



2. Proposed Action and Alternatives

Fire Management
Amendment
Environmental
Assessment

CHAPTER 2 - PROPOSED ACTION AND ALTERNATIVES

A. Alternatives

1. Development of Alternatives

Prior to explaining the Proposed Action and alternatives, it is important to understand the decision-making process for this FMA/EA. In September 2001, planning for the FMA/EA began with the beginning of the scoping process to identify any issues relating to fire management. Several other workshops were held with the BLM to determine agency goals and objectives. At the same time, work began on an accompanying document, a Biological Assessment (BA), to determine the impact of the proposed action on federally threatened and endangered species.

An additional workshop was conducted by the BLM in October of 2001. The objective of this meeting was to discuss refinements to standard operating procedures, changes to fire management categories, and adjustments to the 21 smaller fire management polygons based on new resource information, public comments, agency input and resource priorities. During this meeting, resource specialists consulted recent studies, analyses and GIS information, including sage grouse habitats, noxious weed inventories, recent fire history, cultural resources, wilderness study areas, vegetation, special status species' habitat, watersheds and land use information to help define the Proposed Action. Ongoing efforts, including the Statewide Sage Grouse Recovery Plan and Great Basin Restoration Initiative (GBRI), were also considered during the development of this plan. The majority of this information is described in this document. Additional information and maps can be obtained from the BLM Elko District Office.

Based on this foundation work began on the FMA/EA. The planning framework for the FMA/EA began with the guidance found in the Elko and Wells Resource Management Plans (1987). This was followed by the consideration of a number of environmental documents that formed the basis of the four components of each alternative:

- **General Fire Management** is guided by all documents.
- **Fire Prevention** is guided by the *Vegetation Treatment on BLM Lands in Thirteen Western States Environmental Impact Statement* (1991) and the *Elko/Wells District Vegetation Treatment by Fire Environmental Assessment* (2000), which analyze the general impact of prescribed burning and manual fuels treatments on public lands.
- **Fire Suppression** is guided by the *Elko District Field Office Fire Management Plan* (1998) developed by the BLM Elko Fire Management Officer.
- **Fire Rehabilitation** is guided by the guidelines for rangeland health, *the Normal Fire Rehabilitation Plan Environmental Assessment* (2000), and the *Interagency Burned Area Emergency Stabilization and Rehabilitation Handbook* (2001).

It is important to understand that all components proposed in the FMA/EA are guided by existing documents. This document cannot address policies currently guided by other approved documents. Since most elements outlined in this FMA/EA are addressed by



other documents or subsequent EA's, only general information addressing the whole District is provided.

A Preliminary Draft FMA/EA was prepared based on this information. A second round of public meetings and an internal BLM workshop were held in May, 2002 to refine the Draft FMA/EA. The Draft FMA/EA was mailed to interested parties and comments incorporated into the Final FMA/EA.

2. Actions Common to All Alternatives

Many of the actions addressed in this document may require regulatory coordination, consultation and/or permitting. Completing environmental compliance requirements associated with some of the identified tasks may require extended processing time, additional documentation and commitments beyond the completion of this FMA/EA. These additional requirements would be met prior to implementation of the proposed management actions. All alternatives would follow Standard Operating Procedures (SOP's) described in each alternative, Appendix 2, or are found within other applicable BLM guiding documents. Such SOP's generally provide for the:

- 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 habitat (where appropriate, and where the species does not rely on fire for part of its life cycle), as well as sensitive listed species and habitat;
- Protection of forage for livestock, wildlife, and horses in a sustainable manner that contributes to overall Rangeland Health.
- Protection of wilderness values, particularly that of "naturalness".

Other guidelines developed as part of the FMA/EA or found in other documents include:

- Follow SOP's for rehabilitation found in the Interagency Burned Area Emergency Stabilization and Rehabilitation Handbook.
- Follow SOP's for prescribed burning found in the Vegetation Treatment by Fire Environmental Assessment.
- Follow the "Light-hand-on-the-land" tactics for use in wilderness study areas (WSA) 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.
- Follow SOP's for rangeland health and guidelines for grazing management
- Follow SOP's for cultural resources found in Appendix 2.
- Follow SOP's for fire management near mining activities found in Appendix 2.
- Follow SOP's found in the Vegetation Treatment on BLM Lands in Thirteen Western States Environmental Impact Statement.
- Follow SOP's for species protection applying to all streams currently occupied by Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*) or native range identified as having recovery potential identified by the Humboldt Distinct Population Segment (DPS) found in Appendix 2.

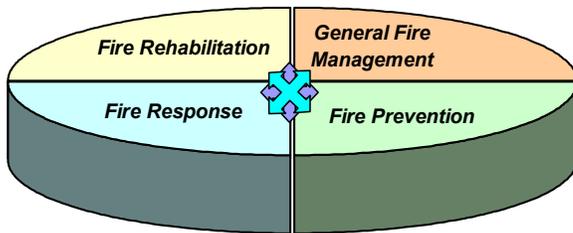


- Follow SOP's for species protection applying to riparian and/or wetland habitats currently occupied by Columbia spotted frog (*Rana Luteiventris*) found in Appendix 2.
- Follow SOP's for species protection applying to the Independence Valley Warm Springs and ponds which supply water to outflow channels and marsh habitats occupied by the Independence Valley speckled dace (*Rhinichthys osculus lethoporus*) found in Appendix 2.
- Follow the SOP's for species protection applying to spring/pond areas occupied by Clover Valley speckled dace (*Rhinichthys osculus oligoporus*) found in Appendix 2.
- Follow the guidance in the Management Guidelines for Sage Grouse and Sagebrush Ecosystems in Nevada.
- Follow the guidance found in the Great Basin Restoration Initiative (GBRI).

3. BLM's Preferred Alternative (Proposed Action)

The remaining sections of this chapter outline four alternatives for fire management in the Elko District. The first alternative, representing the current level of fire protection is identified as the "no action" alternative (Section 2B). The second alternative is based on full suppression (Section 2C) and the third alternative on a limited suppression strategy (Section 2D). The BLM prefers the fourth alternative, hereinafter referenced as the "Proposed Action" (Section 2E), which is based on an integrated approach to accomplish the goals described in Chapter 1.

All alternatives are compared in the same way, by providing descriptions based on general fire management, prevention, response and rehabilitation. These categories provide a concise, informed method for evaluating the alternatives. The environmental analysis provided by this EA, and the agency and public coordination provided through the NEPA process were used to select the Proposed Action and the specific fire management actions.



This approach has provided a Proposed Action with the flexibility and tools necessary for effective fire management. Since it is impossible to estimate the size and intensity of future fires, this approach acknowledges that specificity related to the Proposed Action may change. This may include the amount of fire prevention, boundaries and designation of fire management categories and polygons, and the amount of rehabilitation necessary. In addition, the Proposed Action is based on a number of existing documents that provide its foundation and should continually reflect adjustments in these sources.

B. No Action Alternative

The No Action alternative was analyzed and considered. The No Action alternative is the continuation of current fire management. This alternative makes use of the objectives outlined in the 1998 Fire Management Plan. This plan focuses on responding to and suppressing wildland fire, and does not take full advantage of current strategies to improve the long-term management of fire described in the update of the 1995 Wildland



Fire Policy. Table 2B-1 describes a strategy based primarily on suppression without other complimenting fire management components.

Table 2B-1 Plan Alternatives																
Activity Level	No Action				Full Suppression				Limited Suppression				Proposed Action			
	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation
High																
Medium																
Low																

Note: This table represents near-term activity levels.

1. General Fire Management. Follow general guidance in the current Fire Plan, and other existing guiding documents to protect and maximize the safety of fire operational personnel and the public and achieve resource management objectives.

