be conducted after the first year to determine if road closures are still needed.

### **INDEPENDENCE VALLEY SPECKLED DACE**

**Unless a threat to human life or property exists, the following standard operating procedures for species protection will apply to the Independence Valley Warm Springs and**

**ponds which supply water to outflow channels and marsh habitats occupied by the Independence Valley speckled dace (*Rhinichthys osculus lethoporus*):**

The Independence Valley Warms Springs and wetlands habitat area is located entirely on private lands. The habitat area emerges from several seeps and springs along a 1-mile segment of the western edge of Independence Valley. The flows are impounded into two reservoirs. The upper, shallower reservoir overflows into the lower, deeper reservoir. The outflow from the lower reservoir flows through a channel before entering a marsh area. Several small shallow ponds exist in the marsh area. Spring heads exist both north and south of the impoundment reservoirs. Independence Valley speckled dace are not known to occur in the spring head areas or the two impoundment reservoirs. The dace are known to exist mostly in the marsh area and to a lesser extent in the outflow channel.

**SUPPRESSION ACTIVITIES:**

1. Avoid the application of retardant or foam within 300 feet of the stream channel or waterway<sup>1</sup>.

Exceptions:

- When alternative line construction tactics are not available due to terrain constraints, congested area, life and property concerns or lack of ground personnel, it is acceptable to anchor the foam or retardant application to the waterway. When anchoring a retardant or foam line to a waterway, use the most accurate method of delivery in order to minimize placement of retardant or foam in the waterway (e.g., a helicopter rather than a heavy airtanker).
- Deviations from these guidelines are acceptable when life or property is threatened and the use of retardant or foam can be reasonably expected to alleviate the threat.
- When potential damage to natural resources outweighs possible loss of aquatic life, the unit administrator may approve a deviation from these guidelines<sup>2</sup>.

Emergency Consultation:

Aerial application of retardant or foam outside 300 ft of a waterway is presumed to avoid adverse effects to aquatic species. If it is determined appropriate to apply retardant or surfactant foam within 300 feet of a waterway or stream channel based on one or more of the exceptions listed above, the unit administrator shall determine whether there have been any adverse effects to Independence Valley speckled dace.

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<sup>1</sup> Aerial application and use of retardants and foams will be consistent with national policy guidelines established by the National Office of Fire and Aviation, as amended.

<sup>2</sup> This determination will be made on a case-by-case basis by the Field Manager or the designated Field Manager representative in consultation with the Fire Management Officer, Incident Commander, Resource Advisor, and Elko Field Office Fisheries Biologist through development of the Wildfire Situation Analysis.

If the action agency determines there were no adverse effects to Independence Valley speckled dace or their habitats, there is no additional requirement to consult with Fish and Wildlife Service (FWS).

If the action agency determines that there were adverse effects on Independence Valley speckled dace or their habitats then the action agency must consult with FWS, as required by 50 CFR 402.05 (Emergencies).

In the case of a long duration incident, emergency consultation should be initiated as soon as practical during the event. Otherwise, post-event consultation is appropriate. The initiation of the consultation is the responsibility of the unit administrator.

2. Water needed for suppression activities will be extracted from the two impoundment ponds only. Water may be extracted by helicopter bucket dipping or draft filling. Before water extraction begins, a marker (a stake with a painted line, etc.) will be placed in the outflow drainage area below the lower impoundment pond, indicating the level of water flowing from the pond. Water level in the outflow will be monitored continuously. If the water level in the outflow drops below the designated level, all water removal will cease immediately until water levels return to normal levels.
3. Surfactant foam or retardants will not be used within 300 feet of the spring sources, impoundment ponds, outflow channel, or marsh/wetland areas.
4. Do not draft fill engines that have surfactant foam mixes in tanks directly from the spring source, impoundment ponds, outflow channel, or marsh/wetland areas.
5. The intake end of the draft hose will be screened to prevent entry of fish species. Screen opening size will be a maximum of 3/16 inch.
6. A containment barrier will be constructed around all pumps and fuel containers utilized within 100 feet of the spring source, impoundment ponds, outflow channel, or marsh/wetland areas to prevent petroleum products from entering the stream. The containment barrier will be of sufficient size to contain all fuel being stored or used on site.
7. Do not dump engines filled with surfactant foam mixes within 600 feet of the spring sources, impoundment ponds, outflow channel, or marsh/wetland areas.
8. Do not conduct retardant mixing operations within 300 feet of the spring source, impoundment ponds, outflow channel, or marsh/wetland areas.
9. Fire control lines will not cross or terminate at the spring source, impoundment ponds, outflow channel, or marsh/wetland areas. Control lines will terminate at the edge of the riparian zone at a location determined appropriate to meet fire suppression objectives based on fire behavior, vegetation/fuel types, and fire fighter safety.
10. Before each fire assignment in the Elko District, all fire suppression equipment utilized

