UPPER COLORADO RIVER
INTERAGENCY FIRE MANAGEMENT
NPS Colorado National Monument
BLM Grand Junction and Glenwood Springs
USFS White River and Grand Mesa National Forests

Fire Management Plan

Wildland Fire Management & Prescriptive Vegetation Treatment Guidance

Department of the Interior
Bureau of Land Management
Glenwood Springs Field Office

2002 (Revised 09/2009)

UPPER COLORADO RIVER

INTERAGENCY FIRE MANAGEMENT

REVISED FIRE MANAGEMENT PLAN

FOR THE

GLENWOOD SPRINGS FIELD OFFICE

PREPARED BY THE

GLENWOOD SPRINGS FIELD OFFICE

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I. Introduction

National Fire Policy (NFP) calls for an interagency and multidisciplinary approach to managing wildland fires, since fires respect no jurisdictional boundaries. The ultimate goal is a fully integrated fire management program with uniform policies and practices providing for a seamless, cross-boundary approach to wildland fire management. Recognizing that fire planning procedures are different among all federal land management agencies, a common template for fire management planning was developed. This document is the integration of the existing Glenwood Springs Field Office (GSFO) FMP completed in 2002 into the interagency template.

I.A. Purpose

This Fire Management Plan (FMP) identifies resource values and conditions pertaining to fire management in the Bureau of Land Management (BLM), Glenwood Springs Field Office (GSFO). The FMP recommends strategies for:

- Wildland Fire Suppression,
- Wildlland Fire Managed for Resource Benefit,
- Prescribed Fire,
- Non-Fire Fuels Treatment ,
- Emergency Stabilization and Rehabilitation (ESR), and
- Community Assistance/Protection.

These strategies, which are addressed in detail in Chapters III and IV, are in conformance with and would implement the decisions and direction within the GSFO Resource Management Plan (RMP) as amended in September 2002 and the GSFO Roan Plateau Planning Area Including Naval Oil Shale Reserves 1 & 3 Resource Management Plan Amendment in August 2006.

The fire management strategies presented here will be considered in preparation of the Annual Work Plan and development of annual budget requests. Proposed actions, alternatives, and environmental analyses in compliance with the National Environmental Policy Act (NEPA) will be derived from these strategies and will be used in the development of site-specific projects. The information in this plan may strengthen cumulative effects analysis when planning and analyzing site-specific projects. In addition, this FMP lays the foundation for future collaborative efforts involving interagency partners and state and local cooperators.

I.A.1 National Direction for Fire Management Planning

The FMP was completed to comply with the Federal Wildland Fire Management Policy and Program Review-1995 and 2001; 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 2001 Federal Wildland Fire Management Policy directs BLM Field Offices to have an approved FMP for every area with

burnable vegetation. FMPs define a strategy for managing and prioritizing wildland fire and prescribing vegetation treatments for fuel hazard reduction and resource benefit.

I.B. Relationship to Environmental Compliance

The FMP is tiered from the 1988 Glenwood Springs Resource Area (GSRA) Resource Management Plan (RMP) which is tiered from agency policies. The 1988 GSRA (see Map 1B) RMP did detail general fire management zones (Fire Exclusion, Fire Management, Limited Suppression). However specific zone boundaries, management prescriptions and resource goals were never established in a FMP. Without an approved FMP, the GSFO had no strategy for; managing and prioritizing wildland fire, prescribing vegetation treatments for fuel hazard reduction and resource benefit, or utilizing wildland fires to accomplish land use and resource management objectives. The lack of a detailed FMP led to aggressive suppression action on all wildland fires. Although firefighter safety and public safety and resource concerns were always considered in selecting a fire management strategy, resource benefits could not be a primary consideration.

Land uses, land issues and vegetation (fuels) have changed since the completion of the 1988 RMP, especially in the private land - public land interface. The GSFO wildland fire and vegetation management now reflects a consideration of fire history, land status, issues, concerns, and other resource objectives. Strict fire control has been replaced by more balanced fire management which emphasizes protection and lets fire function as a natural process within certain prescriptions in specific areas. Fire managers have latitude to consider:

1. Human safety,
2. Protection of improvements, property, cultural resources, threatened or endangered species, and high value resources,
3. Return fire to its natural role in the ecosystem.
4. Enhancement of natural resources that can benefit from the careful application of fire,
5. Hazardous fuel reduction, and
6. Fiscal efficiency of fire management operations.

Environmental Assessment (EA) Number: CO 140-2001-0051 amended the GSRA RMP of 1984 (Revised 1988). The FMP EA served as the analysis for implementing wildland fire management. The FMP is categorically excluded from further NEPA analysis, because it does not make decisions outside the scope of the RMP. The EA also served as a programmatic analysis (general guidance) for “fuel hazard reduction” treatments and vegetation treatments that would benefit resources. A future site-specific document that complies with the National Environmental Policy Act and other applicable laws and regulations will be written for each prescribed vegetation treatment, incorporating this document by reference. An EA will be prepared to analyze changes or updates to the FMP that are not adequately addressed by other NEPA documents. Prescribed vegetation treatments may also be derived from research, assessments and other plans.

The FMP is also consistent with conservation measures outlined in pertinent programmatic BOs, as well as conservation measures and agreements resulting from formal consultation pursuant to the Endangered Species Act (ESA). Future actions potentially affecting ESA listed species will be subject to consultation as needed.

I.B.1 Adaptability and Plan Monitoring

Adaptability is of utmost importance to this FMP. As provided in H-1601-1 - Land Use Planning Handbook, the FMP allows managers seasonal and annual application flexibility, based on factors such as resources, weather and operational capability. 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.

The fire suppression information presented in this FMP will be updated regularly to ensure that the most current information is available for use in the resource and budget allocation process. The fire management strategies and priorities recommended in this FMP will be updated as appropriate to reflect current issues and conditions. Adjustments (refining zone boundaries, authorizing a more conservative management approach based on the previous years' fire activity, changing the allowable burned acreage, border adjustments as counties and other agencies complete their FMPs, etc.) will not require amending the RMP but would be done through plan maintenance. Major changes, like revising FMUs, would require amending the RMP.

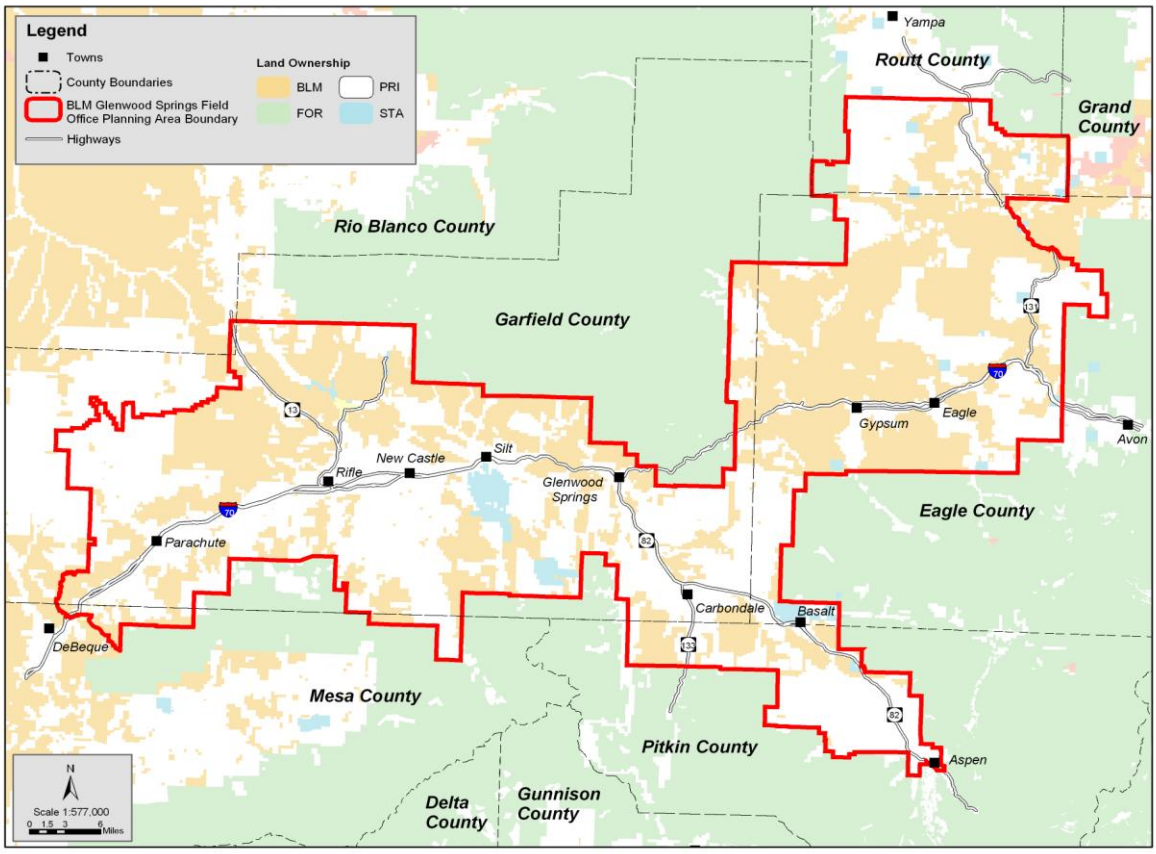
I.C. Collaboration

The GSFO FMP was coordinated across ownership and jurisdictional boundaries. The neighboring BLM Field Offices have corresponding FMPs for the respective Resource Areas. In 2003 the White River National Forest completed a corresponding FMP for adjacent forest lands. The 2000 Colorado Legislature passed House Bill 1283 which clarified responsibilities for wildfire management. The bill redefines the responsibilities of Sheriff's, State Board of Agriculture, and the State Forester from preventing and controlling wildland fires to managing wildland fires. House Bill 1283 authorizes counties to prepare and implement FMPs that detail individual County polices on fire management for prescribed burns or natural ignition burns on lands owned by the State or county.

I.C.1 Agencies Covered by this FMP

The FMP covers fire management and vegetation treatment responsibilities on 567,000 acres of public land administered by the BLM's GSFO in: Eagle, Garfield, Pitkin, Routt, Mesa and Rio Blanco Counties in Colorado (Figure I.C.1).

