San Luis Valley
Bureau of Land Management
Fire Management Plan

2004

Plan Preparation, Review, and Approval

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Bureau of Land Management
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I. Introduction

The Interagency Fire Management Plan template was signed on May 14, 2002, by all Federal Wildland Fire Agency Directors. It directs offices to develop a collaborative approach to working cooperatively and in developing an Interagency Fire Management Plan (FMP). The San Luis Valley Bureau of Land Management Fire Management Plan is a working reference for wildland fire management and hazardous fuels treatments. It will be reviewed and revised as needed to ensure that the strategic guidance provided in the plan is assisting the BLM in meeting its resource management and fire management goals and objectives according to the San Luis Valley Resource Management Plan (RMP). Revisions, additions, and adjustments that are compliant with the RMP may be incorporated into the FMP. The review will also ensure that the fire program is being implemented in a safe, cost effective manner and as directed in this fire management plan. As national wildland fire performance measures are issued, monitoring and evaluation protocols will be developed to meet those requirements to follow Department and Bureau guidelines. The San Luis Valley Public Land Center is a Service First program. Currently the United States Forest Service is responsible for implementing this fire management plan for all BLM lands within the San Luis Valley Public Lands Center (SLVPLC).

A. Purpose

The 1991 San Luis Valley Resource Management Plan (RMP) states, "Any fire, including wildfires, occurring in the Resource Area will be suppressed. The RMP meets the National Environmental Policy Act (NEPA) requirements as well as other State and Federal regulatory requirements. Conditional suppression areas with special fire condition values, such as Areas of Critical Environmental Concern (ACEC's) or Special Recreation Management Areas (SRMA's) are considered in this plan. With this RMP, firefighter safety and public concerns were always considered in selecting a fire management strategy; however, resource benefits could not be a primary consideration. The development of the San Luis Valley Fire and Fuels Management Plan allows for a major procedural change from current fire management. Rather than being limited to an appropriate suppression response of all wildland fires as the only management option, managers would now have specific zone boundaries, management prescriptions, and resource objectives that are tied to wildfire management. The option of using some wildland fires to reduce fuel hazards and improve resource conditions can be considered. Under this plan, managers would evaluate each wildland fire on a case-by-case basis to determine whether full suppression or management for resource benefit is the best response strategy. This plan will also contribute to the most cost efficient fire protection and fire use program.

The Fire and Fuels Management Plan complies with the 1995 Federal Wildland Management Policy and the 2001 Review and Update of the 1995 Federal Wildland Fire Management Policy, the Interagency Fire Management Plan Template; and a Collaborative Approach for Reducing Wildland Fire Risks to Communities and the

Environment: 10-Year Comprehensive Strategy Implementation Plan. The Policy directs BLM Offices to have an approved Fire Management Plan (FMP) for every area with burnable vegetation. FMP's define a strategy for managing and prioritizing wildland fires and prescribing vegetation treatments for fuel hazard reduction and resource benefit.

B. Relationship to Environmental Compliance

The San Luis Valley Resource Management Plan of 1991 meets the National Environmental Policy Act (NEPA) requirements as well as other State and Federal regulatory requirements. Any reference to the Land Use Plan (LUP) includes the San Luis Valley Resource Management Plan (SLV RMP). The Fire Management Plan meets regulatory compliance requirements with the National Environmental Policy Act as it is a strategic document that does not make resource management decisions or project specific implementation decisions and therefore is categorically excluded from further NEPA analysis. Prior to implementing fire managements projects on the ground, additional environmental analysis and compliance with other federal and state regulatory requirements such as the National Historic preservation Act and Endangered Species Ace, the Clean Water Act, and the Clean Air Act will be required. Future site specific and project specific proposals to implement the RMP decisions will require additional environmental analysis and compliance with other relevant laws and regulations.

C. Collaboration

The BLM is the only agency covered in this Fire Planning Unit (FPU); however, to be the most effective, this plan should be coordinated across ownership and jurisdictional boundaries (United States Fish and Wildlife Service (USFWS), National Park Service (NPS), The Nature Conservancy (TNC)), and adjoining counties, home owner's associations and the Rio Grande National Forest staff complete their fire planning documents. It should be noted that the Rio Grande National Forest will be updating their current fire management plan, whereas, the Counties are in the midst of completing their plans. The intention is the creation of a seamless, coordinated, interagency effort that specifies appropriate management actions for wildland fires and prescriptive vegetation treatments.

In 2002, County Commissioners and Sheriffs in Alamosa, Conejos, Costilla, Rio Grande, and Saguache counties were consulted prior to the public meetings and throughout the development process. The BLM has been coordinating with the GIS Authority in Alamosa to share GIS fire management zone data. The GIS Authority has been a focal point for the Counties within the San Luis Valley. This has enabled fire planners throughout the San Luis Valley to have quick and easy access to a central data location.

D. Authorities

Authorities for the development of the Fire Management Plan are listed below:

- Protection Act of September 20, 1922 (42 Stat. 857; U.S.C. 594).
- Taylor Grazing Act of June 28, 1934 (48 Stat. 1269; U.S.C. 315).

- O. and C. Act of August 28, 1937 (50 Stat. 874; U.S.C. 1181e).
- Reciprocal Fire Protection Act of May 27, 1955(69 Stat. 66; 42 U.S.C. 1856, 1856a).
- Economy Act of June 30, 1932 (47 Stat. 417; 31 U.S.C. 686).
- The Federal Land Management and Policy Act of 1976 (FLPMA) (Public Law 94-579; 43 U.S.C. 1701).
- Disaster Relief Act, Section 417 (Public Law 93-288).
- Annual Appropriations Acts for the Department of the Interior.
- United States Department of the Interior Manual (910 DM 1.3).
- 1995 Federal Wildland Fire Management Policy.
- 2001 Updated Federal Wildland Fire Management Policy (1995 Federal Wildland Fire Management Policy Update).
- 1998 Departmental Manual 620 Chapter 1, Wildland Fire Management General Policy and Procedures.
- BLM Manual 9210 and BLM Manual 9200
- "A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment, Aug. 2001.
- The National Fire Plan 10 Year Comprehensive Strategy and Implementation Plan, 2000
- Standards of Public Land Health, February 1997

II. Relationship to Land Management Planning/Fire Policy

A. Policy

The Fire Management Plan derives overall program guidance from the following:

- 1998 BLM Handbook 9214, "Prescribed Fire Management" describes authority and policy for prescribed fire use on public lands administered by the Bureau of Land Management.
- September 2000, National Fire Plan, "Managing the Impacts of Wildfires on Communities and the Environment."
- October 2000, National Cohesive Strategy goal is to coordinate an aggressive, collaborative approach to reduce the threat of wildland fire to communities and to restore and maintain land health www.fireplan.gov.
- August 2001, "Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment -10 Year Comprehensive Strategy" provides a foundation for wildland agencies to work closely with all levels of government, tribes, conservation, and commodity groups and community-based restoration groups to reduce wildland fire risk to communities and the environment,
- May 2002, "Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment, 10 Year Comprehensive Strategy – Implementation Plan"
- Healthy Forests Restoration Act of 2003 (HFRA) (P.L. 108-148), December 2003

The Fire Management plan is designed to help meet the direction from the San Luis Valley Resource Management Plan 1991. The principle SLV area-wide goal is to protect human life and property. This is in addition to the SLV's resource specific objectives. The three San Luis Valley Field Offices will manage wildland fire, use prescribed fire, use mechanical, chemical, hand, and biological methods for vegetation treatments to:

- Reduce hazardous fuel loading and the risks of wildfire escaping public lands to an acceptable level.
- Protect facilities on public lands (power lines, recreation sites, communication sites, cultural sites, etc).
- Restore physical function and biological health of the land and achieve Colorado Land Health Standards at the watershed scale.
- Prevent the listing of Sensitive, Candidate, and Proposed Species and conserve species currently listed as threatened and Endangered under the Endangered Species Act.
- Ensure long-term survival of special status species.
- Protect existing and improve degraded riparian vegetation for long-term health.
- Limit the spread of noxious and invasive plants, insect infestations, and disease.
- Protect archaeological and historical sites.

III. Wildland Fire Management Strategies

A. General Management Considerations

In order to comply with direction provided in current National Fire Plan guidance, the LUPs, the Watershed Plan, the ACEC Plan, and the Wilderness Plan, all agency (ies) will implement the following fire management guidance across the FPU.

- Use fire to restore and/or sustain ecosystem health.
- Identify appropriate management response (AMR) goals, objectives, and constraints by specific Fire Management Units (FMU) within the FPU. All wildland fire management activities will be managed as described in the FMU guidance outlined in Chapter III, section D.
- Work collaboratively with communities at risk within the (Wildland Urban Interface) WUI to develop plans for risk reduction. The Federal Register Notice list is located at: http://www.fireplan.gov/ and http://www.fireplan.gov/communities_at_risk.cfm and is not totally inclusive of all communities.
- Work collaboratively with regional partners in fire and resource management across agency(ies) boundaries.
- Allow wildland fire to protect, maintain, and enhance resources. Allow fire to function in its ecological role when appropriate for the site and situation.
- Employ fire prevention strategies that reduce human ignition with special emphasis in campgrounds and transportation corridors.
- Use fire as a management tool to improve the ecological condition of range ecosystems and maintain natural plant community diversity.

B. Wildland Fire Management Goals

Fire Management Goals

- Achieve a program where firefighter and public safety are the highest priority in every fire management activity.
- Be consistent with land uses and estimates of historic fire regimes,
- Utilize wildland and prescribed fire as tools to meet land management objectives.
- Maintain a safe, efficient, and effective organization for the suppression of wildfires at a minimum cost consistent with the values at risk.

These goals contribute to the accomplishment of regional and national strategic plans including the 10-year Comprehensive Strategy, National Fire Plan, the cohesive strategies, as well as wildland fire policy. These Fire program goals reflect the core principles and goals of the Comprehensive Strategy that is supported by the San Luis Resource Area Resource Management Plan. The actions associated with each goal are derived from the Rocky Mountain Region National Fire Plan Business Plan (2003). We consider this strategy to be dynamic and subject to annual review as national and regional direction evolve. Also, as we gain more experience with fire and fuels management, there may be a need for additional or revised actions.

Goal 1. Improve Prevention and Suppression

The desired outcome of this goal is to eliminate loss of life, prevent firefighter injuries, and to have a reduction in damage to communities and the environment due to severe, unplanned and unwanted wildland fire. Actions taken in order to achieve this goal include the following:

- Coordination of annual preparedness in the San Luis Valley amongst Federal, State, and local volunteer fire department firefighting resource capability and readiness to protect communities and the environment from wildland fires, ensuring that mutual aid and pre-season agreements are in place by March 31st each year.

- Provide appropriate staffing and equipment for initial attack, commensurate with budget appropriations on an annual basis. Have in place, a cadre of personnel trained to effectively respond to and manage extended attack scenarios is necessary.

- Improvement of fire suppression decision-making by line officers and fire managers regarding the outcomes of their decisions, risks, placement of firefighting resources, suppression tactics, and costs. Responsible officials should acquire appropriate training.

- Reduction of the incidence of human injury and property damage resulting from catastrophic wildland fires.

- Have a primary and secondary contact for critical habitat issues and Threatened, Endangered, and Sensitive (TES) species issues for emergency consultation.

- Expansion of outreach and education to homeowners and communities about fire prevention in the San Luis Valley through use of radio interviews, press releases to local newspapers, education contacts with the local school system, and dissemination of FIREWISE programs (http://www.firewise.org).

Goal 2. Reduce Hazardous Fuels

The desired outcome of this goal is to treat hazardous fuels using appropriate tools to reduce the risk of unplanned and unwanted wildland fire to communities and to the environment. Actions taken in order to achieve this goal include the following:

- Reducing the total number of acres at risk of severe wildland fire. This will be done by seeking out areas in need of fuel treatment to maintain ecological integrity in fire-adapted ecosystems. In collaboration with interagency and intergovernmental partners, a process for prioritizing fuel treatment areas in order to restore or maintain desirable vegetation/fuel conditions in the San Luis Valley will be developed.
- An annual review of the skills needed in order to accomplish fuels treatment will be implemented and a corresponding recruitment/ training plan will be developed.
- In collaboration with interagency and intergovernmental partners, a process for prioritizing (Wildland Urban Interface) WUI areas for fuel reduction actions in the San Luis Valley will be designed and implemented so that a significant portion of the hazardous fuel treatment funds can be invested in WUI areas.
- Mapping and identifying critical resources within known municipal watersheds in collaboration with interagency and intergovernmental partners should be completed to design and implement a process for prioritizing fuel reduction actions in municipal watersheds, TES species habitat, and other areas of critical resource values.
- Assure maintenance of areas improved by fuels treatment by managing activities permitted on the restored lands to maintain their resiliency.

Goal 3. Restore Fire-Adapted Ecosystems

The desired outcome of this goal is to ensure that fire-adapted ecosystems are restored, rehabilitated and maintained, using appropriate tools in a manner that will provide sustainable environmental, social, and economic benefits. Actions taken in order to achieve this goal include the following:

- Improvement of critical watershed conditions (restoring hydrologic processes) and health of forests and plant communities. Priority will be placed on habitat improvement quality and the conservation of critical wildlife, fish, and plant populations, and ecosystem resiliency.
- Reduction of the spread of invasive species that negatively impact natural fire cycles and fire-adapted ecosystems.
- Use of native seed to restore ecosystems.
- Prioritization of rehabilitation and restoration work to protect life, property, municipal watersheds, and to prevent further degradation of critical cultural and natural resources. Ensure that short-term Burned Area Emergency Rehabilitation (BAER) and long-term

restoration plans are coordinated and in place so that "Best Management Practices" are applied.

- Place priority on at risk watersheds that have been damaged by wildland fire.

- Prioritize the repair or replacement of facilities and infrastructure damaged by fire based on human safety, protecting property, and long-term projected need.

Goal 4. Promote Community Assistance

The Desired Outcome of this goal is to ensure that communities at risk have increased capacity to prevent losses from wildland fire and that there is a potential to seek economic opportunities resulting from treatments and services. Actions taken in order to achieve this goal include the following:

- Reduction of potential losses that may occur to communities and individuals as a result of wildland fire. Improvement of qualifications and availability of firefighters, crews, overhead and equipment for initial attack, mutual aid, extended attack and large fire support among our local partners and cooperators will be pursued.
- Encouragement of mitigation projects on private property and location of markets for small diameter and other less valuable woody by-products will be pursued.
- Maintenance or enhancement of current levels of domestic livestock grazing on Public Lands as part of fine fuels treatment to reduce fire ignition and spread potential. Local economies are also supported with federal land grazing authorizations.
- Continued promotion of fire-sensitive land use planning by maintaining close communication with County Commissioners.
- Encouragement of private landowners to address defensible space and fuels treatment needs on their own private property by informing landowners of local government assistance programs, providing technical assistance, and assuring public knowledge and understanding of wildland fire risk.

C. Wildland Fire Management Options

The BLM will provide an Appropriate Management Response (AMR) on all wildland fires, with emphasis on fire fighter and public safety, minimizing suppression costs, benefits and values to be protected consistent with resource objectives, standards and guidelines. Every attempt will be made to respond to each wildland fire in a timely manner with appropriate resources, based upon established fire management direction as documented in approved management plans. The use of appropriate management response will allow land managers to tailor preplanned wildland fire dispatch strategies

implementation plans. Agency (ies) will implement fuels treatments, community assistance, education/ mitigation programs and rehabilitation/restoration actions to implement management plan direction.

D. Description of Wildland Fire Management Strategies by Fire Management Unit

Identification of fire management units and strategies within the units is the cornerstone for planning the management of the wildland fire program. A Fire Management Unit (FMU) is a land management area definable by objectives, management constraints, topographic features, access, values to be protected, political boundaries, fuel types, and major fire regime/condition class groups (which were developed with ocular field observations with pre- score card ratings), that set it apart from the management characteristics of an adjacent FMU. The FMU's may have dominant management objectives and pre-selected strategies assigned to accomplish these objectives. Each FMU is unique as evidenced by management strategies, objectives and attributes. This section ties directly to the decisions made in the land and resource management planning process by management area, aggregated into FMU's. Objectives, standards, guidelines, and/or future desired conditions within the FMU as well as the wildland fire management strategies that will be used to accomplish these objectives will be identified.

Public lands will be managed with one of four fire management units (FMUs) for the purposes of wildland fire and prescribed vegetation management (**Refer to Appendix A: Maps: San Luis Valley BLM Fire Management Units**). These units include A FMU's, which are areas where fire is not desired at all, B FMU's, which are areas where unplanned wildland fire is not desired because of current conditions, C FMU's, which are areas where wildland fire is desired, but there are significant constraints that must be considered for its use, and D FMU's, which are areas where wildland fire is desired and there are few or no constraints for its use. The descriptions of FMUs are based on Bureau of Land Management Instruction Memorandum No. 2002-034 (11/15/2001) and Clarification of Fire Management Categories and RMP-Level Decisions; H-1601-1 Land Use Planning Handbook (Appendix C.I.J.) (Refer to **Appendix B: Fire Management Unit Descriptions**).

B-1: Mishak and La Garita Lakes

Location – This FMU is located on the broad central valley floor west of Highway 17 north and east of Mishak Lakes. This FMU is a total of 2660 acres of BLM administered lands. This FMU consists of flat terrain. Elevation is at 7,500 to 7,700 feet.

Vegetation- The dominant bottomland vegetation in this FMU consists of alkali sacaton, greasewood, inland saltgrass, rubber rabbitbrush, alkali cordgrass, blue grama, western wheatgrass, rush, and fourwing saltbush.

Soils- There are four major ecological range sites in this FMU. The most dominant range site in this FMU is the Sandy Hummocks range site. The soils in this range site are deep, fine grained sands that are highly alkaline. Because of the loose nature of the soils, these soils are highly susceptible to damage from wind erosion. The Salt Flats range site is another range site found in this FMU. The soils in this range site contain salts and alkali, with a pH ranging from 8.0-9.7. These soils are highly subject to wind erosion if plant material is destroyed. In the Alkali Overflow range site, the soils range from loamy sands to clay loams that developed primarily from basalt. They are underlain with sand or gravel. They are typically wet and severely alkaline and saline. Chico Land is the last major range site that is found in the FMU. This range site has soils that are deep, well drained soil on flood plains and fans on alluvial valley floors. This soil is developed principally from basalt and is highly alkaline. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain water erosion rating of high, moderate, or low. The water erosion hazard rating throughout this FMU is low.

Threatened and Endangered- Potential nesting habitat has been identified for the federally listed Bald Eagle in this FMU. Potential habitat has also been identified for the following T&E/ Special Status species: Northern Leopard Frog, Ferruginous Hawk, American White Pelican, White-Faced Ibis, and the Black Tern.

Access- is available throughout this FMU through primitive/unimproved roads.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural/Historical Resources- The potential for cultural sites is considered high within the B1 FMU because of the gentle topography and the seasonal availability of water in Mishak and La Garita Lakes. The SLV Cultural Resource GIS database indicates that cultural resource sites have been previously recorded within the B1 FMU. A GIS map of the area has been made with

the locations indicated. This map should be consulted if fuels projects are planned for the area or if wildfire activity occurs.

Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU. Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002 (Refer to **Appendix M**).

Aquatic resources- This unit only contains ephemeral aquatic habitats which when seasonally important are unlikely to experience fire impacts of a magnitude to affect local aquatic wildlife population viability. During much of the fire season surface water is virtually absent. Dormant growing season fires are also unlikely to greatly impact local aquatic wildlife species or their habitat. Some individual animals may perish, but fire fighting stipulations should protect most aquatic resources here.

Wildlife- This unit provides habitat for an undetermined number of terrestrial wildlife species. Some species are year-long residents, while others are migrants. The San Luis Valley (SLV) is the most important waterfowl and water bird production area in Colorado and the southern most major waterfowl production area in the Central Flyway. The Mishak Lakes/La Garita Lakes complex, in conjunction with other state and Federal management areas has been identified by the Colorado Division of Wildlife as a core wetlands production area necessary for the initial recovery of the Valley nesting water bird populations and an area critical for the conservation of amphibian populations in the SLV. Because the potential for fire on BLM is low, fire impacts to terrestrial wildlife resources will be low. If fire does impact terrestrial wildlife resources here the recovery potential is very high.

Fire History –There is one record of a human caused 1 acre within this FMU. This ecotype has a very low natural occurrence of fire due to open, sparse distribution of fuel.

Fire Regime/Condition Class- Fire Regime 2/ Condition Class 1; low risk of loss to key ecological components.

Values at Risk – Primary value to be protected is nesting habitat of ground nesting birds.

Communities at Risk – There are no identified communities at risk within this FMU.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Move toward improved Condition Class

Suppression Objectives:

- Cultural resources will be protected in the area.
- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines

Fire Use and Prescribed Fire Objectives

- This area does not lend itself to prescribed fire treatment due to the open, patchy nature of the fuels..

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration

Community Protection/Community Assistance Objectives:

- There are no identified communities at risk in this FMU.

Fire Management Strategies-

- **Suppression –** No more than 20% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location. Major earth disturbance should be minimized to protect wetlands and nesting habitat.

- **Wildland Fire Use –** Wildland fire use for resource benefit is not an identified fire management option within this FMU.

- **Prescribed Fire -** This area does not lend itself to prescribed fire treatment due to the open, patchy nature of the fuels.

- **Non-fire fuels Treatments** (include by-products utilized) **– N/A**

- **Restoration and Rehabilitation -** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

B-2: Blanca Wetlands Complex

Location –The Blanca Wetlands Complex is located in east-central Alamosa County. The area is relatively flat with no significant topographic features. Elevation in this FMU ranges from 7,500 to 7,540 feet. This FMU encompasses 20,650 acres of Bureau of Land Management administered land. The area has sparsely vegetated and dunes with intermingled depressions and historical playa basins.

Vegetation - Vegetation in this FMU includes alkali sacaton, greasewood, inland salt grass, rubber rabbitbrush, alkali cordgrass, blue grama, ring muhly, sand dropseed, slender spider flower, western wheatgrass, rush, willows, Russian olives, cottonwood (narrowleaf and broadleaf species) trees, and four wing saltbush.

Soils - The dominant range sites found in this FMU include Sand Hummocks, Salt Flats, and the Valley Sand Range Site. The soils in the Sand Hummocks range site are deep, fine grained sands that are highly alkaline. These soils are loose and highly susceptible to damage from wind erosion. Soils in the Salt Flats range site occur in low, flat basins between dunes. The potential of wind erosion is high if vegetation damaged or removed. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. The water erosion hazard rating throughout this FMU is low.

Threatened and Endangered - Potential habitat has been identified for the following T&E/ Special Status species: Northern Leopard Frog, Ferruginous Hawk, American White Pelican, White Faced Ibis, Western Snowy Plover, and the Black Tern. Also, the Slender Spider Flower occurs in this FMU.

Access- Access is available throughout this FMU through a combination of primitive 4WD roads, as well as light duty gravel maintained roads.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural and Historical Resources- The potential for cultural sites is considered high within the B2 FMU because of the gentle topography and the seasonal availability of water. The SLV BLM Cultural Resource GIS database indicates that cultural resource sites have been previously recorded within the B2 FMU. A GIS map of the area has been made with the locations indicated. This map should be consulted if fuels projects are planned for the area or if wildfire activity occurs.

Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU. Tribal consultation for the Bureau of Land Management San

Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002 (Refer to **Appendix M**).

Aquatic Resources: Blanca Wetlands is some of the most important migratory and nesting waterfowl habitat the San Luis Valley that consists of fresh water ponds, marshes, meadows, and alkali ponds, marshes and meadows. There are also playa lakes along with numerous acres of upland habitat. The Blanca Wetlands have many unique features, and it is an important wildlife, fishery, and recreation resource. Because the potential for fire on BLM is low, fire impacts to aquatic resources will be low. If fire does impact aquatic resources here the recovery potential is very high.

Wildlife- The San Luis Valley (SLV) is the most important waterfowl and water bird production area in Colorado and the southern most major waterfowl production area in the Central Flyway. The Blanca Wetland area, in conjunction with other state and Federal management areas has been identified by the Colorado Division of Wildlife as a core wetlands production area necessary for the initial recovery of the Valley nesting water bird populations and an area critical for the conservation of amphibian populations in the SLV. This area also provides habitat for an undetermined number of other terrestrial wildlife species. Some species are year-long residents, while others are migrants. Because the potential for fire on BLM is low, fire impacts to terrestrial wildlife resources will be low. If fire does impact terrestrial wildlife resources here the recovery potential is very high.

Fire History – There has been two fires recorded within this FMU, one human caused and one lightning, for about 1 acre total area. This ecotype has a very low natural occurrence of fire due to open, sparse distribution of fuel.

Fire behavior- Depending on the time year, this fuel type either presents low probability of ignition, summer time, or high degree of intense burning, winter time with no snow.

Fire Regime/Condition Class- Fire Regime 2/ Condition Class 1; low risk of loss to key ecological components.

Values at Risk – The values at risk in this FMU include adjacent private lands, archaeological and historical sites, recreation (Blanca Wetlands SRMA), the Blanca Wetlands ACEC, and sensitive plant and animal habitat.

Communities at Risk – There are no identified communities at risk within this FMU.

Fire Management Objectives

- Create desirable mix of upland and wetland plant communities.
- Restore fire adapted ecosystems.
- Maintain Current Condition Class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- Use prescribed fire on selected "choked out" cat-tail ponds to sustain a mosaic of wetland, waterfowl, shorebird, and fisheries habitat.
- All local air quality objectives will be met.
- Restore flood adapted ecosystems to reduce the risk of intense fire

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- There are no identified communities at risk in this FMU.

Fire Management Strategies

- **Suppression –** No more than 20% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location. Major earth disturbance should be minimized to protect wetlands and nesting habitat.

- **Wildland Fire Use –** Wildland fire use for resource benefit is not an identified fire management option within this FMU.

- **Prescribed Fire -** During the past 10 years, approximately 40 to 80 acres have been burned annually in the cattail and reed grasses around the playas. The application of fire is for conversion of vegetation types, and has been very successful.

- **Non-fire fuels Treatments** (include by-products utilized) **–N/A**

- **Restoration and Rehabilitation -** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

B-3: Zapata

Location – This area lies east of Hooper on the east side of the San Luis Valley along the west side of the Sangre de Cristo Mountains range. The area has a predominantly west facing aspect. This FMU encompasses 12,521 acres of BLM administered land.

Vegetation- This FMU includes Conifer, Piñon/Juniper, Grassland, and Mountain Shrub. The upper areas are dominated by spruce, ponderosa pine, pinyon pine, Douglas-fir, juniper, mountain-mahogany, fringed sage, and blue grama. On the alluvial fans the following species commonly occur: mountain muhly, blue grama, Arizona fescue, June grass, mutton-grass, needle-and-thread grass, rabbitbrush, piñon pine, juniper, and mountain-mahogany. The lower areas are dominated by Indian rice grass, blue grama, mountain muhly, Apache-plume, and little rabbitbrush.

Soils- A variety of different ecological rangesites and soil types encompass this FMU. In the lower elevations the Sandy Bench and Foothill Sand ecological range site make up a majority of this FMU. The soils of the Sandy Bench range site are coarse in texture, and generally, gravel and cobble stones are scattered throughout the soil profile. These soils are easily eroded by wind if cover is removed or destroyed. The Foothill Sand range site has soils that are medium to fine grained sands intermingled with gravel, cobble, and stones. These soils are also easily eroded by wind if plant cover is damaged or destroyed. As you go up in elevation a variety of soil types occupy alluvial fans on the base of the Sangre De Cristo Range. These soils are very cobbly soil that is crossed by numerous dry washes and old gullies. In many places the entire surface layer is covered with cobblestones and boulders that range up to several feet in diameter and are rounded and smooth. The farthest west polygons in this FMU have extremely steep topography and the soil surface layer is covered with angular stones from the parent material and rounded cobblestones that have washed down from adjacent areas. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. The water erosion hazard rating in the areas with steep topography along the west/southwest facing slopes of the Sangre De Cristo Range is high, and in areas where the topography flattens out the water erosion hazard rating is low.