General fire management provides the framework and overall strategy for achieving resource objectives. The main consideration for fire management is to maximize the safety of fire operation personnel and the public and secondarily, to meet resource management objectives. The final consideration is achieving a longer-term strategy to manage fire in the District. Management objectives are achieved through general strategies represented by Fire Management Categories (FMC) (A through D). FMC's are further subdivided into smaller management units called polygons. The FMC's described below are fire management categories, not resource categories. Within each fire management category is a wide range of resource conditions that would be identified in subsequent activity plans or are described further in each polygon. FMC's include:

FMC A - Areas where wildland fire is not desired at all. Areas of maximum suppression activity. 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 yet prescribed fire opportunities will be limited due to close proximity of structures and improvements.

FMC B - 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 - 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 - 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.

Current FMC’s and polygons have not been adjusted to include public and agency comments, recent fire history, new resource information and recent planning initiatives addressing species such as the sage grouse.

The percentage of area in each FMC as compared to other actions is described in Table 2B-2. The percentages within each category and relative to other alternatives illustrate a strategy based on suppression with some limited opportunities for flexibility.

Table 2B-2 Fire Management Category Composition				
FMC	No Action % of Total	Full Suppression %of Total	Limited Suppression % of Total	Proposed Action % of Total
A	5%	5%	5%	6%
B	69%	95%	<1%	40%
C	26%	0	0%	52%
D	0%	0	95%	2%

FMC’s are further subdivided into polygons, which provide management direction for specific areas. These polygons further refine the general strategy by area based on resource value, vegetative response, potential for invasive weeds and public safety. The



acreage by polygon is found in Table 2B-3 and is illustrated in Figure 2B-1. A detailed polygon description can be found in the current FMP.

Table 2B-3 No Action Polygons			
Category	Acres	Category	Acres
A-1/U1 Urban Interface/ Mining Areas/ Areas of Development	463,729	B-10 Gamble and 12 Mile	31,900
A-3 Cultural Sites, Historic and Protohistoric	81,140	B-11 Intermixed Woodlands, NE Corner	388,190
A-9 Municipal Watersheds	19,491	B-12 Areas of Primarily Private Land and Urban Interface	759,154
B – General	28,109	B-13 Aspen Areas	32,311
B-1 Spruce Mountain	89,839	B-14 Tosawihi – Rock & Sheep Creeks, Tuscarora Mountains and I-80	941,486
B-2 Toano Range, South I-80	15,919	B-15 Dixie	181,484
B-3 District-wide Areas of Annual Vegetation Invasion	1,386,737	B-16 Badlands Allotment	25,809
B-4 Woodlands	379,061	C-1 General	20,743
B-5 Ruby Marshes, Franklin Lake and Snow Water Lake	110,236	C-1 Wilderness Study Areas	261,875
B-6 Low Sagebrush & Desert Shrub	1,048,427	C-2 Mixed Conifer	66,791
B-7 Big Sagebrush Areas with Low to Moderate Response Potential	1,669,637	C-5 Goose Creek Area	432,722
B-8 Wood Hills, Pequops and North end of Toanos	184,412	C-7 Double Mountain & O'Neil	1,076,255
B-9 North Pequops, Murdock and Toano Draws	278,316	C-8 Owyhee Desert	967,598

*Includes some areas of private lands. Numbers based on GIS or BLM recorded acreage.

2. Fire Prevention: Vegetative manipulation, fuels reduction, green strips, fuel breaks and thinning should be kept at their current levels

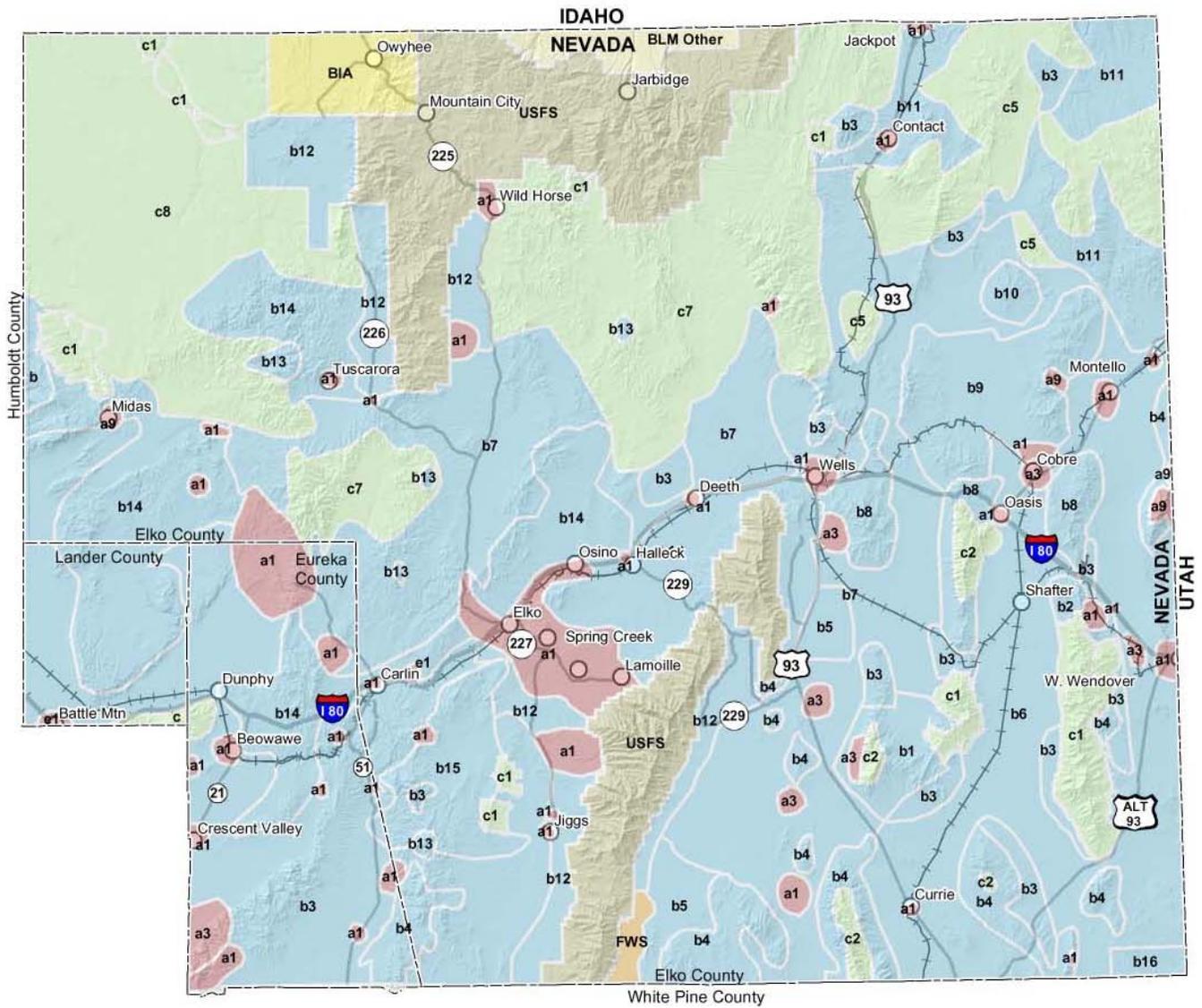
Fire prevention includes measures or actions that can be implemented to prevent or minimize a fire or to enhance the effectiveness of fire suppression activities. Fire prevention in the District has included an extensive system of fuelbreaks and greenstrips, and the reduction of fuel-loads through the use of prescribed fire and mechanical treatments. Efforts to rectify the fuel-loading hazard and use other fire prevention measures in the District have been successful, although limited in their extent.





Elko / Wells Resource Management Plans

Fire Management Amendment and Environmental Assessment



Management Zones

- Area 'a' - Fire not desired
- full suppression
- Area 'b' - Fire has negative effect
- high suppression
- Area 'd' - Fire has beneficial effect
- limited suppression
- Area 'c' - Fire has positive or negative effect
- moderate suppression

Other Public Lands

- BLM (other)
- Bureau of Indian Affairs
- US Fish & Wildlife Service
- US Forest Service

Fire Management Zones

No Action Alternative

Figure 2B - 1



September 2002



The Elko and Wells RMP's prescribe vegetative treatments to meet objectives for the management of livestock grazing and wildlife habitat. The 1998 FMP prescribes treatments to reduce hazardous fuels, where consistent with other resources objectives.