to extract water from stream or spring sources (i.e. helicopter buckets, draft hoses and screens) will be thoroughly rinsed to remove mud and debris and disinfected with a chlorine solution (one part bleach to 32 parts water, or stronger). Rinsing equipment with disinfectant solutions will not occur within 100 feet of natural water sources (streams or springs).

### **REHABILITATION MEASURES:**

The Independence Valley Warm Springs habitat area is located on private lands. A land exchange has been proposed that, if approved, would change ownership of these lands from private to public. Until ownership changes, rehabilitation measures on private lands are restricted to addressing damages due to fire suppression activities. Therefore, the following rehabilitation measures would apply, assuming private ownership of the Independence Valley Warm Springs habitat area.

1. An assessment of the impacts of fire suppression activities to Independence Valley speckled dace habitat (the Independence Valley Warm Springs wetlands is located on private lands) will be completed by an interdisciplinary team of resource specialists, including the Elko Field Office Fisheries Biologist and Hydrologist, representatives from the U.S. Fish and Wildlife Service, and representatives from the Nevada Division of Wildlife. Based on this assessment, appropriate rehabilitation measures will be identified consistent with Departmental Emergency Stabilization and Rehabilitation Handbook guidance, including but not limited to some or all of the following:
  - a. Reconstruct fences or other structures damaged by suppression activities.
  - b. Rehabilitate roads improved or created by suppression activities located within 300 feet of the habitat area as determined necessary to mitigate potential sedimentation into the habitat area.
  - c. Implement appropriate integrated noxious weed control measures in those areas damaged during fire suppression activities where determined necessary by the interdisciplinary review team and/or where determined appropriate through post-fire monitoring.
  - d. Re-seed or replant riparian or wetland areas damaged by suppression activities with native species as determined necessary by the interdisciplinary review team to facilitate re-establishment of perennial vegetation.
2. In addition to the above, the following rehabilitation measures would also be considered by the interdisciplinary review team charged with assessing the impacts of fire and fire suppression activities, should ownership of the Independence Valley Warm Springs habitat area change from private to public ownership:
  - a. Close the affected habitat area to livestock grazing for one or more years to allow for recovery of riparian/wetland vegetation. The appropriate length of time for

closure to livestock grazing will be determined on a site specific basis based on resource data, scientific principles, and experience. Site specific monitoring will determine when resource objectives have been achieved on specific burned areas. Site specific vegetative recovery objectives will be identified by the interdisciplinary review team and included in the Notice of Closure to Livestock Grazing issued in accordance with 43 CFR 4110.3-3.

- b. Reconstruct damaged fences and/or construct new fences to ensure protection of the habitat area from grazing.
- c. Monitor riparian/wetland habitats to allow for comparison of post-fire impacts to existing baseline information.
- d. Where determined necessary by the interdisciplinary review team, install appropriate erosion control structures (i.e. erosion matting and/or straw bale structures, straw wattles, etc.) to mitigate overland flow effects.
- e. Where determined necessary by the interdisciplinary review team, reseed and/or replant riparian/wetland areas with native plant species to facilitate re-establishment of perennial vegetation, minimize potential effects of erosion, and allow for recovery of riparian/wetland functionality.
- f. Implement appropriate integrated noxious weed control measures where determined necessary by the interdisciplinary review team and/or where determined appropriate through post-fire monitoring.

### **CLOVER VALLEY SPECKLED DACE**

**Unless a threat to human life exists, the following standard operating procedures for species protection will apply to spring/pond areas occupied by Clover Valley speckled dace (*Rhinichthys osculus oligopus*):**

Clover Valley speckled dace are known to exist in three separate spring/pond habitats all located on private lands in Clover Valley. All three habitat areas are comprised of a riparian/wetland complex consisting of a spring source, one or more impoundment ponds, and one or more outflow channels. Dace are known to inhabit the spring source areas, impoundment pond(s) and/or outflow channels.