Threatened and Endangered Potential habitat has been identified for the following T&E/ Special Status species: Mountain Plover, Northern Leopard Frog, Ferruginous Hawk, and the Fringed, Yuma, Free Tailed, and Townsends bats. The Black Swift is ranked by Partners in Flight as a species of high priority for conservation concern (Carter, etal. 1996), and is ranked by USDA USFS Region 2 as sensitive species.

Access is available throughout this FMU through light duty maintained dirt roads to primitive 4 wheel drive roads.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural/Historical Resources- The potential for cultural sites is considered low to moderate within the B3 FMU because of the moderate to steep terrain and the predominance of intermittent drainages. The BLM SLV Cultural Resource GIS database indicates that cultural resource sites have not been previously recorded within the B3 FMU. A GIS map of the area has been made. This map should be consulted if fuels projects are planned for the area or if wildfire activity occurs.

Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU. Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002 (Refer to **Appendix M**).

Aquatic resources- This unit contains aquatic habitat and several perennial streams, including Pioneer Creek, Holbrook Creek, and Zapata Creek. If fire does impact aquatic resources here, depending on the severity of the fire, the recovery potential could be very quick or extremely slow. A large scale fire (200 acres or more) could take hundreds of years to recover due to potential soil loss and hence stream bank stability. This unit also contains ephemeral aquatic habitats, when seasonally important are unlikely to experience fire impacts of a magnitude to affect local aquatic wildlife population viability. Dormant growing season fires are also unlikely to greatly impact local aquatic wildlife species or their habitat. Some individual animals may perish, but fire fighting stipulations should protect most aquatic resources here.

Wildlife- Typical piñon and juniper species are found throughout this unit and habitat is extensive. Mechanical and or fire treatment within this FMU will have no negative impacts to wildlife. Changing the species composition and structure will benefit most wildlife and enhance diversity.

Wildlife in the area include mule deer, elk, black bear, mountain lion, coyote, pine squirrels and porcupine. Typical bird species include raven, chickadee, nuthatch, robin, Clark's nutcracker and a variety of woodpeckers and forest hawks, such as Coopers hawk and sharp-shinned hawk. The implementation of this fire plan will improve conditions for neo tropical bird habitat. Neo tropical Birds are birds that winter in the tropics and nest in the Continental United States (CONUS). The patchiness of habitats that can be attained with prescribed natural fire and prescribed fire will be a benefit to these birds. These birds are present throughout the entire SLV. Fuels treatments will follow the provisions identified in the Migratory Bird Treaty Act (MTBA).

Fire History – There has been three fires recorded within this FMU within the last 15 years, all have been lightning caused.

Fire behavior- Fires occurring in the Piñon/Juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing.

Fire Regime/Condition Class- Within the Piñon/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 2; moderate risk of loss to key ecological components.

Values at Risk – The values at risk in this FMU include the adjacent private lands and homes, communications repeater site, archaeological and historical sites, critical big game winter habitat, recreation, Highway 150, and sensitive plant and animal habitat. This FMU contains the Zapata Falls SRMA.

Communities at Risk – Communities within this FMU include Zapata Home Owners Association, Urraca Home Owners Association, and The Great Sand Dunes National Monument.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems.
- Move toward improved Condition Class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- Encourage communities to accomplish hazardous fuels reduction and rehabilitation work.
- Increase incentives for land owners to address defensible space and fuels management needs on private property through local land use policies.
- Promote public knowledge and understanding of wildland fire, including risks and the role in natural ecosystem processes.

Fire Management Strategies

- **Suppression –** No more than 20% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

- **Wildland Fire Use –** Wildland fire use for resource benefit is not an identified fire management option within this FMU.

- **Prescribed Fire –** There may be an opportunity to utilize prescribed fire in some areas, following mechanical treatment.

- **Non-fire fuels Treatments–** The Piñon/Juniper woodlands offer opportunity for mechanical fuels reduction (Hydro-axe or hand thinning) around private property and in areas of critical wildlife concern (winter range). There are also opportunities for firewood gathering areas within the Piñon/Juniper. There are approximately 1,000 + acres of Piñon/Juniper that could be treated mechanically within this FMU.

- **Restoration and Rehabilitation -** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

B-4: Rio Grande River Corridor

Location – Elevation for the area is approximately 7,545 feet. The majority of this FMU is bordered by state land on the north and by USFWS land on the west. This FMU encompasses 3,320 acres of BLM administered lands.

Vegetation- The area is dominated by the following species: greasewood, saltgrass, sedges, alkali sacaton, rabbitbrush, four-wing saltbush, Indian ricegrass, blue grama, ring muhly, spiny muhly, little rabbitbrush, and Greens rabbitbrush.

Soils- Two range sites make up a majority of this FMU with a number of other range sites making up minor portions of this FMU. The Salt Flats range site has soils that have a high alkalinity and a high salt content. pH in these soils ranges from 8.0 to 9.7. This area is subject to wind erosion if plant cover is destroyed. The Valley Sands range site has soils that are sandy, porous, and free of salts and alkali. The soils are very erodable by wind when plant cover is damaged or destroyed. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. The water erosion hazard rating throughout this FMU is low.

Threatened and Endangered- This FMU has potential habitat identified for the following T&E/ Special Status species: South Western Willow Fly Catcher, Bald Eagle (particularly in the Oxbow Hanson's Bluff area), Northern Leopard Frog, the Ferruginous Hawk, and the White Faced ibis (in the Oxbow bluff area).

Access is available throughout this FMU through light duty maintained dirt roads as well as some 4 wheel drive roads.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural/Historical Resources- The potential for cultural sites is considered moderate to high within the B4 FMU because of the proximity to the Rio Grande and the location on Hansen Bluff a feature that is slightly higher ground than the surrounding area. The BLM SLV Cultural Resource GIS database indicates that cultural resource sites have not been previously recorded within the B4 FMU. A GIS map of the area has been made. This map should be consulted if fuels projects are planned for the area or if wildfire activity occurs.

Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU. Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal

Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002 (Refer to **Appendix M**).

Aquatic Resources– This unit mostly contains ephemeral aquatic habitats which when seasonally important are unlikely to experience fire impacts of a magnitude to affect local aquatic wildlife population viability. During much of the fire season surface water is virtually absent. Dormant growing season fires are also unlikely to greatly impact local aquatic wildlife species or their habitat. Some individual animals may perish, but fire fighting stipulations should protect most aquatic resources here. Because the potential for fire on BLM is low due to sparse vegetation characteristics fire impacts to aquatic resources will be low. If fire does impact aquatic resources the recovery potential is very high.

Wildlife- This unit has had extensive riparian restoration work and is recovering well. It is also a designated outstanding natural area and is being managed as a wild and scenic river. An assessment of this area from a fire/fuels reduction aspect has proven to be very positive. The sparse vegetation is not conducive to a hot burning fire and would not support a fire of large size. If fire does impact terrestrial wildlife resources the recovery potential is very high.

Fire History – There have been no reported fires within this FMU in the last 15 years.

Fire behavior- Due to the patchy nature of this fuel type, most fires have a low to moderate potential for spread. Most fires will be very wind dependant on their spread.

Fire Regime/Condition Class- Fire Regime 2/ Condition Class 1-2; low risk of loss to key ecological components.

Values at Risk – Values at risk in this FMU include private lands and homes, archaeological and historical sites, salt desert shrub plant community, sensitive plant and animal habitat.

Communities at Risk – There are no identified communities at risk within this FMU.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems.
- Maintain current Condition Class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- There are no communities identified in this FMU.

Fire Management Strategies-

- **Suppression –** No more than 20% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location. Major earth disturbance should be minimized to protect wetlands and nesting habitat.
- **Wildland Fire Use –** Wildland fire use for resource benefit is not an identified fire management option within this FMU.
- **Prescribed Fire –** This area does not lend itself to prescribed fire treatment due to the open, patchy nature of the fuels.
- **Non-fire fuels Treatments – N/A**
- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.
- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

B-5: McIntyre/Simpson

Location – This area is located east of La Jara. This FMU encompasses 1,631 acres of Bureau of Land Management administered land.

Vegetation– Dominant vegetation includes greasewood, salt grass, sedges, alkali sacaton, rabbit brush, four-wing saltbush, Indian rice grass, blue grama, ring muhly, little rabbit brush, Green's rabbit brush, and spiny muhly. There are also some Cottonwood and willow stands that are found in this FMU.

Soils- Four major ecological range sites make up this FMU. A large portion of this FMU is in the Salt Flats range site. The Salt Flats range site has soils that have a high alkalinity and a high salt content. pH in these soils ranges from 8.0 to 9.7. This area is subject to wind erosion if plant cover is destroyed. The Salt Meadow range site has soils that are typically on flood plains, fans and terraces. These soils are developed in alluvium derived mainly from igneous rock. The Wet Meadow range site has soils that have developed on alluvial deposits under dense grass cover. The Mountain Outwash range site has soils that are shallow to moderately deep soils that are over gravel or cobble. Some of the soils have high lime content. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. The water erosion hazard rating throughout this FMU is low.

Threatened and Endangered- Potential habitat has been identified for the following T&E/ Special Status species: South Western Willow fly catcher, Bald Eagle, Northern Leopard Frog, Ferruginous Hawk, and the White-faced Ibis.

Access- is available throughout this FMU through roads ranging from light duty maintained dirt roads to primitive 4 wheel drive roads.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural/Historical Resources- The BLM SLV Cultural Resource GIS database indicates that cultural resource site 5CN793, the McIntire Ranch Complex, is recorded in the NE ½ of Section 18, adjacent to McIntire Spring. The site, consisting of several features, has been determined to be eligible to the National Register of Historic Places. In addition the Simpson Ranch (5CN920) has been recorded in the NE ¼ of Section 7. Certain features of the site are going to be recommended as eligible to the National Register of Historic Places. Pike's Stockade (5CN75) is located adjacent to B5 on State of Colorado administered land. Site 5CN801, a rock art panel on the summit of Sierra del Ojito, is on State of Colorado administered land that is part of the Pike's

Stockade parcel. A GIS map of the area has been made. This map should be consulted if fuels projects are planned for the area or if wildfire activity occurs.

The potential for cultural sites is considered low to moderate within the B5 FMU because of the proximity to the Conejos River and the presence of the previously recorded sites. The considerable extent of the Conejos River floodplain and the previous agricultural activity within unit B5 somewhat limits site potential.

Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU. Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002 (Refer to **Appendix M**).

Aquatic Resources- This unit contains a section of the Conejos River as well as perennial stream and isolated seep aquatic habitat. If fire does impacts aquatic resources here the recovery potential is very high.

Wildlife- This unit contains extensive riparian habitat and functions as an important waterfowl and water bird production area in Colorado. This area also provides habitat for an undetermined number of other terrestrial wildlife species. Some species are year-long residents, while others are migrants. Because the potential for fire on BLM is low, fire impacts to terrestrial wildlife resources will be low. If fire does impact terrestrial wildlife resources here the recovery potential is very high.

Fire History – There have been no reported fires within this FMU in the last 15 years.

Fire behavior- Depending on the time year, this fuel type either presents low probability of ignition, summer time, or high degree of intense burning, winter time with no snow.

Fire Regime/Condition Class- Fire Regime 2/ Condition Class 1/2/3. Some areas in this FMU have extensive encroachment and establishment of invasive/noxious weeds.

Values at Risk – Values at risk in this FMU include Private lands and homes, archaeological and historical sites, riparian, wetland, and upland plant communities, sensitive plant and animal habitat, bald eagle winter range, southwest willow flycatcher nesting habitat.

Communities at Risk – No identified communities in this FMU

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems.
- Maintain Current Condition Class.

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration

Community Protection/Community Assistance Objectives:

- No Communities have been identified in this FMU.

Fire Management Strategies

Suppression – No more than 20% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location. Major earth disturbance should be minimized to protect wetlands and nesting habitat.

Wildland Fire Use – Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire - This property was acquired by the BLM in 1994 and 2001, there has been no prescribed fires implemented on this FMU.

Non-fire fuels Treatments (include by-products utilized) – None planned or implemented.

Restoration and Rehabilitation - Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

Community Protection/Community Assistance Objectives – Minimize impacts to adjacent private property.

B-6: Mogote

Location – This FMU encompasses 21,294 acres of Bureau of Land Management administered land.

Vegetation – Dominant vegetation on this FMU includes western wheatgrass, needle-and-thread, Indian rice grass, blue grama, bottlebrush squirrel tail, sand dropseed, pinon, juniper, Scribner needlegrass, four wing saltbush, mountain mahogany, three awn, yucca, prickly pear, winter fat, broom snakeweed, pingue, and Arizona fescue.

Soils -Three range sites make up a majority of this FMU. The Basalt Hills range site is the dominant range site found on the northern polygons in this FMU. The soils in this range site are medium to light in texture, very stony, calcareous, and shallow over basalt or other volcanic flow rock. Parts of this site, especially the lower foot slopes are subject to severe water erosion if plant cover is seriously damaged. The Limy Bench range site is the dominant range site found on the southern polygons in this FMU. This range sites has soils that are highly calcareous, medium to light in texture, and moderately permeable. These soils are highly erodable if plant cover is destroyed or severely weakened. In the FMU where the elevation is higher and the topography is steeper, the Rocky Foothills range site is commonly found. The soils in this range site are shallow stony loams. They typically contain a great deal of smaller rock fragments as well as stones, and they occur in a complex pattern with nearly bare rock outcrops in deeper soils. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. The water erosion hazard ratings are high in the steeper areas particularly in the vicinity of Fox Creek, and also in the area south of the Conejos River. Other areas have a water erosion hazard rating of low.

Threatened and Endangered- Potential habitat for the following T&E/ Special Status species has been identified: Mountain Plover, Northern Leopard Frog, and the Ferruginous Hawk

Access- Access is available throughout this FMU is available through primitive four wheel drive roads.

Air- General southwest wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural/Historical- The BLM SLV Cultural Resource GIS database indicates that several cultural resources have been recorded within B6 FMU. Many more sites have been recorded on private land adjoining B6 FMU. Site types range from prehistoric architectural features to open camp/open lithic sites with varying artifact densities. A GIS map of the area has been made. This map should be consulted if fuels projects are planned for the area or if wildfire activity occurs.

Based on past inventory activity within B6 and in the vicinity of B6 it is estimated that the potential for cultural resources ranges from moderate to high for prehistoric open architectural and open camp/open lithic type sites. Specific areas would be on mesa edges and on the sides and heads of drainage features.

Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU. Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002 (Refer to **Appendix M**).

Aquatic Resources- This unit only contains ephemeral aquatic habitats which when seasonally important are unlikely to experience fire impacts of a magnitude to affect local aquatic wildlife population viability. During much of the fire season surface water is virtually absent. Dormant growing season fires are also unlikely to greatly impact local aquatic wildlife species or their habitat. Some individual animals may perish, but fire fighting stipulations should protect most aquatic resources here.

Wildlife- This unit contains extensive terrestrial habitat and parts of this unit function as an important calving, lambing and fawning area in the SLV. This area also provides habitat for an undetermined number of other terrestrial wildlife species. Some species are year-long residents, while others are migrants. Because the potential for fire on BLM is low, fire impacts to terrestrial wildlife resources will be low. If fire does impact terrestrial wildlife resources here the recovery potential is very high.

Fire History – Lightning caused fires account for 50% of all unplanned ignitions in the last 15 years. There were two fires recorded within this FMU within the last 15 years, with a fire size class was A on the human caused fire and C on the lightning caused.

Fire behavior- Fire behavior differs within two major fuel types. Fires occurring in the Piñon /Juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing. Douglas fir/Ponderosa pine fuel types are typically surface fuel driven fires with some individual tree and small group torching. Typical fire season within this FMU is from May 1 to Sept. 15. July and August are the monsoon season with heavy thunderstorm and dry lightning activity.

Fire Regime/Condition Class- Within the Piñon pine/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 1-2; low risk of loss to key ecological components.

Values at Risk – Values at risk in this FMU are private lands and homes, archaeological and historical sites, Cumbres and Toltec Scenic Railroad ACEC, sensitive plant and animal habitat, State Highways 285 and 17, Fox Creek and Conejos River corridors.

Communities at Risk – Fox Creek and Cañon are the only identified communities at risk in the area. There are also ranch houses and private properties in and around public lands.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Move toward improved Condition Class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- Encourage communities to accomplish hazardous fuels reduction and rehabilitation work.
- Increase incentives for land owners to address defensible space and fuels management needs on private property through local land use policies.
- Promote public knowledge and understanding of wildland fire, including risks and the role in natural ecosystem processes.

Fire Management Strategies

- **Suppression –** No more than 20% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

- **Wildland Fire Use –** Wildland fire use for resource benefit is not an identified fire management option within this FMU.

- **Prescribed Fire –** There may an opportunity to utilize prescribed fire in some areas, following mechanical treatment.

- **Non-fire fuels Treatments-** The Piñon/Juniper woodlands offer opportunity for mechanical fuels reduction (Hydro-axe or hand thinning) around private property and in areas of critical wildlife concern (winter range). There are also opportunities for firewood gathering areas within the Piñon/Juniper. There are approximately two to three hundred acres of Piñon/Juniper that could be treated mechanically within this FMU, however most are on steep slopes and in stringers along drainages.

- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives–** Minimize impacts to private property.

B-7: La Jara Canyon

Location– This FMU encompasses 7,401 acres of Bureau of Land Management administered lands.

Vegetation – The area is dominated by western wheatgrass, needle-and-thread, Indian rice grass, blue grama, bottlebrush squirrel-tail, sand dropseed, pinon, juniper, Scribner needlegrass, four wing saltbush, mountain mahogany, three awn, yucca, prickly pear, winter fat, broom snakeweed, pingue, rabbitbrush, and Arizona fescue.

Soils- Two rangesites make up a majority of this FMU. A majority of this FMU is in the Limy Bench ecological range site. Soils in this range site are highly calcareous, medium to light in texture, and moderately permeable. The Basalt Hills is another dominant range site in this FMU. The soils in this FMU are generally medium to light in texture, very stony, calcareous, and shallow over basalt or other volcanic flow rock. are subject to severe water erosion if plant cover is seriously damaged. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain water erosion rating of high, moderate, or low. The water erosion for most of this FMU is low; however, parts of this range site, especially the lower footslopes have a high erosion potential rating.

Threatened and Endangered- Potential habitat has been identified for the following Threatened and Endangered/ Special Status species: Mountain Plover, Northern Leopard Frog, and the Ferruginous Hawk.

Access-is available through primitive four wheel drive roads.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural and Historical Resources- The potential for cultural sites is considered low to moderate within the B7 FMU because of the general lack of a permanent water source. Permanent La Jara Creek is located a considerable vertical distance below a portion of the area increasing the site potential to moderate in some areas. Permanent Hot Creek is also within ¼ mile of portions of the area. A GIS map of the area has been made. This map should be consulted if fuels projects are planned for the area or if wildfire activity occurs.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002 (Refer to **Appendix M**).

Aquatic Resources- This unit only contains ephemeral aquatic habitats which when seasonally important are unlikely to experience fire impacts of a magnitude to affect local aquatic wildlife population viability. During much of the fire season surface water is virtually absent. Dormant growing season fires are also unlikely to greatly impact local aquatic wildlife species or their habitat. Some individual animals may perish, but fire fighting stipulations should protect most aquatic resources here.

Wildlife- This unit contains extensive terrestrial habitat and parts of this unit function as an important calving, lambing and fawning area. This area also provides habitat for an undetermined number of other terrestrial wildlife species. Some species are year-long residents, while others are migrants. Because the potential for fire on BLM is low, fire impacts to terrestrial wildlife resources will be low. If fire does impact terrestrial wildlife resources here the recovery potential is very high.

Fire History – There have been no reported fires within this FMU in the last 15 years

Fire behavior- Fires occurring in the Piñon pine/juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing. Typical fire season within this FMU is from May 1 to Sept. 15. July and August are the monsoon season with heavy thunderstorm and dry lightning activity.

Fire Regime/Condition Class- The area is predominately Fire Regime 2/ Condition Class 1-2 with a low risk of loss to key ecological components.

Values at Risk – Private lands and homes, archaeological and historical sites, sensitive plant and animal habitat, La Jara Creek and Hot Creek riparian corridors, big game winter habitat. The southern section of this FMU contains a small portion of Los Mogotes ACEC.

Communities at Risk – There are no identified communities at risk within this FMU.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems.
- Maintain current Condition Class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments, including mechanical and chemical treatments will be utilized to reduce fuels, and to reduce noxious/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- There are no communities at risk in this FMU.

Fire Management Strategies

Suppression – No more than 20% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

Wildland Fire Use – Wildland fire use for resource benefit is not an identified fire management option within this FMU.

Prescribed Fire – There may be an opportunity to utilize prescribed fire in some areas, following mechanical treatment.

Non-fire fuels Treatments (include by-products utilized) – The Piñon/Juniper woodlands offer opportunity for mechanical fuels reduction (Hydro-axe or hand thinning) around private property and in areas of critical wildlife concern (winter range). There are also limited opportunities for firewood gathering areas within the Piñon/Juniper. There are approximately two to three hundred acres of Piñon/Juniper that could be treated mechanically within this FMU, however most are on steep slopes and in stringers along drainages.

Restoration and Rehabilitation – Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

Community Protection/Community Assistance Objectives – Minimize impacts to private property.

B-8: Alamosa River

Location – This FMU encompasses 2,309 acres of Bureau of Land Management administered lands. Elevations range from approximately 8,202 feet up to 9,515 feet.

Vegetation –The area is dominated by western wheatgrass, needle-and-thread, Indian rice grass, blue grama, bottlebrush squirrel tail, sand dropseed, piñon, juniper, Scribner needlegrass, four wing saltbush, mountain mahogany, three awn, yucca, prickly pear, winter fat, broom snakeweed, pingue, rabbit brush, greasewood, cinquefoil, and Arizona fescue. The riparian area and lands adjacent to it may contain alkali sacaton, willows, sedges, and rushes.

Soils- The dominant range sites in this FMU are the Rocky Foothills, Basalt Hills, Limy Bench, and small areas of Mountain Outwash. The soils in the Rocky Foothills range contain smaller rock fragments as well as stones, and they occur in a complex pattern with nearly bare rock outcrops. The soils in the Basalt Hills range site are generally medium to light in texture, very stony, calcareous and shallow over basalt or other volcanic flow rock. The soils in the Limy Bench range site are highly calcareous. Soils are medium to light in texture, and moderately permeable. The underlying material is outwash of igneous origin or basalt bedrock. The soils in the Mountain Outwash range site are loams and sandy loams that are shallow to moderately deep over gravel or cobble. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. Parts of this site, especially the lower foot slopes, are subject to severe water erosion if plant cover is seriously damaged. These soils are highly erodable if plant cover is destroyed or severely weakened.

Threatened and Endangered- Potential habitat has been identified for the following Threatened and Endangered Species/Special Status Species: South Western Willow Flycatcher (Migrational), Mountain Plover, and the Northern Goshawk.

Access- throughout this FMU is available through light duty maintained dirt roads as well as several primitive four wheel drive roads.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural/Historical- The San Luis Valley BLM Cultural Resource GIS Database will be used to produce a map of the locations of known cultural sites within the FMU. This map can then be consulted if fuels treatment is planned, if wildland fires are used to reduce fuel hazards, or if the suppression of wildfire occurs. Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002.

Aquatic Resources- This unit lies along the Alamosa River and has aquatic habitat. Because the potential for fire on BLM is low, and fire impacts to aquatic resources will be low. If fire does I impacts to aquatic resources the recovery potential is very high. If fire occurs up gradient, ash flows might cause short term damage.

Wildlife- Typical piñon and juniper species are found throughout this unit and habitat is extensive. Mechanical and or fire treatment within this FMU will have no negative impacts to wildlife. Changing the species composition and structure will benefit most wildlife and enhance diversity. This unit also contains extensive riparian habitat and functions as an important waterfowl and water bird production area in Colorado. This area also provides habitat for an undetermined number of other terrestrial wildlife species. Some species are year-long residents, while others are migrants. Because the potential for fire on BLM is low, fire impacts to terrestrial wildlife resources will be low. If fire does impact terrestrial wildlife resources here the recovery potential is very high.

Fire History – Lightning caused fires account for 100% of all unplanned ignitions during the last 15 years, with only one size class A fire.

Fire behavior- Fire behavior differs within two major fuel types. Fires occurring in the Piñon pine/juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing. Fires within the Douglas fir/Ponderosa pine fuel type are typically surface fuel driven fires with some individual tree and small group torching. Typical fire season within this FMU is from May 1 to Sept. 15. July and August are the monsoon season with heavy thunderstorm and dry lightning activity.

Fire Regime/Condition Class- Within the Piñon pine/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 1-2; low risk of loss to key ecological components.
Within the Douglas fir/Ponderosa pine mixed conifer zone, the Fire Regime is 3 and the Condition Class is 2; moderate risk of loss to key ecological components.

Values at Risk – Values at risk include private lands and homes, archaeological and historical sites, sensitive plant and animal habitat, and the Alamosa River riparian corridor.

Communities at Risk –Terrace Reservoir is identified as a community at risk within this FMU, and there are also ranch houses and private property in and around the federal lands.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Move toward improved Condition Class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- There are no communities at risk identified in this FMU.

Fire Management Strategies

- **Suppression –** No more than 20% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

- **Wildland Fire Use –** Wildland fire use for resource benefit is not an identified fire management option within this FMU.

- **Prescribed Fire –** There may an opportunity to utilize prescribed fire in some areas, following mechanical treatment.

- **Non-fire fuels Treatments (include by-products utilized) –** The piñon /juniper woodlands offer opportunity for mechanical fuels reduction (Hydro-axe or hand thinning) around private property and in areas of critical wildlife concern (winter range). There are also limited opportunities for firewood gathering areas within the piñon /juniper. There are approximately two to three hundred acres of piñon /juniper that could be treated mechanically within this FMU, however most are on steep slopes and in stringers along drainages.

- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

B-9: Rock Creek-Cat Creek

Location – Greenie Mountain lies on the west side of the Valley, south of Monte Vista, on the east side of the San Juan Mountain range. Elevation ranges from near 7,545 to over 8,038 feet. This FMU encompasses 14,379 acres of Bureau of Land Management administered land.

Vegetation – Vegetation in the area is dominated by the following: Indian rice grass, rabbit brush, winter fat, low rabbit brush, blue grama, broom snakeweed, ring muhly, sand dropseed, and western wheatgrass.

Soils- A variety of different ecological range sites are found on this FMU. The Limy Bench range site is the most dominant range site that is found on the FMU east of Greenie Mountain. The soils in the Limy Bench range site are highly calcareous. Soils are medium to light in texture, and moderately permeable. The underlying material is outwash of igneous origin or basalt bedrock. The north western portion of the polygon has three range sites throughout. The soils in the Shallow Loam range site are medium to light in texture, and they are mostly shallow over coarse gravel, cobble, glacial till, or impervious bedrock. The soils in the Foothill Loam range site are mostly deep loams. The soils on the Loamy Park range site are formed from moderately rapid to slow but are mostly moderate. The Basalt Hills range sites are generally medium to light in texture, very stony, calcareous, and shallow over basalt or other volcanic flow rock. The Rocky Foothills range site is found in the immediate area north of Cat Creek. The soils are shallow stony loams that contain a great deal of smaller rock fragments and stones. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. In the area of Bishop Rock and Rock Creek, the water erosion hazard ratings vary from high to moderate depending on topography. And in the area of Cat Creek, the water erosion hazard rating is high. Throughout the rest of the FMU, the water erosion hazard is low.