Figure I.C.1



I.C.2 Collaboration during Development of the Plan

A Notice of Intent to amend the RMP for the management of wildland fire and prescriptive vegetation treatments was published in the Federal Register on May 24, 2001 (Volume 66, Number 101, Page 28759-28760).

In addition to agency coordination, public open houses were held in Glenwood Springs, Colorado on June 26, 2001 and Eagle, Colorado on June 28, 2001. The open houses provided ideas and suggestions that helped create a draft FMP. The GSFO asked for comments on the draft FMP via a formal comment period which ran from July 30, 2001 through August 31, 2001. Comments were accepted and coordination with local, State and Federal agencies continued through April 2002. The 60-day Governor's consistency review and the 30-day protest period occurred in June and July of 2002 and both ended on August 2, 2002. Throughout the planning process interested persons could visit the GSFO website at http://www.co.blm.gov/gsra/gshome.htm or contact the project planner for current information or to see maps of the proposed fire management zones.

Consultation occurred with: the Colorado State Forest Service, Rio Blanco County, Routt County, Mesa County, Town of Eagle, Town of Glenwood Springs, Town of Aspen, Town of Rifle, Town of Gypsum, Town of Parachute, Town of New Castle, Town of Silt, local volunteer fire departments, Colorado Division of Wildlife, US Forest Service, US Fish and Wildlife Service, and the Colorado Air Pollution Control Division.

I.C.3 Collaboration during Implementation

Federal, State, and interagency coordination were essential in the development of the FMP and will be fundamental in the application of the FMP. The BLM participates in a fully integrated fire management program with the White River National Forest (WRNF), the Grand Mesa National

Forest and the Colorado National Monument (COLM). The Upper Colorado River (UCR) Interagency Fire Planning Unit (FPU) (Figure I.C.3) provides preparedness, suppression, prevention and fuels management services to the above agencies and the Grand Valley Ranger District of the Grand Mesa - Uncompahgre - Gunnison National Forests.

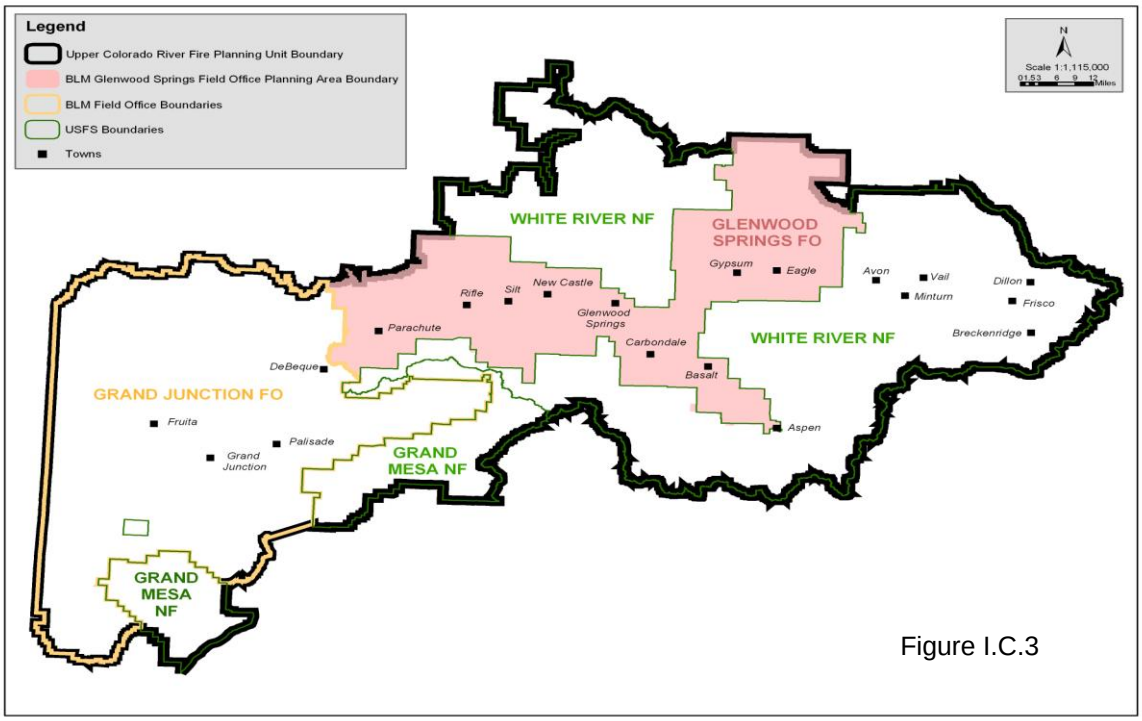


Figure I.C.3

Planning Coordination - The 2000 Colorado Legislature passed House Bill 1283 which clarified responsibilities for wildfire management. The bill redefines the responsibilities of Sheriff's, State Board of Agriculture, and the State Forester from preventing and controlling wildland fires to managing wildland fires. House Bill 1283 authorizes counties to prepare and implement FMPs that detail individual county polices on fire management for prescribed burns or natural ignition burns on lands owned by the State or county.

To be the most effective, this plan will be coordinated across ownership and jurisdictional boundaries as adjoining counties and the U.S. Forest Service complete fire planning. The intention is the creation of a seamless, coordinated, interagency effort that specifies appropriate management actions for wildland fires and prescriptive vegetation treatments.
In 2000, the Colorado Legislature authorized counties to create countywide wildland FMPs. Such plans may include not only county and State lands but also private and Federal lands where landowners and managers are willing to cooperate. The BLM immediately supported the effort by providing maps, information, technical assistance, and financial support to counties in which the agency managed lands.

Cooperative Arrangements - The UCR FPU has developed cooperative arrangements to cover administrative and jurisdictional responsibilities that provide for:

- The use of closest-forces and total mobility concepts for wildland fire suppression, including personnel, equipment, and supplies;
- Development and use of fire equipment and supply caches compatible with total interagency requirements by local, geographical, and national needs;
- Training to mutually agreeable common standards and curricula;
- Mutually acceptable performance qualifications and standards for all fire management positions;

- Mutual assistance for managing wildland fires that are managed for resource benefits; and
- Mutual assistance for conducting hazardous fuels reduction, wildland urban interface treatments, and ecosystem restoration and maintenance using prescribed fire.

Wildland Urban Interface (WUI) Project Collaboration - That area where homes meet wildlands is called the wildland-urban interface. The wildland-urban interface is more than a geographic area where structures intermingle with forests. It is a set of conditions where flammable structures exist within the reach of ignition sources (fire-brands) from burning wildlands. The potential exists in wildland-urban interface areas for extremely dangerous and complex fire conditions which pose a tremendous threat to public and firefighter safety.

Effective fire prevention is critical because of the values at risk. As the region's population grows, the challenge of protecting people, their homes, businesses, and natural resources, escalates yearly. A recent Denver Post article estimated that Colorado's population in the "red zone" – where homes are sprinkled in and around 6 million acres of forest - grew by 33 percent from 1990 to 2000. The population in that red zone is now at 1 million people.

Public Lands managed by the UCR FPU are intermingled with private lands and contain a large percentage of wildland-urban interface. For example, approximately 80% of the public lands managed by the GSFO are within one mile of private land. This intermixed landscape means wildland fires have a heightened potential to spread onto private property, destroying homes and valued landscapes.

In addition, many homes are being built and maintained without regard to wildland fire and, in some cases, no efforts have been made by residents to protect themselves and their property from wildland fire. Houses are built of flammable material and surrounded by wildland vegetation that is thick and choked with dead material. Such development fragments the land, making it difficult to protect homes and difficult to apply ecosystem-based land management strategies. The answer is not one of finding new solutions but of implementing known solutions. For example, vegetation treatments can; build defensible spaces around homes, help keep wildland fires smaller, and allow fire to play a role in natural communities.

The UCR FPU coordinates local fire protection agencies and participates in, local projects to reduce wildfire risks and damages by implementing proactive community projects.

The UCR FPU works with County fire planners to identify communities and other wildland urban interface values-at-risk from wildfire and to set priorities for the mitigation of those threats. When a community or neighborhood has been identified as a priority, the BLM directs its resources to preparation of the necessary analyses and plans to reduce the fire threat on lands that the agency manages in the vicinity of the community or other values-at-risk.

Where public lands are adjacent to WUI areas, federal funding may be available for:

1. Planning and implementation of fuel treatments to mitigate risk.
2. Education and prevention efforts.
3. Completing pre-attack assessments, inventories, and plans.

Cooperative Prevention and Education - The UCR participates as a partner with other Federal, state and local fire protection agencies the creation and implementation of public and community education programs focused on mitigation and reduction of fire risk in the wildland urban interface. Projects that implement or adapt existing models such as FireFree and Firewise Communities are encouraged. Examples include education programs that lead to homeowner and community action to reduce fire risk, such as Firewise landscaping and construction, and home and property maintenance.

The USFS, Colorado State Forest Service, the Nature Conservancy, and BLM are collaborating on a series of workshops to identify a consistent message about wildland fire and forest health. The workshops bring together people in logical geographical areas who do fire education and communications.

Interagency Coordination -The UCR FPU participates in additional interagency coordination as follows:

- Colorado BLM developed a system with the Colorado State Forest Service (CSFS) to distribute Rural Fire Assistance funds to local fire departments after the department(s) had provided a detailed plan on how the funding would be utilized. The system permits close coordination of Rural Fire Assistance funding and Volunteer Fire Assistance Funding so that more efficient use could be made of the two different sources of rural fire department support.
- A catalog of Federal, state, and private foundation funding sources has been developed and placed on the website, www.rockymountainwildlandfire.info. The catalog is intended to provide a "one-stop' location to which communities, fire departments, counties, and others can go to find financial and technical assistance to support fire and wildland health projects. Soon, the catalog will be converted to a searchable database. Development of the catalog and database is supported by the BLM, Colorado State Forest Service, and Western Forestry Leadership Coalition.
- Colorado BLM has contracted with the Natural Resource Conservation Service and Meeker Plant Center to propagate and store seed from native plants to be used in fire rehabilitation efforts.
- Worked with USFS and CSFS to organize and train fire prevention regional teams that can respond rapidly to wildland fires and prepare residents to minimize losses and distress associated with interface fires.