Fuelbreaks and greenstrips are strategically located wide 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. The District manages an extensive system of fuelbreaks.

Fuel reduction has focused on mechanical clearing/thinning and prescribed fire projects. The District had conducted an average of one prescribed fire project each year, with acreage totals ranging from 100 to 1,500 acres. Between the period of 1979 to 2001, 17 prescribed fires have been conducted totaling 13,000 acres. This is far below the amount identified in the 1998 FMP.

The previous fire plan identified up to 240,000 acres for fuel reduction activities, with 24,000 acres being targeted annually. Fuel reduction activities have included burning seedlings to restore productivity, vegetation enhancement in sagebrush communities, wildlife habitat treatments in pinyon-juniper, and burning in the mixed conifer to reduce fuel loadings and create uneven aged classes.

Past burns have been highly regulated, closely following all applicable regulations. A burn plan is also written by the BLM in order to ensure that proper conditions are met prior to the controlled burn. The burn prescription includes information on the location, objectives, fuel loading, scheduling, firing plan, weather and smoke management. The smoke management section addresses the desired and acceptable wind direction, venting height, visibility and the condition of permissive burn day requirements.

There are many beneficial objectives to be met by prescribed burning and mechanical and chemical treatments. One is the development of a patchy mosaic of vegetation age classes to reduce the change of a catastrophic fire. For example, fire removes dead material, or fuel accumulation, on the ground and at the base of plants. Smaller fires burn themselves out relatively quickly as fuels are depleted. The result is a mosaic of areas, with younger-age class vegetation consisting of lighter fuel loads and thinner layers of partly decayed organic matter. Subsequent fires through vegetation with a mosaic of age classes are typically smaller, patchier and of lower intensity. Conversely, fires occurring in large mono-aged plant communities with high fuel loading would have higher potential to be hotter and larger. The continuity of older, unburned and highly flammable plant communities increases with time, also increasing the risk of large fires.

A second benefit of a mosaic pattern of vegetation is reduced erosion. Although erosion is a natural process, it is considered destructive in most instances, involving resources such as topsoil, native habitat, water quality and property, especially when erosion is accelerated by human activity. Erosion by wind, water or gravity often increases following a fire, sometimes occurring for several years after burning. Despite the usual reduction in the amount of soil-holding ground cover following fire, fuel reduction treatments and erosion control are compatible. For example, smaller burn areas, cooler fires and less plant mortality associated with regular burning help retain the important root systems that provide structure to underlying soils. This minimizes soil loss, especially on steep slopes that can be vulnerable to erosion following fire.



A third benefit of fuel reduction treatments is the maintenance of ecological diversity by fostering multiple successional stages and age classes of vegetation. A mosaic of various age classes of vegetation types benefits many species of wildlife. Improved edge effects, water yields, nitrogen-fixing plant growth and post-fire successional plant species are all important wildlife benefits from fuel treatment techniques. For example, an increase in plant nutrient density, palatability and earlier green-up are usual occurrences following fire. Post-fire plants remain greener and are more palatable and nutritious for a longer time period, benefiting wildlife that uses the plants for forage. Habitat diversity is increased with patchy or irregular burns, especially in areas with only one or a few communities all in relatively the same structural condition. Increased diversity and resultant increases in edge effect makes more niches available for wildlife use.

The timing, intensity and frequency of fire can critically influence vegetation recovery and establishment, leading to potentially long-term changes in vegetation type and flammability. Many timing-related factors must be analyzed when determining when and where to use prescribed fire. Among the many factors are the season of a prescribed burn, determining approximately how many years have passed since the last fire in an area, presence or absence of endangered species or their habitat, pertinence of migratory bird regulations, and plant regeneration and seed germination requirements during and following fire. Many issues must be coordinated to ensure that prescribed fire meets regulations and benefits the plant and animal communities.

In this alternative, the amount of the vegetative treatment and fuels reduction would be kept at their current levels. Target acreage levels by alternative are described in Table 2B-4.

Table 2B-4 Annual Acres of Treatment			
No Action Acres of Treatment	Full Suppression Acres of Treatment	Limited Suppression Acres of Treatment	Proposed Action Acres of Treatment
24,000	<4,000	<4,000	24,000 - 60,000

Currently, there is less emphasis on fire prevention resulting in lower target acreage than in the Proposed Action.

3. Fire Response – Fire suppression should be maximized in most areas. The strategy is based on the current FMP and other guiding documents.

Fire response describes fire suppression strategy. 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 District. 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.

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 and existing federal, state and local regulations are critical management components that protect environmentally and culturally sensitive areas.

This alternative focuses primarily on full suppression of almost all fires and provides for only a limited amount of flexibility for fire management. For example, a fire under low fire intensity conditions in an area in which there would be a positive vegetative response would most likely be immediately suppressed even if the area was designated for future prescribed burning. Polygon acreage is described in Table 2B-3 and illustrated in Figure 2B-1. Detailed polygon descriptions can be found in the current FMP.

4. Fire Rehabilitation – 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 (ESRP) and Burned Area Emergency Rehabilitation Plans (BAER) will contain a site – specific Environmental Assessment (EA). These plans should be tiered with existing EIS's, this document and other land use plans.

Wilderness Study Areas – Manual Handbook H_8550_1 includes BLM policy and guidance for management of wilderness study areas (WSA's) and should be consulted. WSA's 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, such as the Standards for Rangeland Health and Guidelines for Grazing Management (43 CFR 4180.1), provide additional guidelines concerning post-fire rehabilitation. These documents include the District's Normal Fire Rehabilitation Plan EA to provide additional guidance for normal fires.

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.

Rehabilitation strategies do not vary among alternatives since activities are currently guided by existing documents and are dependent on other fire management components. However, the amount of acres in which treatment would be necessary will vary among alternatives.

C. Full Suppression Alternative – Full suppression of all wildland fire minimizing burned acreage under all circumstances.

The Full Suppression alternative was analyzed and considered. This action assumes wildfire is generally a negative impact on resources in the Elko District. Full suppression and the minimization of burned acreage would be the highest fire management priority. This alternative does not take full advantage of the strategies outlined in the Proposed Action. Table 2C-1 describes a strategy based primarily on full suppression without other complimenting fire management components.

**Table 2C-1
Plan Alternatives**

Activity Level	No Action				Full Suppression				Limited Suppression				Proposed Action			
	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation
High																
Medium																
Low																

Note: This table represents near-term activity levels.



1. General Fire Management. Fire management resources and objectives will focus on full suppression irrespective of management objectives.

The Full Suppression alternative focuses on FMC A and B described in the No Action alternative. The increase in the amount of acreage found in FMC A and B reflects the strategy that is directed at full suppression in all circumstances with no opportunities to achieve other resource objectives. The percentage of area in each FMC as compared to other actions is described in Table 2C-2.

FMC	No Action % of Total	Full Suppression %of Total	Limited Suppression % of Total	Proposed Action % of Total
A	5%	5%	5%	6%
B	69%	95%	<1%	40%
C	26%	0	0%	52%
D	0%	0	95%	2%

FMC's are further subdivided into polygons, which provide management direction for specific areas. These polygons further refine the general strategy by area based on resource value, vegetative response, potential for invasive weeds and public safety. The acreage by polygon is found in Table 2C-3 and illustrated in Figure 2C-1.

Category	Acres	Category	Acres
A-1 Urban Interface/ Mining Areas/ Areas of Development	233,385	A-3 Municipal Watersheds	32,245
A-2 Cultural Sites, Historic and Protohistoric	68,094	B-1 General Vegetation	8,461,051

*Includes some areas of private lands. Numbers based on GIS or BLM recorded acreage.