Threatened and Endangered- Potential habitat has been identified for the following Threatened and Endangered/Special Status Species: Mountain Plover, Northern Goshawk (in the lower Rock Creek area), and the Ferruginous Hawk.

Access is available throughout this FMU through primitive four wheel drive roads.

Air- General SW winds flows predominate over this area. Temperature inversions are common in the winter months. Springtime winds can be very strong with gusts to over 50 miles per hour.

Cultural/Historical- The San Luis Valley BLM Cultural Resource GIS Database will be used to produce a map of the locations of known cultural sites within the FMU. This map can then be consulted if fuels treatment is planned, if wildland fires are used to reduce fuel hazards, or if the suppression of wildfire occurs. Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002 (Refer to **Appendix M**).

Aquatic resources- This unit mostly contains ephemeral aquatic habitats when seasonally important are unlikely to experience fire impacts of a magnitude to affect local aquatic wildlife population viability. During much of the fire season surface water is virtually absent. Dormant growing season fires are also unlikely to greatly impact local aquatic wildlife species or their habitat. Some individual animals may perish, but fire fighting stipulations should protect most aquatic resources here.

Wildlife- This unit contains extensive terrestrial habitat and parts of this unit function as an important calving, lambing and fawning area in the SLV. This area also provides habitat for an undetermined number of other terrestrial wildlife species. Some species are year-long residents, while others are migrants. Because the potential for fire on BLM is low, fire impacts to terrestrial wildlife resources will be low. If fire does impact terrestrial wildlife resources here the recovery potential is very high.

Fire History – There is no record of recent fires in this FMU. There is some evidence of historic fires from charcoal, snags, and fire scar patterns that exist in the Bishop Rock area.

Fire behavior- Fire behavior would differ with the three major fuel types. Fires occurring in the open grass savannah can be fast moving in areas of continuous fuels. In areas of discontinuous fuels the fire behavior would be a mosaic pattern. Fires occurring in the Piñon pine/juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing. Fires within the Douglas fir/Ponderosa pine fuel type are typically surface fuel driven fires with some individual tree and small group torching. Typical fire season within this FMU is from May 1 to Sept. 15. July and August are the monsoon season with heavy thunderstorm and dry lightning activity.

Fire Regime/Condition Class- Within the Piñon/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 2; moderate risk of loss to key ecological components.
Within the Douglas fir/Ponderosa pine mixed conifer zone, the Fire Regime is 3 and the Condition Class is 2; moderate risk of loss to key ecological components.

Values at Risk – Values at risk include private lands and homes, archaeological and historical sites, and critical big game winter habitat.

Communities at Risk – There are no communities at large in this FMU. There are scattered homes and ranches to the east.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems.
- Move toward improved Condition Class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- Encourage hazardous fuels reduction and rehabilitation work.
- Increase incentives for land owners to address defensible space and fuels management needs on private property through local land use policies.
- Promote public knowledge and understanding of wildland fire, including risks and the role in natural ecosystem processes.

Fire Management Strategies

- **Suppression –** The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

- **Wildland Fire Use –** Wildland fire use for resource benefit is not an identified fire management option within this FMU; however, there are areas that would benefit greatly from some fire.

- **Prescribed Fire –** Portions of this FMU could provide some opportunities for prescribed fires in the Bishop Rock area in the Mixed Conifer/Aspen fuel type. The remainder of the FMU is more open grass savannah and could provide opportunity for approximately 2,000 acres of prescribed fire.

- **Non-fire fuels Treatments –** Portions of the Mixed Conifer /Aspen zone offer opportunity for commercial timber harvest and fire wood harvest. Approximately 500 acres of mixed conifer could be treated mechanically within this FMU.

- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

B-10: Del Norte

Location – This FMU takes in a large area beginning at the Rio Grande and Saguache County line going southward while taking in all the BLM lands near South Fork, Del Norte, and Monte Vista; continue southward on the BLM lands to the north side of Rock Creek. This FMU encompasses 33,013 acres of Bureau of Land Management Administered Lands. Elevations range from a low along the Monte Vista Canal (7,709 feet) to high at Pup Peak (8,789 feet).

Vegetation- The dominant vegetation within this area consists of the following: Indian rice grass, rabbit brush, pinyon pine, juniper, winter fat, low rabbit brush, blue grama, needle-and-thread grass, broom snakeweed, ring muhly, sand dropseed, and western wheatgrass.

Soils- The dominant range sites in this FMU are the Basalt Hills, Limy Bench, and the Rocky Foothills. Soils in the Basalt Hills range site are medium to light in texture, very stony calcareous, and shallow over basalt or other volcanic flow rock. The soils in the Limy Bench range site are highly calcareous. These soils are medium to light in texture, moderately permeable, and deep enough to moisture. The soils in the Rocky Foothills range site contain a lot of smaller rock fragments as well as stones. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. Some areas in this FMU have a water erosion rating of high and moderate particularly in the areas with steeper topography, and a water erosion rating of low in the lower elevation, flat areas.

Threatened and Endangered- No Federally listed threatened or endangered species or special status species or critical habitats have been identified in this FMU.

Access is available throughout this FMU through roads ranging from light duty, maintained dirt roads to primitive four wheel drive roads.

Air- General SW winds flows predominate over this area. Temperature inversions are common in the winter months. Springtime winds can be very strong with gusts to over 50 miles per hour.

Cultural/Historical Resources- The San Luis Valley BLM Cultural Resource GIS Database will be used to produce a map of the locations of known cultural sites within the FMU. This map can then be consulted if fuels treatment is planned, if wildland fires are used to reduce fuel hazards, or if the suppression of wildfire occurs. Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002.

Aquatic resources- This unit mostly contains ephemeral aquatic habitats which when seasonally important are unlikely to experience fire impacts of a magnitude to affect local aquatic wildlife population viability. During much of the fire season surface water is virtually absent. Dormant growing season fires are also unlikely to greatly impact local aquatic wildlife species or their habitat. Some individual animals may perish, but fire fighting stipulations should protect most aquatic resources here.

Wildlife- This unit contains extensive terrestrial habitat and parts of this unit function as an important calving, lambing and fawning area in the SLV. This area also provides habitat for an undetermined number of other terrestrial wildlife species. Some species are year-long residents, while others are migrants. Because the potential for fire on BLM is low, fire impacts to terrestrial wildlife resources will be low. If fire does impact terrestrial wildlife resources here the recovery potential is very high.

Fire History – There is a record of nine human caused fires in this FMU from 1987 to present. Seven of these fires were less than a 1/10 acre in size, one was 7 acres and one was 25 acres in size. The causes were escaped fires from campfires or controlled burns and one from smoking.

Fire behavior- Fire behavior differs within two major fuel types. Fires occurring in the Piñon pine/juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing. The steeper slopes common near South Fork would increase the flame lengths and add to the potential for crown fires. Fires within the Douglas fir/Ponderosa pine fuel type are typically surface fuel driven fires with some individual tree and small group torching. Typical fire season within this FMU is from May 1 to Sept. 15. July and August are the monsoon season with heavy thunderstorm and dry lightning activity.

Fire Regime/Condition Class- Within the Piñon /Juniper woodlands, the Fire Regime is 1 and the Condition Class is 3; high risk of loss to key ecological components. Within the Douglas fir/Ponderosa pine mixed conifer zone, the Fire Regime is 3 and the Condition Class is 2; moderate risk of loss to key ecological components.

Values at Risk – Values at risk include private lands and homes, archaeological and historical sites, and critical big game winter habitat.

Communities at Risk – Communities at risk in this FMU include South Fork, Alpine Meadows Subdivision, and Del Norte.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Move toward improved Condition Class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines.
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- Encourage communities to accomplish hazardous fuels reduction and rehabilitation work.
- Increase incentives for land owners to address defensible space and fuels management needs on private property through local land use policies.
- Promote public knowledge and understanding of wildland fire, including risks and the role in natural ecosystem processes.

Fire Management Strategies

- **Suppression –** The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

- **Wildland Fire Use –** Wildland fire use for resource benefit is not an identified fire management option within this FMU.

- **Prescribed Fire –** Portions of this FMU could provide some opportunities for prescribed fires in the South Fork and Del Norte area in the Douglas Fir/Ponderosa fuel type. The remainder of the FMU is more open grass savannah and could provide opportunity for approximately 4,000 acres of prescribed fire.

- **Non-fire fuels Treatments (include by-products utilized) –** Portions of the Douglas Fir/Ponderosa fuel type offer opportunity for commercial timber harvest and fire wood harvest. Portions of the Piñon/Juniper woodlands could provide opportunities for fuel wood harvest. Much of the heavily timbered portions of this FMU are nearby homes and structures.

- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

B-11: La Garita

Location – This is a large FMU extends on BLM lands west of Saguache southward to the Rio Grande County line. This FMU encompasses 61, 893 acres of Bureau of Land Management Lands. Elevations range from 7,709 feet south of La Garita to 10,663 feet north of Carnero Creek.

Vegetation- The dominant vegetation within this area consists of the following: Arizona fescue, Parry oat grass, June grass, mountain muhly, snowberry, bluegrasses, blue grama, ponderosa pine, piñon, juniper, needle grasses, western wheatgrass, slender wheatgrass, rabbit brush, four wing saltbush, winter fat, squirrel tail, Indian rice grass, broom snakeweed, prickly pear, pingue, three awn, and smaller amounts of true mountain mahogany, wax currant, and gooseberry. There are also healthy, mature Aspen stands, and small amounts of Engelmann spruce, Douglas fir, nodding brome, and Thurber fescue are found in higher elevation areas.

Soils- Soils for the most part fall in the Rocky Foothills, Basalt Hills, or Shallow Loam ecological range sites. Soils in the Rocky Foothills range site are shallow and stony, and they contain a great deal of smaller rock fragments and stones. Surface runoff in these soil types is rapid. Soils in the Basalt Hills range site are medium to light in texture, very stony, calcareous and shallow over basalt or other volcanic flow rock. Soils in the Shallow Loam range site are medium to light in texture, and they are mostly shallow over coarse gravel, cobble, glacial till, or impervious bedrock. Water storage capacity is greatly restricted by the lack of depth. The Ponderosa Pine/Douglas Fir woodland range site exists in the Coolbroth Canyon area. The soils are deep, well drained soils. They developed in colluvium derived from igneous rock. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. The western polygons in this FMU have water erosion ratings of high and moderate, and as the topography flattens out, the water erosion rating is low.

Threatened and Endangered- Potential habitat has been identified for the following T&E/ Special Status species: Mountain Plover, and Northern Goshawk in the Carnero area of this FMU.

Access- Access throughout this FMU is available throughout this FMU through roads ranging from light duty maintained dirt roads to four wheel drive roads.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural/historical resources- The San Luis Valley BLM Cultural Resource GIS Database will be used to produce a map of the locations of known cultural sites within the FMU. This map can then be consulted if fuels treatment is planned, if wildland fires are used to reduce fuel hazards, or if the suppression of wildfire occurs. Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002 (Refer to **Appendix M**).

Aquatic Resources- This unit contains small perennial streams, including Carnero Creek and La Garita Creek which are public recreation fisheries, and potentially isolated seep aquatic habitat. Because the potential for fire on BLM is low due to sparse vegetation characteristics fire impacts to aquatic resources will be low. If fire does impacts aquatic resources here the recovery potential is very high.

Wildlife- This unit contains extensive terrestrial habitat and parts of this unit function as an important calving, lambing and fawning area in the SLV. This area also provides habitat for an undetermined number of other terrestrial wildlife species. Some species are year-long residents, while others are migrants. Because the potential for fire on BLM is low, fire impacts to terrestrial wildlife resources will be low. If fire does impact terrestrial wildlife resources here the recovery potential is very high.

Fire History – Lightning caused fires account for 100% of all unplanned ignitions in the last 15 years. Fire size class was A, and there were two fires recorded within this FMU within the last 15 years

Fire behavior- Fire behavior differs within two major fuel types. Fires occurring in the Piñon pine/juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing. Fires within the Douglas fir/Ponderosa pine fuel type are typically surface fuel driven fires with some individual tree and small group torching. Typical fire season within this FMU is from May 1 to Sept. 15. July and August are the monsoon season with heavy thunderstorm and dry lightning activity.

Fire Regime/Condition Class- Fire Regime/Condition Class-Within the Piñon/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 1-2; low risk of loss to key ecological components. Within the Douglas fir/Ponderosa pine mixed conifer zone, the Fire Regime is 3 and the Condition Class is 2; moderate risk of loss to key ecological components.

Values at Risk – Values at risk in this FMU include private lands and homes, archaeological and historical sites, critical big game winter habitat, recreation, and sensitive plant and animal habitat. This FMU contains the Penitente Canyon SRMA, and the Elephant Rocks ACEC.

Communities at Risk – La Garita is the closest community, but there is very low risk of fire spread to this community due to change in fuel type (Piñon/Juniper woodlands to short grass prairie). There are also some homes in the Tracy Common area, and the Lime Creek Estates near Biedell Creek are also located in this FMU.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Move toward improved Condition Class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- Encourage hazardous fuels reduction and rehabilitation work.
- Increase incentives for land owners to address defensible space and fuels management needs on private property through local land use policies.
- Promote public knowledge and understanding of wildland fire, including risks and the role in natural ecosystem processes.

Fire Management Strategies

- **Suppression –** No more than 20% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

- **Wildland Fire Use–** Wildland fire use for resource benefit is not an identified fire management option within this FMU.

- **Prescribed Fire –** Approximately 350 acres are identified for prescribed fire treatment in the mixed conifer zone in Coolbroth Canyon.

- **Non-fire fuels Treatments (include by-products utilized) –** The Piñon/Juniper woodlands offer opportunity for mechanical fuels reduction (Hydro-axe or hand thinning) around private property and in areas of critical wildlife concern (winter range). There are also opportunities for firewood gathering areas within the Piñon/Juniper. Approximately 5,000 acres of Piñon/Juniper could be treated mechanically within this FMU. Portions of the Douglas fir/Ponderosa pine zone (Coolbroth Canyon) offer opportunity for commercial timber harvest and fire wood harvest. Approximately 500 acres of mixed conifer could be treated mechanically within this FMU.

- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

B-12:Villa Grove/Bonanza

Location – This FMU encompasses 43137 acres of BLM administered land. Elevations range from 7,709 feet east of Saguache to about 10,334 feet north of Bonanza.

Vegetation- The dominant vegetation within this area consists of the following: Arizona fescue, Parry oat grass, June grass, mountain muhly, snowberry, bluegrasses, blue grama, ponderosa pine, Piñon, juniper, needle grasses, western wheatgrass, slender wheatgrass, rabbit brush, four wing saltbush, winter fat, squirrel tail, Indian rice grass, broom snakeweed, prickly pear, pingue, three awn, and smaller amounts of true mountain mahogany, wax currant, and gooseberry. Small amounts of Engelmann spruce, Douglas fir, nodding brome, and Thurber fescue are found in higher areas.

Soils- A variety of ecological range sites are found throughout this FMU. The most predominant range site found in this FMU is the Limy Bench range site. Soils in this range site are highly calcareous. These soils are medium to light in texture, moderately permeable, and deep enough to hold much of the moisture that falls. Mountain outwash is the next most common range site found in this FMU. The soils in this range site are deep to moderately deep sandy, gravelly, and stony soils developing from outwash materials. Plant growth is low for the climatic zone because a large part of the moisture percolates below the root zone and also because of the low soil fertility. Another range site that is found within these polygons is the piñon/juniper woodland range site. The soils in this range site are shallow and well-drained soils that formed in thin colluvium from igneous and metamorphic rocks. The Ponderosa Pine/Douglas Fir Range site is also found particularly in the western polygons, in the higher elevation areas. The soils in this range site are deep, well drained soils. They developed in colluvium derived from igneous rock. The Shallow loam range site is found in isolated areas especially in the Noland Gulch area. These soils are very stony, calcareous and shallow over basalt or other volcanic flow rock. Minimal amounts of the Mountain Loam and Foothill Loam range site are found in this FMU. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. In the areas with steeper topography, the water erosion ratings range from high to moderate, and in the flatter areas, the water erosion rating is low.

Threatened and Endangered -Potential habitat for the following T&E/ Special Status species has been identified: Canada Lynx, Gunnison Sage Grouse, Northern Goshawk, and Ferruginous Hawk.

Access- Access is available throughout this FMU through primitive four wheel drive roads.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural and Historical Resources- The San Luis Valley BLM Cultural Resource GIS Database will be used to produce a map of the locations of known cultural sites within the FMU. This map can then be consulted if fuels treatment is planned, if wildland fires are used to reduce fuel hazards, or if the suppression of wildfire occurs. Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002 (Refer to **Appendix M**).

Aquatic Resources- There are several perennial streams on this FMU that may run the risk of fire related fish kills (resulting from fire ensuing ash and sediment). Theses risks are from fire ensuing ash and sediment deposition, excessive aggradations and erosion. This situation could be worsened particularly in the Kerber Creek watershed because the high amount of exposed soils, exploratory test pits, and waste piles from past mining activities that could be mobilized to Kerber Creek and eventually San Luis Creek. Over $500,000 has been spent on remedial activities on BLM lands within this watershed. Catastrophic run-offs could setback years or progress. Following the stipulations outlined to suppress, control, and manage fire, coupled with fire size restrictions, aquatic resources should be adequately protected and slopes should be stabilized.

Wildlife- Typical piñon and juniper species are found throughout this unit and habitat is extensive. Wildlife in the area include mule deer, elk, black bear, mountain lion, coyote, pine squirrels and porcupine. Typical bird species include raven, chickadee, nuthatch, robin, Clark's nutcracker and a variety of woodpeckers and forest hawks, such as Coopers hawk and sharp-shinned hawk. The implementation of this fire plan will improve conditions for neo tropical bird habitat. Neo tropical Birds are birds that winter in the tropics and nest in the Continental United States (CONUS). The patchiness of habitats that can be attained with prescribed natural fire and prescribed fire will be a benefit to these birds. These birds are present throughout the entire SLV. Fuels treatments will follow the provisions identified in the Migratory Bird Treaty Act (MTBA).

Mechanical and or fire treatment within this polygon will have no negative impacts to wildlife. Changing the species composition and structure will benefit most wildlife and enhance diversity.

Fire History – Lightning caused fires account for 100% of all unplanned ignitions during the last 15 years. Fire size class was A, and there where 3 fires within this FMU in the last 15 years.

Fire behavior- Fire behavior differs within two major fuel types. Fires occurring in the Piñon /Juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing. Fires within the Douglas fir/Ponderosa pine fuel type are typically surface fuel driven fires with some individual tree and small group torching. Typical fire season within this FMU is from May 1 to Sept. 15. July and August are the monsoon season with heavy thunderstorm and dry lightning activity.

Fire Regime/Condition Class- Within the Piñon pine/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 1-2; low risk of loss to key ecological components.
Within the Douglas fir/Ponderosa pine mixed conifer zone, the Fire Regime is 3 and the Condition Class is 2; moderate risk of loss to key ecological components.

Values at Risk – Values at risk in this FMU include private lands and homes, archaeological and historical sites, critical big game winter habitat, recreation, and sensitive plant and animal habitat

Communities at Risk – The communities at risk in this FMU are Bonanza and Bonanza Mountain Estates.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Move toward improved Condition Class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- Encourage communities to accomplish hazardous fuels reduction and rehabilitation work.
- Increase incentives for land owners to address defensible space and fuels management needs on private property through local land use policies.
- Promote public knowledge and understanding of wildland fire, including risks and the role in natural ecosystem processes.

Fire Management Strategies

- **Suppression –** No more than 20% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

- **Wildland Fire Use –** Wildland fire use for resource benefit is not an identified fire management option within this FMU.

- **Prescribed Fire –** There may an opportunity to utilize prescribed fire in some areas, following mechanical treatment.

- **Non-fire fuels Treatments (include by-products utilized) –** The Piñon/Juniper woodlands offer opportunity for mechanical fuels reduction (Hydro-axe or hand thinning) around private property and in areas of critical wildlife concern (winter range). There are also opportunities for firewood gathering areas within the Piñon/Juniper. Approximately 1,000 acres of Piñon/Juniper could be treated mechanically within this FMU. Portions of the Douglas fir/Ponderosa pine zone (mixed conifer) offer opportunity for commercial timber harvest and fire wood harvest. Approximately 500 acres of mixed conifer could be treated mechanically within this FMU.

- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

B-13:Poncha Pass

Location – This FMU encompasses 9,827 acres of Bureau of Land Management administered land. This FMU extends Northward from Spring Creek, crosses State Highway 285, and extends southeast to the Eaglebrook Gulch Road. Elevations range from 8,202 feet at the base of Eaglebrook Gulch to over 9,514 feet north of Merkt Creek.

Vegetation- The dominant vegetation within this area consists of the following: Arizona fescue, Parry oat grass, bearded wheatgrass, June grass, mountain muhly, slender wheatgrass, blue grama, ponderosa pine, pinyon/juniper, oak brush, needle-and-thread, western wheatgrass, rabbit brush, four wing saltbush, winter fat, bottlebrush squirrel tail, Indian rice grass, broom snakeweed, elk sedge, three awn, big sagebrush, cinquefoil, true mountain mahogany, bluegrass, ring muhly, Douglas fir, nodding brome, and Thurber fescue. There are also some aspen stands in this FMU.

Soils- The Mountain Loam and Shallow Loam are the dominant range sites found in the northern portion of this FMU. Soils are for the most part are fairly deep soils and include sandy, gravelly, and stony textured soils. The Piñon/Juniper woodland range site is found along the eastern portion of this FMU on the west facing slopes of the Sangre de Cristo Mountain Range. The Limy Bench range site is found in small areas of this FMU, particularly at the southeastern section of the polygon contains a small amount of strongly calcareous soil. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. There are some areas that of the FMU that due steep topography have a water erosion rating of high and moderate, particularly in the area south of Tree Creek, around Round Hill Gulch and also a majority of the area east of San Luis Creek. In the areas with flatter topography the water erosion rating is low.

Threatened and Endangered- Potential habitat has been identified for the following Threatened and Endangered/ Special status species: Northern Goshawk, the Fringed, Yuma, Free-tailed, and townsends bats.

Access-is available throughout this FMU through light duty maintained dirt roads as well as primitive four wheel drive roads.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural and Historical Resources- The San Luis Valley BLM Cultural Resource GIS Database will be used to produce a map of the locations of known cultural sites within the FMU. This map can then be consulted if fuels treatment is planned, if wildland fires are used to reduce fuel hazards, or if the suppression of wildfire occurs. Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002.

Aquatic Resources- This unit contains small perennial streams and isolated seep aquatic habitat. Because the potential for fire on BLM is low fire impacts to aquatic resources will be low. Additionally, if fire does impact aquatic resources here, because they are in a high seral state, the recovery potential is very high. Nearly all streams are fisheries, and they provide high value macro invertebrate habitat.

Wildlife- This unit contains extensive terrestrial habitat and parts of this unit function as an important calving, lambing and fawning area in the SLV. This area also provides habitat for an undetermined number of other terrestrial wildlife species. Some species are year-long residents, while others are migrants. Because the potential for fire on BLM is low, fire impacts to terrestrial wildlife resources will be low. If fire does impact terrestrial wildlife resources here the recovery potential is very high.

Fire History – Lightning caused fires account for 33% of all unplanned ignitions in the last 15 years, with the remainder are human caused. Predominant fire size classes were A and B.

Fire behavior- Fires occurring in the Piñon pine/juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing. Fires occurring within the Gambel's oak are typically surface fires through the leaf litter. Areas that have under-burned in the oak will dry out the over-story vegetation and these areas are prone to re-burn which can compromise safety. Fires occurring in the sagebrush are typically slow moving surface fires in low wind conditions (5 mph or less), but can rapidly spread under high wind conditions.

Fire Regime/Condition Class- Within the Piñon e/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 1-2; low risk of loss to key ecological components.
Within the sagebrush and Gambel's oak shrublands, the Fire Regime is 3 and Condition Class is 1-2; low risk of loss to key ecological components.

Values at Risk – The values at risk in this FMU include private lands and homes, archaeological and historical sites, critical big game winter habitat, recreation, sensitive plant and animal habitat, and Gunnison sage grouse habitat.

Communities at Risk – There are no identified communities at risk within this FMU; however there are several cabins and other structures in this unit.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Maintain current Condition Class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- There are no identified communities at risk in this FMU.

Fire Management Strategies

- **Suppression –**No more than 20% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

- **Wildland Fire Use –** Wildland fire use for resource benefit is not an identified fire management option within this FMU.

- **Prescribed Fire –** There is limited opportunity for prescribed fire within this FMU due to sparse, patchy fuel arrangement.

- **Non-fire fuels Treatments (include by-products utilized) –** There is limited opportunity for mechanical treatment within this FMU due to sparse, patchy fuel arrangement and steep slopes.

- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

B-14: Raspberry

Location – This FMU encompasses 16, 736 acres of Bureau of Land Management administered land. It extends from Eaglebrook Gulch Road southeastward to Hayden Pass Road and includes the BLM Wilderness Area surrounding Steel Canyon and Lime Canyon. Elevations range from 7,677 feet at the Rito Alto Road turn-off to 9,842 feet north of Brook Creek.

Vegetation- The dominant vegetation within this area consists of the following: Mountain muhly, four wing saltbush, blue grama, piñon/juniper, oak brush, needle-and-thread, western wheatgrass, three awn, winter fat, bottlebrush squirrel tail, Indian rice grass, broom snakeweed, rabbit brush, prickly pear, pingue, three awn, and smaller amounts of true mountain mahogany, and yucca. There are also some stands of aspen.

Soils- There are a variety of range sites found in this FMU. The first range site is the Piñon/Juniper woodland range site which is found at the higher elevations of this FMU. The soils in this range site are shallow and well-drained soils that formed in thin colluvium from igneous and metamorphic rocks. Permeability in these soil types is moderate. The second range site is the Rocky Foothills range site. Soils in this range site typically contain smaller rock fragments as well as stones, and they occur in a complex pattern with nearly bare rock outcrops and deeper soils. The Limy Bench range site is found on the lower elevations of this FMU. The soils in this range site are highly calcareous. These soils are medium to light in texture, moderately permeable, and deep enough to hold much of the moisture that falls. Another range site found on the lower elevation of this FMU is the Mountain Outwash range site. The soils in this range site are loams and sandy loams that are shallow to moderately deep over gravel or cobble. Some are quite limy, but they do not have the strong lime zone near the surface. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. A majority of this FMU has a water erosion rating of high, particularly along the west facing slopes along the Sangre De Cristo Range, but as the topography flattens out, the water erosion rating is low.

Threatened and Endangered- Potential habitat for the following threatened and endangered/special status species has been identified: Canada Lynx, Bald Eagle (in the Rito Alto area), Mountain Plover, Northern Goshawk, and the Ferruginous Hawk. Habitat (roosting sites) for the following bat species has also been identified: Fringed, Yuma, Free-tailed, and the townsends.

Access throughout the FMU is available through county roads, secondary roads, and four-wheel drive jeep trails.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural/Historical resources- The San Luis Valley BLM Cultural Resource GIS Database will be used to produce a map of the locations of known cultural sites within the FMU. This map can then be consulted if fuels treatment is planned, if wildland fires are used to reduce fuel hazards, or if the suppression of wildfire occurs. Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002 (Refer to **Appendix M**).

Aquatic resources- This unit contains small perennial streams which are fisheries, and isolated seep aquatic habitat. Because the potential for fire on BLM is low due to sparse vegetation characteristics fire impacts to aquatic resources will be low. If fire does occur impacts to aquatic resources would be short term, and the recovery potential is very high.

Wildlife- This unit contains extensive terrestrial habitat and parts of this unit function as an important calving, lambing and fawning area in the SLV. This area also provides habitat for an undetermined number of other terrestrial wildlife species. Some species are year-long residents, while others are migrants. Because the potential for fire on BLM is low, fire impacts to terrestrial wildlife resources will be low. If fire does impact terrestrial wildlife resources here the recovery potential is very high.