#### **SUPPRESSION ACTIVITIES:**

1. Avoid the application of retardant or foam within 300 feet of the stream channel or waterway<sup>1</sup>.

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<sup>1</sup> Aerial application and use of retardants and foams will be consistent with national policy guidelines established by the National Office of Fire and Aviation, as amended.

Exceptions:

- When alternative line construction tactics are not available due to terrain constraints, congested area, life and property concerns or lack of ground personnel, it is acceptable to anchor the foam or retardant application to the waterway. When anchoring a retardant or foam line to a waterway, use the most accurate method of delivery in order to minimize placement of retardant or foam in the waterway (e.g., a helicopter rather than a heavy airtanker).
- Deviations from these guidelines are acceptable when life or property is threatened and the use of retardant or foam can be reasonably expected to alleviate the threat.
- When potential damage to natural resources outweighs possible loss of aquatic life, the unit administrator may approve a deviation from these guidelines<sup>2</sup>.

Emergency Consultation:

Aerial application of retardant or foam outside 300 ft of a waterway is presumed to avoid adverse effects to aquatic species. If it is determined appropriate to apply retardant or surfactant foam within 300 feet of a waterway or stream channel based on one or more of the exceptions listed above, the unit administrator shall determine whether there have been any adverse effects to Clover Valley speckled dace.

If the action agency determines there were no adverse effects to Clover Valley speckled dace or their habitats, there is no additional requirement to consult with Fish and Wildlife Service (FWS).

**If the action agency determines that there were adverse effects on Clover Valley speckled dace or their habitats then the action agency must consult with FWS, as required by 50 CFR 402.05 (Emergencies).**

**In the case of a long duration incident, emergency consultation should be initiated as soon as practical during the event. Otherwise, post-event consultation is appropriate. The initiation of the consultation is the responsibility of the unit administrator.**

2. Dipping water from the impoundment ponds by helicopter bucket is allowed only during initial attack operations (the first 24 hours following the initiation of suppression actions). Beyond initial attack, additional water needed to control and contain the fire will be obtained by drafting from the pond into a portable dipping tank or drafting from the pond directly into the helicopter bucket.
3. Before drafting begins, a marker (a stake with a painted line, etc.) will be placed in the outflow drainage area indicating the level of water flowing from the pond. Water level in

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<sup>2</sup> This determination will be made on a case-by-case basis by the Field Manager or the designated Field Manager representative in consultation with the Fire Management Officer, Incident Commander, Resource Advisor, and Elko Field Office Fisheries Biologist through development of the Wildfire Situation Analysis.

the outflow will be monitored continuously. If the water level in the outflow drops below the designated level, all water removal will cease immediately until water levels return to normal levels.

4. The intake end of the draft hose will be screened to prevent entry of fish species. Screen opening size will be a maximum of 3/16 inch.
5. A containment barrier will be constructed around all pumps and fuel containers utilized within 100 feet of the spring source, impoundment ponds, or outflow channel to prevent petroleum products from entering the water. The containment barrier will be of sufficient size to contain all fuel being stored or used on site.
6. Do not draft fill engines that have surfactant foam mixes in tanks directly from the spring source, impoundment ponds or outflow channel.
7. Do not dump engines filled with foam or surfactant mixes within 600 feet of the spring source, impoundment ponds, or outflow channel.
8. Do not conduct retardant mixing operations within 300 feet of the spring source, impoundment ponds, or outflow channel.
9. Fire control lines will not cross or terminate at the spring source, impoundment ponds, or outflow channel. Control lines will terminate at the edge of the riparian zone at a location determined appropriate to meet fire suppression objectives based on fire behavior, vegetation/fuel types, and fire fighter safety.
10. Before each fire assignment in the Elko District, all fire suppression equipment utilized to extract water from stream or spring sources (i.e. helicopter buckets, draft hoses and screens) will be thoroughly rinsed to remove mud and debris and disinfected with a chlorine solution (one part bleach to 32 parts water, or stronger). Rinsing equipment with disinfectant solutions will not occur within 100 feet of natural water sources (streams or springs).

#### **REHABILITATION MEASURES:**

All known spring/pond areas providing habitat for Clover Valley speckled dace are located on private lands. Therefore, rehabilitation measures would be limited to addressing those impacts directly related to fire suppression activities.