2. Fire Prevention: Vegetative manipulation, fuels reduction, green strips, fuel breaks and thinning should be kept at or below their current levels

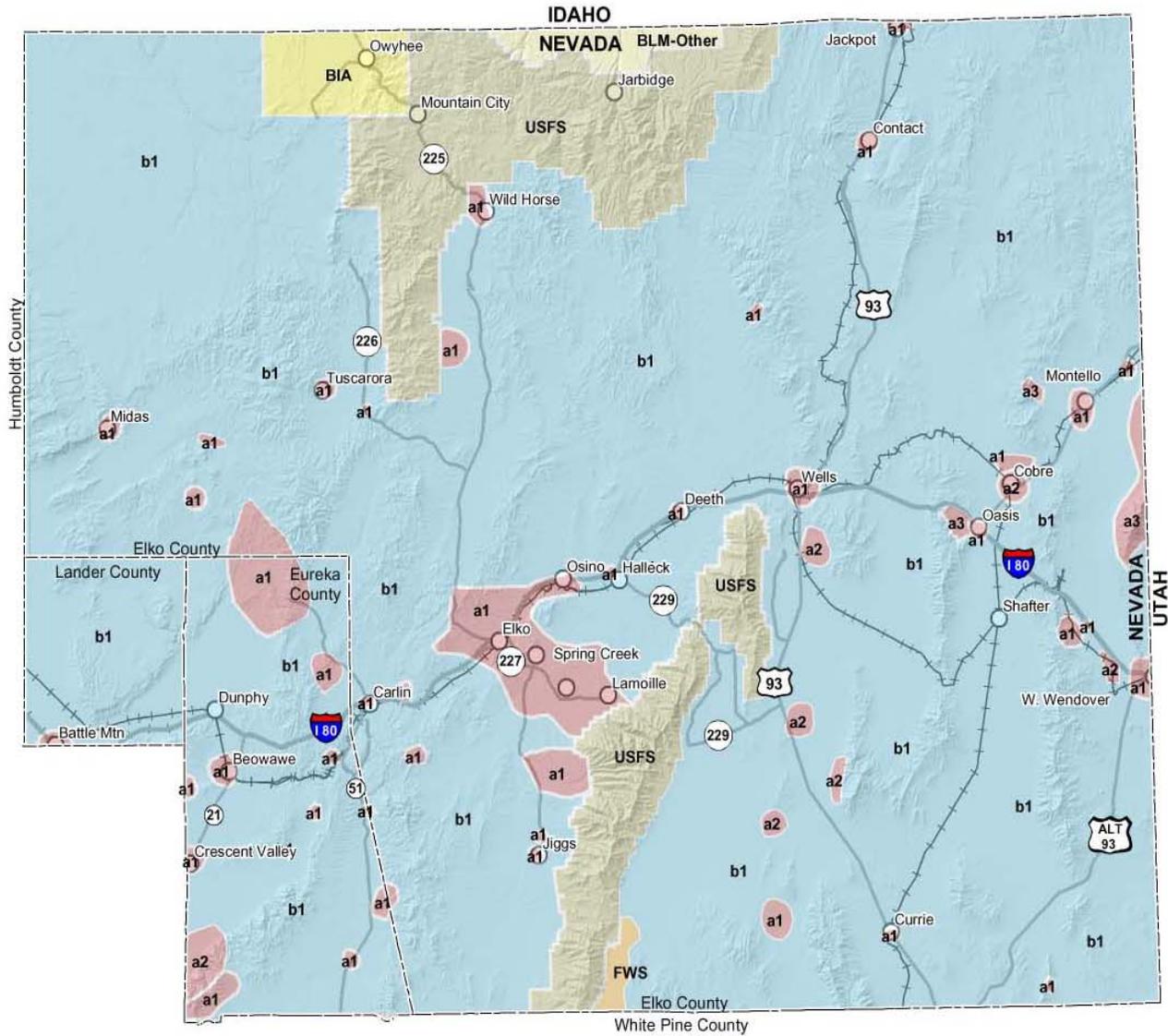
The alternative is similar to the fire prevention section described in the No Action alternative except for the targeted acreage for vegetative treatment. Without the guidance found in the proposed action, the amount of the vegetative treatment and fuels reduction techniques will be kept at or below their current levels. This alternative assumes that fire does not benefit the landscape, therefore discouraging the use fuel reduction techniques such as prescribed fire. Under this alternative, fuels in the area will continue to increase.





Elko / Wells Resource Management Plans

Fire Management Amendment and Environmental Assessment



Management Zones

- Area 'a' - Fire not desired
- full suppression
- Area 'b' - Fire has negative effect
- high suppression

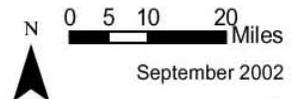
Other Public Lands

- BLM (other)
- Bureau of Indian Affairs
- US Fish & Wildlife Service
- US Forest Service

Fire Management Zones

**Full Suppression
Alternative
Figure 2C - 1**

EDAW



Target acreage levels by alternative are described in Table 2C-4.

Table 2C-4 Annual Acres of Treatment			
No Action Acres of Treatment	Full Suppression Acres of Treatment	Limited Suppression Acres of Treatment	Proposed Action Acres of Treatment
24,000	<4,000	<4,000	24,000 - 60,000

3. Fire Response - Fire suppression should be maximized in all areas.

The fire response strategy’s main consideration is to maximize the safety of fire operational personnel and the public and secondarily to achieve the resource goals for the area. The primary difference between this alternative and the Proposed Action alternative is that all fires would be suppressed in all conditions and locations irrespective of the resource benefit, fire intensity or resources available. This alternative would not benefit from the guidance of the proposed action and be based solely on full fire suppression with the assumption that fire would only have a negative impact on the landscape.

This alternative assumes the maximum use of resources to fully suppress all fires. Polygons for most areas were re-classed to a “B”, providing little flexibility except for full suppression. For example, a fire in a steep mountainous area within Wilderness Study Area under low fire intensity conditions would be immediately suppressed irrespective of other priorities, resource objectives or resource cost. The long-term impact of this strategy would be an increase in fuel load and resources needed for fire suppression.

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

Fire rehabilitation strategies remain the same as the No Action, however in the short-term fire rehabilitation should be minimized since most fires should be suppressed and less acreage will be burned. Long-term implications may result in an increase in rehabilitation activities as fuel loads and fire intensity increase. Based on the condition of existing rangelands and recent fire history, the need for rehab may be sooner than later under the full suppression alternative.

D. Limited Suppression Alternative - Wildfire is a positive influence on resources and fire management activities would be minimized.

The Limited Suppression alternative was analyzed and considered. This action assumes wildfire generally has a positive influence on resources in the Elko District and the minimization of fire management activities would be the highest fire management priority. This alternative does not take full advantage of the strategies outlined in the Proposed Action. Table 2D-1 describes a strategy based primarily on limited suppression without other complimenting fire management components.



Activity Level	No Action				Full Suppression				Limited Suppression				Proposed Action			
	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation
High	■		■	■	■		■									
Medium													■	■	■	■
Low		■				■		■	■	■	■	■				

Note: This table represents near-term activity levels.

1. General Fire Management. Fire management resources and objectives will focus on limited suppression irrespective of management objectives and direction found in other guiding documents.

The general fire management category descriptions remain the same as the No Action. What changes is amount of acreage in each FMC. The decrease in the amount of acreage found in FMC A and B and the increase in FMC D reflect a strategy directed at limited suppression in all circumstances. This strategy provides only limited flexibility to achieve resource objectives. The percentage of area in each FMC as compared to other actions is described in Table 2D-2.

FMC	No Action % of Total	Full Suppression % of Total	Limited Suppression % of Total	Proposed Action % of Total
A	5%	5%	5%	6%
B	69%	95%	<1%	40%
C	26%	0	0%	52%
D	0%	0	95%	2%

FMC's are further subdivided into polygons, which provide management direction for specific areas. These polygons further refine the general strategy by area based on resource value, vegetative response, potential for invasive weeds and public safety. The acreage by polygon is found in Table 2D-3 and is illustrated in Figure 2D-1.