Fire History – No fires have been recorded within this FMU within the last 15 years.

Fire behavior- Fires occurring in the Piñon/juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing. Fires occurring within the Gambel's oak are typically surface fires through the leaf litter. Areas that have under-burned in the oak will dry out the over-story vegetation and these areas are prone to re-burn which can compromise safety.

Fire Regime/Condition Class- Within the Piñon pine/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 1-2; low risk of loss to key ecological components. Within Gambel's oak shrublands, the Fire Regime is 3 and Condition Class is 1; low risk of loss to key ecological components.

Values at Risk – The values at risk in this FMU include private lands and homes, archaeological and historical sites, critical big game winter habitat, recreation, and sensitive plant and animal habitat

Communities at Risk – The community at risk is Valley View Hot Springs.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Maintain current Condition Class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- Encourage communities to accomplish hazardous fuels reduction and rehabilitation work.
- Increase incentives for land owners to address defensible space and fuels management needs on private property through local land use policies.
- Promote public knowledge and understanding of wildland fire, including risks and the role in natural ecosystem processes.

Fire Management Strategies

- **Suppression –** No more than 20% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

- **Wildland Fire Use –** Wildland fire use for resource benefit is not an identified fire management option within this FMU.

- **Prescribed Fire –** There is limited opportunity for prescribed fire within this FMU due to sparse, patchy fuel arrangement.

- **Non-fire fuels Treatments (include by-products utilized) –** There is limited opportunity for mechanical treatment within this FMU due to sparse, patchy fuel arrangement and steep slopes.

- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

B-15: Crestone

Location – The majority of the area in this FMU lies north and west of the town of Crestone, and a small portion lies east of the town. This FMU encompasses 2,038 acres of Bureau of Land Management administered land. Elevations in the area range from approximately 8,038 feet northwest of Crestone to 8,202 feet east of Crestone.

Vegetation- The dominant vegetation within this area consists of the following: Pinyon/juniper trees, true mountain mahogany, mountain muhly, Indian rice grass, blue grama, three awn, yucca, prickly pear, needle-and-thread, blowout grass, spike dropseed, sand dropseed, spiny muhly, western wheatgrass, broom snakeweed, rabbit brush, and bottlebrush squirrel tail.

Soils- The area to the east of Crestone has rough topography and is dominated by the Piñon/Juniper woodland ecological range site. The soils in this range site are coarse in texture and vary in depth. The soil absorbs moisture readily and has a good capacity for storage where depth is not limited. These soils are easily eroded by wind if plant cover is removed or destroyed. The polygons north and west of Crestone have three major range sites within them. Starting at the higher elevation and steeper areas is the Rocky Foothills ecological range site. The soils in this range site are deep, well drained soils on fans and terraces. The Deep Sand range site has soils that are deep medium and fine grained sands. These soils are highly susceptible to damage from wind erosion when the cover is weakened or destroyed. The Sandy Bench range site has soils that are coarse in texture and these soils are easily eroded by wind and if the cover is removed or destroyed. The farthest west polygon is comprised of the Mountain Outwash range site. This range site has soils that are deep to moderately deep sandy, gravelly, and stony soils developing in and from outwash materials such as tuffs, trachites, ryolites, and granites. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. Part of this FMU has a water erosion rating of high, particularly along the west facing slopes along the Sangre De Cristo Range, but as the topography flattens out, the water erosion rating is low.

Threatened and Endangered- Potential habitat has been identified for the following Threatened and Endangered/Special Status species: Canada Lynx, Northern Goshawk and the Ferruginous Hawk.

Access- Throughout this FMU, access is available through light duty maintained dirt roads as well as four wheel drive roads.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural/Historical Resources- The San Luis Valley BLM Cultural Resource GIS Database will be used to produce a map of the locations of known cultural sites within the FMU. This map can then be consulted if fuels treatment is planned, if wildland fires are used to reduce fuel hazards, or if the suppression of wildfire occurs. Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002.

Aquatic resources- This FMU contains some perennial streams and fisheries, including San Isabel Creek, Rito Alto, Cotton Creek, and Garner Creek. This unit also contains ephemeral aquatic habitats which when seasonally important are unlikely to experience fire impacts of a magnitude to affect local aquatic wildlife population viability. During much of the fire season surface water is virtually absent. Dormant growing season fires are also unlikely to greatly impact local aquatic wildlife species or their habitat. Some individual animals may perish, but fire fighting stipulations should protect most aquatic resources here.

Wildlife- Typical piñon and juniper species are found throughout this unit and habitat is extensive. Wildlife in the area includes mule deer, elk, black bear, mountain lion, coyote, pine squirrels and porcupine. Typical bird species include raven, chickadee, nuthatch, robin, Clark's nutcracker and a variety of woodpeckers and forest hawks, such as Coopers hawk and sharp-shinned hawk. The implementation of this fire plan will improve conditions for neo tropical bird habitat. Neo tropical Birds are birds that winter in the tropics and nest in the Continental United States (CONUS). The patchiness of habitats that can be attained with prescribed natural fire and prescribed fire will be a benefit to these birds. These birds are present throughout the entire SLV. Fuels treatments will follow the provisions identified in the Migratory Bird Treaty Act (MTBA).

Mechanical and or fire treatment within this polygon will have no negative impacts to wildlife. Changing the species composition and structure will benefit most wildlife and enhance diversity

Fire History – No fires recorded within this FMU within the last 15 years.

Fire behavior- Fires occurring in the Piñon pine/juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing.

Fire Regime/Condition Class- Within the Piñon/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 2; moderate risk of loss to key ecological components.

Values at Risk – The values at risk in this FMU include the town of Crestone, private lands, and homes, archaeological and historical sites, critical big game winter habitat, recreation, Highway 112, and sensitive plant and animal habitat.

Communities at Risk – The community at risk is Crestone

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Move toward improved Condition Class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines.
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- Encourage communities to accomplish hazardous fuels reduction and rehabilitation work.
- Increase incentives for land owners to address defensible space and fuels management needs on private property through local land use policies.
- Promote public knowledge and understanding of wildland fire, including risks and the role in natural ecosystem processes.

Fire Management Strategies

- **Suppression –**No more than 20% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location

- **Wildland Fire Use –** Wildland fire use for resource benefit is not an identified fire management option within this FMU.

- **Prescribed Fire –** There may an opportunity to utilize prescribed fire in some areas, following mechanical treatment.

- **Non-fire fuels Treatments (include by-products utilized)-** The Piñon/Juniper woodlands offer opportunity for mechanical fuels reduction (Hydro-axe or hand thinning) around private property and in areas of critical wildlife concern (winter range). There are also opportunities for firewood gathering areas within the Piñon/Juniper. Approximately 1,000 acres of P/J could be treated mechanically within this FMU.

- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

C-1: Piñon Hills/San Luis Hills

Location – This FMU encompasses 75, 982 acres of Bureau of Land Management administered land. Flat Top and Piñon Hills, are located in this FMU. It extends from South Piñon Hills to the New Mexico state line, westward to where County Road 16 meets the BLM and angles southwesterly to the Colorado/New Mexico State Line. Elevations range from 7,300 feet along the Rio Grande River to 9,475 feet in the Piñon Hills.

Vegetation- Vegetation over the area is dominated by the following species: Indian rice grass, western wheatgrass, needle-and-thread, blue grama, bottlebrush squirrel tail, sand dropseed, winter fat, four wing saltbush, three awn, prickly pear cactus, rabbit brush, snakeweed, pingue, greasewood, inland salt grass, and alkali sacaton.

Soils- There are four major range sites found in this FMU. The Basalt Hills range site has soils that are medium to light in texture, very stony, calcareous and shallow over basalt or other volcanic flow rock. Parts of this site, especially the lower foot slopes are subject to severe water erosion if plant cover is seriously damaged. The soils in the Limy Bench range site are highly calcareous. These soils are medium to light in texture, and moderately permeable. These soils are highly erodable if plant cover is destroyed or severely weakened. The Sandy Bench range site has soils that are coarse in texture and generally contain gravel, cobble, and scattered stones. These soils are easily eroded by wind and water once the cover is removed or destroyed. The soils are mostly deep loams with varying amounts of gravel or cobble. These soils are easily eroded when plant cover is seriously damaged. This can lead to severe gullying in many places. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. The water erosion rating is low throughout this FMU except for the top of Piñon Hills and Flat Top.

Threatened and Endangered- Potential habitat has been identified for the following Threatened and Endangered/ Special Status Species: South Western Willow Flycatcher (in riparian areas), Bald Eagle, Mountain Plover, Gunnison Sage Grouse (near Rio Grande), and the Northern Leopard Frog.

Access- Access throughout this FMU is available through roads ranging from light duty maintained dirt roads to four wheel drive roads.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural and Historical Resources- The San Luis Valley BLM Cultural Resource GIS Database will be used to produce a map of the locations of known cultural sites within the FMU. This map can then be consulted if fuels treatment is planned, if wildland fires are used to reduce fuel hazards, or if the suppression of wildfire occurs. Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002 (Refer to **Appendix M**).

Aquatic Resources- This unit mostly contains ephemeral aquatic habitats which when seasonally important are unlikely to experience fire impacts of a magnitude to affect local aquatic wildlife population viability. During much of the fire season surface water is virtually absent. Dormant growing season fires are also unlikely to greatly impact local aquatic wildlife species or their habitat. Some individual animals may perish, but fire fighting stipulations should protect most aquatic resources here.

Wildlife- Typical piñon and juniper species are found throughout this unit and habitat is extensive. Wildlife in the area include mule deer, elk, black bear, mountain lion, coyote, pine squirrels and porcupine. Typical bird species include raven, chickadee, nuthatch, robin, Clark's nutcracker and a variety of woodpeckers and forest hawks, such as Coopers hawk and sharp-shinned hawk. The implementation of this fire plan will improve conditions for neo tropical bird habitat. Neo tropical Birds are birds that winter in the tropics and nest in the Continental United States (CONUS). The patchiness of habitats that can be attained with prescribed natural fire and prescribed fire will be a benefit to these birds. These birds are present throughout the entire SLV. Fuels treatments will follow the provisions identified in the Migratory Bird Treaty Act (MTBA).

Mechanical and or fire treatment within this polygon will have no negative impacts to wildlife. Changing the species composition and structure will benefit most wildlife and enhance diversity.

Fire History – There have been 4 fires in this FMU in the last 15 years. Lightning caused fires account for 75% of all unplanned ignitions. Fire size class ranged from A to D with the total number of fires at 4, within the last 15 years.

Fire behavior- Fires occurring in the Piñon/Juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing. The greater majority of the area is a grassland type that presents a low to moderate fire potential. Most fires in this type are dependant on wind to spread the fire.

Fire Regime/Condition Class- Within the Piñon pine/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 1-2; low risk of loss to key ecological components. Within the grassland fuel type the Fire Regime is 2 and the Condition Class is 1-2; low risk of loss to key ecological components.

Values at Risk – Values at risk on this FMU include private lands and homes, archaeological and historical sites, San Luis Hills ACEC, San Luis Hills WSA, Rio Grande River ACEC, the Rio Grande Corridor SRMA, and State Highway 285.

Communities at Risk – There are no identified communities at risk within this FMU.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Maintain current condition class.

Suppression Objectives

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives

- There are no communities at risk identified in this FMU.

Fire Management Strategies

- **Suppression –** Lower suppression priority in multiple wildland fire situation than "A" and "B" FMUs. No more than 50% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands while ensuring that fire is contained within natural or man-made barriers/firebreaks.

- **Wildland Fire Use –** Wildland fire use for resource benefit is encouraged within this FMU.

- **Prescribed Fire –** No prescribed fires are currently planned within this FMU at this time, however, there are some large areas of piñon/juniper that could be treated with broadcast burning or pile burning after mechanical treatments.

- **Non-fire fuels Treatments (include by-products utilized) –**The Piñon/Juniper woodlands offer opportunity for mechanical fuels reduction (Hydro-axe or hand thinning) around private property and in areas of critical wildlife concern (winter range). There are also limited opportunities for firewood gathering areas within the Piñon/Juniper. No estimation of acres that could be treated by mechanical treatments has been made at this time

- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

C-2: Los Mogotes Prairie

Location – This FMU encompasses 49, 025 acres of BLM administered lands. This FMU is in the Flat Top area on BLM lands between Los Mogotes and Capulin. Elevations range from approximately 7,677 feet southeast of Capulin to 9,022 feet on Flat Top.

Vegetation- Vegetation over the area is dominated by the following species: Arizona fescue, mountain muhly, June grass, Parry oat grass, ring muhly, pinyon/juniper trees, Indian rice grass, western wheatgrass, needle-and-thread, blue grama, bottlebrush squirrel tail, sand dropseed, winter fat, four wing saltbush, three awn, prickly pear cactus, rabbit brush, broom snakeweed, big sagebrush, and pingue.

Soils- A number of different range sites make up this FMU. The most dominant range site is the Limy Bench Range Site. The soils in the Limy Bench range site are highly calcareous. These soils are medium to light in texture, and moderately permeable. These soils are highly erodable if plant cover is destroyed or severely weakened. The soils in the Basalt Hills range site are medium to light in texture, very stony, calcareous and shallow over basalt or other volcanic flow rock. Parts of this site, especially the lower foot slopes are subject to severe water erosion if plant cover is seriously damaged. The soils in the Foothill Loam are mostly deep loams, with dark surface soil that indicates high organic matter. These soils are easily eroded when plant cover is seriously damaged. In polygon in the La Jara Canyon, there are deep soils that developed in slope wash from igneous rock. This soil type is suited for mainly woodland (Englemann Spruce). Runoff is rapid and the erosion hazard is moderate. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. The water erosion rating throughout this FMU is low with the exception of an area north of Los Mogotes with water erosion potential of high.

Threatened and Endangered- Potential habitat has been identified for the following Threatened and Endangered/ Special Status Species: Mountain Plover and the Ferruginous Hawk.

Access is available throughout this FMU through primitive and four wheel drive roads.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural and Historical Resources- The San Luis Valley BLM Cultural Resource GIS Database will be used to produce a map of the locations of known cultural sites within the FMU. This map can then be consulted if fuels treatment is planned, if wildland fires are used to reduce fuel hazards, or if the suppression of wildfire occurs. Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002.

Aquatic Resources- This unit only contains ephemeral aquatic habitats which when seasonally important are unlikely to experience fire impacts of a magnitude to affect local aquatic wildlife population viability. During much of the fire season surface water is virtually absent. Dormant growing season fires are also unlikely to greatly impact local aquatic wildlife species or their habitat. Some individual animals may perish, but fire fighting stipulations should protect most aquatic resources here.

Wildlife- Typical piñon and juniper species are found throughout this unit and habitat is extensive. Wildlife in the area include mule deer, elk, black bear, mountain lion, coyote, pine squirrels and porcupine. Typical bird species include raven, chickadee, nuthatch, robin, Clark's nutcracker and a variety of woodpeckers and forest hawks, such as Coopers hawk and sharp-shinned hawk. The implementation of this fire plan will improve conditions for neo tropical bird habitat. Neo tropical Birds are birds that winter in the tropics and nest in the Continental United States (CONUS). The patchiness of habitats that can be attained with prescribed natural fire and prescribed fire will be a benefit to these birds. These birds are present throughout the entire SLV. Fuels treatments will follow the provisions identified in the Migratory Bird Treaty Act (MTBA).

Mechanical and or fire treatment within this polygon will have no negative impacts to wildlife. Changing the species composition and structure will benefit most wildlife and enhance diversity.

Fire History – Lightning caused fires account for 100% of all unplanned ignitions within the last 17 years. Fire size classes were A and C for the two fires within this FMU.

Fire behavior- Fire behavior differs within three major fuel types. Fires occurring in the Piñon pine/juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing. Fires within the Douglas fir/Ponderosa pine fuel type are typically surface fuel driven fires with some individual tree and small group torching. Typical fire season within this FMU is from May 1 to Sept. 15. July and August are the monsoon season with heavy thunderstorm and dry lightning activity. The greater majority of the area is a grassland type that presents a low to moderate fire potential. Most fires in this type are dependant on wind to spread the fire.

Fire Regime/Condition Class- Within the Piñon pine/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 1-2; low risk of loss to key ecological components. Within the grassland fuel type the Fire Regime is 2 and the Condition Class is 1-2; low risk of loss to key ecological components. Within the Douglas fir/ Ponderosa Pine fuel type, the Fire Regime is 3 and the Condition Class is 2; moderate risk of loss to key ecological components.

Values at Risk – Values at risk in this FMU are private lands and homes, archaeological and historical sites, recreation. This FMU contains Los Mogotes ACEC.

Communities at Risk – There are no identified communities at risk within this FMU.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Maintain current condition class

Suppression Objectives:

- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- There are no identified communities at risk in this FMU.

Fire Management Strategies

- **Suppression –** Lower suppression priority in multiple wildland fire situation than "A" and "B" FMUs. No more than 50% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands while ensuring that fire is contained within natural or man-made barriers/firebreaks.

- **Wildland Fire Use –** Wildland fire use for resource benefit is encouraged within this FMU.

- **Prescribed Fire –** No prescribed fires are currently planned within this FMU at this time, however, there are some large areas of piñon/juniper mixed conifer on the western polygons that could be treated with broadcast burning or pile burning after mechanical treatments.

- **Non-fire fuels Treatments (include by-products utilized) –** The Piñon/Juniper woodlands and mixed conifer stands offer opportunity for mechanical fuels reduction (Hydro-axe or hand thinning) around private property and in areas of critical wildlife concern (winter range). There are also limited opportunities for firewood gathering areas within the Piñon/Juniper. No estimation of acres that could be treated by mechanical treatments has been made at this time.

- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

C-3: Ra Jadero Canyon/Hot Creek

Location- This FMU encompasses 25,098 acres of BLM administered land located between La Jara Creek and Alamosa River. Elevation ranges from 7,844 feet north of Centro to over 9,685 feet near Romero Canyon.

Vegetation- Vegetation species at the high end include Thurber's fescue, Engelmann spruce, sub alpine fir, Parry oat grass, nodding brome, bearded wheatgrass, fringe sagebrush, snowberry, Kentucky bluegrass, big sagebrush, and cinquefoil. On the lower elevations, the following species are commonly found: Sand dropseed, mountain muhly, pinyon/juniper, four wing saltbush, rabbit brush, bottlebrush squirrel tail, Arizona fescue, Scribner needlegrass, mountain mahogany, yucca, rabbit brush, winter fat, broom snakeweed, June grass, three awn, prickly pear cactus, ring muhly, mutton grass, needle-and-thread, western wheatgrass, Indian rice grass, pingue, and blue grama.

Soils- A number of different ecological range sites makes up this FMU. The most dominant is the Rocky Foothills Range site which is found in the steeper areas. The soils in this range site are deep, well drained soils on fans and terraces. Permeability in these soils is moderately rapid, surface runoff is slow, and the hazard or erosion is slight to moderate. The soils in the Basalt Hills range site are medium to light in texture, very stony, calcareous and shallow over basalt or other volcanic flow rock. Parts of this site, especially the lower foot slopes are subject to severe water erosion if plant cover is seriously damaged. The soils in the Limy Bench range site are highly calcareous. These soils are medium to light in texture, and moderately permeable. These soils are highly erodable if plant cover is destroyed or severely weakened. The soils in the Shallow Loam range site are medium to light in texture, and they are mostly shallow over coarse gravel, cobble, glacial till, or impervious bedrock. These soils are easily eroded by water when plant cover is damaged or removed. The Mountain Outwash range site is found in the polygons west of the Alamosa Canal. The soils in this range site are loams and sand loams that are shallow to moderately deep over gravel or cobble. Run off is slow and potential of erosion is slight. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain water erosion rating of high, moderate, or low. The western portion with steeper topography of this FMU has water erosion rating of high. The eastern portion has water erosion potential of low.

Threatened and Endangered- Potential habitat has been identified for the following Threatened and Endangered/Special Status species: Mountain Plover, Northern Goshawk, and the Ferruginous Hawk.

Access- Access is available throughout this FMU through roads ranging from light duty maintained dirt roads to primitive four wheel drive roads.

Air - General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural/Historical Resources- The San Luis Valley BLM Cultural Resource GIS Database will be used to produce a map of the locations of known cultural sites within the FMU. This map can then be consulted if fuels treatment is planned, if wildland fires are used to reduce fuel hazards, or if the suppression of wildfire occurs. Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002 (Refer to **Appendix M**).

Aquatic Resources- This unit mostly contains ephemeral aquatic habitats which when seasonally important are unlikely to experience fire impacts of a magnitude to affect local aquatic wildlife population viability. During much of the fire season surface water is virtually absent. Dormant growing season fires are also unlikely to greatly impact local aquatic wildlife species or their habitat. Some individual animals may perish, but fire fighting stipulations should protect most aquatic resources here.

Wildlife- This FMU has habitat for many species of wildlife. It includes a variety of habitat types from grasslands, shrublands, and riparian meadows to ponderosa pine and aspen, Douglas fir, and spruce forested uplands. Habitat in this FMU is used by big game species (elk, pronghorn, big horn sheep and mule deer), carnivores (black bear, coyotes, foxes, badgers, mountain lions, bobcats), small mammals (various moles, voles, mice, wood rats, ground squirrels), birds, reptiles and amphibians. This FMU also encompasses the Hot Creek State Wildlife area and the big game management objectives for this FMU come from the State of Colorado Division of Wildlife. The rest of the species data is from personal observations, literature/ field guides, the Colorado Natural Heritage Program, and BLM and Forest Service databases. This FMU contains critical winter range, calving, lambing and fawning areas, and year round habitat for four big game species. Small mammals, reptiles, amphibians, and birds use multiple types of range sites in this FMU during different stages of their lifecycle. Because the potential for fire on BLM is low, fire impacts to terrestrial wildlife resources will be low. If fire does impact terrestrial wildlife resources here the recovery potential is very high.

Fire History – There have been no ignitions within this FMU in the last 15 years.

Fire behavior- Fire behavior differs within three major fuel types. Fires occurring in the Piñon /Juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing. Fires within the Douglas fir/Ponderosa pine fuel type are typically surface fuel driven fires with some individual tree and small group torching. The greater majority of the area is a grassland type that presents a low to moderate fire potential. Most fires in this type are dependant on wind to spread the fire. Typical fire season within this FMU is from May 1 to Sept. 15. July and August are the monsoon season with heavy thunderstorm and dry lightning activity.

Fire Regime/Condition Class - Within the Piñon pine/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 1-2; low risk of loss to key ecological components. Within the grassland fuel type the Fire Regime is 2 and the Condition Class is 1-2; low risk of loss to key ecological components. Within the Douglas fir/Ponderosa pine mixed conifer zone, the Fire Regime is 3 and the Condition Class is 2; moderate risk of loss to key ecological components.

Values at Risk – Values at risk in this FMU include private lands and homes, archaeological and historical sites, critical big game winter habitat, and recreation. This FMU contains the Ra Jadero Canyon ACEC.

Communities at Risk – There are no identified communities at risk within this FMU

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Move toward improved condition class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines.
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- There are no identified communities at risk in this FMU.

Fire Management Strategies

- **Suppression –** Lower suppression priority in multiple wildland fire situation than "A" and "B" FMUs. No more than 50% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands while ensuring that fire is contained within natural or man-made barriers/firebreaks.
- **Wildland Fire Use –** Wildland fire use for resource benefit is encouraged within this FMU.
- **Prescribed Fire –** No prescribed fires are currently planned within this FMU at this time, however, there are some large areas of piñon/juniper mixed conifer on the western polygons that could be treated with broadcast burning or pile burning after mechanical treatments.
- **Non-fire fuels Treatments (include by-products utilized) –** The Piñon/Juniper woodlands offer opportunity for mechanical fuels reduction (Hydro-axe or hand thinning) around private property and in areas of critical wildlife concern (winter range). There are also opportunities for firewood gathering areas within the Piñon/Juniper. Portions of the Douglas fir/Ponderosa pine zone (mixed conifer) offer opportunity for limited commercial timber harvest and fire wood harvest. Approximately 200-300 acres of mixed conifer could be treated mechanically within this FMU.
- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.
- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

C-4: Chiquito Peak

Location – This FMU encompasses 365 acres of BLM administered land between Alamosa River and Cat Creek. Elevation ranges from over 8,037 on the lower flats, to 9,642 feet (Chiquito Peak).

Vegetation- Vegetation in the area is dominated by the following: Arizona fescue, piñon/juniper, four wing saltbush, sand dropseed, winter fat, mountain mahogany, broom snakeweed, rabbit brush, Scribner needlegrass, needle-and-thread, three awn, prickly pear cactus, yucca, western wheatgrass, bottlebrush squirrel tail, Indian rice grass, pingue, and blue grama.

Soils- The Rocky Foothills range site make up a majority of this FMU. The soils in this range site are deep, well drained soils on fans and terraces. Permeability in these soils is moderately rapid, surface runoff is slow, and the hazard or erosion is slight to moderate. The soils in the Basalt Hills range site are medium to light in texture, very stony, calcareous and shallow over basalt or other volcanic flow rock. Parts of this site, especially the lower foot slopes are subject to severe water erosion if plant cover is seriously damaged. The soils in the Limy Bench range site are highly calcareous. These soils are medium to light in texture, and moderately permeable. These soils are highly erodable if plant cover is destroyed or severely weakened. Another range site occurring in a small area of this FMU is the Foothill Loam range site. The soils in the Foothill Loam range site are mostly deep loams, with dark surface soil that indicates high organic matter. These soils are easily eroded when plant cover is seriously damaged. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. A majority of this FMU has a water erosion rating of high, particularly in the steeper terrain around Chiquito peak, and a water erosion rating of low where the terrain flattens out.

Threatened and Endangered- Potential habitat has been identified for the Ferruginous Hawk.

Access is available through this FMU through primitive and four wheel drive roads.

Air -General SW wind flows predominate over this area. Temperature inversions are common during the winter

Cultural /Historical Resources- The San Luis Valley BLM Cultural Resource GIS Database will be used to produce a map of the locations of known cultural sites within the FMU. This map can then be consulted if fuels treatment is planned, if wildland fires are used to reduce fuel hazards, or if the suppression of wildfire occurs. Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002.

Aquatic Resources- This unit mostly contains ephemeral aquatic habitats when seasonally important are unlikely to experience fire impacts of a magnitude to affect local aquatic wildlife population viability. During much of the fire season surface water is virtually absent. Dormant growing season fires are also unlikely to greatly impact local aquatic wildlife species or their habitat. Some individual animals may perish, but fire fighting stipulations should protect most aquatic resources here.

Wildlife- Typical piñon and juniper species are found throughout this unit and habitat is extensive. Wildlife in the area include mule deer, elk, black bear, mountain lion, coyote, pine squirrels and porcupine. Typical bird species include raven, chickadee, nuthatch, robin, Clark's nutcracker and a variety of woodpeckers and forest hawks, such as Coopers hawk and sharp-shinned hawk. The implementation of this fire plan will improve conditions for neo tropical bird habitat. Neo tropical Birds are birds that winter in the tropics and nest in the Continental United States (CONUS). The patchiness of habitats that can be attained with prescribed natural fire and prescribed fire will be a benefit to these birds. These birds are present throughout the entire SLV. Fuels treatments will follow the provisions identified in the Migratory Bird Treaty Act (MTBA).

Mechanical and or fire treatment within this polygon will have no negative impacts to wildlife. Changing the species composition and structure will benefit most wildlife and enhance diversity.

Fire History – There have been no ignitions within this FMU in the last 15 years

Fire behavior- Fire behavior differs within three major fuel types. Fires occurring in the Piñon /Juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing. Fires within the Douglas fir/Ponderosa pine fuel type are typically surface fuel driven fires with some individual tree and small group torching. The greater majority of the area is a grassland type that presents a low to moderate fire potential. Most fires in this type are dependant on wind to spread the fire. Typical fire season within this FMU is from May 1 to Sept. 15. July and August are the monsoon season with heavy thunderstorm and dry lightning activity.