Cooperative Stewardship Projects - The UCR FPU may use stewardship contracting as a tool to achieve resource work identified through the normal planning processes and as described in the 10 year Implementation Plan for the NFP (www.blm.gov/nhp/efoia/wo/fy04/im2004-081attach1.pdf)

The primary objective of a stewardship contracting project is to achieve one or more of the land management goals that meet local and rural community needs. These goals as identified in the authorizing legislation may include but are not limited to:

a. road and trail maintenance or obliteration for improved water quality;
b. soil productivity, habitat for wildlife and fisheries, or other resource values;
c. setting prescribed fires to improve composition, structure, condition, and health of stands or to improve wildlife habitat;
d. removing vegetation or other activities to promote healthy forest stands, reduce fire hazards or achieve other land management objectives;
e. watershed restoration and maintenance;
f. restoration and maintenance of wildlife and fish habitat; and
g. control of noxious and exotic weeds and reestablishing native plant species.

Information Sharing - Local, State and Federal land management, scientific, and regulatory agencies exchange the requisite technical information to make fully informed fire and vegetation management decisions.

I.D. Authorities

Authorities for the development of FMPs for the UCR FPU 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 of May 22, 1974, Section 417 (Public Law 93-288)
- Federal Fire Prevention and Control Act of October 29, 1974, 88 Stat. 1535; 15 U.S.C. 2201
- The Federal Land Management and Policy Act of 1976 (FLPMA) (Public Law 94-579; 43 U.S.C. 1701)
- Federal Grants and Cooperative Act of 1977, Pub. L. 95-244, as amended by Pub. L. 97-258, September 13, 1982. 96 Stat. 1003 31 U.S.C. 6301-6308
- Supplemental Appropriation Act of September 10, 1982, 96 Stat.837
- Department of the Interior and Related Agencies Appropriation Act, (Public Law 103-32)
- Healthy Forests Initiative and Healthy Forests Restoration Act of 2003 (Public Law 108-148)
- 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).
- Departmental Manual 620 Chapter 1, Wildland Fire Management General Policy and Procedures (April 10, 1998)
- 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.
- National Environmental Policy Act of 1969 (NEPA)
- Federal Clean Air Act (CAA) and CAA Amendments of 1990
- Endangered Species Act of 1973, Section 7
- The Wilderness Act of 1964
- The Archaeological Resources Protection Act of 1979
- The Archaeological and Historical Preservation Act of 1974, as amended
- National Historic Preservation Act (NHPA) of 1966, Section 106
- NPS Organic Act of 1916 (16 U.S.C. Section 1)
- NPS Director's Order 18, Wildland Fire Management (DO-18) (November 1998)
- NPS Reference Manual 18, Wildland Fire (RM-18). (February 1999)
- NPS Director's Order 12, Environmental Impact Analysis (DO-12)
- NPS Director's Order 28, Cultural Resource Management (DO-28)
- NPS Management Policies (2001)

II. Relationship to Land Management Planning/Fire Policy

This chapter outlines the national policy, regional guidance, BLM state policy and local land use planning guidance that provide direction for this FMP.

II.A. National Policy

II.A.1 The Federal Wildland Fire Management Policy (FWFMP)

The FWFMP was developed by the Secretaries of the USDI and USDA in 1995 to respond to dramatic increases in the frequency, size, and catastrophic nature of wildland fires in the United States. This policy was reviewed and reaffirmed by the Secretaries in 2001. The 2001 Review and Update of the 1995 FWFMP consists of findings, guiding principles, policy statements, and implementation actions. The guiding principles, policy statements, and implementation actions are called the 2001 FWFMP. This replaces the 1995 FWFMP. The 2001 Review and Update of the 1995 FWFMP directs Federal agencies to achieve a balance between suppression to protect life, property, and resources, and fire use to regulate fuels and maintain healthy ecosystems.

The FWFMP provides nine guiding principles that are fundamental to the success of the Federal wildland fire management program and the implementation of review recommendations. These "umbrella" principles compel each agency to review its policies to ensure compatibility. The DOI BLM polices were reflected through the fire management planning process and this plan.

Guiding Principles - The guiding principles are:

1. Firefighter and public safety is the first priority in every fire management activity.
2. The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process.
3. FMPs, programs, and activities support land and resource management plans and their implementation.
4. Sound risk management is a foundation for all fire management activities.
5. Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
6. FMPs and activities are based upon the best available science.
7. FMPs and activities incorporate public health and environmental quality considerations.
8. Federal, State, tribal, local, interagency, and international coordination and cooperation are essential.
9. Standardization of policies and procedures among federal agencies is an ongoing objective.

Policy Statements - Policy statements related to fire management and fire management planning:

1. Safety - Firefighter and public safety is the first priority. All FMPs and activities must reflect this commitment.

2. Fire Management and Ecosystem Sustainability - The full range of fire management activities will be used to help achieve ecosystem sustainability, including its interrelated ecological, economic, and social components.

3. RESPONSE TO WILDLAND FIRE - Fire, as a critical natural process, will be integrated into land and resource management plans and activities on a landscape scale, and across agency boundaries. RESPONSE TO WILDLAND FIRE is based on ecological,

social, and legal consequences of the fire. The circumstances under which a fire occurs; the likely consequences on firefighter and public safety; the welfare of natural and cultural resources; and the values to be protected dictate the appropriate management response to the wildland fire.

4. Use of Wildland Fire - Wildland fire will be used to: protect, maintain, and enhance resources and, as nearly as possible, be allowed to function in its natural ecological role. Use of fire will be based on approved FMPs and will follow specific prescriptions contained in operational plans.

5. Rehabilitation and Restoration - Rehabilitation and restoration efforts will be undertaken to protect and sustain ecosystems, public health, and safety, and to help communities protect infrastructure.

6. Protection Priorities - The protection of human life is the single, overriding priority. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources will be based on the values to be protected, human health and safety, and the costs of protection. Once people have been committed to an incident, these human resources become the highest value to be protected.

7. Wildland Urban Interface (WUI) - The operational roles of federal agencies as partners in the WUI are: wildland firefighting, hazardous fuels reduction, cooperative prevention and education, and technical assistance. Structural fire suppression is the responsibility of tribal, State, or local governments. Federal agencies may assist with exterior structural protection activities under formal Fire Protection Agreements that specify the mutual responsibilities of the partners, including funding. (Some federal agencies have full structural protection authority for their facilities on lands they administer, and may also enter into formal agreements to assist State and local governments with full structural protection).

8. Planning - Every area with burnable vegetation must have an approved FMP. FMPs are strategic plans that define a program to manage wildland and prescribed fires based on the area's approved land management plan. FMPs must provide for firefighter and public safety; include fire management strategies, tactics, and alternatives; address values to be protected and public health issues; and be consistent with resource management objective, activities of the area, and environmental laws and regulations.

9. Science - FMPs and programs will be based on a foundation of sound science. Research will support ongoing efforts to increase our scientific knowledge of biological, physical, and sociological factors. Information needed to support fire management will be developed through an integrated interagency fire science program. Scientific results must be made available to managers in a timely manner and must be used in the development of land management plans, FMPs, and implementation plans.

10. Preparedness - Agencies will ensure their capability to provide safe, cost-effective fire management programs in support of land and resource management plans through appropriate planning, staffing, training, equipment, and management oversight.

11. Suppression - Fires are suppressed at minimum cost, considering firefighter and public safety, benefits, and values to be protected, consistent with resource objectives.

12. Prevention - Agencies will work together with local partners and other affected groups and individuals to prevent unauthorized ignition of wildland fires.

13. Standardization - Agencies will use compatible planning processes, funding mechanisms, training and qualification requirements, operational procedures, value-to-be-protected methodologies, and public education programs for all fire management activities.

14. Interagency Cooperation and Coordination - Fire management planning, preparedness, prevention, suppression, fire use, restoration and rehabilitation, monitoring, research, and education will be conducted on an interagency basis with the involvement of cooperators and partners.

15. Communication and Education - Agencies will enhance knowledge and understanding of wildland fire management policies and practices through internal and external communication and education programs. These programs will be continuously improved through the timely and effective exchange of information among all affected agencies and organizations.

16. Agency Administrators and Employee Roles - Agency administrators will ensure that their employees are trained, certified, and made available to participate in the wildland fire program locally, regionally, and nationally as the situation demands. Employees with operational, administrative, or other skills will support the wildland fire program as necessary. Agency administrators are responsible and will be held accountable for making employees available.

17. Evaluation - Agencies will develop and implement a systematic method of evaluation to determine effectiveness of projects through implementation of the 2001 Federal Fire Policy. The evaluation will assure accountability, facilitate resolution of areas of conflict, and identify resource shortages and agency priorities.

The UCR FPU is committed to addressing the 17 policy statements in all FMPs. A tabular crosswalk between the 17 policy statements from the FWFMP and this FMP can be found in Appendix D.

Key Implementation Actions - Key implementation actions related to fire management and fire management planning:

1. Incorporate mitigation, burn plan rehabilitation, and fuels reduction and restoration activities that contribute to ecosystem sustainability into FMPs and resource management plans. There is a need to more effectively and directly integrate fire management activities with other natural resource goals.

2. Respond to wildland fires based on approved FMPs and land use plans regardless of ignition source or the location of the ignition. The management response to fires, regardless of source, must be based on the approved FMP. FMPs, based on the land management objectives of the area, guide the appropriate response through criteria and prescriptions.

3. Complete, or update, by the end of FY 2004 FMPs for all areas with burnable vegetation. FMPs, based on the underlying land use plans, are the principle foundation for implementation of the 2001 FWFMP.

4. Consider whether plan amendments are needed to implement the NFP and comply with the Federal Wildland Fire Management Policy if plans are not undergoing revision in the near future. A FMP in compliance with the Federal Fire Policy must be based on the area's land use plan which identifies the fire management decisions outlined in Appendix C of the Land Use Planning Handbook (H-1601-1). If a land use plan does not identify

the necessary fire decisions and if the plan is not currently scheduled to be revised or replaced, proceed with a land use plan amendment to ensure fire guidance will be in place by the end of FY 2004.

5. Suppress fires in areas without approved FMPs or in areas with FMP that are not consistent with the 2001 Federal Fire Policy.