1. An assessment of the impacts of fire suppression activities to Clover Valley speckled dace habitat will be completed by an interdisciplinary team of resource specialists, including the Elko Field Office Fisheries Biologist and Hydrologist and representatives from the U.S. Fish and Wildlife Service and the Nevada Department of Wildlife. Based on this assessment, appropriate rehabilitation measures will be identified consistent with Departmental Emergency Stabilization and Rehabilitation Handbook guidance, including but not limited to some or all of the following:

- a. Reconstruct fences or other structures damaged by suppression activities.
- b. Rehabilitate roads improved or created by suppression activities located within 300 feet of the habitat area as determined necessary to mitigate potential sedimentation into the habitat area.
- c. Implement appropriate integrated noxious weed control measures in those areas damaged during fire suppression activities where determined necessary by the interdisciplinary review team and/or where determined appropriate through post-fire monitoring.
- d. Re-seed or replant riparian or wetland areas damaged by suppression activities with native plant species as determined necessary by the interdisciplinary review team to facilitate re-establishment of perennial vegetation, minimize potential effects of erosion, and allow for recovery of riparian/wetland functionality.

## **PART B – FIRE MANAGEMENT GUIDELINES FOR SAGE GROUSE**

The *Management Guidelines for Sage Grouse and Sagebrush Ecosystems in Nevada*, (October 2000) recommend the following guidelines pertinent to fire management.

### **Vegetation Treatment**

1. Consider the habitat needs of sage grouse when planning vegetation treatments and maintenance projects.
2. On all vegetation treatments, manage livestock for the long-term health of the vegetation community and the attainment of the treatment objectives.
3. Vegetation treatments in areas highly susceptible to, or currently dominated by, cheatgrass should be accompanied by rehabilitation. Rehabilitation should include site preparation techniques and seed mixtures appropriate for the soils, climate, and landform of the area.
4. Use appropriate vegetation treatment techniques to remove junipers/conifers that have invaded sage grouse habitat. Whenever possible employ vegetal control techniques that are least disruptive to the stand of sagebrush.
5. Take appropriate precautions to minimize the possibility that noxious weed eradication activities directly impact sage grouse populations or affect sagebrush stands.
6. Implement effective monitoring plans to determine the effectiveness of vegetation treatments.
7. Develop and maintain cumulative records for all vegetation treatment projects to determine and evaluate site specific and cumulative impacts to sage grouse habitats and identify best management practices for successful vegetation treatments.
8. Evaluate recent prescribed burns and wildfires to determine if rehabilitation is necessary to achieve habitat management objectives.
9. Create sites suitable for leks where current leks are compromised by roads and other facilities.
10. Use vegetation treatments to maintain or improve known habitats. Avoid vegetation treatments in known habitats when birds are present.
11. When native plant species adapted to the site are available in sufficient quantities, and it is economically and biologically feasible to establish or increase them to meet management objectives, emphasize them over non-native species.

## **Fire Management**

1. Review district fire management plans annually, incorporate new sage grouse habitat information, and distribute to fire dispatchers for initial attack planning.
2. Where practical, locate fire camps, staging areas, and helibases at least 1 km. (0.6 mile) away from known sage grouse habitat. Also, as part of any preparedness planning process, identify the possible location of these temporary facilities on a map.
3. Ensure known sage grouse habitat information is incorporated into each Wildfire Situation Analysis to assist in determining appropriate suppression plans and prioritizing fires during multiple ignition episodes.
4. Minimize the amount of sage grouse habitat burned:
5. Give wildfire suppression in sage grouse habitat appropriate consideration within the framework of the Federal Wildland Fire Policy (human life and safety as the first priority, with property and natural resources as equal second priorities) (USDI and USDA 1995).
6. Use direct attack when it is safe and effective.
7. Retain, if possible, unburned areas (including interior islands and patches between roads and the fire perimeter) of sage grouse habitat.
8. When modifying water sources for the temporary purpose of fire suppression, ensure that all impacts are reclaimed as soon as practicable following fire suppression activities.