Fire Regime/Condition Class - Within the Piñon pine/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 1-2; low risk of loss to key ecological components. Within the grassland fuel type the Fire Regime is 2 and the Condition Class is 1-2; low risk of loss to key ecological components. Within the Douglas fir/Ponderosa pine mixed conifer zone, the Fire Regime is 3 and the Condition Class is 2; moderate risk of loss to key ecological components.

Values at Risk – Values at risk in this FMU include private lands and homes, archaeological and historical sites, critical big game winter habitat, and recreation.

Communities at Risk – There are no identified communities at risk within this FMU

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Move toward improved condition class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines.
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- There are no communities at risk identified in this FMU.

Fire Management Strategies

- **Suppression –** Lower suppression priority in multiple wildland fire situation than "A" and "B" FMUs. No more than 50% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands while ensuring that fire is contained within natural or man-made barriers/firebreaks.

- **Wildland Fire Use –** Wildland fire use for resource benefit is encouraged within this FMU.

- **Prescribed Fire –** No prescribed fires are currently planned within this FMU at this time, however, there are some large areas of piñon/juniper and mixed conifer that could be treated with broadcast burning or pile burning after mechanical treatments.

- **Non-fire fuels Treatments (include by-products utilized) –** The Piñon/Juniper woodlands and mixed conifer stands offer opportunity for mechanical fuels reduction (Hydro-axe or hand thinning) around private property and in areas of critical wildlife concern (winter range). There are also limited opportunities for firewood gathering areas within the Piñon/Juniper. No estimation of acres that could be treated by mechanical treatments has been made at this time.

- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

C-5: Greenie Mountain

Location – Greenie Mountain lies on the west side of the Valley, south of Monte Vista, on the east side of the San Juan Mountain range. This FMU encompasses 11,772 acres of BLM administered land. Elevation ranges from over 8,030 feet to about 10,990 feet on Greenie Mountain.

Vegetation- Vegetation in the area is dominated by the following: Arizona fescue, mountain muhly, piñon pine, juniper, currant, rabbit brush, winter fat, broom snakeweed, low rabbit brush, ring muhly, June grass, Parry oat grass, and needle-and-thread grass, western wheatgrass, Indian rice grass, mutton grass, and blue grama.

Soils - The dominant soil type in this FMU is rocky soil that occupies mountain sides.Runoff is slow, and the erosion is slight. Other range sites in this FMU include Foothill Loam, Basalt Hills, and Limy Bench. The soils in the Foothill Loam range site are the soils in the Foothill Loam are mostly deep loams, with dark surface soil that indicates high organic matter. These soils are easily eroded when plant cover is seriously damaged. The soils in the Basalt Hills range site are medium to light in texture, very stony, calcareous and shallow over basalt or other volcanic flow rock. Parts of this site, especially the lower foot slopes are subject to severe water erosion if plant cover is seriously damaged. The soils in the Limy Bench range site are highly calcareous. These soils are medium to light in texture, and moderately permeable. These soils are highly erodable if plant cover is destroyed or severely weakened. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion rating of high, moderate, or low. The water erosion rating is high along the east facing slopes of the Greenie Mountain area, and in the flatter areas, the water erosion rating is low.

Threatened and Endangered- No potential habitat has been identified for any Threatened and Endangered or Special Status species

Access is available throughout this FMU through primitive four wheel drive roads and through some ATV trails.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural/Historical Resources- The San Luis Valley BLM Cultural Resource GIS Database will be used to produce a map of the locations of known cultural sites within the FMU. This map can then be consulted if fuels treatment is planned, if wildland fires are used to reduce fuel hazards, or if the suppression of wildfire occurs. Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002.

Aquatic Resources- This unit mostly contains ephemeral aquatic habitats which when seasonally important are unlikely to experience fire impacts of a magnitude to affect local aquatic wildlife population viability. During much of the fire season surface water is virtually absent. Dormant growing season fires are also unlikely to greatly impact local aquatic wildlife species or their habitat. Some individual animals may perish, but fire fighting stipulations should protect most aquatic resources here.

Wildlife- Typical piñon and juniper species are found throughout this unit and habitat is extensive. Wildlife in the area include mule deer, elk, black bear, mountain lion, coyote, pine squirrels and porcupine. Typical bird species include raven, chickadee, nuthatch, robin, Clark's nutcracker and a variety of woodpeckers and forest hawks, such as Coopers hawk and sharp-shinned hawk. The implementation of this fire plan will improve conditions for neo tropical bird habitat. Neo tropical Birds are birds that winter in the tropics and nest in the Continental United States (CONUS). The patchiness of habitats that can be attained with prescribed natural fire and prescribed fire will be a benefit to these birds. These birds are present throughout the entire SLV. Fuels treatments will follow the provisions identified in the Migratory Bird Treaty Act (MTBA).

Mechanical and or fire treatment within this polygon will have no negative impacts to wildlife. Changing the species composition and structure will benefit most wildlife and enhance diversity.

Fire History – There have been no ignitions within this FMU in the last 15 years

Fire Behavior- Fire behavior differs within three major fuel types. Fires occurring in the Piñon /Juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing. Fires within the Douglas fir/Ponderosa pine fuel type are typically surface fuel driven fires with some individual tree and small group torching. The greater majority of the area is a grassland type that presents a low to moderate fire potential. Most fires in this type are dependant on wind to spread the fire. Typical fire season within this FMU is from May 1 to Sept. 15. July and August are the monsoon season with heavy thunderstorm and dry lightning activity.

Fire Regime/Condition Class- Within the Piñon pine/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 1-2; low risk of loss to key ecological components. Within the grassland fuel type the Fire Regime is 2 and the Condition Class is 1-2; low risk of loss to key ecological components. Within the Douglas fir/Ponderosa pine mixed conifer zone, the Fire Regime is 3 and the Condition Class is 2; moderate risk of loss to key ecological components.

Values at Risk – Values at risk in this FMU include private lands and homes, archaeological and historical sites, and critical big game winter habitat.

Communities at Risk – There are no identified communities at risk within this FMU.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Move toward improved condition class

Suppression Objectives:

- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- There are no identified communities at risk identified in this FMU.

Fire Management Strategies

- **Suppression –** Lower suppression priority in multiple wildland fire situation than "A" and "B" FMUs. No more than 50% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands while ensuring that fire is contained within natural or man-made barriers/firebreaks.

- **Wildland Fire Use –** Wildland fire use for resource benefit is encouraged within this FMU.

- **Prescribed Fire –** No prescribed fires are currently planned within this FMU at this time, however, there are some large areas of piñon/juniper and mixed conifer that could be treated with broadcast burning or pile burning after mechanical treatments.

- **Non-fire fuels Treatments (include by-products utilized) –** The Piñon/Juniper woodlands and mixed conifer stands offer opportunity for mechanical fuels reduction (Hydro-axe or hand thinning) around private property and in areas of critical wildlife concern (winter range). There are also limited opportunities for firewood gathering areas within the Piñon/Juniper. No estimation of acres that could be treated by mechanical treatments has been made at this time.

- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

C-6: Saguache-Trickle Mountain

Location – This area begins near Higgins Spring (west of Saguache) and extends clockwise west of McIntyre Canyon (east of Saguache). This area encompasses 88, 213 acres of Bureau of Land Management administered land. Elevations range from 7,709 feet (northeast of Saguache) to about 10,482 feet (Sheep Mountain).

Vegetation- The dominant vegetation within this area consists of the following: Arizona fescue, Parry oat grass, June grass, mountain muhly, elk sedge, snowberry, bluegrasses, blue grama, ponderosa pine, pinyon, juniper, needle grasses, western wheatgrass, slender wheatgrass, Letterman needlegrass, rabbit brush, four wing saltbush, winter fat, bottlebrush squirrel tail, Indian rice grass, broom snakeweed, prickly pear, pingue, three awn, and smaller amounts of true mountain mahogany, wax currant, and gooseberry. Small amounts of Engelmann spruce, Douglas fir, nodding brome, and Thurber fescue are found in higher areas. The lower and drier areas are dominated by greasewood, rabbit brush, and inland salt grass. Wetland areas may contain the following species: tufted hair grass, sedges, slender wheatgrass, rush, iris, clover, cinquefoil, yarrow, rose, false hellebore, and willows.

Soils- A variety of soil types that have been categorized by range site exist in this FMU. The Shallow Loam range site is the dominant range site that is found in each of the polygons. The soils in this ecological range site are medium to light in texture and they are mostly shallow over coarse gravel, cobble, glacial till, or impervious bedrock. These soils area easily eroded by water when the plant cover is damaged or destroyed. The Mountain Loam range site is another common range site found in this FMU. The soils in this range site are fairly deep and have a good water holding capacity. Many are fine to moderately coarse textured and many of them are gravelly to stony. In the basalt hills range site, the soils are generally medium to light in texture, very stony, and calcareous and shallow over basalt or other volcanic flow rock. Parts of this range site especially the lower foot slopes are subject to severe water erosion of plant cover is seriously damaged. The Ponderosa Pine/Douglas Fir Woodland range site is found only in small areas at higher elevations. The soils are deep, well drained soils. They developed in colluvium derived from igneous rock. Permeability is slow, and surface runoff is moderated, and the hazard or erosion is moderate to very high. The Piñon/Juniper Woodland is found in a small area north of the Upper Saguache Guard Station. The soils in this range site are shallow and well-drained soils that formed in thin colluvium from igneous and metamorphic rocks. Permeability in these soil types are moderate, however surface runoff is rapid and the hazard of erosion is very high. The Limy Bench range site is another range site that occurs in small amounts. The soils in this range site are highly calcareous. These soils are medium to light in texture, moderately permeable, and deep enough to hold much of the moisture that falls. These soils are highly erodable if plant cover is destroyed or severely weakened. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain a water erosion

rating of high, moderate, or low. Water erosion ratings vary throughout this FMU. The water erosion rating is high to moderate in the steeper terrain, and low in the flatter terrain.

Threatened and Endangered- Potential habitat has been identified in this FMU for the following Threatened and Endangered/ Special Status species: South Western Willow Flycatcher (in riparian areas), Mountain Plover, and the Northern Goshawk (especially in the Trickle Mountain area).

Access- Access is available throughout this FMU through roads ranging from light duty maintained dirt roads to primitive four wheel drive roads.

Air -General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural/historical resources- The San Luis Valley BLM Cultural Resource GIS Database will be used to produce a map of the locations of known cultural sites within the FMU. This map can then be consulted if fuels treatment is planned, if wildland fires are used to reduce fuel hazards, or if the suppression of wildfire occurs. Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002 (Refer to **Appendix M**).

Aquatic resources- This unit contains perennial streams including Sheep Creek which is a productive fishery, and isolated seep aquatic habitat. Because the potential for fire on BLM is low due to sparse vegetation characteristics fire impacts to aquatic resources will be low. If fire does impact aquatic resources here the recovery potential is very high. One exception would be in the Antelope Creek Drainage. Depending on the severity and size of the fire, impacts could be high because of minimal herbaceous ground cover.

Wildlife- This FMU has habitat for many species of wildlife. It includes a variety of habitat types from grasslands, shrublands, riparian meadows to ponderosa pine and aspen, Douglas fir, and spruce forested uplands. Habitat in this FMU is used by big game species (elk, pronghorn, Big Horn Sheep and mule deer), carnivores (black bear, coyotes, foxes, badgers, mountain lions, bobcats), small mammals (various moles, voles, mice, wood rats, ground squirrels), birds, reptiles and amphibians. This FMU also encompasses the Trickle Mountain Area of Critical Environmental Concern (ACEC) but the big game management objectives for this FMU come from the State of Colorado Division of Wildlife. The rest of the species data is from personal observations, literature/ field guides, the Colorado Natural Heritage Program, and BLM and Forest Service databases. This FMU contains critical winter range, calving, lambing and fawning areas, and year round habitat for four big game species. Small mammals, reptiles, amphibians, and birds use multiple types of range sites in this FMU during different stages of their lifecycle. Because the potential for fire on BLM is low, fire impacts to terrestrial wildlife

resources will be low. If fire does impact terrestrial wildlife resources here the recovery potential is very high.

Fire History – Lightning caused fires account for 100% of all unplanned ignitions within the last 17 years. Fire size class was A, and there where 11 fires within this FMU within the last 17 years.

Fire behavior -Fires within the Douglas fir/Ponderosa pine fuel type are typically surface fuel driven fires with some individual tree and small group torching. Typical fire season within this FMU is from May 1 to Sept. 15. July and August are the monsoon season, with heavy thunderstorm and dry lightning activity.

Fire Regime/Condition Class- Within the Ponderosa pine zone, the Fire Regime is 1 and the Condition Class is 2; moderate risk of loss to key ecological components. Within the Piñon pine/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 1-2; low risk of loss to key ecological components.

Values at Risk – Values at risk in this FMU include private lands and homes, Trickle Mountain ACEC, archaeological and historical sites, critical wildlife habitat, recreation, and sensitive plant and animal habitat.

Communities at Risk –There are no identified communities at risk within this FMU.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Move toward improved condition class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines.
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- There are no identified communities at risk in this FMU.

Fire Management Strategies

- **Suppression –** No more than 20% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

- **Wildland Fire Use –** Wildland fire use for resource benefit is encouraged within this FMU.

- **Prescribed Fire –** Approximately 500 acres have been identified to treat with prescribed fire within this FMU. This prescribed fire will follow harvest and thinning activities.

- **Non-fire fuels Treatments (include by-products utilized) –** Approximately 500 acres are identified for mechanical treatment within this FMU. A stewardship contracting process will be utilized to harvest commercial timber and thin small diameter material with the Ponderosa pine areas of this FMU.

- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

C-7: Eaglebrook-Hayden Pass

Location –This area begins on the south side of Eaglebrook Gulch Road and extends southeasterly to the Hayden Pass Road. This FMU encompasses 6,092 acres of BLM administered land. Elevations range from around 8,038 feet to approximately 10,335 feet.

Vegetation- The dominant vegetation within this area consists of the following: Mountain muhly, blue grama, yucca, bottlebrush squirrel tail, piñon/juniper, oak brush, needle-and-thread, western wheatgrass, rabbit brush, four wing saltbush, winter fat, Indian rice grass, broom snakeweed, prickly pear, pingue, three awn, and true mountain mahogany. Small amounts of Engelmann spruce and sub alpine fir can be found on open north facing slopes in higher elevation areas.

Soils- There are a variety of soil types that are categorized according to three ecological range sites. The first range site is the Pinon/Juniper woodland range site which is found at the higher elevations of this FMU. The soils in this range site are shallow and well-drained soils that formed in thin colluvium from igneous and metamorphic rocks. Permeability in these soil types are moderate, however surface runoff is rapid and the hazard of erosion is very high. The second range site is the Rocky Foothills range site. Soils in this range site typically contain a great deal of smaller rock fragments as well as stones, and they occur in a complex pattern with nearly bare rock outcrops and deeper soils. The Limy Bench range site is found on the lower elevations of this FMU. The soils in this range site are highly calcareous. These soils are medium to light in texture, moderately permeable, and deep enough to hold much of the moisture that falls. These soils are highly erodable if plant cover is destroyed or severely weakened. A recently developed Water Erosion Hazard rating model called the Water Erosion Prediction Program (WEPP) (John Rawinski, 2004) was used to look at erosion potential throughout the FMU. This model takes surface cover, surface texture, precipitation zone, and slope into consideration to obtain water erosion rating of high, moderate, or low. The water erosion potential rating is high throughout this FMU due to steep topography and soil type.

Threatened and Endangered- Potential habitat has been identified for the following Threatened and Endangered/Special Status species: Canada Lynx, Boreal Toad (on Poncha Pass), Gunnison Sage Grouse, Northern Goshawk, Ferruginous Hawk, Barrow's Goldeneye, and bat species including Fringed, Yuma, Free-Tailed, and Townseds.

Access is available throughout this FMU through primitive and four wheel drive roads.

Air- General SW wind flows predominate over this area. Temperature inversions are common during the winter.

Cultural and Historical Resources- The San Luis Valley BLM Cultural Resource GIS Database will be used to produce a map of the locations of known cultural sites within the FMU. This map can then be consulted if fuels treatment is planned, if wildland fires are used to reduce fuel hazards, or if the suppression of wildfire occurs. Cultural resource inventories will be scheduled during the environmental analysis for any fuels related proposals within the FMU.

Tribal consultation for the Bureau of Land Management San Luis Valley Fire and Fuels Management Plan was accomplished by issuance of the Tribal Consultation Bulletin, Bureau of Land Management, La Jara, Del Norte, and Saguache Field Offices, November 2002 (Refer to **Appendix M**).

Aquatic Resources- There are several perennial streams on this FMU that may run the risk of fire related fish kills (resulting from fire ensuing ash and sediment). Escaped fires, multiple fires, and large, up gradient fires, pose a risk to important down gradient fisheries and aquatic habitat. Fire effects could potentially affect aquatics down stream on private land in the lower San Luis Creek where the Rio Grande Chub occupies habitat. Following the stipulations outlined to suppress, control, and manage fire, coupled with fire size restriction, aquatic resources should be adequately protected.

Wildlife- The lower portion of this FMU provides habitat for a variety of wildlife dependent on the sagebrush ecosystem. The more obvious include antelope, mule deer, sage grouse (small population), several species of raptors and coyotes. Antelope, sage grouse and coyotes are yearlong residents while raptors and songbirds use this FMU during non-winter periods. Habitat conditions for wildlife could be improved throughout this FMU by introducing "mosaic" type of fuels treatments. This could possibly be done treating small acreage of sagebrush by either fire or mechanical means. This would enhance the "edge effect" or "ecotone" which would provide a greater prey base for sage grouse and other wildlife.

Because the potential for wildfire on this FMU is low, fire impacts to terrestrial wildlife resources will be low. If fire does impact terrestrial wildlife resources here the recovery potential is very high.

Fire History – No fires recorded within this FMU within the last 15 years.

Fire behavior- Fires occurring in the Piñon pine/juniper woodlands typically exhibit creeping, ground spread that is limited in size by fuel continuity. However, under high wind conditions, fires in this fuel type can quickly transition to wind-driven crown fires that are stand replacing. Fires occurring within the Gambel's oak are typically surface fires through the leaf litter. Areas that have under-burned in the oak will dry out the over-story vegetation and these areas are prone to re-burn which can compromise safety.

Fire Regime/Condition Class- Within the Piñon pine/Juniper woodlands, the Fire Regime is 1 and the Condition Class is 1-2; low risk of loss to key ecological components. Within Gambel's oak shrublands, the Fire Regime is 3 and Condition Class is 1; low risk of loss to key ecological components.

Values at Risk - The values at risk in this FMU include private lands and homes, archaeological and historical sites, critical big game winter habitat, recreation, and sensitive plant and animal habitat

Communities at Risk – There are no identified communities at risk within this FMU.

Fire Management Objectives

- Manage fire to create healthy, productive native plant communities.
- Restore fire adapted ecosystems
- Maintain current condition class

Suppression Objectives:

- Refer to Appendix C: Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines
- Optimally, no more than 25 percent of big game winter range will be burned or regenerated over the next 10 years.
- Cultural resources will be protected in the area.

Fire Use and Prescribed Fire Objectives:

- Use prescribed fire and mechanical/chemical treatments to create a vegetative mosaic, with emphasis on preventing the spread of noxious weeds and invasive species and reducing their extent on the landscape.
- All local air quality objectives will be met.

Non-Fire Fuels Treatment Objectives:

- Multi staged treatments including chemical and mechanical treatments will be utilized for forest health restoration, to reduce fuels, to improve wildlife habitat and forage potential, and to reduce noxious weed/invasive species competition with native plant species.

Post Fire Rehabilitation and/or Restoration Objectives

- Initiate aggressive post fire rehabilitation and restoration to facilitate reestablishment upland vegetation communities.
- Prevent establishment or spread of invasive species.
- Restore watershed function and biological communities through short-term rehabilitation.
- Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fire through long-term restoration.

Community Protection/Community Assistance Objectives:

- There are no identified communities at risk in this FMU.

Fire Management Strategies

- **Suppression –** No more than 20% of the FMU will be burned over a ten year period. The priority for AMR is to prevent wildland fires from spreading to private property and other agency lands. Use AMR to manage all fires in accordance with management objectives based on current conditions and fire location.

- **Wildland Fire Use –** Wildland fire use for resource benefit is encouraged within this FMU.

- **Prescribed Fire –** There is limited opportunity for prescribed fire within this FMU due to sparse, patchy fuel arrangement.

- **Non-fire fuels Treatments (include by-products utilized) –** There is limited opportunity for mechanical treatment within this FMU due to sparse, patchy fuel arrangement and steep slopes.

- **Restoration and Rehabilitation –** Restoration and rehabilitation will emphasize the reestablishment and perpetuation of habitat diversity.

- **Community Protection/Community Assistance Objectives –** Minimize impacts to private property.

IV. Fire Management Components

A. Wildland Fire Suppression

1. Fire Planning Unit Fire History

Although wildfires have occurred in every month of the year, the fire season normally starts May 1 and continues until October 30 with most fires occurring between June 1 and September 5 each year. Lightning accounts for most starts and for the majority of acres burned.

The table below reflects fires on public lands administered by the SLV BLM Field Offices.

Year	BLM Fires	Total BLM Acres
1993	1	0.5
1994	2	3.2
1995	1	86
1996	2	5.1
1997	4	130.3
1998	3	166.1
1999	1	0.1
2000	3	326.7
2001	5	9.3
2002	7	10.1
Total	**29**	**737.4**
20 Year Average	**2.9 Fires/Year**	**73.74 Acres/Year**

Table2: Fire History

It appears, from the data that the number of fires per year is increasing. A possibility is that the increase is due to better reporting as a result of highway signing and a dedicated "report fires" telephone number than an actual increase in number of fires per year. Historical fire activity in the SLV is typically limited to class "A" fires of .25 acre or less and controlled within a single burning period. One or two fires per year that result in extended attack typically last for one or two days. "Project" fires that require a Type 3 or Type 2 organization occur on average, once every five years or so. In the predominant fuel types, piñon/juniper woodland, with little herbaceous understory, and piñon/juniper with a minor ponderosa pine component, suppression operations might average 3 to 4 days in duration.

2. Suppression/Preparedness Actions

The objective is to plan and prepare for a level of protection from damage by wildfire appropriate to safely achieve land and resource management goals and objectives and fire management direction.

The operational roles of the BLM in the wildland/urban interface are wildland firefighting, hazard fuels reduction, cooperative prevention and education, and technical assistance. Structural fire suppression is the responsibility of tribal, State, or local governments, as described in the Interagency Standards for Fire and Fire Aviation Operations.

Agency Administrators will ensure employees are trained, certified and available to participate in wildland fire program locally, regionally and nationally as the situation demands, as described in the Interagency Standards for Fire and Fire Aviation Operations.

Preparedness Levels
There are Preparedness Levels for each level within the fire organization (National, Regional, and Zone). These Preparedness Levels are planning levels that are used to indicate the types of preparedness activities needed to meet fire objectives. They are determined by the following criteria:

- Fire situation-Number of recent fires, fires uncontrolled at the present time, fire sizes, and difficulty in controlling fires.
- Current and forecasted weather
- Fire severity indices (Energy Release Component (ERC) and 1000 hour fuels moisture) and Haines Indices.
- Availability of resources

Preparedness reviews of suppression resources (engines), support, and administration should occur prior to June 1, with early May more desirable. Funding and seasonal fire personnel on-board will drive the actual date for reviews.

The Dispatcher will assist the FMO in determining the appropriate Preparedness Level.

The Preparedness Level will generally be disseminated along with the afternoon weather forecast and fire danger forecast; or whenever changes in conditions warrant a change in the level.

Specific Action Preparedness Guide
This guide details the appropriate actions and responsibilities for fire personnel in response to the current Preparedness Level, and is used in conjunction with the San Luis Valley Public Lands Center Mobilization Guide (Refer to **Appendix D**: San Luis Valley Public Lands Center Specific Action Preparedness Guide: Levels I-V.)

SEVERITY GUIDE

Severity planning involves both short and long duration. Short duration is generally for a period of one to several days. These conditions are expected to fluctuate within short time periods. Long duration contingency planning is for extended time periods. The previous section, Planning and Preparedness Levels, contains information which needs to be considered with contingency.

Short duration planning is by the SLV PLC and field offices without severity funding, to prepare for conditions that are in the high fire behavior complexity range or more. This may be accomplished by increased staffing, propositioning of local forces, contacting other field offices, and increased prevention efforts. The long duration severity plan for the SLV PLC will be done by requesting severity funding. The funding request is made one pay period in advance of when the funding goes into effect (i.e., done every 2 weeks). The Field Offices must anticipate their needs based on the 1) Fire Severity Index and Prep level, 2) Long Range weather Forecasts, and 3) Actual fire behavior and fuel conditions. Funding requests are for the amount needed above what is currently budgeted. Severity funds do not make up the difference between the SLV PLC funding level and the appropriated preparedness dollars. The Severity Index uses the ERC, 1000 Hr. fuel moistures and drought indices obtained by monitoring yearly precipitation (See Table 3: Severity Index).

Table 3: Severity Index

LEVEL	DESCRIPTION	REMARKS
LOW	ERC is within the 0-24 percentile range of the weather station within the geographical area. 1000 HR. FUEL MOISTURES greater than 20% YEARLY PRECIPITATION of weather stations at normal or above.	Two of the three meet the criteria for this severity level.
MODERATE OR NORMAL	ERC is within the 25-50 percentile range of the weather stations within the geographical area. 1000 HR. FUEL MOISTURES range between 16-20. YEARLY PRECIPITATION at weather stations averages 10% below normal.	Two of the three meet the criteria for this severity level.
HIGH	ERC is within the 51-80 percentile range of weather stations within the geographical area. 1000 HR. FUEL MOISTURES range between 13-16%. YEARLY PRECIPITATION at weather stations averages 10 to 25% below normal.	Two of the three meet the criteria for this severity level.
VERY HIGH	ERC is within the 81-95 percentile range of the weather stations within the geographical area. 1000 HR. FUEL MOISTURES range between 8-12%. YEARLY PRECIPITATION at weather stations averages between 25-45% below normal.	Two of the three meet the criteria for this severity level.
EXTREME	ERC is greater than the 95 percentile range of the weather stations within the geographical area. 1000 HR. FUEL MOISTURE is less than 8%. YEARLY PRECIPITATION at weather stations averages more than 45% below normal.	Two of the three meet the criteria for this severity level.

3. Fire Prevention, Community Education, Community Risk Assessment, and Other Community Assistance Activities (Firewise).

a. Annual Prevention Program –

The primary goal of wildfire prevention is the cost effective reduction of fire suppression expenditures and damages from human-caused fires. This is done at levels that commensurate with resource management objectives and fire management direction of the fire prevention program. SLV PLC fire management officers provide fire refresher training for agency personnel, post fire prevention signs throughout the FPU and share current and expected fire hazard status with agency personnel and local volunteer fire departments.

Direct Contacts: Visitor information specialists provide current and expected fire risk information to visitors. The SLV PLC funds a full-time education specialist who presents fire prevention classes to schoolchildren throughout the FPU.

Indirect Contacts: The shared public affairs officer (PAO) disseminates fire prevention messages to various local media, such as local radio stations and newspapers.

Community Outreach: Structural risk assessments for willing participants within WUI communities were completed through a partnership in 2003. Planning and mitigation efforts on private land are variable throughout the FPU. Six WUI communities have completed wildland fire protection plans. Additionally, The San Luis Valley Red Cross, CO State Forest Service, Rio Grande National Forest, and South Fork Volunteer Fire Department work together to provide Firewise presentations to communities throughout the FPU.

b. Special Orders and Closures

The purpose of restrictions and closures is to reduce the risk of human-caused fire during periods of extended very high to extreme fire danger.