How the FMP Implements the Policies of the National Fire Plan and the 10-Year Comprehensive Strategy - Under the FWFMP, Federal land management agencies with vegetation capable of sustaining wildland fire are required to prepare FMPs. The FMP is a strategic plan that defines a program to manage wildland and prescriptive vegetation treatments. The foundation of the FMP is the agency's land use plan. FMPs are dynamic documents that are reviewed annually and updated whenever better information is available. The plan is supplemented by operational plans such as preparedness plans, preplanned dispatch plans, prescribed fire plans, and prevention plans. Development of this collaborative FMP is an essential implementation task and performance measure for accomplishing the goals of the NFP and the 10-Year Comprehensive Strategy. The FMP is the on-the-ground, operational framework by which the UCR FPU will implement national direction for: wildland fire suppression, Wildland fire managed for resource benefit, fuels treatment, emergency stabilization and rehabilitation (ESR), and community assistance/protection programs.

The FWFMP establishes the concept of RESPONSE TO WILDLAND FIRE. A wildland fire that is not a prescribed fire requires a RESPONSE TO WILDLAND FIRE. The RESPONSE TO WILDLAND FIRE, which can range from aggressively suppressing the incident as a wildland fire, to managing the incident as a WILDLAND FIRE MANAGED FOR RESOURCE BENEFIT event, is guided by the strategies and objectives outlined in the RMP reflecting land and resource values and objectives. The FMP outlines fire management activities and procedures to accomplish those objectives. The objective of a WILDLAND FIRE MANAGED FOR RESOURCE BENEFIT project is to obtain resource benefits whereas a wildland fire is to be extinguished at minimum cost.

The FWFMP identified the need for a new approach to fire management on federal lands and led to the development of the NFP (www.fireplan.gov).

THE NATIONAL FIRE PLAN

Working with Congress, the Secretaries of Agriculture and Interior jointly developed the National Fire Plan to respond to severe wildland fires, reduce their impacts on communities, and assure sufficient firefighting capabilities for the future. The National Fire Plan is a long-term investment that will help protect communities and natural resources, and most importantly, the lives of firefighters and the public.

Key Points of the National Fire Plan

Firefighting: Maintain a cost effective level of preparedness in firefighting and prevention.

Rehabilitation and Restoration: Rehabilitate fire damaged wildlands and restore high-risk ecosystems.

Hazardous Fuels Reduction: Invest in projects to reduce fire risk with focused effort in wildland urban interface areas.

Community Assistance: Work with communities to reduce the risks of catastrophic fire.

Accountability: Establish and maintain a high level of accountability including oversight reviews, progress tracking and performance monitoring.

http://www.fireplan.gov/

II.A.2 The National Fire Plan

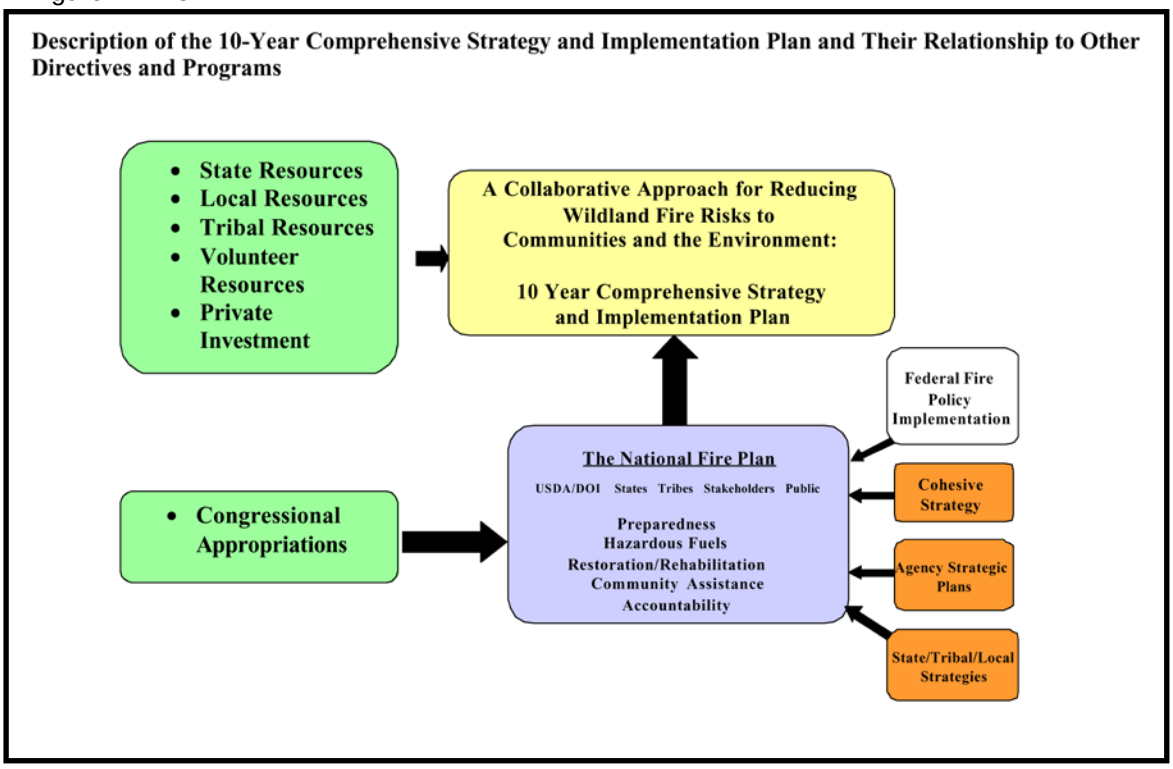
The Secretaries of USDI and USDA initiated the NFP in 2000 to address the needs identified in the FWFMP. The NFP is not an actual document, but a nationally coordinated effort to protect communities and natural resources from the harmful effects of increasing wildland fire occurrence and severity in the United States. The NFP establishes the overarching purpose and goals, which are articulated and carried forward through the 10-Year Comprehensive Strategy (USDI, USDA 2001), the Cohesive Strategy for Protecting People and Sustaining Natural Resources (USDA 2000), and other supporting documents.

II.A.3 A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment - The 10 Year Comprehensive Strategy

The 10-Year Comprehensive Strategy (http://www.fireplan.gov/reports/7-19-en.pdf) was prepared in 2001 by the USDI, USDA, and the Western Governor's Association to provide a more detailed framework for accomplishing the goals of the NFP. The 10-Year Comprehensive Strategy reflects the views of a broad cross-section of governmental and nongovernmental stakeholders.

Successful implementation of the *10-Year Comprehensive Strategy* requires a collaborative process among multiple levels of government and a range of interests.

Figure - II.A.3



II.A.4 The Cohesive Strategy for Protecting People and Sustaining Natural Resources

The Cohesive Strategy for Protecting People and Sustaining Natural Resources was prepared in 2000 by the USDA. It projects the quantity and rate of fuels reduction treatments required on a landscape scale to restore fire-adapted ecosystems and protect communities from increasing wildland fire. The Cohesive Strategy estimates fuels reduction treatments needing to increase fivefold in order to achieve these goals. It also concludes that treatments are needed both within and outside the WUI.

Fire Regime Condition Class - The Cohesive Strategy establishes a classification system, known as the Fire Regime Condition Class (FRCC), which describes the amount of departure of an area or landscape from the historic to present conditions. This departure from the natural state may be a result of changes in one or more ecosystem components such as fuel composition, fire frequency, or other ecological disturbances. As mandated by national direction,

this FMP utilizes the FRCC classification system to rank existing ecosystem conditions and prioritize areas for treatment. As taken from the Cohesive Implementation Strategy, FRCC is defined as follows:

Fire Regime Condition Class 1 (CC1): Fire regimes in this condition class are within historical ranges. Thus, the risk of losing key ecosystem components from the occurrence of fire remains relatively low. Maintenance management such as prescribed fire, mechanical treatments, or preventing the invasion of non-native weeds, is required to prevent these lands from becoming degraded. Approximately 18% (106,431 acres) of the GSFO managed public lands are classified as CC1.

Fire Regime Condition Class 2 (CC2): Fire regimes on these lands have been moderately altered from their historical range by either increased or decreased fire frequency. A moderate risk of losing key ecosystem components has been identified in these lands. To restore their historical fire regimes, these lands may require some level of restoration as through prescribed fire, mechanical or chemical treatments, and the subsequent reintroduction of native plants. Approximately 82% (484,855 acres) of the GSFO managed public lands are classified as CC2.

Fire Regime Condition Class 3 (CC3): These lands have been significantly altered from their historical range. Because fire regimes have been extensively altered, risk of losing key ecosystem components from fire is high. Consequently, these lands verge on the greatest risk of ecological collapse. To restore their historical fire regimes before prescribed fire can be utilized to manage fuel or obtain other desired benefits these lands may require multiple mechanical or chemical restoration treatments, or reseeding.

As noted above, approximately 98% of the GSFO managed acres are classified as CC1, CC2, or CC3, with the remaining 2% of the area consisting of non-vegetative landscape (*e.g*., water and rock outcrops).

Historic Fire Regime - The Cohesive Strategy utilizes the concept of Historic Fire Regime (HFR). These regimes represent fire intervals prior to Euro-American settlement and are calculated and classified by analyzing natural vegetation, known fire cycles, and fire history data (Table A). Based on the FRCC and HFR classifications, the Cohesive Strategy established the following national priorities for implementing vegetation treatments:

- Treat vegetation types within HFR Groups I, II, and III,
- Treat lands that have been either significantly altered (CC3) or moderately altered (CC2) from their historic range, and
- Treat at least 2% of an agency's administered lands annually.

II.A.5 National BLM Special Status Species Policy

It is national policy to:

1. Conserve federally listed and proposed threatened or endangered species and the habitats on which they depend.
2. Ensure that actions requiring authorization or approval by the BLM are consistent with the conservation needs of special status species (SSS) and do not contribute to the need to list any SSS, either under provisions of the ESA or other provisions of this policy.

The terms conserve and conservation in this national policy and pursuant to the ESA are defined as the use of all methods and procedures necessary to improve the status of federally listed species and their habitats to a point where the provisions of the ESA are no longer necessary.