## **Emergency Fire Rehabilitation**

1. Evaluate all wildfires as soon as possible to determine if reseeding is necessary to recover ecological processes and achieve habitat objectives appropriate for the biological needs of sage grouse and prevent the invasion of noxious weeds or other exotic invasive species.
2. Assure that long-term wildfire rehabilitation objectives are consistent with the potential natural vegetation community.
3. Align long-term objectives for seedings with the habitat needs of sage grouse. Seedings should include an appropriate mix of grasses, forbs, and shrubs, including sagebrush, that will recover the ecological processes and habitat features of the potential natural vegetation. Emphasize native plant species when these species are adapted to the site, are available in sufficient quantities, and are economically and biologically feasible.
4. Reseed all burned lands occurring in sage grouse habitat within 1 year unless natural recovery of the native plant community is expected.

## **PART C -- SOPS FOR FIRE MANAGEMENT IN ASPEN AND COTTONWOOD STANDS**

### Fire Management/Treatments

1. Treatments that impact any stand should only be implemented if protective measures (such as exclosures, or deferred grazing) have been put in place first to protect the regeneration.
2. The demise of even a single aspen clone should not be an option, especially since so much has been lost already (estimated 30 to 50 percent aspen clone reduction in many areas of this region).
3. Minimize the amount of aspen/cottonwood habitat burned.
4. Retain unburned aspen/cottonwood habitat (including interior islands and patches) unless there are compelling safety, resource protection, or control objectives at risk.
5. Use mechanical equipment sparingly within aspen/cottonwood stands. Minimize ground disturbance to protect the root systems (many roots are only a few inches below the ground surface). Dozers should not be utilized within stands.
6. Aspen stands containing a high degree of disease (> 80 percent infected) should be treated with fire to completely kill the overstory.
7. Severely deteriorated stands containing high crown coverage of competing shrubs/grasses should be spot treated with fire to reduce competition for the aspen regeneration. Measures need to be taken to protect the remaining trees from being scorched from the fire.

### Emergency Fire Rehabilitation/Post Fire Treatments

1. Aspen/cottonwood areas that have been burned should have the livestock removed immediately (aspen starts to regenerate 2 – 4 weeks after being burned) and be totally rested until the aspen suckers have reached an average height of at least seven (7) feet.
2. Fence or otherwise protect aspen/cottonwood sites that are in “high risk” areas (easily accessible riparian settings, loafing areas, or other areas where livestock tend to congregate).
3. Falling operations to reduce the density of dead standing trees should only be implemented within the first two weeks following fire. Any ground disturbing actions within the stands following that time period would be detrimental to regeneration.

## PART D – SOPS FOR CULTURAL RESOURCE PROTECTION

**Notice: All information related to cultural or archaeological resources, including location of these resources, type or quantity of resources, and value of resources, is proprietary information. Persons accessing or issuing this information are subject to applicable Federal and state laws, as well as Bureau policies and regulations. Any misuses of this proprietary information will subject the involved parties to penalties associated with these laws, regulations and policies.**

1. Upon receiving specific locational information on a new wildland fire incident, dispatch will consult the *Elko Field Office Cultural Alert Map* of known highly sensitive cultural resources (provided and updated by the cultural resource team), and relay the information regarding any special procedures to the Incident Commander. The Incident Commander will assume responsibility for this proprietary information, and will act in a manner such as to protect the cultural sites and information, subject to policy, regulation and law. Closed circuit communication (i.e. telephone) will be used whenever possible when relaying this information.
2. If the incident is in an area identified on the map as sensitive due to the presence of significance cultural resources, a BLM field office archaeologist will be notified immediately. **NOTE: The Cultural Alert Map contains only a tiny fraction of the known significant cultural resources in the District. The fact that a fire incident falls outside the sensitive areas (A-2 polygons) on the alert map does not signify the absence of important cultural resources or that cultural resources are not a concern.**
3. Should a District Resource Advisor be assigned to an incident, he or she will act as the Field Manager's representative to the Incident Commander, and will ensure that any cultural resource concerns, as well as other resource concerns, are addressed. It is the responsibility of the Resource Advisor to contact a District Archaeologist regarding cultural resources in the area of the incident (preferably prior to leaving the office) and updating that information as situations change.
4. A District Archaeologist will be notified if earth-moving equipment (i.e. bulldozers, road graders, etc.) is ordered for suppression of any fire on the District. A District Archaeologist will be responsible for recommending assignment of an archaeologist or DAT (district archaeological technician) to the incident to mitigate any potential cultural resource damage. The assigned archaeologist/DAT will report to the Resource Advisor or Incident Commander.
5. When an area is known to contain significant cultural resources and life and property are not imperiled, fire suppression methods other than those that result in substantial ground-disturbance are preferred.