Authority: The State Director and Public Lands Center Manager Manager/Forest Supervisor have authority to issue restrictions and closures of BLM Lands. The Field Office Managers, who are responsible for implementation and enforcement of the restrictions, will be contacted for proper coordination prior to a decision to enter any level of restriction. Fire restrictions or closures are not normally put into effect until after coordinating with other agencies (Federal, State, and County) in the local area. Reference the Pueblo Interagency Dispatch Center Fire Restriction Implementation Guide for more specifics.

The four situations for applying restrictions and closures are defined as follows:
Situation I: Includes normal fire prevention programs and public awareness of pending fire conditions. The State Director's permanent orders on spark arresters and use of fireworks will be enforced. Fire plans in contracts and permits will govern operations of contractors and permittees.

Situation II (Stage I)(Refer to Appendix E for sample Restriction Order): Restricts fires and smoking to developed campgrounds and other areas as authorized by permit (Stage I restrictions in the PIDC Restriction Implementation Guide). This restriction applies to all users including force account crews, permittees, and contractors.

Situation III (Stage II) (Refer to Appendix E for sample Restriction Order): Restricts fires, smoking, and chainsaw use except where authorized by a BLM officer or by permit (Stage II restrictions in PIDC Guide). This restriction applies to all users including force account crew, and contractors.

Situation IV(Stage III) (Refer to Appendix E for sample Restriction Order): Area of total BLM lands closure. Prohibits ingress and egress in effected zones except by written permit, by an authorized BLM officer. BLM activities will be governed by the order signed by the Public Lands Center Manager/Forest Supervisor.

c. Industrial Operations and Fire Precautions

Structures and Improvements: The BLM owns and maintains structures and improvements that are within the SLV PLC boundaries. All structures and improvements should meet county building codes. Inspections should be made of all BLM facilities by the BLM Facilities managers looking at the potential risk and hazards. If problem areas are found, then steps to reduce the risks and hazards should be taken immediately. Sites should be maintained to prevent problems from developing.

Developed and dispersed recreation areas: The SLV PLC has many developed and dispersed recreation areas. Consideration should be given to possibly design fire prevention plans for specific areas (developed and dispersed) where historically there is a higher human-caused fire risk. The sites should be inspected not only for problems within, but for potential risk and hazard from fires on adjacent lands. All of the dispersed sites cannot be inspected, but should be checked for hazards and risk when in use. All BLM personnel should be educated to identify and report or correct potential problems.

Cumbres-Toltec Scenic Railroad: The CTSRR runs between Antonito, CO and Chama, NM on the La Jara Field Office. The Field Office FMO should discuss prevention with the railroad company and personnel on at least a yearly basis. Ignitions caused by trains are particularly common when the fine fuels are cured. Particular attention should be given during drier than normal years because of the potential for large, fast spreading fires.

Natural Gas and Power lines: Power lines running through BLM lands should be inspected periodically for vegetation that could fall across the lines and start fires. A natural gas pipeline also runs north-south through portions of the Forest and BLM lands.

Industrial Operations (Timber and Special Use Operations):
The Contracting Officer Representative is responsible for the fire prevention inspection of the thinning contractor's equipment and thinning area. Inspection of equipment should be in accordance with the thinning contract and the spark arrester handbook. The inspector should be trained to conduct equipment inspections. Special Use operations should be inspected regarding the use of equipment and operation methods. Individuals trained (with knowledge of equipment and spark arresters) should perform equipment inspection.

Spark Arresters and Equipment: All internal combustion engines that operate on BLM lands should have properly working spark arresters. Prevention technicians, sale administrators, and any other operation inspectors should carry a spark arrester guide. All equipment should be inspected before any operation is begun.

The inspection procedures are listed in the spark arrester guide. (Spark Arrester Guide, General Purpose and Locomotives, Volume 1, PMS 430-2 and Spark Arrester Guide, Multiposition Small Engine, Volume 2, PMS 430-4).

Roads: Public roads are numerous, offer many attractions, and are the main travel corridors throughout BLM lands. There is great potential for human caused fires to start along roadways. All BLM employees should watch for fires when traveling BLM roads.

4. Fire Training Activities

a. Critical fire qualifications and needs within the SLV

The PLC/Forest and District/Field Office FMO's will compile annual training needs assessments each winter.

Qualifications currently identified as the highest priorities include:

- **Burn Boss 2 (RXB2)** - Currently have two qualified (one is the Forest AFMO), two trainees. Need to have at least three or four, excluding the Forest AFMO.
- **Ignition Specialist Type 2 (RXI2)** – Excluding RXB2s and RXB2(T)s, currently have 2 qualified RXI2s and 2 RXI2(T)s. Desired organization/qualifications is at least one RXI2 per District/Field Office.
- **Incident Commanders Type 3 (ICT3) & 4 (ICT4)** - We currently have five ICT4's (FS & BLM), one BLM ICT3 (excluding the Forest AFMO), and one FS ICT3(T) on the SLV PLC. Desired organization/qualifications is one ICT3 per District/Field Office and 2 to 3 ICT4s per District/Field Office.
- **Fire Use Manager 2 (FUM2)** – Currently have one qualified FUM1 (the Forest AFMO), no trainees. No trainees identified until RXB2 or ICT3 (for FUM2) or RXB1 (for FUM1) and S-580 Advanced Fire Use Applications (for both FUM1 & 2) requirements are met. One FUM2 per District/Field Office is desired.
- **Class C Fallers (FALC)** – Currently have two qualified. Need to have at least one more (one per District), and one C-Certifier would also be desirable.
- **Strike Team/Task Force Leaders (STCR, STEN, TFLD)** – Currently have one FS and one BLM person at this level (excluding one BLM DIVS and one FS OSC1 qual'd person) and no trainees. Though these positions are not necessarily needed for SLV PLC use, they are prerequisite experience levels (ladders) to ICT3.
- **Crew Boss (CRWB)** – Currently have 7 qualified (6 FS, 1 BLM) and 3 trainees (all FS). Majority of qualified personnel have higher position qualifications and aspirations. Need to increase trainee pool significantly.

  Quantifiably within the SLV, it is estimated there will be approximately 7 Permanent Full Time (PFT) BLM employees and 8 BLM seasonal employees.

  Training can be broken down into 2 categories: Fireline and Non-Fireline.

  All Fireline qualified employees require an annual fire refresher. An estimated 50% will be Fireline qualified.
  8 employees x $100 = $800

  Additionally, it is estimated 40% of these employees may need basic Firefighter training (S-130/190) annually.
  6 employees x $650 = $3900

An additional 20% of the permanent and seasonal workforce may desire to enhance their fire qualifications and may wish to attend additional advanced training.

3 employees x $1500 = $4500

*Safety officer and national needs were not considered in this section of the plan.

b. Fire Season Readiness

Fire season readiness includes assuring Line Officers are trained and knowledgeable as Agency Administrators, current on WFSA process, and meet core competencies. With the SLV interagency configuration between Forest Service and BLM, engines, personnel and equipment is shared. Appropriate monetary contributions toward outfitting engines and other equipment along with support of 15 people with either wildland fire gear or other administrative assistance is required. Concurrently, appropriate financial support of Fire Management Officers is necessary (see table in V. A Organization and Budget). Typical fire season dates run from May 1st to October 31st.

5. Detection

No formal detection program is utilized on the SLV PLC, again due to the low fire occurrence. Early fire detection protocols and procedures are established and are based on those times or periods that increased ignition sources have been identified. Increased patrol personnel and extensions of duty-day are implemented during holidays and hunting seasons if conditions warrant, and also on days identified with issuance of a Fire Weather Watch or Red Flag Warning.

Lightning maps are also evaluated and utilized for the increased detection patrol capability and presence. Ground patrols and aerial detection flights are utilized as conditions indicate.

6. Fire Weather and Fire Danger

The San Luis Valley Public Lands Center utilizes four weather stations.

	Blue Park	Lujan	Bighorn	Sand Dunes
WS Number	055305	054702	056005	Unknown at this time
Field Office/Unit	Del Norte	Saguache	La Jara	Sand Dunes Nationl Monument
Type	RAWS	RAWS	RAWS	RAWS
Fuel Model	H&G	H&G	C,L,&U	Unknown at this time
Site Type	Flat Ridgetop	Ridgetop	Open	Open
Aspect	Southeast	Southwest	Level	West
Elevation	10,300’	11,154’	8,600’	8324’
Latitude	37:47:35	38:15:16	37: 1:15	37:43:36
Longitude	106: 46:43	106: 34: 04	106:12:04	105:30:39
Legal	T41N R2E S 31	T46N R4E S7	T32N R7E S 15	T27S R7W S2

Table 4 : RAWS Station Information

Data from these weather stations are used for weather forecasting and for fire danger rating information. The National Fire Danger Rating System (NFDRS) uses this information to determine a fire danger rating. These fire danger ratings, combined with additional criteria (fire situation, current and forecasted weather, fire severity indices, and availability of resources), are used in determining planning levels for implementing the Specific Action Preparedness Guides (refer Part IV, A.2.-Preparedness). This section describes the process for identifying fire danger levels and the appropriate actions taken to address them. Though not specifically identified as such, this section constitutes the Unit’s Fire Danger Operating Plan.

Weather and fire danger readings will start in the spring when snow has melted over a significant portion of the BLM. Once the station has been started in the spring, the readings should be on a continuous basis until the station is closed in the fall. An unbroken record of accurate observations is necessary for effective use of the fire danger forecasting program.

All fire weather observations need to be transferred into WIIMS via PIDC no later than 1300 MDT. PIDC will post the observations and forecast generated from the RAWS information on their webpage. At the end of the fire season, all Districts planning slash or other prescribed burning projects will continue to take daily weather readings. The decision to burn will be based on the latest weather forecasts and fire danger rating measurements as well as the Regional and National Preparedness Levels.

7. Aviation Management

Prior to any use of aircraft check with the Aviation Officer or Saguache Dispatch to ensure the correct procedures and procurement requirements are being used. The rules for USDA and DOI /BLM are different. They are outlined in the respective regional and state plans in **Appendix F: Aviation Management Plan.**

The most commonly used aircraft are light single and multi-engine airplanes utilized periodically for point to point transportation of passengers and for fire and insect/disease detection flights.

Helicopters and air tankers are used for initial attack on fires. Helicopters are also used for aerial reconnaissance, detection, aerial ignition, seeding, spraying, mapping, and other resource management projects. During part of the fire season, airtankers are contracted and available from Region 2 Dispatch at the Jefferson County Airport (JEFFCO) and Durango Airtanker Base in Durango. Several exclusive use helicopters are available in the region as well as Call-When-Needed (CWN). These aircraft may be ordered through the Forest Dispatch Center in Saguache to Pueblo Dispatch Center (hereinafter referred to as PIDC), who relays the orders to Rocky Mountain Area Coordination Center (RMACC).

The Colorado State BLM will have a Single Engine Airtanker (SEAT) on contract and based out of the Alamosa (ALS) airport for 2005. This three year contract will have a 500 gallon Turbine Thrush available for aerial delivery of retardant from the end of May until mid August 2005. This aircraft will be available for dispatch to incidents through the state.

8. Initial Attack

General Responsibilities

This section of the Fire Management Plan addresses responsibilities and actions when the Appropriate Management Response is determined to be suppression oriented, as documented on the Stage I WFIP decision criteria.

With firefighter and public safety as the number one priority, fires will be suppressed at minimum cost, considering values to be protected and consistent with resource management objectives (least cost plus loss).

The Public Lands Center Manager is responsible for establishing priorities and coordinating all fire management activities on the Forest.

The Field Office Manager is directly responsible for all fire management activities within their Unit protection boundaries; i.e., safety, training, prevention, preparedness, and suppression, unless relieved by the Public Lands Center Manager or their acting. Authority to act may be delegated, but responsibility will remain with the Field Office Manager.

Even though fire responsibility remains with the Field Office, the closest available, and qualified, resources will initial attack, without regard to Field Office boundaries.

Suppression of going fires will take priority over most other work. However, it may be necessary at times for certain individuals or groups to be exempt from fire suppression activities in order to meet critical targets or deadlines, or accomplish other high priority jobs. For coordination purposes, it is requested that the work supervisor notify the Field Office FMO of the specific individual(s) and what time periods are involved.

Consideration of night travel and work will be thoroughly evaluated for safety conditions such as weather, fire behavior, snags or falling/rolling rocks, and difficult or unfamiliar terrain.

Organization and Management

Types of fire suppression organizations that may be used:

1. Initial Attack (Type 5 and 4 incidents)
2. Type III Incident Management Team (extended attack)
3. Type Type I or II Incident Management Team
4. Incident Support Organization (ISO)

All incidents, regardless of complexity level (Types 5 through 1) must have a single, dedicated Incident Commander (IC). It must be assured that Type 3 IC's are not given, and do not accept, collateral duties. The only exceptions are functioning as a trainer/evaluator for a Type 3 IC Trainee or temporarily performing un-filled Command & General Staff position duties (i.e., logistics).

Initial Attack

This is made up of the first suppression personnel to arrive at a fire, plus reinforcements arriving during the first burning period. An Incident Commander (IC), who must be qualified as a Type 5 IC at a minimum, must be identified and will be responsible for all the suppression actions on the incident. Reference the 310-1 Fire Qualifications Guide and FSH 5109.17, Fire and Aviation Management Qualifications Handbook, for training and experience requirements of the various IC positions.

Type 5 Incident characteristics are:

- Command and General Staff positions are not activated. An experienced and qualified Advanced Firefighter (FFT1) may be designated as IC. Multiple Type 5 incidents may be managed by a Type 3 or 4 IC.
- Resources may vary from 1 to 6 firefighters.
- The incident is normally contained rapidly during initial attack in the first operational period.
- A written action plan is not required.

Type 4 Incident characteristics are:

- Command and General Staff positions are not activated. An experienced and qualified advanced firefighter (FFT1) may be designated as IC.
- Resources on incident may vary from 7 firefighters to several single resources or a single Task Force or Strike Team.
- The incident is limited to one operational period in the control phase. Mop-up may extend into multiple periods.
- A written action plan is not required.

Initial attack strategies and tactics will be based on the current and predicted weather and fire behavior. Firefighter and public safety is always the first priority. As fire complexity increases, additional staffing will be requested as appropriate and consistent with incident complexity.

In determining initial attack priorities, the following general guideline will be followed. Highest priority for initial attack will be given to FMU's with an "A" designation, and in descending order of #2- "B" designated FMU's, #3- "C" designated FMU's, and #4- "D" designated FMU's. These are general prioritization guidelines; site specific evaluation of fuel conditions, weather conditions, and values at risk will drive the prioritization process on a case-by-case basis.

9. Extended Attack and Large Fire Suppression

Type 3 Incident Management

A Type 3 Incident Management organization is used for non-complex, short duration incidents (extended attack) or during interim periods between when a fire has grown beyond local management capabilities and/or a Type 1 or Type 2 incident management team assumes command. The members of this group are all from this Forest, or neighboring agencies, and can be assembled in a reasonably short period of time.

Team members should have ICS qualifications for their positions or be working toward those qualifications. Ideally, the team members should be qualified at one "level" below the true ICS designator (i.e., Type 3 Operations SC should be Division/Group qualified); however, depending on the complexity of the incident, this may be extended to two "levels" below Type 1 & 2 incident qualifications. The Type 3 Team will generally manage fires up to a single division size (30-60 people), but situations may occur where the Type 3 Team will be managing two divisions or more (100+ people). The decision for Type 3, 2, or 1 designation shall be based on the Incident Complexity Analysis (refer to: **Appendix I**).

Type 3 Incident characteristics are:

- Some of the Command and General Staff positions may be activated, as well as the Division/Group Supervisor and Unit Leader levels.
- Resources may vary from several single resources to several Task Forces/Strike Teams.
- The incident may be separated into divisions, but usually does not meet the Division/Group Supervisor position for complexity or span-of-control.
- The incident may involve multiple operational periods prior to control, which requires a written action plan.
- Staging areas and a base camp may be utilized.

The Field Office Manager/District Ranger, through Pueblo Interagency Dispatch Center (PIDC), will request the Type 3 Organization. PIDC will be notified when a situation shows the potential for developing into a Type 3 incident so that preparation can be initiated and personnel located.

The assumption of a fire by the Type 3 Organization should be as smooth and orderly as possible. The incoming IC will contact the local unit's line officer immediately upon notification of dispatch to obtain information about the fire and determine a location for a briefing. The Type 3 Logistics Section Chief (LSC), immediately upon notification, shall contact PIDC to obtain information about what resources are on the fire, what has been ordered, and have PIDC order any necessary additional items.

Type I or Type II Incident Management Team

A National or Regional Incident Management Team (IMT) is brought in from off-forest at the request of the Forest Supervisor to manage an incident (generally a project size fire). The type ordered depends on the complexity and severity of the situation.

The ordering unit should do the following prior to the arrival of the incoming team:

- Prepare Wildland Fire Situation Analysis (WFSA), Delegation of Authority, and Agency Administrators Briefing package.
- Identify and establish Incident Support Organization (ISO)
- Determine potential ICP/fire camp locations.
- Order fire camp supplies, as directed by the Logistics Section Chief.
- Order or make ample supply of topographic maps, base maps, photos, etc.
- Determine line officer briefing time and location.
- Obtain necessary information for the line officer briefing.

There should be two briefings of the incoming fire management team. The first briefing should be by the Line Officer/Agency Administrator (LO/AA) at a site

away from the fire. The second briefing should be by the Initial or Extended Attack Incident Commander and the staff at the fire site. Regardless of location, every effort should be made to arrange a meeting between the Initial or Extended Attack IC and the incoming IMT.

The LO/AA briefing should be as soon as possible after the arrival of the team's Incident Commander and his/her Command and General staff. As a minimum the Wildland Fire Situation Analysis (WFSA) and Line Officer/Agency Administrator Briefing Checklist or package should be completed.

The Local Incident Commander briefing shall take place when the incoming Team arrives at the fire camp. The incoming team will not assume responsibility for the fire until they are thoroughly briefed and comfortable with the situation. Both Incident Commanders and the LO/AA shall determine the exact time of command change, and this should be documented in the Delegation of Authority. After the briefing, the team should start phasing into their areas of responsibility, but shall not assume control until the predetermined time.

The local unit's suppression forces may continue to work on the fire in various functions but should be relieved as soon as possible so they can be rested and ready for Initial Attack or as reinforcements on other parts of the public lands.

Incident Support Organization (ISO)
This is a group made up of mostly Supervisor's Office personnel that are mobilized out of their regular jobs to assist in the handling of large or multiple incidents. The ISO works to provide logistical and business administration support to the incident(s).

Support Functions
The technical support function of incident support management provides specialized skills that facilitate incident operations with off-site support. These skills can vary from situation to situation. Common technical support needs are: telecommunication, caching of supplies, transportation services for personnel and equipment, equipment inspection, ramp services, mobilization center management and security at various sites. In many situations, full time staffing of these support skills is unnecessary. The incumbent individual can redeem these responsibilities through the course of their normal job duties. If the situation requires more attention, it may become a full time responsibility for the duration of the incident.

With telecommunications, approval and coordination with the local unit is often required for computer support and frequency management. Often personnel or equipment require repair or assistance that can be provided by a local technician.

Most units have some capability for caching equipment and supplies. Often it is good to have an off-site location to pass incident ordered materials through during demobilization. Occasionally it is difficult to ship materials directly to remote camps without transferring the materials to different size vehicles.

Transportation services providing delivery of personnel and equipment is very common. Many units have a fleet of vehicles that can be made available or a GSA or lease source to draw upon. This fleet is managed through coordination between the ISO representative and the Incident's Ground Support Unit Leader; capability is determined and qualified drivers assigned. Running purchasing people around or delivering miscellaneous overhead to commercial airports is a frequent mission.

Many times local units have equipment signed up on emergency equipment rental agreements. Prior to using these resources, they must pass a pre-use inspection. Often incident personnel can accomplish this. In other cases, it may be more practical to have this done off-site, especially when equipment is being signed up for the first time.

Mobilization Centers are off-incident locations where resources are held. Resources may be awaiting transportation, reassignment or in R&R. Managing the mobilization center is sometimes assigned to an incident management team.

When a situation requires the use of small fixed wing aircraft for transporting personnel or equipment, providing for ramp service is key. These individuals may organize ramp operations at remote sites, but as a minimum they keep track of aircraft arrivals/departures and communicate this information to the expanded dispatch.

Security can become an issue in some off-site operations. Planning should consider the personal welfare of employees as well as security of equipment, supplies and vehicles.

The **Administrative Management** function of the ISO provides personnel and fiscal support to the ISO and incident. Support resources begin with the **Incident Business Advisor (IBA)**, whose role is to be the eyes and ears of the Agency Administrator and provide business management recommendations, support, problem resolution, and leadership in many business management areas. They can assist in identifying and providing equipment and personnel timekeeping services for off-site operations, procurement services (often in the form of a **Buying Team**), provide for the hiring of local AD employees to support operations, follow up on local compensation or certain claims actions, as well as providing fiscal advice and interpretation.

Again, in less complex situations, many of these functions can occur without full time staffing of an organizational position. In some situations, timekeeping for personnel is done by the individuals. Additional equipment and AD employees may make this difficult to accomplish.

Procurement services provided by a **Buying Team** is common. Working in close coordination with the expanded dispatch and the IBA, this team purchases goods and services for the incident and support organization. Sources for equipment (both tactical and support), services (food, lodging, etc.), and other incident needs can be found in the Service and Supply Plan. This document needs to be updated yearly and kept at the Supervisor's Office and Saguache Dispatch. This book contains all the Emergency Equipment Rental Agreements (EERA's) and Blanket Purchase Agreements (BPA's) currently in effect with potential suppliers of goods and services for Incident management. Commercial airline tickets may be acquired by a buying team, local unit travel clerk, or by the overhead dispatcher.

When expanding operations, it is often necessary, and usually desirable, to hire local citizens. Having someone with the appropriate authority to hire and negotiate rates with these individuals is a great time saver.

Administrative Payment Teams (Dept. of Interior) or **Administrative Disbursement Teams** (Dept. of Agriculture) may also be assigned to help make direct payments to personnel or businesses.

Having someone to work with the local medical facility, to follow up on employee condition and diagnosis is important. Having a local person to deal with compensation for injury or other claims usually simplifies the process, since final completion of the paperwork often occurs long after the incident is finished.

10. Other Fire Suppression Considerations
Wildland Fire Situation Analysis (WFSA)

The WFSA is required when it is evident that a fire will exceed, or has exceeded, initial attack resource capabilities (will require a Type 3, 2, or 1 Incident Management Team).

A WFSA is a decision making process. The complete WFSA package, with instructions, is contained in the Wildland and Prescribed Fire Management Policy – Implementation Procedures Reference Guide (referred to as the Implementation Guide) (Refer to **Appendix G**: WFSA Instructions). General directions for developing a WFSA include the following:

A. **Identification of Evaluation Criteria**
Document the criteria used to evaluate suppression alternatives. The criteria shall reflect land and resource management objectives (including environmental, political, and social concerns), potential suppression costs and resource damages, safety, and include considerations of local, Regional, and national fire suppression activities and reinforcement capabilities. The criteria must be clearly stated and measurable.

B. Development of Suppression Alternatives
Develop a sufficient number of alternatives to represent a reasonable range for the situation. Each alternative must be viable and include a concise strategic plan of control forces required, probability of success and estimated time of containment/control, acreage burned, suppression cost, and resource damage. Do not consider a "no suppression" alternative. A least cost alternative must be included.

C. Analysis of Suppression Alternatives
Use the evaluation criteria to analyze alternatives. Be certain that estimates of potential fire consequences are consistent with resource objectives, values, and fire effects identified for the area in the Forest planning fire management analysis. Identify the alternative that minimizes the sum of suppression costs plus resource damage, consistent with the expected probability of success/failure.

D. Approval Documentation and Notification
The line officer shall approve the WFSA and any revisions. Document the analysis including any revisions, and file with form DOI-1202, Individual Fire Report. Inform the public and cooperators of the selected alternative as appropriate.

E. Monitoring and Evaluation
Evaluate the validity of the suppression decision daily based on the current and predicted situation. If needed, revise and update the analysis prior to the next burning period.

B. Wildland Fire Use

1. Description of Wildland Fire Use Opportunities

Within the Fire Planning Unit, there are FMU's where wildland fire may be used for resource benefits. These FMU's are:

1. C1: Pinon Hills/San Luis Hills
2. C2: Los Mogotes Prairie
3. C3: Ra Jadero Canyon/Hot Creek
4. C4: Chiquito Peak
5. C5: Greenie Mountain
6. C6: Saguache-Trickle Mountain
7. C7: Eaglebrook-Hayden Pass

2. Preplaned Implementation Procedures

The elements of wildland fire management options available to the SLV PLC are Wildland Fire Suppression and Wildland Fire Use. This is referred to as Appropriate Management Response and is described as specific actions taken in response to a wildland fire to implement protection and fire use objectives.

The entire SLV PLC is approved for Appropriate Management Response (AMR, which includes Wildland Fire Use and Wildland Fire Suppression).

Appropriate Management Response evaluation, determination, and operating procedures will utilize the Wildland and Prescribed Fire Management Policy – Implementation Procedures Reference Guide for direction (hereafter referred to as the Implementation Guide). All Line Officers and FMO's have copies of this document and should become familiar with it prior to need. The recently released Wildland Fire Use Management Guide (May, 2004 by the Colorado State Office of the BLM) provides additional guidance that clarifies and strengthens the Implementation Guide.

For all wildland fires that are not human-caused, a Stage I Wildland Fire Implementation Plan (WFIP, contained in the Implementation Guide) will be initiated. A Stage I WFIP provides the decision framework for selecting the appropriate management response (AMR). i.e., Wildland Fire Use (WFU) or suppression-oriented (initial attack). The Stage I Initial Fire Assessment includes the Fire Situation and the Decision Criteria Checklist and documents the current and predicted situation, documents all appropriate administrative information, and aids managers by providing them with decision criteria to make the initial decision whether to manage a fire for resource benefits or to take suppression action: a "GO/NO GO" checklist (Refer to Appendix H: SLV GO-NO-GO Checklist). All ignitions determined to be human-caused will receive a suppression oriented

response and cannot be be considered for Wildland Fire Use (WFU). Reference the Implementation Guide and the Implementation Section of this FMP for further guidance and direction on the Stage I process. Stage II is described as Short Term Implementation Actions and Stage III is Long Term Assessment and Implementation Actions and Periodic Fire Assessments. Only the most complex fires being managed for resource benefits (WFU) require completion of all stages of a WFIP.

Decision Authority and Responsibility

Forest Service/Bureau of Land Management Service First Units: When the National Preparedness Level is 3 or lower, the decision-making authority for a WFU rests with the Public Lands Center Manager/Forest Supervisor . Any delegation of this authority will be in writing from the Public Lands Center Manager/Forest Supervisor for a specific time period to a specific individual.

The responsibility of the respective line officer involves:

Field Office Manager/District Ranger:

1) approval of **Stage I WFIP** - Appropriate Management Response
2) approval of **Stage II** of the WFIP for each ignition that is declared a WFU (with Public Lands Center Manager/Forest Supervisor approval – see (1) below)
3) revalidation during **Stage II** WFIP, and
4) approval of any revision of the **Stage II** WFIP.

Public Lands Center Manager/Forest Supervisor:

1) approval of the decision for management as a WFU (verbal or written).
2) approval of **Stage III** of the WFIP for each ignition that is declared a WFU
3) revalidation during **Stage III** WFIP
4) approval of any revision of the **Stage III** WFIP.

2. A Fire Use Manager (FUMA) is required for Bureau administered lands as per (IM-CO-2004-044).

In addition to the tasks listed in FSM 5145.31 & IM-CO-2004-44, the Fire Use Manager will assist the Field Office Manager/District Ranger (recommending official) and Public Lands Center Manager/Forest Supervisor in the decision process for an ignition.