Fire management planning and activities on site-specific projects should consider the following where ESA species occur:

1. Recovery or conservation plans and activities that promote species recovery in the SFO.

2. Terms and conditions of consultation with the USFWS, NOAA Fisheries, and IDFG to promote species recovery in the SFO.
3. Where and how fire management activities can conserve SSS, especially ESA listed proposed and candidate species.

II.A.6 The Wilderness Act of 1964

The Wilderness Act provisions apply to all fire management activities undertaken on wilderness lands. The Wilderness Act states that "... measures may be taken as may be necessary in the control of fire...". The act also generally prohibits motorized equipment or mechanized transport in designated wilderness areas; however it allows them "as necessary to meet minimum requirements for the administration for the area for the purposes of this act."

Fire and fuels management actions will meet the non-impairment mandate for wilderness study areas (WSAs). In WSAs fire and fuels management will strive to avoid unnecessary impairment that would affect the suitability toward wilderness designation of these areas. The ultimate goal would be to allow fire to play its natural role in these ecosystems.

II.B. Colorado State Guidance

In January 1997 the Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health (http://www.co.blm.gov/standguide.htm) and amended all RMPs in the State. Standards describe the conditions needed to sustain public land health and apply to all uses of public lands. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands.

Standard 1: *Upland* soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff.

Standard 2: Riparian systems associated with both running and standing water function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods. Riparian vegetation captures sediment, and provides forage, habitat and bio-diversity. Water quality is improved or maintained. Stable soils store and release water slowly.

Standard 3: Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations, and ecological processes.

Standard 4: Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.

Standard 5: The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado. Water Quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and anti-

degradation requirements set forth under State law as found in (5 CCR 1002-8), as required by Section 303(c) of the Clean Water Act.

II.C. Land Use Plan Guidance

GSFO RMP Resource Program Direction - The GSFO RMP addresses a wide range of resources, management programs and issues and contains a comprehensive description of resource considerations. The following are major RMP decisions that fire management strategies can help achieve.

- maintain or increase wildlife populations
- stabilize grazing operations
- protect critical watersheds
- protect visual resources

In March of 1999 the *Oil and Gas Leasing & Development Final Supplemental Environmental Impact Statement – Record of Decision* amended the GSFO RMP. Although the lease stipulations and Conditions of Approval (COAs) were developed to apply to oil and gas leasing and development, it is intended that the same or similar measures be applied to other public land uses in order to maintain or achieve the same resource conditions. The FMP identifies administrative measures and constraints needed to apply comparable measures to wildland fire management and prescriptive vegetation treatments. Specific guidelines for wildland fire suppression and prescriptive vegetation treatments can be found in III.D.2-3 and IV.C.1.4, respectively.

GSFO Fire Program Direction - The 2002 land use plan amendment (EA # CO 140-2001-0051) (http://www.co.blm.gov/gsra/documents/FMP_EA_signed_version.pdf) for this FMP complemented the decisions in the GSFO RMP and provides the specific fire program direction to help achieve National and RMP goals and objectives.

III. Wildland Fire Management Strategies

Chapter III further refines the broad programmatic direction provided in Chapter II and provides specific guidance on how wildland fire will be managed. This section summarizes resource and fire management conditions and presents management direction in the form of priorities, objectives, and strategies.

III.A. General Management Considerations

Wildland fire does not respect jurisdictional boundaries. No single federal, state, local, tribal, or volunteer agency alone can handle all wildland fire that may occur in its jurisdiction. Agencies must work together to exchange support, protection responsibilities, information, and training, providing an efficient method for protecting lives, property, and natural resources. The UCR FPU works collaboratively and coordinates with local partners in fire and resource management across agency boundaries. The following incorporates the core principles of the 10 Year Comprehensive Strategy.

III.A.1 Collaboration and Coordination to Implement Wildland Fire Management Direction

Organization Chart - An organization chart for the interagency fire management staff unit is included in Appendix C. Planned and/or unfunded positions are denoted in addition to existing staffing.

Local cooperators primarily in an interface setting for initial and extended attack incidents supplement the existing interagency staff and associated preparedness resources. Local resources are used for these purposes as well as to suppress escaped fires. National aviation and smokejumper resources are used subject to their availability as appropriate.

Supplemental resources are ordered to provide increased firefighting capability during periods of high fire danger as well as during periods where ongoing and anticipated levels of initial attack would result in a draw down of local resources. Administratively determined (AD) hiring authority is used on a discretionary basis to supplement agency resources with those staffed by local cooperators outside the parameters of county cooperative fire agreements for initial attack.

Shared Personnel -The UCR FPU shares personnel as follows:

Program Leadership - The BLM portion of the UCR FPU is managed by a Unit FMO. A Zone FMO and Assistant FMO manage each Zone. The fire management expertise for the COLM is provided by an FMO who covers several NPS units.

Interagency Dispatch - The interagency dispatch center is located at the Grand Junction Air Center at Walker Field, Grand Junction, Colorado. The planned BLM staffing component of the interagency dispatch center includes the Center Manager, the Assistant Center Manager for Aviation, the Supervisory Initial Attack Dispatcher, the Supervisory Aircraft Dispatcher, Air Tanker Base Manager, two aircraft seasonal positions, an administrative assistant, and three seasonal dispatcher positions. The NPS COLM has no personnel stationed at the Grand Junction Air Center.

Shared Facilities - The UCR shares fire equipment and supply caches on a geographical basis and regional need as follows:

- West Zone Cache
- Central Zone Cache
- East Zone Cache

Cooperative Management Efforts - Exchange of Protection - When wildland fires burn on, or threaten, lands of more than one agency, joint management is carried out by the representative agencies to suppress the wildland fire. Unless otherwise provided for, an agency is expected to take prompt initial action, with or without request, on wildland fires. Where one agency takes initial action in the protective unit of the other, the initially acting agency shall continue to fight the fire until relieved by an officer of the designated management agency.

The UCR FPU has developed cooperative arrangements to cover administrative and jurisdictional responsibilities that will provide for cooperative management of personnel, equipment (including aircraft), supplies, services, and funds among the agencies.

III.A.2 Resource Advisors

The use of resource advisors (RA) is essential to adequately implement the FMP. Suppression crews may not be familiar with such things as; land uses, land management plans, resource concerns, local restrictions or access routes. The use of resource advisors allows management decisions to be made with full use of available information and local resource expertise. Not all wildland fire situations would require the on-site presence of a resource advisor. However, when management of an unplanned ignition may adversely or beneficially affect resources, the use of a resource advisor is warranted and necessary. Consult NFES # 1831 - Resource Advisor's Guide for Wildland Fire (1996). *GSFO - Fire Management Plan 10*

III.A.3 Financial Accountability

The BLM and COLM have established uniform and cost-effective measures, standards, reporting processes, and budget information in implementation plans that will fold into the Government Performance and Results Act process. The Wildfire Situation Analysis process will always include cost efficiency as a concern in all alternatives developed.

III.B. GSFO Resource Area-wide Fire Management Goals

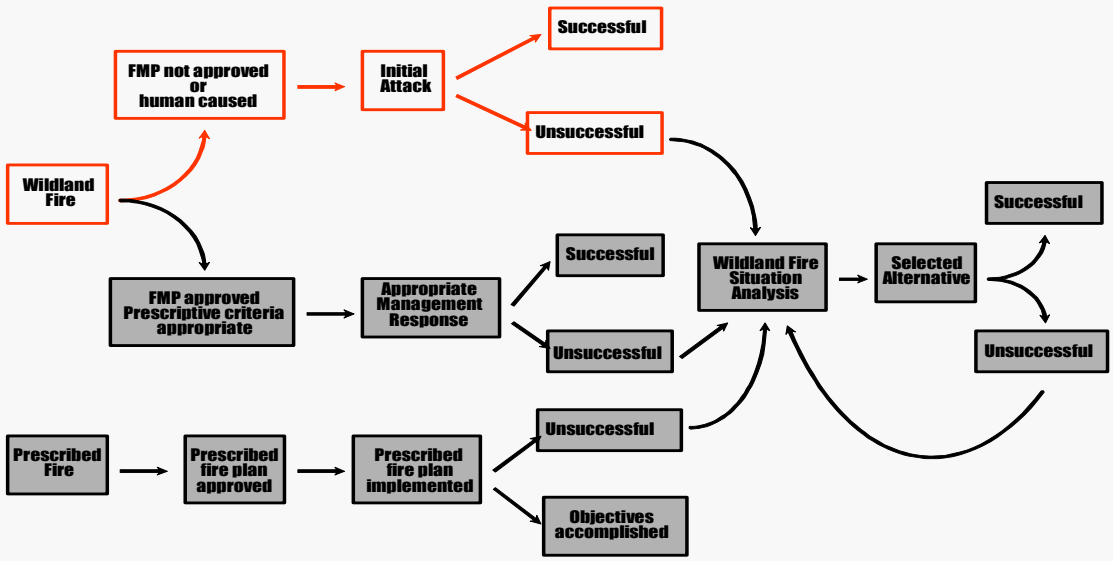
The GSFO fire program goals reflects the core principles and direction of the Comprehensive Strategy and the Cohesive Strategy where supported by the GSFO RMP. The intent of this FMP is to convey fire program direction from the NFP and the RMP to wildland fire management, fuels treatments and community assistance/protection actions. The GSFO will work safely and effectively with partners to: manage wildland fire; use prescribed fire; and use mechanical, chemical, hand, and animal vegetation treatments to:

- ***Protect human life and property***.
- Reduce hazardous fuel loading and the risks of wildfire escaping public lands to an acceptable level.
- Protect facilities on public lands (recreation sites, communication 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 or 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 historic sites.
- Minimize emissions using available, practicable methods that are technologically feasible and economically reasonable in order to minimize the impact or reduce the

potential for such impact on both the attainment and maintenance of national ambient air quality standards and achievement of federal and state visibility goals.

III.C. Wildland Fire Management Options

Figure III.C - Suppression Pathway Flowchart



As illustrated in Figure III.C, if an approved FMP (meeting NEPA compliance) is not present for a particular unit, or if a fire is human-caused, then by definition the only available option is suppression of the wildland fire and appropriate action will be taken immediately. Common sense will be used in suppression actions considering values to be protected, least cost, resource damage caused by the suppression action, and the first priority at all times, firefighter and public safety. If the initial action is unsuccessful, a WFSA will be prepared to determine the next set of management responses.