Table 2D-3 Limited Suppression Polygons			
Category	Acres	Category	Acres
A-1 Urban Interface/ Mining Areas/ Areas of Development	233,385	A-3 Municipal Watersheds	32,245
A-2 Cultural Sites, Historic and Protohistoric	68,094	D-1 General Vegetation	8,461,051

*Includes some areas of private lands. Numbers based on GIS or BLM recorded acreage.

2. Fire Prevention: Vegetative manipulation, fuels reduction, green strips, fuel breaks and thinning should be kept at or below their current levels

The alternative is similar to the fire prevention section described in the No Action except for the targeted acreage for vegetative treatment. Without the guidance of the proposed action, the amount of the vegetative treatment and fuels reduction techniques will be kept at or below their current levels. This alternative assumes that fire benefits the landscape and that natural fire would accomplish most fire prevention goals such as fuel reduction.

Target acreage levels by alternative are described in Table 2D-4.

Table 2D-4 Annual Acres of Treatment			
No Action Acres of Treatment	Full Suppression Acres of Treatment	Limited Suppression Acres of Treatment	Proposed Action Acres of Treatment
24,000	<4,000	<4,000	24,000 - 60,000

3. Fire Response - Fire suppression would be minimized in most areas.

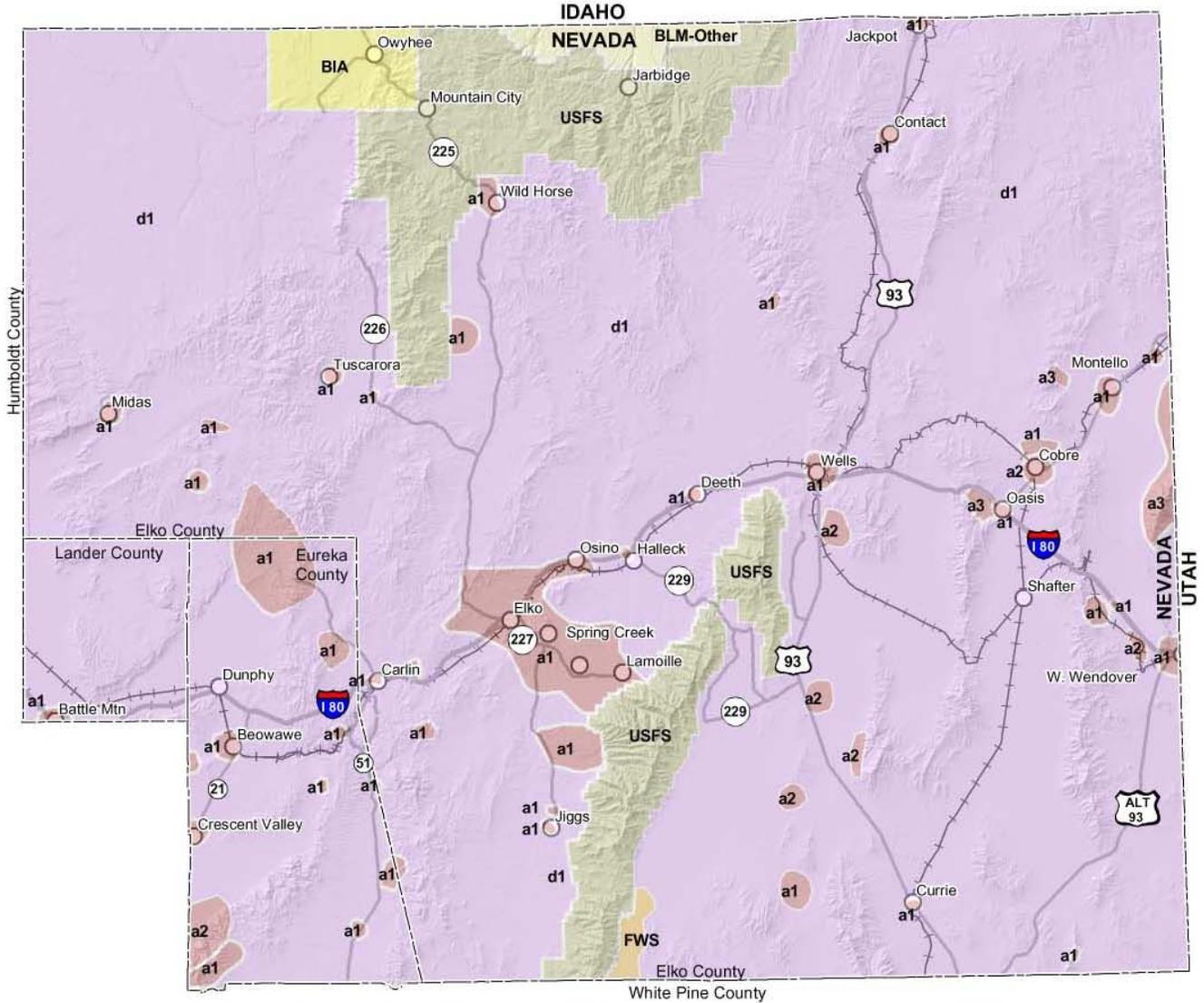
The fire response strategy's main consideration is to maximize the safety of fire operational personnel and the public and secondarily to achieve the resource goals for the area. The primary difference between this alternative and the Proposed Action is that fire suppression would be minimized in most cases irrespective of the resource benefit, fire intensity or resources available. This alternative would not benefit from a response strategy focused on resource objectives. Instead, the alternative is based on limited fire suppression and the assumption that fire would have only a positive impact on the landscape.

This alternative assumes a limited use of resources to suppress fires. Polygons for most areas were reclassified to a "D" classification, providing little flexibility except for limited suppression. For example, a fire in an area that has a high composition of invasive plant





Elko / Wells Resource Management Plans Fire Management Amendment and Environmental Assessment



Management Zones

- Area 'a' - Fire not desired
- full suppression
- Area 'd' - Fire has beneficial effect
- limited suppression

Other Public Lands

- BLM (other)
- Bureau of Indian Affairs
- US Fish & Wildlife Service
- US Forest Service

Fire Management Zones

**Limited Suppression
Alternative
Figure 2D - 1**

EDAW



0 5 10 20 Miles

September 2002



species would not be immediately suppressed irrespective of the negative vegetative response, incompatibility with resource objectives and long-term resource cost.

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

Fire rehabilitation strategies remain the same as the No Action, however, fire rehabilitation would be minimized since the assumption is that most fires will have a positive benefit to the landscape. Long-term implications may result in an increase in rehabilitation activities to restore areas that had a negative vegetative response to fire.

E. Proposed Action

The Elko District prefers this alternative as it provides for a balanced mix of appropriate strategies to achieve an integrated approach to fire management. The Proposed Action acknowledges that wildfire can have a positive or negative influence on resources in the District, depending on geographic location, fire size, desired vegetative goals, weather and existing fuel conditions.

This action builds on existing documents and makes use of new guidance, which recommends new integrated strategies to improve the long-term management of fire. By taking full advantage of the strategies outlined below, the BLM is following planning guidelines as mandated under FLPMA.

By using an integrated approach focusing on all elements of fire management, the size and severity of future fire may be reduced and critical resources protected. As shown in Table 2E-1, other alternatives stress one component over another. For example, the Full Suppression alternative focuses primarily on fire response and the immediate suppression of every fire, irrespective of climatic condition and fire location. In some cases, this reduces the flexibility and tools available for effective long-term fire management. However, the Proposed Action seeks to emphasize all components equally.

**Table 2E-1
Plan Alternatives**

Activity Level	No Action				Full Suppression				Limited Suppression				Proposed Action			
	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation	General Fire Management	Fire Prevention	Fire Response	Fire Rehabilitation
High	■		■	■	■		■									
Medium													■	■	■	■
Low		■				■		■	■	■	■	■				

Note: This table represents near-term activity levels.



The following section will discuss each component of the Proposed Action. The actions described in each component will be applicable to other components. For example, some actions described in the fire prevention component may be equally applicable to suppression activities.

Should the Proposed Action be implemented, site-specific project plans and associated NEPA documents may be developed for specific key actions. The project plans, including site-specific environmental analysis by an interdisciplinary team, will identify issues at the ecological or vegetative site level.