6. Wildland Fire Use Areas ignited by natural sources may be allowed to burn without an area-specific prescribed fire management plan that has been through review by the State Historic Preservation Officer if:
  - a. a District archaeologist with concurrence by the appropriate Field manager determines that there is a low probability of discovering vulnerable archaeological sites within the proposed area;
  - b. there is written documentation that the area has burned in the last 50 years at a sufficient intensity so that there is a low probability that vulnerable resources could have survived the fire;
  - c. the proposed area has been previously inventoried and no historic properties were identified; or
  - d. the proposed fire is in an area that has been inventoried for cultural resources and will be managed within prescription limits that protect known historic properties from the fire. This can be by hand-constructing lines, foam wetting agents, fire shelter fabric or other effective methods.
7. Any damage to cultural resources resulting from suppression activities will be addressed in the Resource Advisor's report, and the report will contain proposed mitigation or rehabilitation measures.

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## **PART E – SOPS FOR FIRE MANAGEMENT IN MINING AREAS**

1. Let the fire burn across closed or reclaimed mine facilities. These mine facilities include, but are not limited to, the following:
  - heap leach pad
  - tailing impoundment
  - attenuation field
  - constructed wetlands
  - bioreactor
  - cement foundation
  - diversion ditches
  - hydrocarbon bioremediation pads
  - leach fields
2. It is better to let the fire burn through or across the reclaimed mine facilities due to the cost of repairing the damage created by the fire suppression activities. Repair costs to reconstruct the facilities can result in thousands to millions of dollars. Damages to the closed or reclaimed mine facilities include, but are not limited to, the following:
  - Digging up liners (plastic or clay), pipes, tanks, buried concrete foundation
  - Destroying or damaging liners (plastic or clay) by causing them to leak as a result of either blading or driving across them
  - Getting stuck in wetlands, bioreactors, leach fields, attenuation fields, etc., which could result in broken pipes, damaged liners, acid mine drainage
  - Breaching or destroying the integrity of constructed dams resulting in instability
  - Driving or blading across some constructed slopes may result in instability and slope failure, and erosion problems
3. Consequences of destroying or damaging the closed or reclaimed mine facilities could result in problems such as:
  - Acid mine drainage
  - Erosion
  - Slope failure
  - Degradation of waters of the United States
  - Creating a superfund site
4. Hazardous water quality issues that may be encountered at inactive, closed or abandoned mine sites are:
  - waters latent with chemicals such as (i.e. cyanide, hydrogen peroxide, caros acid, acidic waters, etc)
  - acid mine drainage (water would have a pH range of 1 to 4.5; the closer the pH is to 1 the more hazardous)

- Interaction between people and these water quality issues could result in serious health problems, such as (poisoning, burn the skin, rashes, etc.)
- **Interaction between equipment and these water quality issues could result in equipment damage or failure to work.**

Fire suppression activities in the vicinity of the Valmy Powerplant

1. It is critical to prevent the wooden structures for the powerlines to the pump houses from burning. These powerlines feed electricity to the wells for the Valmy Powerplant. Most powerlines follow roads.
2. It is imperative that a dozer or equipment constructing control lines not damage the cement manholes. These manholes provide access to the pipelines that carry water to the Valmy Powerplant. Most pipelines follow roads.

## Acronyms

BAER	Burned Area Emergency Rehabilitation
BLM	Bureau of Land Management
DOI	Department of the Interior
DR	Decision Record
EA	Environmental Assessment
EIDC	Elko Interagency Dispatch Center
EIS	Environmental Impact Statement
ESR	Emergency Stabilization and Rehabilitation
FLPMA	Federal Land Policy and Management Act of 1976
FMA	Fire Management Amendment
FMC	Fire Management Category
FMP	Fire Management Plan
FONSI	Finding of No Significant Impact
F&WS	U. S. Fish and Wildlife Service
MIST	Minimum Impact Strategy and Tactics
NDF	Nevada Division of Forestry
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act of 1969
ROD	Record of Decision
RMP	Resource Management Plan
SOP	Standard Operating Procedure
USFS	United States Forest Service
WSA	Wilderness Study Area

**Grandmother Prescribed Burn, Cherry Creek Mountains, May 2004**



Ruby Mountain Hotshots

Photo by Shane McDonald

**Beaver Creek Prescribed Burn, September 2004**



Photo by Michael Claiborne



Photo by Ky Kinkade