When the National Preparedness Level is 4 the decision-making authority for a WFU rests with the Public Lands Center Manager/Forest Supervisor with the concurrence of the Colorado State Director for BLM lands and the Regional Forester on NFS lands. Once the "go" decision is made, daily validations are the responsibility of the Forest Supervisor on NFS lands or delegated to the Field Office Manager for BLM lands. Any delegation of this authority will be in writing from the Public Lands Center Manager/Forest Supervisor for a specific time period to a specific individual.

When the National Preparedness Level is 5 the decision-making authority for a WFU rests with the State Director (BLM lands) or the Regional Forester (USFS lands) or the with the concurrence of the respective National Office. Once the "go" decision is made, daily validations are the responsibility of the Forest Supervisor on NFS lands and delegated to the Field Office Manager for BLM lands. Any delegation of this authority will be in writing from the Public Lands Center Manager /Forest Supervisor for a specific time period to a specific individual.

Inter/Intra Agency Notification and Coordination Process

It is essential that the WFU program activities exhibit a high degree of continuity, consistenty in application, and open coordination. Inter- and intra-agency notification and coordination will occur (1) during a WFU incident and (2) during pre-season and post-season planning and evaluation meetings (Refer to tables 5-7).

G. Pre & Post Season Planning/Evaluation Meetings

Review of the WFU Program, including findings and recommendations of the post season evaluation process, will be included in pre-season meetings and/or sessions. This is expected to occur with:

1.Other Agencies

- Colorado State Forest Service during County - Federal Coop meetings and spring review of pre-planned dispatch areas.
- Colorado Department of Public Health and Environment by sharing documented findings and recommendations from the annual evaluation process.
- United States Fish and Wildlife Service by sharing documented findings and recommendations from the annual evaluation process.
- Colorado State Historic Preservation Office, by sharing monitoring and post burn results by way of field trips and shared information from the Agency/Zone Archeologists and Prescribed Fire Manager's/Forest FMO's.

2. Internal Sessions

- Pre-season meeting with Field Office Managers, and Field Office Staff, for a simulation exercise/refresher of a WFU and WFIP development.
- Leadership Team meetings which are normally held monthly.
- Regionally: Fire Director & Staff Meetings, annual Regional Fire Manager's Conference, and Regional Dispatcher's Workshops.
- Overview of the program with SLV PLC Fire Management Group meetings held twice a year.
- Biannual with Pueblo Interagency Dispatch Zone Advisory Board Meetings

3. City/County Governments & Local Air Quality Committees

- Talk with County Commissioners to let them know what the WFU program is and to get any concerns.
- Share the results of the annual evaluation of the WFU program and address any concerns they may have.
- In addition, all above listed agencies or groups will be invited to attend the annual post-season evaluation meeting of the WFU program, most likely scheduled in the fall following the fire season.

Internal and External (Public) Information Process

The following actions will be the process by which current direction and information about the WFU Program, plus information regarding on-going WFU(s), will be conveyed both internally and externally.

The tables also describe how the public will be provided with information and educational material regarding wildland fire use activities:

A. Annual Fire Season Involvement

Table 5: Annual Fire Season Involvement: Internal and External (Public) Information Process

TASK	RESPONSIBILITY	WHEN
1. Present fire policy and procedures to permanent/seasonal employees who will be involved directly, or indirectly with the program. Specific differences between wilderness and non wilderness fire policy should be emphasized	Fire Staff, Field Office Managers/District Rangers, FMO's, and Area Managers	By field season of each year.
2. Maintain a contact list of potentially affected outfitters, permittees, and private land owners within and immediately adjacent to the WFU area	Field Office Manager/District Ranger, FMO's , Field Office VIS	By field season fo year
3. Prepare Annual Preseason news article on Wildland Fire Use each policy/ecology, along with face to face meetings with the media	SLV PLC PAO, SLV PLC Fire Staff	By field season fo each year
4. Preseason meetings with the County Commissioners and VFD's	Field Office FMO's, Staffs and State	By the start of fire season
5. Compile list of trainee Archaeologist and update current list	SLV PLC Managers, FMO's	By June 1
6. Deliver fire education presentation incorporating the WFU concept to appropriate school-aged and adult audiences	SLV PLC Education Specialist	On-going

B. Table 6: Ongoing WFU: Internal and External (Public) Information Process

TASK	RESPONSIBILITY	WHEN
1. Brief appropriate line officer(s) on current and expected fire status	Field Office FMO, RX fire Manager	At fire start and then daily and at significant changes
2. Post "fire caution" and WFU info signs at appropriate access points	Field Office Manager/District Ranger, Field Office VIS	When the fire is burning in the area
3. Determine the need for access restrictiosn. Coordinate with adjacent agencies, landownders, and permitees.	Colorado State Director, Regional Forester, Public Lands Center Manager/Forest Supervisor, Field Office Manager/District Ranger,	Determine by current and affected expected fire behavior
4. Post "trail closure" signs at appropriate trailheads. Inform permitees, the public, and the media	Field Office Manager/District Ranger, SLV PLC PAO, Field Office VIS	When closure is put into effect
5. Brief the appropriate political contacts (Federal, State, and local) on current and expected fire status	SLV PLC PAO, Field Office Managers/District Rangers, Public Lands Center Manager	As appropriate based on National, Regional, and local fire situations
6. Establish public information by organization to keep media informed of fire status	SLV PLC PAO, Field Office VIS Field Office Managers/District Rangers	Determine by number and size of fires
7. Keep appropriate agency personnel (significant trail crews, VIS, etc.) briefed on situation	Field Office VIS, SLV PLCPAO's, Field Office FMO's	At Fire and at significant changes
8. Keep appropriate publics (outfitters, permittees, private land owners, etc.) briefed on the fire situation.	Field Office Managers/District Rangers, Field Office FMO, Field Office VIS Personnel	At Fire and at significant changes
9. Document fire ecology/effects for furture training and/or presentations	Fire Use Manager, Field Office FMO, Fire Monitors	On-Going when possible

C. Table 7: Post Season: Internal and External (Public) Information Process

TASK	RESPONSIBILITY	WHEN
1. If significant/warranted, prepare news article summarizing the past season's fire activity.	Field Office FMO SLV PLC PAO Field Office VIS	Each year if appropriate
2. Consider follow-up contacts with affected outfitters, permittees, and private landowners	Field Office Managers/District Rangers Field Office VIS Field Office FMO's SLV PLC Managers	Within three months of the end of fire season
3. Review past season's information dissemination effort	Field Office Managers/District Rangers SLV PLC Managers SLV PLC PAO Field Office FMO's	Within three months of the end of fire season
4. Include in annual fire and wilderness reports	Field Office VIS Personnel Field Office Managers/District Rangers Fire Staffs	As Required

3. Initial Action Procedures

Wildland Fire Use - Implementation and Operational Procedures

As per Instruction Memorandum No. CO-2004-044, the Implementation Guide will remain the foundation for the management of wildland fire use on federal lands across the nation until otherwise modified or rescinded. This IM also issues guidance that further clarifies and strengthens the Implementation Guide through issuance of the Colorado BLM Wildland Fire Use Guide. Within the Implementation Guide is a description of the procedures for development of the Stage II or III Wildland Fire Implementation Plan (WFIP), which is the operational document, or "Burn Plan/Incident Action Plan", for a WFU incident. The Implementation Guide and WFIP will be utilized to address the following:

- Documentation of risk assessment
- Establish Maximum Management Area (MMA)
- Information used to set incident priorities
- Objectives for each Fire Management Unit
- Restrictions/constraints, special areas for each FMP Unit/Zone
- Social/Political concerns
- Organizational requirements, strategy, tactics, etc.
- Develop and refine complexity levels for incident management
- Revalidation requirements

Decision Criteria Guides/Prescriptive Parameters

In addition to the primary criteria for public and firefighter safety and least cost-plus-loss, the following prescriptive criteria will supplement the Stage I decision chart and "GO/NO GO" checklist that guides strategic decision making to determine whether to manage a new fire start (natural ignition) for the benefit of the resource. This "prescription" guide is, in essence, a supplement to the "GO/NO GO Checklist" of the Stage I WFIP process to ensure that all factors have been evaluated in determining whether to manage a natural start. There are environmental, social/political, and economic components that need to be evaluated to make a sound decision. The difference between this checklist and the Stage I WFIP checklist is that if one of these components indicates a "No Go", the fire can still be managed as long as that component can be mitigated, and the related components are still within "prescription". This process will be documented. The additional components to be considered will be:

A) Environmental

1) Will this fire threaten to cross into an area with more stringent constraints? If "No", continue. If "Yes", describe mitigation methods.
2) Do environmental parameters indicate that this fire will burn as planned/projected? (Parameters/indicators include maximum temperature, minimum relative humidity, maximum RH "recovery", wind speed, live fuel moisture, dead fuel moisture, etc.) If "Yes", continue. If "No", describe mitigation methods.
3) Is the fire meeting resource constraints, as outlined by the FMU polygon descriptor section of this FMP? If "Yes", continue. If "No", describe mitigation methods.

B) Social/Political

1) Is there a smoke permit in place and are smoke management forecasts favorable? If "Yes", continue. If "No", describe mitigation methods.
2) Are there sufficient resources available, or are National and Regional Preparedness Levels low enough, that this fire can be managed? If "Yes", continue. If "No", describe mitigation methods.

C) Economic

1) As clearly as can be determined, managing this fire will not result in a higher cost per acre than would a more aggressive suppression response? If "Yes", continue. If "No", describe mitigation methods. If, at the end of this checklist, all the answers indicate that the Line Officer should continue with the selected strategy, the decision will be documented and approved by the Line Officer. As per the Stage II and III WFIP process, a periodic re-certification/validation will take place to ensure that all considerations remain valid and the

course of action will be maintained. If an item cannot be mitigated, then a suppression oriented response will be implemented.

To further assist managers in implementing this Plan, preplanned parameters were established for fire behavior characteristic indicators for the C and D management categories. The indicators used include the energy release component (ERC), commitment of initial attack resources, thousand hour fuel moistures, and annual precipitation departure. The ERC is a numerical indicator of dryness of the fuels based on the fuel model utilized, large, dead fuel moisture, and live fuel moisture. It is a reliable drought indicator for the western U.S. Live fuel moisture in the conifers may also be utilized to provide a local indicator of fire behavior and potential for active/passive crowning, based on observed historical fire effects. The Palmer drought index is based on long-term rainfall amounts and may also be utilized.

The parameters listed below are guidelines that will be used to assist the field manager; deviations from the parameters will require line officer approval. This could be in the case where, to meet fire effect objectives, lower 1000 hr FM's could be warranted. Also, an ignition in a Category B FMU may justify deviation from this criteria if topography and fuel conditions (natural fuel breaks) create a very low probability of the fire spreading towards the values at risk. i.e., fire near border with C or D FMU and further fire spread within the B FMU can be contained.

Category A FMU's Fire Exclusion – Initial Attack required.

Category B FMU's-Initial attack required unless adjacent to less restricted FMU and further spread in B FMU can be mitigated.

Category C FMU's

Annual precipitation departure not over 25% of average.

1000 hr FM not less than 12%.
Not over 75% commitment of initial attack resources.
ERC's not over 50% departure from average.

Category D FMU's
Annual precipitation departure not over 35% of average.
1000 hr FM not less that 8%.
Less than full commitment of initial attack resources.
ERC's not over 75% departure from average.

Fire Fighter Safety
The Prescriptive Criteria are designed to help managers determine if a wildland fire should be managed for resource benefit. However, once this decision has been made at the management level, the field personnel will determine if they can implement the decision. Ultimately, it is the responsibility of the field personnel and manager to evaluate and implement the appropriate tactics on all fires, with primary regard for their safety.

To assist managers in implementing this plan, the following section overviews the response strategy for each of the management categories. It also details particular concerns that apply across all categories.

All Human-Caused Wildland Fires:
The Appropriate Management Response for all wildland fires that are determined to be human-caused will be suppression-oriented initial attack.

A and B category FMU:
Upon receiving a report of a fire in an A or B category FMU, dispatch will send the closest fire fighting forces to the fire. All wildland fires in these areas will be immediately suppressed under the Appropriate Management Response guidelines currently in effect. Line officer concurrence is an option in the case of a lightning ignition proximate to the boundary of a C or D FMU (i.e., burning into a lower risk area) and further spread into the B FMU can be controlled.

C and D category FMU:
Upon receiving a report of a fire in a C or D FMU, dispatch will also send the closest fire fighting forces to the fire. While these forces are enroute and after they have arrived on the scene, the dispatcher/fire management officer will continue to collect information about the fire - such as the exact location and size, potential for spread, weather observations, closest natural barriers, proximity to private/urban areas, sites and structures threatened, etc. - in order to answer the questions on the go/no go checklists.

If, at the end of these checklists, all the questions indicate that the fire managers should manage the fire for resource benefit, the decision will be documented and approved by the Line Officer. At this point, an analysis team will be assigned to the fire to evaluate what effect the fire is having on management objectives. This decision-making process will be ongoing while the fire remains active. Managers will recertify their decision at a pre-determined interval to ensure that all considerations remain valid, in which case, the course of action will be maintained. The monitoring and certification/validation interval is determined based on criteria outlined in the Implementation Guide and the Colorado BLM Wildland Fire Use Management Guide. All management decisions will be in accordance with the Wildland and Prescribed Fire Management Policy (August 1998).

4. Required Personnel

The FPU is capable of managing wildland fire use (WFU) incidents up to and including those at the Stage II WFIP/Type 3 incident complexity level. A Fire Use Management Team will be ordered for incidents exceeding this level of complexity (Stage III WFIP/Type 2 or 1 incident complexity). Current qualified staff members may act as interim fire use managers pending the arrival of a Fire Use Manager 1 or 2, and/or the Fire Use Management Team. Reference the Colorado BLM Wildland Fire Use Management Guide, Implementation Roles and Responsibilities for further guidance and direction. A current list of all personnel qualified to manage and/or assist in wildland fire use incidents is available through the respective agency (ies).

- Public information/coordination should occur with agency(ies) public affairs staff to prepare pre-season news releases.
- Target audiences include: agency(ies) staff and publics focusing on special use permittees, recreationists, and public or communities that would be potentially affected by a wildland fire use incident.

(Reference Preplanned Implementation Procedures, External and Internal Information Process section for a more detailed discussion of these two items)

5. Public Information

Public will be provided with information and educational material regarding wildland fire use activities. Refer to Table 5: Annual Fire Season Involvement: Internal and External (Public) Information Process, Table 6: Ongoing WFU: Internal and External (Public) Information Process, and Table 7: Post Season: Internal and External (Public) Information Process.

C. Prescribed Fire

1. Planning and Documentation

The application of prescribed fire as a resource treatment provides the manager with another tool to meet the specific land management objectives. The decision to use prescribed fire must come from current approved land management documents and associated approved NEPA documents for the area in which the burn is located.

One aspect of the prescribed fire program is to increase efficiency by accepting a certain, predetermined level of risk, based on the probability and consequences of a fire exceeding its prescription parameters. This information must be made available to, and understood by, the approving Line Officer. The complexity level will be determined in accordance with NWCG Prescribed Fire Complexity Analysis (NFES 2474, PMS 424) and will be signed by the approving Line Officer. Final determination will be made after review of the Burn Plan; specifically, the Risk Assessment and Objectives/Prescription elements.

Once the prescribed burn plan is approved by the appropriate line officer, the execution/implementation must follow the plan. It is expected that escapes will occur from time to time. However, when these escapes do occur, it is important that they were the result of an unpredicted weather event and not from errors in our management decisions or actions.

Considerably more than just preparing a burn plan is involved when anticipating the use of prescribed fire. Input from other resource managers is important because prescribed burning can benefit or impact other resource objectives such as wildlife, silviculture, range, visual esthetics, and air, soil, and water quality. It must be assured that all of these issues are covered by NEPA documentation (through a CE, DM, or DN). This is especially true for wildlife issues.

Detail in the prescribed burn plan may vary with type and complexity of the job. Each prescribed burn requires a written plan prepared in advance of ignition and approved by the appropriate line officer. The approving line officer must also authorize any changes to the approved burn plan.

Prescribed burning projects must meet requirements set forth in the BLM, H-9214-1, Prescribed Fire Management Handbook and incorporated by reference in the Implementation Guide.

It is important to consider specific environmental impacts of the prescribed burn. Examples of areas and situations that may complicate the use of prescribed burning to attain management objectives are as follows:

- TEPS (Threatened, Endangered, Proposed, Sensitive) species habitat.
- Highly erodible sites.
- Riparian zones where siltation/sedimentation could damage fish habitat or other stream values.
- Timber types or age classes susceptible to fire damage.
- Areas where smoke will create serious safety and health hazards.
- Areas where, regardless of fuel preparation and weather factors, the risk of escape is high.
- Areas where the volume of wood residue is high (consider use of fire only if this material cannot reasonably be utilized).

a. Fire planning units prescribed fire program

Several FMU's have been identified where prescribed fire would be a resource benefit. In some cases, mechanical reduction of fuels is necessary prior to prescribed burning. Several of these burns would be for the most part in Piñon/Juniper fuel type, but there are also areas with aspen/mixed conifer fuel type, as well as in an open grass/sagebrush fuel type. Slash pile burning will take place in some areas after hand thinning has occurred.

Out of the Saguache Field Office, a 181 acre burn in the Trickle Mountain area was completed in the Fall of 2004. This area is currently a fire regime 1 condition class 2, and the goal is to improve the condition class. Pile burning is scheduled to take place in the fall of 2004 in a previously hand thinned fuels reduction project (170 acres) in Crestone. Pile burning is also scheduled for the Alpine Village Fuels Reduction Project (40 acres) in South Fork out of the Del Norte Field Office. Out of the La Jara field office, an average of 40-80 acres have been burned annually in the Blanca Wetlands Complex for a reduction of a cat tail/reed grass plant community.

b. Numbers and kinds of qualified personnel necessary to plan and execute the proposed annual prescribed fire program.

Qualification standards for the organizational positions are listed in the NWCG 310-1. The following positions are needed:

- Prescribed Fire Manager
- Prescribed Fire Planner (Prescribed Fire Planning Specialist)
- Burn Boss – Levels II and I
- Ignition Specialist
- Holding Specialist: This position is not specifically identified as such. Wildfire suppression position descriptions/qualifications are utilized based on the potential holding complexities of the burn project. (e.g., Strike Team leader or Crew Boss for Level 2 burns, Division Supervisor or Operations Chief for Level 1 burns)

c. Program effectiveness monitoring objectives.

A monitoring plan has been developed to estimate the reduction of cover and density of live trees in the project areas and evaluate the effect that the reductions have on secondary factors such as changes in herbaceous and shrub cover and composition, presence and cover of non-native weedy species, changes in the proportion of downed litter and bare ground (See **Appendix J**: Monitoring Plan), soils, erosional processes, and changes in hydrological function.

d. Fuels treatment maps displaying past accomplishments and proposed treatments:

Figure 1: Saguache Field Office Fuels Reduction Projects

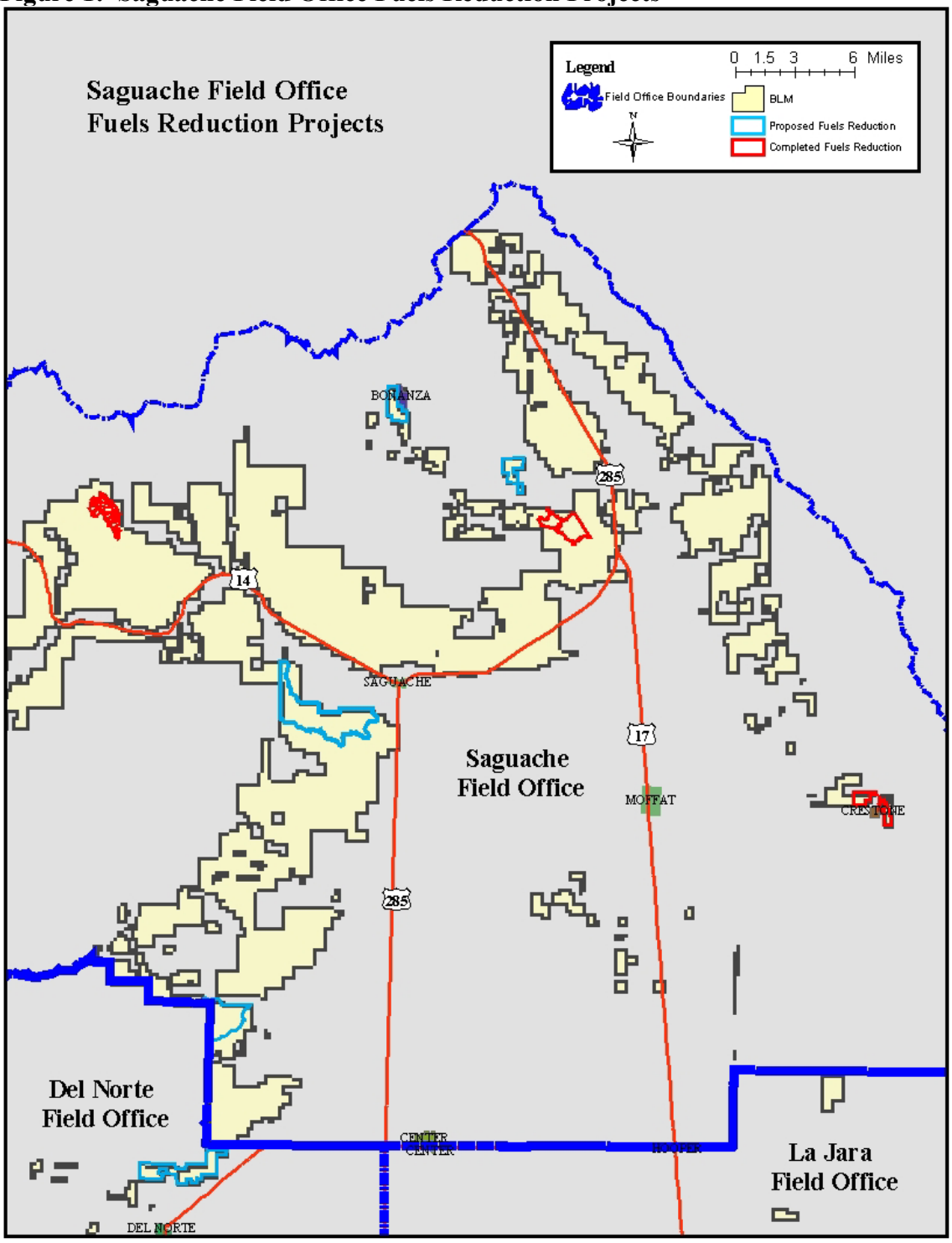


Figure 2: Del Norte Field Office Fuels Reduction Projects

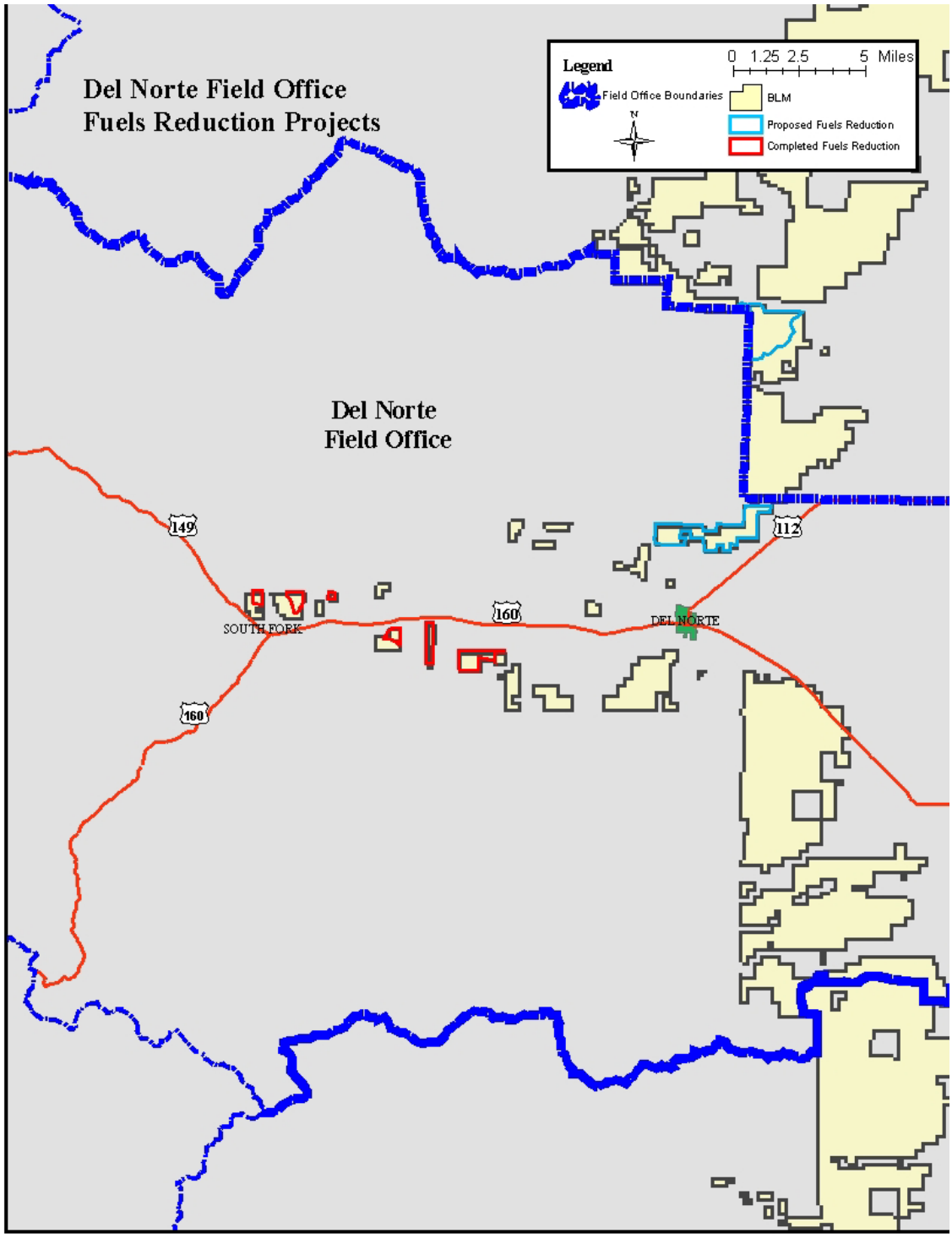
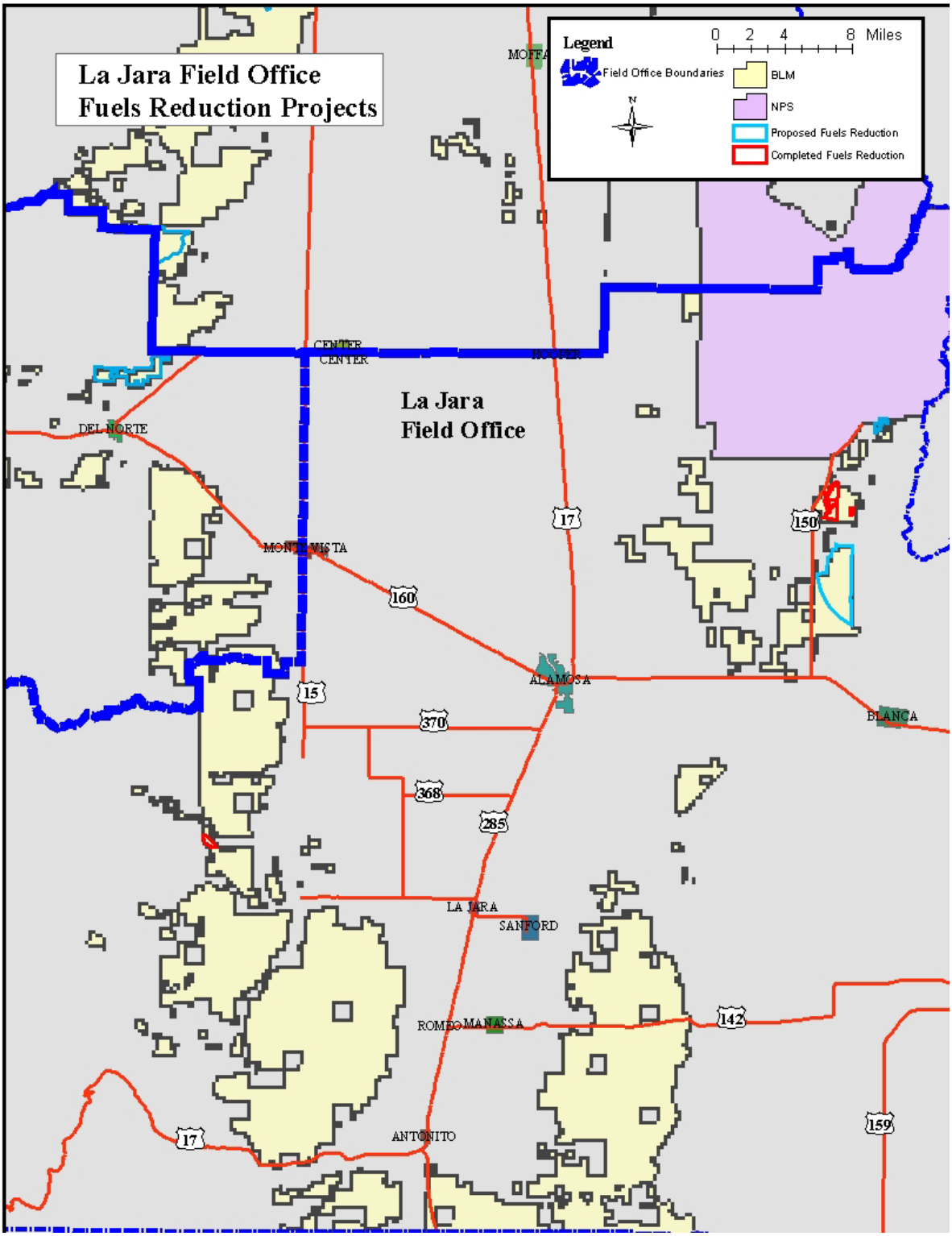


Figure 3 :La Jara Field Office Fuels Reduction Projects



2. Air Quality and Smoke Management

a. Description of pertinent air quality issues.