1. General Fire Management: Follow general guidance of this FMA/EA 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 described the overall strategy for fire management. The strategy is based on the guidance from this FMA/EA. 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 fire management categories. The final consideration is achieving a longer-term strategy to manage fire in the District. Resource specialists in the BLM have identified the management objectives after considering public and agency comment during the scoping period of this project. The fire management categories and polygons described in the following section address public concerns, resource objectives identified by the BLM and other agencies, local and statewide planning initiatives and allows for the flexibility necessary for effective fire management. The Fire Management Categories (FMC) (A through D) and their relative composition represent the BLM's general fire management framework and strategy for the Proposed Action.

The percentage of area in each FMC as compared to other actions is described in Table 2E-2 and illustrated in Figure 2E-1. The percentages within each category and relative to other alternatives illustrate a strategy based on an integrated and comprehensive approach to fire management. Under the guidance of the FMA, managers would have a greater range of options for appropriate responses to wildland fires. This is reflected by a distribution of acreage in all fire management categories. As shown by the composition of FMC A and B and the addition of a more restrictive FMC C, fire response is the highest priority in most areas. The amount of area in the most restrictive category, FMC A increases to reflect the protection of key resources found through the FMA/EA process.

FMC's are further subdivided into polygons, which provide resource management direction for specific areas. These polygons further refine the general strategy by area based on resource value, vegetative response, potential for invasive weeds and public safety. The polygon descriptions address public concerns, agency recommendations and recent resource planning initiatives. The acreage by polygon is found in Table 2E-3 followed by polygon descriptions, desired conditions and operational constraints.



Table 2E-2 Fire Management Category Composition				
FMC	No Action % of Total	Full Suppression %of Total	Limited Suppression % of Total	Proposed Action % of Total
A	5%	5%	5%	6%
B	69%	95%	<1%	40%
C	26%	0	0%	52%
D	0%	0	95%	2%

Table 2E-3 Proposed Action Polygons			
Category	Acres	Category	Acres
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's (includes Owyhee Canyon, South Fork Owyhee, Rough Hills and Badlands WSA's)	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

*Includes some areas of private lands. Numbers based on GIS or BLM recorded acreage.

Polygons include:

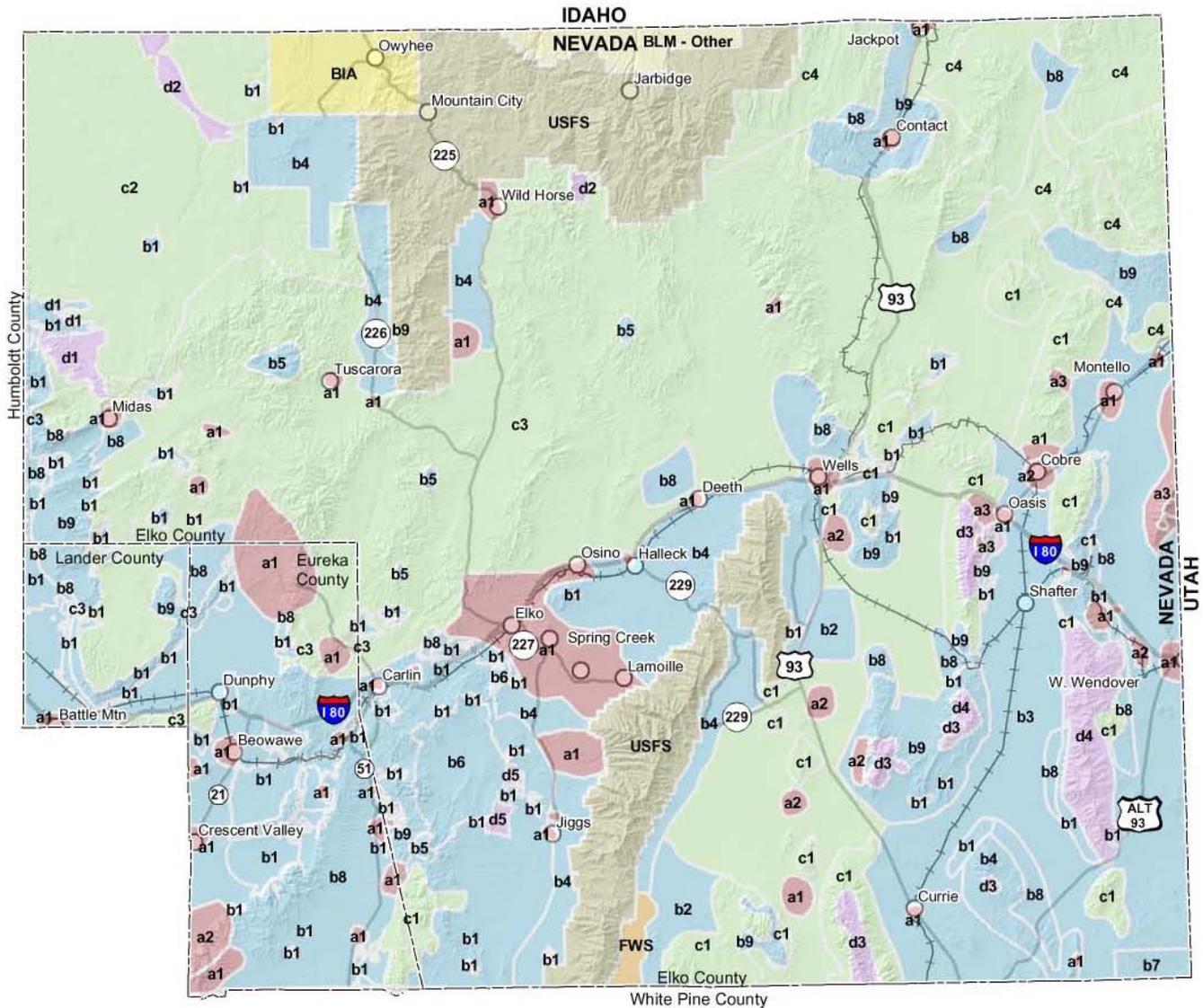
A-1 Urban Interface / Mining Areas / Areas of Development

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.





Elko / Wells Resource Management Plans Fire Management Amendment and Environmental Assessment



Management Zones

- Area 'a' - Fire not desired
- full suppression
- Area 'b' - Fire has negative effect
- high suppression
- Area 'd' - Fire has beneficial effect
- limited suppression
- Area 'c' - Fire has positive or
negative effect
- moderate suppression

Other Public Lands

- BLM (other)
- Bureau of Indian Affairs
- US Fish & Wildlife Service
- US Forest Service

Fire Management Zones

Proposed Action

Figure 2E - 1

EDAW



0 5 10 20 Miles

September 2002



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 considerably 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.

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. 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. Engine usage should be the preferred alternative since most of the fires occur next to roads.

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.



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 and will be consistent with Field Office Guidelines. 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.

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 and will be consistent with Field Office Guidelines. 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.

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 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-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 WSA's

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 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-5 Cedar Ridge and Red Springs WSA's

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.



2. Fire Prevention: Vegetative manipulation, fuels reduction, green strips, 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.

This alternative 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.

Maximizing the use of fuel management techniques is one key tool in an integrated strategy for long-term fire management. Using 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 suppression costs. Fuels management techniques would also be used to increase livestock forage production, protect the urban interface and other cultural resources. The proposed acreage would vary by year dependent on project planning, funding and staffing levels. Target acreage levels by alternative are described in Table 2E-4.

Table 2E-4 Annual Acres of Treatment			
No Action Acres of Treatment	Full Suppression Acres of Treatment	Limited Suppression Acres of Treatment	Proposed Action Acres of Treatment
24,000	<4,000	<4,000	24,000 - 60,000

Fire prevention measures include:

Fuel Load Reduction

Large amounts of standing dead and live biomass represent a high fuel load and a greater risk of larger fires. A high fuel load would burn more rapidly or at a hotter temperature.