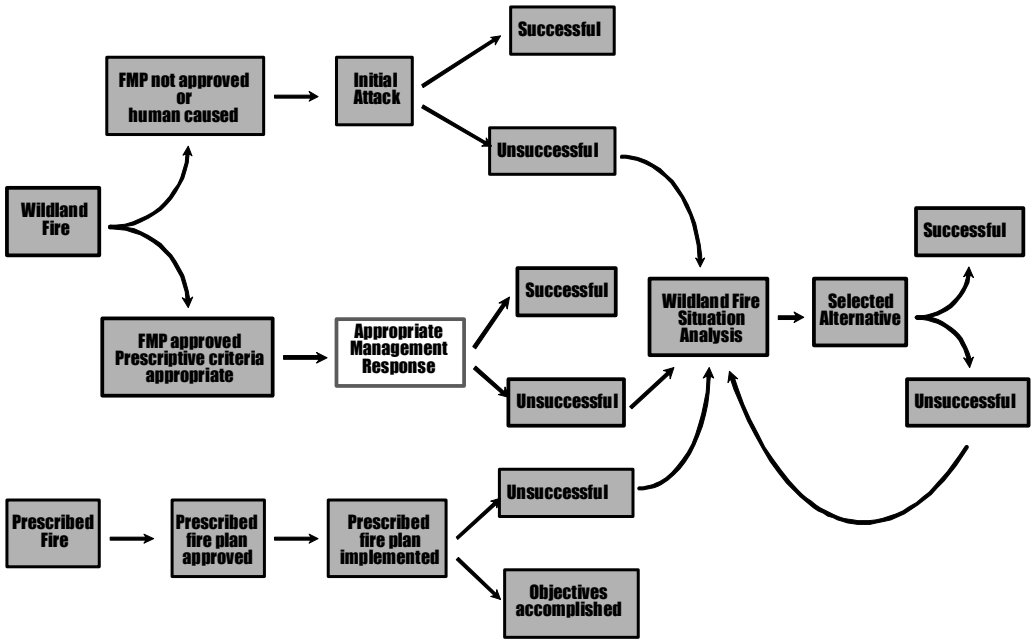
As a result of completion and approval of this fire management plan, this pathway will not be required for lightning fires occurring. While all human-caused fires will be suppressed, lightning-caused fires will receive an appropriate management response commensurate with the resource and protection objectives for the management unit in question.

III.C.1 RESPONSE TO WILDLAND FIRE or Appropriate Management Response

The appropriate management response (Figure III.C.1) is defined as the specific actions taken in response to a wildland fire to implement protection and/or fire use objectives. It allows managers to utilize a full range of responses and as conditions change, the particular response can change to accomplish the same objectives.

The appropriate management response is not a replacement term for prescribed natural fire, or the suppression strategies of; control, contain, confine, limited, or modified, but is a concept that offers managers a full spectrum of responses. It is based on objectives, environmental and fuel

III.C.1 - Appropriate Management Response Pathway Flowchart



conditions, constraints, safety, and ability to accomplish objectives. It includes wildland fire suppression at all levels, including aggressive initial attack. Use of this concept dispels the interpretation that there is only one way to respond to each set of circumstances.

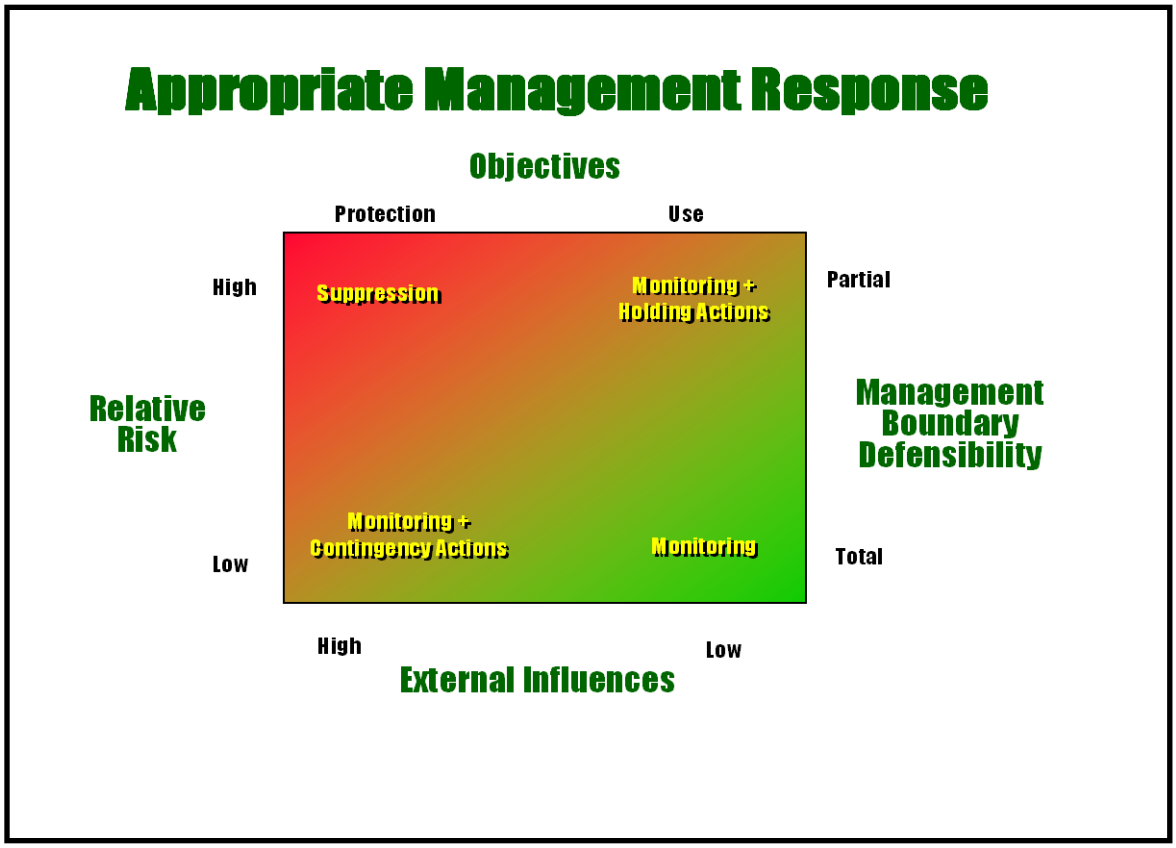
The purpose of giving management the ability to select the appropriate management response on every wildland fire is to provide the greatest flexibility possible and to promote opportunities to achieve greater balance in the program. To clarify the full range of options available under the appropriate management response, the following figure (Figure III.C.2) utilizes four variables to illustrate development of an appropriate management response. Ranges of appropriate management responses based on objectives, relative risk, complexity, and defensibility of management boundaries.

The chart can be used to estimate appropriate methods to implement desired/necessary strategies. To obtain this estimate, draw lines that connect the top and bottom variables and the left and right variables. Where the two lines intersect is a potential management response for the defined conditions. It is important to note that even when suppression action is deemed appropriate, the aggressiveness of the action taken will vary depending on the values to be protected, cost containment objectives, potential for resource damage caused by the suppression action, and the first priority at all times, firefighter and public safety.

Under the Appropriate Management Response concept, management responses are programmed to accept resource management needs and constraints, reflect a commitment to safety, are cost-effective, and accomplish desired resource objectives while maintaining the versatility to vary in intensity as conditions change. Section III.D.1 and Appendix B define what specific management responses are considered “appropriate” within each fire management unit. These
may contain all or only a portion of the full range of options available depending on resource and protection objectives for each particular unit. The Field Office Manager may choose to extinguish

any wildland fire, or manage any fire occurring in an area designated for fire use if it meets specific decision criteria found in Section III.D.1 and Appendix B.

Figure III.C.2 **-** Range of Appropriate Management Responses



III.C.2 Fire Management Categories

Public lands will be managed under one of four fire management categories for the purposes of wildland fire and prescribed vegetation management. The descriptions of Categories A - D are based on BLM Instruction Memorandum No. 2002-034 (11/15/2001) and Clarification of Fire Management Categories and RMP-Level Decisions; and H-1601-1 - Land Use Planning Handbook (Appendix C; Part I. Subpart J. Page 9).

"A"	***Areas where fire is not desired at all.***
FMUs	

General description: This category includes areas where mitigation and suppression is required to prevent direct threats to life or property. It also includes areas where fire never played a large role historically in the development and maintenance of the ecosystem or because of human development fire can no longer be tolerated without significant loss or where fire return intervals were very long.

Fire Mitigation Considerations*:* Emphasis should be focused on those actions that will reduce unwanted ignitions and threats to life, property, natural and cultural resources.

Fire suppression considerations: Emphasis should be placed on prevention, detection, and rapid suppression response and techniques. Virtually all wildland fires would be actively suppressed and no fire is prescribed unless the management ignited fire (burnout) is for the sole purpose of reducing an immediate threat to firefighter or public health and safety.

Fuel treatment considerations: Non-fire fuel treatments should be employed. Unit costs for prescribed fire would be too prohibitive to implement efficiently. Pile burning of mechanically removed vegetation is acceptable.

"B" FMUs	***Areas where unplanned wildland fire is not desired because of current conditions***

General Description: Fire plays a natural role in the function of the ecosystem, however these are areas where an unplanned ignition could have negative effects unless/until some form of mitigation takes place. Sagebrush ecosystems, for example, can fall into this category because of encroachment of cheatgrass or a prolonged lack of fire which leads to large monotypic stands of sagebrush that won't burn as they historically would have.

Fire Mitigation Considerations*:* Emphasize prevention/mitigation programs that reduce unplanned ignitions and threats to life, property, natural and cultural resources.

Fire suppression/use considerations: Fire suppression is usually aggressive.

Fuel treatment considerations*:* Fuel hazard reduction as a major means of mitigation potential risks and associated loss are a priority. Fire and non-fire fuels treatments are utilized to reduce the hazardous effects of unplanned wildland fire. Restorative treatments may consist of multiple non-fire treatments before the use of fire will be considered. Unit costs for prescribed fire are high and require stringent mitigation and contingencies. Concurrently, achieve fire protection and resource benefits, when possible.