Air quality within the San Luis valley in the area of the proposed Fire Management Plan is very good. This may be due to relatively limited local emission from stationary and mobile sources. However, episodic events such as an exceedance of PM10 standard in Alamosa in 1999 and 2000 due to high winds and blowing dust; and smoke production from agriculture practices and wildland fires have temporarily influenced air quality in the past. The entire planning area is considered as attainment for all six criteria pollutants.

b. Description of all measures to prevent or mitigate adverse smoke events. A detailed smoke management plan may be developed cooperatively with the State regulatory agency responsible for regulatory air quality management.

All prescribed and fire use burning would be coordinated with the Colorado Department of Public Health and Environment's Division of Air Quality. There would be strict adherence to Colorado Regulation 9 to insure protection of the State Standard for Air Quality. Smoke mitigation techniques used for this proposed action are found in the Smoke Management Guide for Prescribed and Wildland Fire. Some techniques that will be used, but not inclusive are: burning when fuel moisture is high in large woody fuels, rapid mop-up, aerial/mass ignition, utilizing favorable meteorological conditions to avoid sensitive areas and utilizing piles to increase combustion efficiency. Alternatives to fire will be analyzed and used where appropriate. Smoke from prescribed fire and Wildland Fire Use will be monitored. All Burn Plans and Wildland Fire Implementation Plans will contain a monitoring plan. Monitoring can consist of visually tracking smoke plumes by persons on the ground or in aircraft and installing PM10/PM2.5 particulate monitors at sensitive receptors.

1. Location of Class I air sheds and clean air corridors.

The nearest non-attainment areas are Aspen (121 miles to the northwest) and Lamar (175 miles to the east) for PM10 and maintenance areas for PM10 are Pagosa Springs (60 miles to the WSW) and Canon City (75 miles to the northeast). There is a Class I area is within the planning area, Great Sand Dunes National Monument. The closest Class I Wilderness is Weminuche and LaGarita , both about 30 miles to the west and West Elk Wilderness about 60 miles to the northwest.

2. Description of pre-identified smoke sensitive areas.

Specific smoke sensitive areas are identified in prescribed burn plans and wildland fire implementation plans. Major population areas that potentially could be affected are: Pueblo, Saguache, Alamosa, Monte Visa. Currently, the Colorado Air Pollution Control Division requires the use of the official Colorado State Map to identify sensitive receptors. Of major concerns within these areas are: hospitals, schools, airports and retirement communities and any individual that is sensitive to smoke.

3. Local and regional smoke management restrictions and procedures.
The Colorado Smoke Management Memorandum of Understanding (2001) and Colorado's Regulation 9 outlines the processes and procedures necessary to obtain a smoke permit from the State. The following are general guidelines that the San Luis Valley Public Lands Center, with the assistance of The Colorado Department of Health Air Quality Division, has developed in order to meet air quality standards for prescribed burns on this forest. Specifics are contained in the MOU.

- BLM will document that an evaluation of non-burning fuel treatments has occurred and that smoke and/or emissions minimization techniques will be employed.
- Burning will be conducted during periods of favorable meteorological conditions; when smoke dispersal rating indicates minimal impacts on sensitive receptors. The National Weather Service lists the forecast for smoke dispersal in the daily Fire Weather Forecast. Burning should be conducted during hours of maximum dispersal, normally midmorning to mid to late afternoon.
- Location of the burn and meteorological conditions such as wind direction should also be considered in order to assess the impact to air quality as related to visitor enjoyment, particularly in regard to visibility. The time of year is also a factor because of differences in visitor use.
- Burning can only be permitted if no public nuisance will occur. The SASEM computer program will be used to predict smoke and visibility conditions over communities or scenic areas.

Air Quality Agency

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Smoke Management

Implementing this Plan may result in an overall increase of acres burned per year, which could have additional impacts on air quality. Wildland fires (both natural and prescribed) are a potentially significant source of air pollution because fire is a natural combustion process that releases air pollutant emissions. The amount of emissions depends on the size and intensity of the fire, which are determined by meteorological conditions, the fuel type and moisture content, and the available fuel loading. Dry fuels (such as dead and down or dry vegetation) are consumed first in the beginning stages of burning. As a fire progresses, green/live vegetation is

dried through radiant and convective heat transfer and then may be consumed as well. These varying combustion stages produce differing amounts of emissions because the efficiency of the combustion process in these fuels determines how much is consumed in the flaming front as opposed to the smoldering stage.

These potential impacts were considered in developing this Fire Management Plan, and mitigation measures have been built into the Plan to offset potential negative impacts from smoke pollution. For one, air quality is a factor that must be considered in the Prescriptive Criteria (Go/No Go Checklist) to determine the appropriate response strategy. If the established federal and state standards for air quality cannot be met or mitigated in an acceptable manner, the fire will be suppressed. Secondly, even when these standards are met, the Plan also provides a list of smoke management techniques to mitigate potential impacts, which includes monitoring the amount of emissions and the direction of the smoke dispersal. Finally, the Plan is also designed to accommodate areas where fire is not desired and other types of fuels treatments need to be used. Therefore, additional areas where concerns with air quality standards would require the use of alternative fuels treatments can be identified and added to the Plan as the need arises. Alternatives, such as chemical treatments and mechanical treatments, including chaining, roller chopping, hydro-axing, and thinning can be utilized where allowed within the planning area.

It is also important to note that suppressing all wildland fires could improve air quality in the short-term by eliminating even temporary smoke production as quickly as possible. However, preventing periodic fires in the ecosystem has already contributed to unacceptable fuel loadings in certain parts of the planning area, which has increased the risk of larger, more intense wildland fires burning for longer periods. These uncontrolled wildland fires typically cause greater air pollutant emission levels. Thus, they ultimately result in more extreme and widespread air quality impacts. This Plan provides the greatest management flexibility to control smoke production and impacts in smoke-sensitive and high visibility areas.

Smoke Management Techniques

Consultation and approval by the State of Colorado is a continuing process, as described below. Management will cooperate with other land managers and the State of Colorado to minimize air quality impacts from smoke on local communities and individuals, including the following specific measures:

- When preparing site-specific burn plans and identifying wildland fire use areas, the agency will obtain all necessary air pollutant emission permits and approvals from the State of Colorado prior to initiating a prescribed fire and wildland fire use. The agency will follow and implement the terms of the interagency Colorado Smoke Management Plan and MOU as well as any site-specific burn permit criteria.

- The agency will assess potential air quality impacts through the use of smoke dispersion modeling techniques (e.g.; SASEM) to predict particulate matter emissions, smoke plume characteristics, exposure and visibility impacts.

- The agency will apply management techniques to minimize smoke production and to enhance dispersion, including burning under optimum weather conditions, expanding the burning season, using backing fires where applicable, burning small blocks, expediting mop-up, etc. These techniques are described in Smoke Management Guide for Prescribed and Wildland Fire; 2001 Edition. Application of these techniques will minimize smoke exposure impacts (health and visual).

- Once a wildland fire for resource benefit (WFU) or a prescribed fire is initiated, the agency will monitor weather and the burning and smoke dispersion conditions to assure air quality impacts remain within prescribed smoke management levels. If monitoring indicates conditions are no longer within prescription, and cannot be brought back into prescription or impacts mitigated, managers will consider declaration of the fire as an unwanted wildland fire, and re-evaluate the Appropriate Management Response (if a WFU) or initiate a WFSA (if a prescribed fire).

- The agency will establish and maintain close communications with State and local agencies regarding the status of managed fire projects. They will notify concerned smoke-sensitive organizations/areas (e.g.; hospitals, schools, retirement centers, cities/towns, or other areas identified on the State's Special Status Air Quality Area map) of intentions and conditions, both prior to and during prescribed fire activities.

- The agency will ensure that the general public is informed of the status of managed fires, including smoke management contingencies, through the local press, radio and TV.

- The field personnel will maintain communications with the Pueblo Interagency Dispatch Center. This office will act as a clearinghouse, providing and maintaining daily information on burning projects throughout their zone.

D. Non-Fire Fuel Treatments

Several projects totaling about 2,500 acres are planned for each year across the FPU. The treatment methods used include and are not limited to Hydroaxe, hand thinning, and chipping. These projects are implemented in both wildland urban interface (WUI) as well as non-WUI areas. These areas will be improved from condition class 3 and 2. Several of the WUI projects will be implemented using local contractors. A combination of local (San Luis Valley) and regional contractors are involved in the implementation of the WUI projects. BLM is working with a local company to make biomass available under a stewardship contract, and whenever possible, firewood for public gathering is made available as part of the fuels reduction efforts.

E. Emergency Stabilization and Rehabilitation

Long-Term Rehabilitation

All burned areas will be evaluated, by the Resource Advisor/staff to determine whether post-incident rehabilitation is needed. (For example: Evaluate to determine whether seeding is necessary to prevent excessive erosion or the invasion of noxious weeds and to restore a native vegetative community.) If the evaluation shows that post-incident rehabilitation is necessary, a rehabilitation plan will be prepared and implemented in accordance with the Interagency Burned Area Emergency Stabilization and Rehabilitation (ESR) Handbook, Version 2.0, BLM Supplemental ESR Guidance, Fire Management Zone instructions and other applicable directives. The Handbook and Supplemental Guidance replace BLM Handbook 1742 (July 1999).

Short-Term Rehabilitation

Incident Commanders and Resource Advisors are responsible for implementing short-term actions to mitigate the effects of fire suppression activities. The following action items will guide short-term rehabilitation of surface disturbing suppression impacts (including closing routes opened during fire suppression) prior to releasing fire crews and equipment following containment. These would be actions taken in addition to standard mop-up duties of extinguishing burning material along or near the control line, felling snags, or moving logs so they won't roll downhill.

General Rehabilitation Action Items:

- New routes created by wildland fire suppression should be closed and rehabilitated in accordance with Resource Area guidance or with the Emergency Fire Rehabilitation Plan (EFRP).
- Weed-free seeding should occur prior to pulling organic material back over fire lines.
- Equipment used in rehabilitation activities should be washed before arriving on-site to reduce the spread of noxious weeds.
- Remove all trash, debris, and flagging from the area.
- Provide for drainage with water bars on constructed hand/dozer lines and impacted areas.
- Flush cut suppression-created tree stumps down to 2 inches above ground level along fire lines, hiking trails, and at helispots. Crosscut the top of all 10 inches plus diameter tree stumps to speed decay.
- Where fire lines cross or parallel streams, remove line construction debris from the channel and place debris sufficiently above the channel so it will not roll back into the stream.
- Conduct a Class III cultural resources inventory of all ground disturbing rehabilitation activities and use non-ground disturbing techniques within known or newly identified site boundaries.

Rehabilitation Action Items for Hand Lines and Other Trails:

- Scatter limbs/deadfall/rocks (weathered side up) to obliterate evidence of fire line.
- Hand lines should be seeded at rates specified for the particular region.
- Where a recreation trail was used for fire line, reconstruct the trail tread to 24 inches in width.
- Where fire lines cross trails, discourage fire line use by camouflaging with rocks/debris/etc.
- Block off fire lines to motorized access with rocks, natural woody material and signs.
- Remove hazards from along recreational trails.

Rehabilitation Action Items for Dozer Lines:

- Pull fire line berms onto the hand line and blend the area into the undisturbed soil contours.
- Pull trees/limbs/rocks and other organic material back into perpendicular line with the slope.
- Block off dozer lines to motorized access using boulders/natural large woody material/signs.
- Dozer lines that were constructed across slopes will need to be fully obliterated with slash.

Rehabilitation Action Items for Water Bars:

- Place waterbars 20-40 degrees perpendicular to the fall line where natural drainage occurs.
- Hand line waterbars should be 8 inches deep.
- Waterbars for dozer lines should be 12 inches plus deep and 18-24 inches high for the berm.
- If the soil is loose, augment waterbar construction with woody debris and or rocks.

GENERAL WATERBAR SPACING	
Fire Line Grade	**Est. Max. Spacing**
< 5%	None required
6-15 %	150 ‘
16-25 %	100 ‘
26-65 %	50 ‘
65 % +	25 ‘

- Ensure that each waterbar has a direct outlet and drains into a vegetation or rock filter.
- On slopes > 30%, waterbars should be installed perpendicular to the fall line and constructed as “cup trenches” rather than drainage features.
- Waterbars on steeper slopes (> 50%) may be built from tree boles and should be alternated to opposite sides of the line.
- Waterbar spacing and location should consider site-specific topography during installation.

Rehabilitation Action Items to Reduce Sedimentation:

- To reduce sedimentation, straw bales or log check dams are prescribed in areas where resource values are at risk.
- Specific sites where check dams should be considered include:
  - Ephemeral and small intermittent channels.
  - Areas where logs and branches had created natural check dams and were burned out.
  - Locations with less steep gradients that will naturally store large quantities of sediment.
  - Areas that are natural sediment catch basins.

F. Community Protection/Community Assistance

Wildland Urban Interface (WUI) communities have been identified as at risk areas. These communities are adjacent to SLV BLM lands (**See Table 8: Communities at Risk**). The table also identifies which of these communities have had risk assessments, developed current fire management plans, and have started implementing fire mitigation measures.

WUI Communities	Risk Assessment	Community Fire Plan	Fire Plan Implementation
Alamosa County			
Zapata HOA	X	X	P
Conejos County			
Canon			
Capulin			
Centro			
Fox Creek	X		
Mogote			
San Antonio			
Costilla County			
Mineral County			
Rio Grande County			
Alpine	X		
Pinos Creek	P		
San Francisco Creek	X		
South Fork and Vicinity			
Saguache County			
Baca Grande	X	X	P
Bonanza	X		
Crestone	X		
Poncha Pass			
Valley View Hot Springs	X		
Villa Grove			

Table 8: Communities at Risk
X=Completed P=Partially Completed

V. Organization and Budget

A. Budget and Organization

Current Organization

Fire suppression in the SLV is lead by the Rio Grande National Forest through an Interagency Agreement. Current staffing includes a Valley-wide Fire Management Officer (FMO) and assistant FMO which is planned to be 20% BLM funded along with the FMO's on the Saguache, Del Norte and La Jara Field Offices that are currently financed approximately 15% by BLM.

There are 2 Forest Service engines in the SLV (#631, #671) and 1 Inter-agency engine (#161). Joint interagency funding is used to fund engine #161 that includes NPS, F&WS, BLM, FS and Colorado State. Currently the SLV has zone dispatch support from Pueblo Interagency Dispatch and an Initial Attack Dispatch based out of Saguache. Saguache Dispatch is a fourth tier dispatch that is scheduled to go away in FY'05 with Pueblo Dispatch assuming initial attack duties. A Forest Service Education Specialist is partially financed by BLM.

Within the San Luis Valley there is also an agreement between all the Federal, State, Local, and Volunteer fire fighting agencies pertaining to wildland fire suppression. This document defines the rolls and responsibilities of each agency, denotes chain of command, and describes the process for handling wildland fires that cross multi-agency boundaries.

Table 9: Bureau of Land Management Planned Fire Resources-Attachment 3
Office: San Luis Valley Public Lands Center: Current Organization

Resources	Quantity	Number of Personnel	Total Work Months
Number of Engines:	.25	1	3
Number of Water tenders:	0	0	0
Number of Dozers:	0	0	0
Number of Tractors / plows:	0	0	0
Number of Fire Boats:	0	0	0
Number of Type 1 Crews:	0	0	0
Number of Helitack Crews:	0	0	0
Number of Fuels Crews:	0	0	0
Number of Type 2 Crews sponsored:	0	0	0
Number of Smokejumpers (AK & NIFC only):	0	0	0
Number of Fire Management Officers:	3	1	3
Number of Assistant FMOs / FCOs:	0	0	0
Number of Fire Operations Specialists:	0	0	0
Number of Dispatchers:	0	0	0
Number of Other Aviation Staff (Aviation Mgr., Seat Mgr, etc.):	0	0	0
Number of Mitigation/Education/Prevention Specialists / Techs:	1	1	1
Number of Resource Specialists:	0	0	0
Number of Fuels Specialists:	0	0	0
Number of Other Fire Staff:	0	0	0
Number of PFT funded by Preparedness:	0	0	0
Number of Career Seasonals funded by Preparedness:	0	0	0
Number of Temporaries funded by Preparedness:	0	0	0
Number of PFT funded by Fuels:	0	0	0
Number of Career Seasonals funded by Fuels:	0	0	0
Number of Temporaries funded by Fuels:	0	0	0

Desired Organization
An increase in fire preparedness staffing is needed for the San Luis Valley. Financing of the SLV PLC FMO and Assistant FMO and Field Office FMO's (Saguache, La Jara, and Del Norte) at 20% of the cost of associated FTE's would provide the SLV BLM lands with necessary fire management and oversight. Financing 20% of the staffing and capital cost of 2 Federal engines is needed. Continued financing of the interagency engine is needed (minimum $10,000). Financing of 10% of the cost of the Forest Aviation Officer is needed. Addition of a dedicated mitigation / prevention / education specialists that would be shared between the BLM and Forest Service is needed. Appropriate BLM share is estimated at 20%. Administrative assistance for fire is needed by financing 20% of an AA position.

The SLV PLC would function well with dedicated Fuels funding and target assigned. Dedicated personnel to work on Fuels projects would include: 4 PFT FTE's as part of a larger Service First Fuels Team, financing of a 4 person seasonal fuels crew, and associated fleet.

The following Table displays the desired organization:

Table 10: Bureau of Land Management Planned Fire Resources-Attachment 3
Office: San Luis Valley Public Lands Center: Desired Resources

Resources	Quantity	Number of Work Months	Total Work Months
Number of Engines	1		
Number of Water Tenders			
Dumber of Dozers			
Number of Tractors/Plows			
Number of Fire Boats			
Number of Type 1 Crews			
Number of Helitack Crews			
Number of Fuels Crews			
Number of Type 2 Crews Sponsored			
Number of Smokejumpers (AK and NIFC only):			
Number of Fire Management Officers:	*4		8
Number of Assistant FMO's/FCO's	*1		2
Number of Fire Operation Specialists:			
Number of Dispatchers			
Number of Other Aviation Staff (Aviation Mgr., Seat Mgr, etc.)	1		1
Number of Mitigation/Education/Prevention Specialists/Techs:	1		6
Number of Resource Specialists	**1		6
Number of Fuels Specialists	4		48
Number of Other Fire Staff	1		6
Number of PFT funded by Preparedness	4.5		
Number of Career Seasonal funded by Preparedness	1.5		
Number of Temporaries funded by preparedness	1		
Number of PFT funded by fuels	5.5		
Number of Career seasonals funded by fuels	1.5		
Number of Temporaries funded by Fuels	1		

*Service First Organization
**To Support NEPA efforts for fuels projects

B. Assistance Agreements and Intra/Interagency Agreements

POLICY
Develop and implement mutually beneficial fire management agreements with other Federal, State, and local agencies.

NOTE: All of the documents listed below are kept on file at the Saguache Fire Dispatch office in the 5170 file designation.

A. **Interagency Cooperative Fire Protection Agreement**
United States Department of the Interior
Bureau of Land Management
National Park Service
Bureau of Indian Affairs
Fish and Wildlife Service
United States Department of Agriculture
Forest Service (Agreement #1102-0005-95-004)
State of Colorado
Colorado State Forest Service

B. **Memorandum of Understanding**
1. USDI, Bureau of Land Management
USDA, Rio Grande National Forest
For Initial Attack on BLM lands within the San Luis Valley

2. USDI, National Park Service, Great Sand Dunes N.P.
USDI, Fish and Wildlife Service, Alamosa/Monte Vista/Baca
National Wildlife Refuges
USDI, Bureau of Land Management
USDA, Rio Grande National Forest
The Nature Conservancy, Colorado Field Office
For collaborative work in wildland fire management

C. **Joint Powers Agreement**
1. USDA, Rio Grande National Forest
2. New Mexico Natural Resources Department
Reciprocal Fire Protection

D. **State Cooperative Fire Protection Agreements**
1. USDA, Rio Grande National Forest
Colorado State Forest Service
Counties Of:
Rio Grande, Saguache, Hindsdale, Mineral, Alamosa, Conejos

C. Equipment Rental Agreements

A copy of these agreements (on a per incident basis) are available in dispatch as part of the service and supply plan.

D. Contract Suppression and Prescribed Fire Resources

SLV BLM does not utilize contract suppression and prescribed fire resources.

VI. Monitoring and Evaluation

Adaptability is of utmost importance to this FMP. For effective "adaptive management" (a feedback approach to management that uses monitoring results to plan future actions) land management agencies must rely upon a continuous process of interagency and public feedback to monitor the outcomes and consequences of the selected management strategies.

Managers and staff will analyze the cumulative effects of the previous fire seasons, examine monitoring results, and incorporate new information into the management strategy. This analysis lends to the dynamic nature of this planning effort. The analysis will include both wildland fire data and fuels treatment data. Also, consideration of what's being done on adjacent properties may necessitate changing a fire management zone classification (for ex. new subdivisions, meeting acreage objectives, and completion of fuels reduction projects). This data will also be measured against the National Fire Plan and 10-Year Comprehensive Strategy Implementation Plan.

This FMP and associated Fire Management Units are designed to be dynamic to incorporate new scientific and monitoring data, changing landscape conditions, and or emerging management concerns. While the general philosophy of this FMP will not change, details within areas may change. Adjustments (refining fire management zone boundaries, authorizing a more conservative management approach based on the previous years' activity, changing the allowable burned acreage, adjustments of fire management zone borders and or classification as counties and other agencies complete and or update their Fire Management Plans, etc.) would not require amending the FMP but would be done through plan maintenance. Major changes, like a plan revision, would require amending the FMP.

Fuels Reduction Project Monitoring

The BLM conducts monitoring on the parcels of land where fuel reduction treatments are completed. The primary objectives for the treatments are to reduce hazardous fuels accumulation, improve condition class, reduce potential for crown fire spread on the treatment areas, as well as improving forage for wildlife. A monitoring plan to determine the degree of fuel reduction accomplished and the secondary effects the fuel reduction treatments on the local terrestrial plant communities has been developed. This monitoring protocol also requires subsequent monitoring in the first, third and fifth years after treatment. The plan is designed to allow the BLM to estimate the reduction of cover and density of live trees in the project areas and evaluate the effect that the reductions have on secondary factors such as changes in herbaceous and shrub cover and composition, presence and cover of non-native weedy species, and changes in the proportion of downed litter and bare ground (See **Appendix J**: Monitoring Plan).

Glossary of Terms

FPA – Fire Program Analysis - the new fire analysis software program that will become available in October 2004. The first module will analyze initial attack resources at the Fire Planning Unit level.

FPU-Fire Planning Unit –The FPU is defined to describe the geographic planning area. It can include a single or multiple LUP planning area(s), cross jurisdictional boundaries including adjacent BLM office lands, and/or other partner lands. The FPU will be a key component of the new Fire Program Analysis (FPA) software program. FPA defines a FPU as the geographic area for fire management analysis. Fire Planning Units are not predefined by the agency administrative office boundaries, and may relate to one or more agencies. They may be described spatially. A Fire Planning Unit consists of one or more Fire Management Units.

FMU-Fire Management Unit - An FMU is any land management area definable by objectives, management constraints, topographic features, access, values to be protected, political boundaries, fuel types, major fire regime groups, and so on, that set it apart from the management characteristics of an adjacent FMU. Fire Management Units are scalable, and cannot be separated geographically. The FMU's may have dominant management objectives and pre-selected strategies assigned to accomplish these objectives. The development of FMU's should avoid redundancy. Each FMU should be unique as evidenced by management strategies, objectives and attributes.

Acronyms

ACEC	Area of Critical Environmental Concern
AMR	Appropriate Management Response
AOP	Annual Operating Plan
BA	Biological Assessment
BI	Burning Index
BLM	Bureau of Land Management
CAR	Communities at Risk
CC	Condition Class
EFRP	Emergency Fire Rehabilitation Plan
ERC	Energy Release Component
ESA	Endangered Species Act
ESR	Emergency Stabilization and Rehabilitation
FIL	Fire Intensity Level
FMP	Fire Management Plan
FMU	Fire Management Unit
FPA	Fire Program Analysis
FPD	Fire Protection District
FRCC	Fire Regime Condition Class
FUMA	Fire Use Manager
FWFMP	Federal Wildland Fire Management Policy
ICS	Incident Command System
IM	Internal Memorandum
ISO	Incident Support Organization
LUP	Land Use Plan
MIST	Minimum Impact Suppression Tactics
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NFDRS	National Fire Danger Rating System
NFP	National Fire Plan
NOAA	National Oceanic Atmospheric Administration
NPS	National Park Service
NWCG	National Wildfire Coordination Group
RAWS	Remote Automated Weather Stations
RMRS	Rocky Mountain Research Station
SHPO	State Historic Preservation Office
SLV	San Luis Valley
SRMA	Special Recreation Management Areas
SSS	Special Status Species
USDA	United States Department of Agriculture
USDI	United States Department of Interior
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
WFSA	Wildland Fire Situation Analysis
WFU	Wildland Fire Use
WSA	Wilderness Study Area
WUI	Wildland Urban Interface

Appendix A- Maps

B- FMU Descriptions

C- Threatened & Endangered/ Special Status Species Wildland Fire Suppression Guidelines

D- SLV PLC: Specific Action Preparedness Guide: Level I-V

E- Sample Restrictions Orders

F- Aviation Management Plan

G- WFSA Instructions

H- SLV PLC Go-No-Go Checklist

I- Incident Complexity Analysis

J- Monitoring Plan

K- Endangered Species and Fire Policy Clarification

L- Tabular Crosswalk Between the 1995 and 2001 Federal Fire Policies