Reduction of the fuel load can be achieved through prescribe fire, mechanical (chaining, brush aerator, dixie harrow) methods, chemical treatments (herbicides such as tebuthron) and biological treatments (grazing). These options should give consideration not only to fire management objectives, but also the resource goals of the area. Table 2E-5 describes preferred option by polygon type.



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 District's Prescribed Burning Environmental Assessment.

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

A fuelbreak/greenstrip is a strategically located wide block, or strip 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. Fuelbreaks 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 these greenstrips. Specific actions by polygon type are described in Table 2E-5.



Table 2E-5 - Fire Prevention Activities	
Category	Action
A-1 Urban Interface/ Mining Areas/ Areas of Development	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.
A-2 Cultural Sites, Historic and Protohistoric	None at this time.
A-3 Municipal Watersheds	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-1 District-wide Areas of Exotic Vegetation Invasion	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-2 Ruby Marshes, Franklin Lake and Snow Water Lake	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-3 Low Sagebrush & Desert Shrub	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-4 Areas of Primarily Private Land and Urban Interface	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-5 Aspen Areas	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-6 Dixie	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-7 Badlands Allotment	None at this time.
B-8 Early Seral Sagebrush Grasslands	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-9 Crucial Deer Winter Range	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.



Table 2E-5 - Fire Prevention Activities	
Category	Action
C-1 Woodlands	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.
C-2 Owyhee Desert	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.
C-3 Sage/Mountain Brush/Perennial Grass	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.
C-4 Intermixed Woodlands, NE Corner	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.
D-1 Little Humboldt WSA	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.
D-2 Owyhee Canyon WSA's. Includes Owyhee Canyon, South Fork Owyhee, Rough Hills and Badlands WSA's.	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.
D-3 Mixed Conifer	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.
D-4 Goshute, South Pequop, and Bluebell WSA's	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.
D-5 Cedar Ridge and Red Springs WSA's	Planned ignitions will be curtailed if unplanned ignitions meet management objectives. Use MIST in all suppression actions.



3. Fire Response – Fire response should be maximized in most areas and still provide the flexibility and range of options available to managers to appropriately respond to wildland fires and meet long-term management objectives.

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, the Proposed Action focuses 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.

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 2E-6 and illustrated in Figure 2E-1.

Table 2E-6 - Fire Response Strategies	
Category	Action
A-1 Urban Interface/ Mining Areas/ Areas of Development	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.
A-2 Cultural Sites, Historic and Protohistoric	Generally all fires will be kept to the minimum possible acreage based on firefighter safety and restrictions on mechanized equipment usage
A-3 Municipal Watersheds	All fires will be kept to minimum possible acreage based on firefighter safety.
B-1 District-wide Areas of Exotic Vegetation Invasion	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-2 Ruby Marshes, Franklin Lake and Snow Water Lake	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.



Table 2E-6 - Fire Response Strategies	
Category	Action
B-3 Low Sagebrush & Desert Shrub	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.
B-4 Areas of Primarily Private Land and Urban Interface	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-5 Aspen Areas	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-6 Dixie	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-7 Badlands Allotment	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-8 Early Seral Sagebrush Grasslands	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-9 Crucial Deer Winter Range	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.
C-1 Woodlands	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.
C-2 Owyhee Desert	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.



Table 2E-6 - Fire Response Strategies	
Category	Action
C-3 Sage/Mountain Brush/Perennial Grass	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.
C-4 Intermixed Woodlands, NE Corner	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.
D-1 Little Humboldt WSA	When 50% or more of this WSA has experienced wildfire in a ten-year period: 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. When Less than 50% of the WSA has experienced wildfire in a ten-year period: 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.
D-2 Owyhee Canyon WSA's. Includes Owyhee Canyon, South Fork Owyhee, Rough Hills and Badlands WSA's.	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.
D-3 Mixed Conifer	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 WFSA if a wildfire may cross-jurisdictional boundaries. The Districts will also coordinate prescribed fire activities to cross district boundaries whenever appropriate
D-4 Goshute, South Pequop, and Bluebell WSA's	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.
D-5 Cedar Ridge and Red Springs WSA's	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.

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

Fire rehabilitation strategies remain the same as the No Action, however 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 guidance in the 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, may reduce fire suppression costs.



F. Comparison of Alternatives

Table 2F-1 summarizes the estimated area of wildfire impact, area expected to be rehabilitated, and acreage for target treatment per year for each alternative. Table 2F-2 summarizes and compares the potential environmental consequences associated with each alternative. The results of the impact analysis and definitions/explanations of impact levels are provided in Chapter 4.

Table 2F-1 Alternative Comparison				
	No Action	Full Suppression	Limited Suppression	Proposed Action
Wildfire Acreage Expected (per year avg)	65,000	0-5 year: 62,000 to 65,000 5-10 year: 72,000 to 78,000 10-20 year: 78,000 to 91,000	0-5 year: 65,000 to 130,000 5-10 year: 130,000 to 163,000 10-20 year: 163,000 to 195,000	0-5 year: 52,000 to 58,000 5-10 year: 49,000 to 52,000 10-20 year: 26,000 to 49,000
Rehabilitation Acreage Expected (per year avg)	19,000	0-5 year: 18,000 to 19,000 5-10 year: 21,000 to 23,000 10-20 year: 23,000 to 27,000	0-5 year: 1,000 to 2,000 5-10 year: 2,000 to 2,400 10-20 year: 2,400 to 3,000	0-5 year: 15,000 to 17,000 5-10 year: 14,000 to 15,000 10-20 year: 8,000 to 14,000
Target Treatment Acreage (per year)	24,000	Less than 4,000	Less than 4,000	24,000 to 60,000
<p>Estimate is based on the past 22 fire seasons in the District. Some variables that present a challenge to this exercise are; unknown future weather, funding support for fuels treatment initiatives in the long term, funding support for continued suppression at this level, and the amount of vegetation treatment necessary to affect a substantial reduction in large fire growth over the entire planning unit. To further develop this set of outcomes some assumptions were needed for consistency:</p> <ol style="list-style-type: none"> 1. Future weather elements such as precipitation, and multiple ignition days can not be anticipated with any degree of accuracy. The past 22 years of data will be used. 2. Past occurrence will be used to reflect future potential for number of starts. 3. Weather, natural barriers, or changes in fuel composition catch fifty percent of all fires in the planning unit. 4. Past suppression efforts have been at least 95% effective. At least 95% of all fires have been suppressed with less than 200 acres impacted in less than 24 hours. 5. 29% of total burned acreage has received rehabilitation/stabilization effort. This figure will be used to project future potential rehabilitation needs. 6. Treatment of fuels has not been a substantial element of the Elko program in the past. Fuels treatment targets are based on Sagebrush Ecosystem planning that is ongoing as well as other initiatives such as allotment evaluations and habitat management plans. The treatment targets in the Limited Suppression or Full Suppression Alternatives were intentionally set low, less than 4,000 acres per year to illustrate that suppression alone is not the significant variable in large fire growth. 7. Rehabilitation would only be necessary for 29% of the 'A' polygon under the Limited Suppression Alternative due to the assumption that under this alternative fire is desirable under most conditions. <p>Source: BLM Elko Field Office, 2002</p>				