"C" FMUs	***Areas where wildland fire is desired, but there are significant constraints that must be considered for its use.***

General Description: Areas where significant ecological, social or political constraints must be considered. These constraints could include air quality, threatened and endangered species considerations (effect of fire on survival of species), or wildlife habitat considerations.

Fire Mitigation Considerations: Programs should reduce unwanted fire ignitions and resource threats.

Fire suppression/use considerations: Ecological/resource constraints may be applied. These constraints along with human health and safety, etc., are utilized in determining the appropriate suppression tactic on a case by case basis by the incident commander and sub-unit agency administrator. Areas in this category would generally receive lower suppression priority in multiple wildfire situations than would areas in "A" or "B" FMZs.

Fuel treatment considerations: Fire and non-fire fuels treatments may be utilized to ensure constraints are met or to reduce any hazardous effects of unplanned wildfire. Significant prescribed fire activity would be expected to help attain desirable resource/ecological conditions. Prescribed fire for hazard/fuel reduction are of a lower priority than in "B" zones. Prescribed fire

unit costs are low to moderate and are generally non-complex. Concurrently, achieve fire protection and resource benefits, when possible.

"D" FMUs	***Areas where wildland fire is desired, and there are few or no constraints for its use.***

General Description: Areas where unplanned and planned wildfire fire may be used to achieve desired objectives such as to improve vegetation, wildlife habitat or watershed conditions.

Fire Mitigation Considerations: Implement programs that reduce unwanted human-caused ignitions, as needed.

Fire suppression/use considerations: These areas offer the greatest opportunity to take advantage of the full range of options available for managing wildfire under the appropriate management response. Natural occurring fires under prescribed conditions are permitted to run their course where approved Fire Management Action Plans or Prescribed Fire Plans exist. Health and safety constraints will apply. Resource use considerations similar to those described for Category C may be identified if needed to achieve resource objectives. Areas in this category would be the lowest suppression priority in a multiple fire situation.

Fuel treatment considerations: There is generally less need for hazard fuel treatment in this category. Prescribed fire for fuel hazard reduction is not a priority except where there is an immediate threat to public health and safety. If treatment is necessary however, both fire and non-fire treatments may be utilized. Prescribed fire to obtain desired resource/ecological condition is appropriate.

Figure III.C.2 – Fire Management and Vegetation Treatment Summary by Category

		Wildland Fire Management			Vegetation Treatments	
		Suppression Priority	**Suppression Strategy**	**Wildland Fire Use Strategy ***	**Prescribed Fire**	**Mechanical/ Chemical/ Hand/Other**
A FMU	Fire not desired at all.	Generally High	Aggressive suppression	No	No, except pile burning of mechanically removed vegetation	Yes
B FMU	Unplanned wildland fire not desired.	Generally High	Aggressive suppression	No	Yes, fuel hazard reduction to mitigate risks a priority	Yes
C FMU	Wildland fire desired - must consider significant constraints.	Generally Moderate	Appropriate suppression responses	No	Yes, fuel hazard reduction lower priority than "B" zones; used to attain desirable resource conditions	Yes
D FMU	Wildland fire desired - few or no constraints.	Generally Low	Appropriate suppression responses	Yes, natural occurring fires under prescribed conditions	Yes, used to attain desirable resource conditions; fuel hazard reduction is generally not a priority	Yes

III.C.3 FMU Prioritization

In the event of multiple wildland fire ignitions or limited resources/funding, priorities *within* fire management categories were also considered. The rationales for establishing priorities are derived from national, state, and local guidance. The relative ranking was established using a rating system of LOW, MODERATE and HIGH (Table III.C.3 and Appendix F) for:

- Wildland Fire Suppression,
- Wildlland Fire Managed for Resource Benefit,
- Fuels Treatment,
- Emergency Stabilization and Rehabilitation (ESR), and
- Community Assistance/Protection.

Table III.C.3 - Summary of Prioritization by FMU

Fire Management Unit	Acres	Wildland Fire Suppression	WILDLLAND FIRE MANAGED FOR RESOURCE BENEFIT	Emphasis on Fuels Treatment?	Emphasis on ESR	Community Assistance / Protection
A-140-01 Mount Logan Foothills	3,762	Low	No	Low	Low	Low
A-140-02 New Castle Watershed	6,629	High	No	High	High	Moderate
A-140-03 Glenwood Springs Debris Flow	5,933	High	No	High	High	High
A-140-04 Rifle Municipal Watershed	768	High	No	Moderate	High	Moderate
A-140-05 East Eagle	1,641	High	No	High	High	High
A-140-06 Blue Hill ACEC	3,722	Moderate	No	Moderate	Low	Low
B-140-01 East Rifle Creek	17,147	Low	No	Moderate	High	Moderate
B-140-02 1-70 Corridor West of Glenwood Springs	93,116	High	No	High	High	High
B-140-03 Roaring Fork Valley	46,171	High	No	High	High	High
B-140-04 Thompson Creek / Eagle Mountain	6,560	Moderate	No	Moderate	Moderate	Moderate
B-140-05 Eagle Valley	81,074	High	No	High	High	High
B-140-06 Bocco Mountain / Siloam Springs	7,216	Low	No	Low	Low	Moderate
B-140-07 King Mountain/Black Mountain	39,466	Low	No	High	Low	Moderate
C-140-01 West Of Glenwood Springs	86,567	Moderate	No	Moderate	Moderate	Moderate
C-140-02 Roan Cliffs and Plateau	39,130	Moderate	No	Moderate	Moderate	Moderate
C-140-03 Upper Colorado	100,355	Moderate	No	Moderate	Moderate	Moderate
C-140-04 Deep Creek	4,531	Low	No	Low	High	Low
D-140-01 Bull Gulch / Castle Peak / Hack Lake	22,794	Low	High	Low	High	Low

III.C.3.1 Wildland Fire Suppression Prioritization

With consideration for NFP and RMP direction, each FMU was assessed for several key factors including the threat to human life and public safety, property/improvements on or nearby public lands, municipal watersheds, historic/cultural resources, and natural values. For the UCR FPU, areas designated as HIGH priority for suppression are at a greater risk for loss of life and property

from wildland fire (Table III.C.3). Areas designated as MODERATE and LOW generally have less concentrated WUI areas but have potential to impact resource values sensitive to unplanned wildland fire. ***Note: Regardless of the category (A-D) or priority ranking, wildland fires threatening human life and property will always receive the HIGHEST priority for fire suppression. Once people are assigned to an incident, these human resources become the highest value to be protected.***

III.C.3.2 Wildlland Fire Managed for Resource Benefit Prioritization

On public lands managed by the GSFO, there is one FMUs where wildland fire may be used to accomplish specific, pre-stated resource management objectives (see Table III.C.3). This FMU is: D-140-01 Bull Gulch/Castle Peak/Hack Lake

FMU D-140-01 Bull Gulch/Castle Peak/Hack Lake was rated as higher because of the presence of Wilderness Study Areas (WSAs). The GSFO is required to maintain the wilderness character of each WSA until a final decision is made by Congress as to whether it becomes part of the National Wilderness Preservation System, or is released from WSA status and made available for other uses. The general standard for this management is that the suitability of these lands for preservation as wilderness must not be impaired.

III.C.3.3 Fuels Treatment Prioritization

As with suppression, each FMU was assessed for several key factors including the threat to human life and public safety, property/improvements on or nearby public lands, municipal watersheds, historic/cultural resources, and natural values. These factors all contribute to the ranking process for fuels treatments. FMUs designated as HIGH priority for fuels treatments have the greatest concerns for public safety, protecting property/investments protecting municipal water supplies and protecting historic/cultural resources, and natural values (see Table III.C.3). Sections IV.C. - Prescribed Fire, IV.D. - Non-Fire Fuel Treatments and Appendix B of this plan discusses fuels treatments in more depth.

III.C.3.4 Emergency Stabilization and Rehabilitation (ESR) Prioritization

As with fuels treatment prioritization, each FMU was assessed for several key factors including the threat to human life and public safety, property/improvements on or nearby public lands, municipal watersheds, historic/cultural resources, and natural values. FMUs designated as HIGH priority for ESR have the greatest concerns for public safety, protecting property/investments, protecting municipal water supplies and protecting natural values (see Table III.C.3).

Section IV.E. - Emergency Stabilization and Rehabilitation of this plan discusses ESR in more depth.

III.C.3.5 Community Assistance/Protection Prioritization

As with ESR prioritization, each FMU was assessed for several key factors including the threat to human life and public safety, property/improvements on or nearby public lands, municipal watersheds and findings from WUI hazard assessments. FMUs designated as HIGH priority for community assistance and protection have the greatest concerns for public safety, protecting property/investments and protecting municipal water supplies (see Table III.C.3).

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

III.D.1 Fire Management Unit Descriptions, Objectives, and Strategies

All Federal agencies within the UCR FPU have identified specific Fire Management Units (FMUs). Pubic lands administered by the GSFO were delineated into 20 FMUs. For each FMU, fire managers, fuels specialists and resource specialists performed an assessment of: the risk of wildfire, potential damage to resource values, similar vegetation type and condition, management constraints, WUI issues, objectives and strategies.

FMU maps can be found in Appendix A. The narratives by FMU including; 1) a FMU description, 2) fire management objectives and 3) fire management strategies can be found in Appendix B. Wildland Fire Suppression Protocols (restrictions and recommendations) common to all FMUs are outlined below in section III.D.2. *The protocols apply solely to BLM managed land within the FMUs.*

III.D.2 Wildland Fire Suppression Protocols (Restrictions & Recommendations)

III.D.2.1 Restrictions Specific to Heavy Equipment

Mechanized equipment, such as dozers or excavators, is infrequently used in the FPU to assist in fire suppression actions. In instances where the use of mechanized equipment is contemplated the following will apply:

- All use of heavy equipment (dozers, graders, etc) requires authorization from the agency administrator or designated acting. *Exception: When the fire is outside a Wilderness Study Area (WSA), and lives or homes are nearby and in imminent danger of being loss, the FMO may authorize the use of heavy equipment.*
- The Zone FMO will involve the appropriate resource staff. On site reconnaissance and review will be conducted prior to engaging in line construction activities unless there is an imminent threat to firefighter or public safety or an imminent threat to private land and improvements (structures). All identified cultural resources will be protected to the extent possible unless firefighter and public safety is compromised.
- In general, dozers will be prohibited from operating on slopes greater than 40%.