**Table 2F-2
Summary of Impacts**

Element	No Action	Full Suppression	Limited Suppression	Proposed Action
Air Quality	Increase in smoke emissions due to potential increase in number and severity of fires due to fuel loads.	Increase in smoke emissions due to potential increase in number and severity of fires due to fuel loads.	Increase in smoke emissions due to potential immediate increase in number and severity of fires.	Reduction of smoke emissions due to reduction of fuel loads, resource focused response strategies and new procedural guidelines.
Native American Consultation/Religious Concerns	Increase impact to areas due to potential increase in number and severity of fires due to fuel loads.	An increase in damage to sites may occur due to potential for larger fires and fire suppression activities.	An increase in damage to sites may occur due to potential immediate increase in number and severity of fires.	Reduction of impacts due to reduction of fuel loads, resource focused response strategies and new procedural guidelines.
Cultural Resources	Increase impact to areas due to potential increase in number and severity of fires due to fuel loads.	An increase in damage to sites may occur due to potential for larger fires and fire suppression activities.	Unmanaged fires burning under dry and hot conditions would potentially have a high impact to cultural resources.	Reduction of impact due to reduction of fuel loads, resource focused response strategies and new procedural guidelines.
Paleontology	Increase impact to areas due to potential increase in number and severity of fires due to fuel loads.	An increase in damage to sites may occur due to potential for larger fires and fire suppression activities.	Unmanaged fires burning under dry and hot conditions would potentially have an impact to these resources.	Reduction of impact due to reduction of fuel loads, resource focused response strategies and new procedural guidelines.
Lands	Increase impact to private lands due to potential increase in number and severity of fires due to fuel loads.	Greater fuel loads would create conditions for high intensity fires with potential to cause damage to surrounding private lands.	Fire risk to private lands would increase due to conditions favoring more severe uncontrolled fires on adjacent public lands.	Reduction of impact due to reduction of fuel loads, resource focused response strategies and new procedural guidelines.
Water Resources	Severe fires over a potentially larger area due to increasing fuel loads could lead to harmful inputs to water resources from erosion of burned areas.	Severe fires over a potentially larger area due to increasing fuel loads could lead to harmful inputs to water resources from erosion of burned areas.	Severe uncontrolled fires could burn sensitive areas that could lead to harmful inputs to water resources from erosion of burned areas.	Reduction of impact due to reduction of fuel loads, resource focused response strategies and new procedural guidelines.
Wild and Scenic Rivers	Severe fires over a potentially larger area due to increasing fuel loads could lead to harmful impacts to these resources.	Severe fires over a potentially larger area due to increasing fuel loads could lead to harmful impacts to these resources.	Unmanaged fires burning under dry and hot conditions would potentially have an impact to these resources.	Reduction of impact due to reduction of fuel loads, resource focused response strategies and new procedural guidelines.
Wilderness	The potential for stand-replacing fires would be increased due to increasing fuel loads.	The potential for stand-replacing fires would be increased due to increasing fuel loads.	Unmanaged fires under certain conditions could increase the potential for stand-replacing fires.	Polygons with targeted management recommendations would help to maintain plant diversity and health of fire-dependent ecosystems in these areas.
Areas of Critical Environmental Concern	Fire does not play a critical role in the natural ecology of the ACEC in the area	Fire does not play a critical role in the natural ecology of the ACEC in the area and the	Fire does not play a critical role in the natural ecology of the ACEC in the area and the proposed action	Fire does not play a critical role in the natural ecology of the ACEC in the area and the proposed action would not result in any impacts.



**Table 2F-2
Summary of Impacts**

Element	No Action	Full Suppression	Limited Suppression	Proposed Action
	and the proposed action would not result in any impacts.	proposed action would not result in any impacts.	would not result in any impacts.	
Recreation	A reduction in an areas recreational value may occur and public safety may be threatened if the size and frequency of fires continue to increase near public areas.	A reduction in an areas recreational value may occur and public safety may be threatened if the size and frequency of fires continue to increase near public areas due to increasing fuel loads.	Unmanaged fires burning under dry and hot conditions would potentially have an impact to recreation related resources.	A benefit would occur for recreation due to a reduction of fuel loads, resource focused response strategies and new procedural guidelines.
Visual Resources	Short term visual impacts will continue as fire size and intensity increase.	Short term visual impacts will continue as fire size and intensity increase.	Visual impacts will increase as areas with a negative vegetative response are burned.	Long-term increase in habitat quality would result in an improved visual quality.
Wildlife	An impact to wildlife areas would occur if the size and frequency of fires continue to increase.	Greater fuel loads would eventually lead to high intensity fires, reducing habitat structure and limiting the success of restoration.	Large area fires burning sensitive wildlife areas and areas with a negative vegetative response would decrease habitat for wildlife.	Wildlife and habitat improvement would occur through creation of plant community mosaics, fire prevention focusing on habitat development and the preservation of key wildlife areas.
Special Status Species	An impact to special status species would occur if the size and frequency of fires continue to increase.	An impact to special status species would occur if the size and frequency of fires continue to increase due to higher fuel loads.	Large area fires burning sensitive wildlife areas and areas with a negative vegetative response would decrease habitat for special status species.	Sensitive wildlife and habitat improvement would occur through creation of plant community mosaics, fire prevention focusing on habitat development and the preservation of key wildlife areas. Additional operating procedures reduce potential impact to special status species.
Migratory Birds	Plant community structure and restoration success, both important for migratory birds, would be reduced as fire intensity and severity continue to increase.	Greater fuel loads would eventually lead to high intensity fires, reducing habitat for migratory birds.	Large area fires burning sensitive wildlife areas and areas with a negative vegetative response would decrease habitat for migratory birds.	Habitat improvement for migratory birds would occur through creation of plant community mosaics and rehabilitation focusing on habitat development.
Soils	An impact to soils would occur if the size and frequency of fires continue to increase.	An impact to soils would occur if the size and frequency of fires continue to increase due to higher fuel loads.	An impact to soils would occur if fires are unmanaged and the size and frequency of fires continue to increase.	Reduction of impact due to reduction of fuel loads, resource focused response strategies and new procedural guidelines
Wetlands and Riparian Zones	An impact to wetlands and riparian areas would occur if the size and frequency of fires continue to increase.	An impact to wetlands and riparian areas would occur if the size and frequency of fires continue to increase due to increasing fuel loads.	Low levels of fire management would severely impact current objectives for wetland and riparian zones.	Coupled with appropriate grazing strategies, SOP's, prescribed burning under this alternative would promote healthier and more diverse natural communities in these zones.



**Table 2F-2
Summary of Impacts**

Element	No Action	Full Suppression	Limited Suppression	Proposed Action
Vegetation	An impact to vegetation would occur if the size and frequency of fires continue to increase.	Under this alternative conversion to annual species, such as cheatgrass, would be promoted to a greater degree if fuel loads continue to increase causing larger more frequent fires.	Fire suppression would be limited and not account for vegetative response resulting in greater areas being converted to annual communities.	Management strategies are targeted to promote a healthy vegetative response, fuel loads would be decrease and habitats would be improved by increasing fuels prevention projects.
Noxious/ Invasive Weeds	This alternative would lead to high intensity fires inhibiting native plant communities and allowing invasion of noxious weeds.	This alternative would lead to high intensity fires inhibiting native plant communities and allowing invasion of noxious weeds.	Fire suppression would be limited and not account for vegetative response resulting in greater areas of invasive and noxious weeds.	Management strategies are targeted to promote a healthy vegetative response, fuel loads would be decrease and habitats would be improved by increasing fuels prevention projects.
Wild Horses	Displacement of wild horses may occur if habitat is degraded by increasing amounts of wildfire.	Displacement of wild horses may occur if habitat is degraded by increasing amounts of wildfire.	Unmanaged fire could result in further displacement of wild horses and associate habitat.	This alternative would enhance habitat for wild horses by increasing forage and maintaining areas for cover.
Rangeland / Grazing Management	This alternative would lead to high intensity fires inhibiting native plant communities and the promotion of less desirable species.	This alternative would lead to high intensity fires inhibiting native plant communities and the promotion of less desirable species.	Fire suppression would be limited and not account for vegetative response resulting in greater areas of invasive and noxious weeds.	Management strategies are targeted to promote a healthy vegetative response, fuel loads would be decrease and habitats would be improved by increasing fuels prevention projects.
Socioeconomic Conditions	Loss and conversion of habitat would decrease wildlife habitat, range condition, and opportunities for recreational activities.	Loss and conversion of habitat would decrease wildlife habitat, range condition, and opportunities for recreational activities.	Loss and conversion of habitat would decrease wildlife habitat, range condition, and opportunities for recreational activities.	Management strategies are targeted to promote a healthy vegetative response, fuel loads would be decrease and habitats would be improved by increasing fuels prevention projects. This should improve areas for recreation.