III.D.2.2 Restrictions Specific to Motorized Vehicle Use

Travel Restricted Areas - Motorized travel restrictions do not apply to federal, state and local law enforcement officers or fire-fighting forces in the performance of official duties. However, motorized vehicle use in designated closed areas and on non-motorized routes is discouraged. If vehicle use is necessary, RAs will be consulted to develop vehicle use strategies that minimize vehicle impacts and address resource concerns.

Within Wilderness Study Areas (WSAs) and Areas of Critical Environmental Concern (ACECs) - (see maps in Appendix A) The use of motorized vehicles, fire engines and mechanical ground disturbing equipment within these areas requires approval of the Field Manager (FM) or designated acting FM. *Exception: When lives or homes are nearby and in imminent danger of being lost, the Fire Management Officer (FMO) may authorize vehicle use within WSAs and ACECs.*

III.D.2.3 Restrictions Specific to the Aerial Application of Retardant or Foam

Avoid aerial application of retardant or foam within 300 feet of any body of water including lakes, rivers, streams and ponds whether or not they contain aquatic life. Exceptions (as per Instruction Memorandum No. OF&A 2000-011):

- When alternative line construction tactics are not available due to terrain constraints, life and property concerns or lack of ground personnel, it is acceptable to anchor the foam or retardant application to the waterway. When anchoring a retardant or foam line to a waterway, use the most accurate method of delivery in order to minimize placement of retardant or foam in the waterway (e.g., a helicopter rather than an air tanker).
- When life or property is threatened and the use of retardant or foam can be reasonably expected to alleviate the threat.
- When potential damage to natural resources outweighs possible loss of aquatic life, the FM or acting FM may approve retardant or foam use within 300 feet of waterways.

If retardant is applied within 300 ft of a water body:

- Ditches should be dug as soon as possible to minimize entry of fire retardant into waterways. Mitigation may also include the use of straw bales, tree slash, or other materials to trap fire retardant and limit entry into aquatic systems.
- *A*s soon as practicable after an aerial application of retardant within 300 ft of a waterway, the FM or acting FM must initiate a post application assessment of aquatic systems to determine effects to T&E species or their habitat. If there were no adverse effects to aquatic T&E species or their habitats, there is no requirement to consult with the USF&WS. If the FM or designated acting determines that there were adverse effects on T&E species or their habitats then the GSFO must consult with the USF&WS, as required by 50 CFR 402.05 (Emergencies). Procedures for emergency consultation are described in Part 11.

III.D.2.4 Restrictions Specific to WSAs and ACECs

Wildland fires will require immediate and continued close coordination with the resource advisor (RA). The RA also notifies the appropriate GSFO staff person of fires and actions taken in WSAs and ACECs.

Restrictions Specific to WSAs - (see maps in Appendix A) To protect wilderness characteristics (roadlessness and naturalness) wildland fire management follows H-8550-1 – Interim Management Policy for Lands under Wilderness Review and Grand Junction District WSA Fire Suppression Tactics Policy (05-10-95). Specifically:

- The use of motorized vehicles, fire engines and mechanical ground disturbing equipment within WSAs requires approval of the Field Manager (FM) or designated acting FM. *Exception: When lives or homes are nearby and in imminent danger of being lost, the Fire Management Officer (FMO) may authorize vehicle use within WSAs and ACECs.*
- The use of airtankers, chain saws / pumps, and the delivery of personnel / equipment / water by helicopter require the approval of the FMO or designated acting.
- Reduce the negative effects of wildland fire management by applying minimizing measures (see Appendix E for Minimum Impact Suppression Tactics (MIST).
- Placement of large fire camps should be outside WSAs.
- Perform rehabilitation of fire suppression impacts as defined by the resource advisor to restore visual and/or wilderness characteristics.
- The use of natural firebreaks and existing roads to contain a wildland fire is encouraged.

Restrictions Specific to ACECs - Same as for WSAs (see maps in Appendix A).

III.D.2.5 Other Wildland Fire Suppression Recommendations

- Private landowner or sheriff permission should be obtained to cross private property and use access roads.
- Erosion control and rehabilitation recommended on all surface disturbances (see section IV.E).
- During wildland fire suppression consider visual qualities in Visual Resource Management (VRM) Class I and II areas where the classification goal is to preserve the landscape character and landscape modifications are not evident.
- Protect known heritage resources (cabins, homesteads, mine structures, prehistoric sites, pole structures, etc.). As possible and when necessary: inventory fire line construction in sensitive areas; avoid placing control lines, base camps and support facilities within site boundaries; inventory ground disturbing rehabilitation activities and use non-ground disturbing techniques within known or newly identified site boundaries.
- Protect special status species. As possible and when necessary: inventory fire line construction in sensitive areas; avoid placing control lines, base camps and support facilities within important habitats; inventory ground disturbing rehabilitation activities and use non-ground disturbing techniques within known or occupied areas.
- Notify the resource advisor/archaeologist of any cultural resources encountered.
- When practical and possible; equipment used for wildland fire suppression activities should be washed before arriving on-site and staging/parking areas should avoid weed patches to reduce the spread of noxious weeds.
- Monitor for hazardous materials that may also be introduced as a result of the fire fighting activities. Rehabilitation plans should consider any contaminated waters and soils.

III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines

Suppression activities can be detrimental to fish, wildlife and plants. This section provides information about threatened and endangered (T&E) and special status species at risk from wildland fire suppression activities. The resource advisor (RA) should provide the guidelines (Figure III.D.3) and any additional measures identified by the FO biologist or USF&WS to wildland fire managers.

Of paramount importance are the safety of the firefighters and the protection of life and property. If a suppression action is determined to be necessary to: (1) control a wildland fire, (2) save lives and/or property, or (3) ensure that fire crews can do their jobs safely and efficiently, and then it is appropriate to act even if it results in the take of an endangered species. DO NOT stand in the way of the response efforts (8.2.(A) - Final ESA Section 7 Consultation Handbook, March 1998). No wildland fire suppression guideline (Figure III.D.5), for the protection of endangered species or their habitat, will be considered if the FMO or Incident Commander feels they place firefighters or life or property in danger.

Figure III.D.3 - T&E / Special Status Species Wildland Fire Suppression Guidelines

Species	FMUs	Wildland Fire Suppression Guidelines for Federally Threatened, Endangered and Candidate Species
Federally Threatened, Endangered and Candidate Species		
Big River Fishes (inc. Flannelmouth	B-140-02 C-140-01	• Avoid aerial application of retardant or foam within 300 feet of any body of water including lakes, rivers, streams and ponds whether or not they contain aquatic life. (See exceptions under southwest willow flycatcher). • Within the Colorado River drainage and associated tributaries located in

Figure III.D.3 - T&E / Special Status Species Wildland Fire Suppression Guidelines

Species	FMUs	Wildland Fire Suppression Guidelines for Federally Threatened, Endangered and Candidate Species
sucker and Roundtail chub)		FMZ B-140-02 and C-140-01, minimize the erosion of sediments into the Colorado River by: - minimizing vegetation losses, - coordinating fire line placement with RA or hydrologists, - constructing fire lines in a manner that limits the potential for erosion, - rehabilitating constructed hand/dozer lines/impacted areas in critical watershed areas and placing water bars where erosion potential is high (see FMP Part 12). * Depletion log: The GSFO Biologist will report 1-acre foot of water to be added yearly to the water depletion log to account for water depletions associated with fire abatement within the planning area. If, in the event of a large wildland fire or severe fire season more water is used, the log will be adjusted accordingly and all depletions accounted for.
Bald Eagle	A-140-01 A-140-02 A-140-03 A-140-05 A-140-06 B-140-01 B-140-02 B-140-03 B-140-05 B-140-06 B-140-07 C-140-01 C-140-03 D-140-01	In order to minimize effects, both direct and indirect, to potential nesting bald eagles, the following minimization measures are required along main waterways: • Avoid unnecessary tree cutting within ¼ mile of known roost trees. • Avoid aerial application of retardant or foam within 300 feet of any body of water including lakes, rivers, streams and ponds whether or not they contain aquatic life (as per OF&A - IM No. 2000-011, see Part 9). To reduce indirect effects to bald eagles from potential modification of winter roost sites, the following minimization measures are required: • Avoid aerial application of retardant or foam within 300 feet of any body of water including lakes, rivers, streams and ponds whether or not they contain aquatic life (as per OF&A - IM No. 2000-011, see FMP Part 9).
Canada lynx	A-140-02 A-140-03 B-140-01 B-140-02 B-140-03 B-140-04 B-140-05 B-140-06 B-140-07 C-140-01 C-140-03 C-140-04 D-140-01	Wildland fire suppression within mapped potential Canada lynx habitats will be performed in a manner consistent with conservation measures outlined in the *Canada Lynx Conservation Assessment and Strategy* (2000) Chapter 7 – Pages 7-6, 7-7 and 7-8. Considerations include; • Attempts will be made to keep linear openings (fire line, access routes and escape routes) out of mapped potential habitat and away from key components such as denning areas. • When managing wildland fire, minimize the creation of linear openings (fire line, access routes and escape routes) that could result in permanent travel ways for competitors and humans. • Obliterate and reclaim linear openings (fire line, access routes and escape routes) associated with wildland fire suppression constructed within lynx habitat in order to deter future human and competitive species use. • Avoid constructing permanent firebreaks on ridges or saddles in lynx habitat.
Uinta Basin hookless cactus	A-140-01	• Minimize surface disturbance by using retardant, water, engines/wet lines, etc in known habitat for this species. • Where firefighter safety is not compromised, construct fire line outside the perimeter of known cactus populations. • Avoid off-route use of motorized vehicles and mechanical equipment within known cactus populations.
Boreal toad	D-140-01	Not known to exist - potential habitat on Castle Peak • Avoid aerial application of retardant or foam within 300 feet of any body of water including lakes, rivers, streams and ponds whether or not they contain aquatic life (as per OF&A - IM No. 2000-011, see FMP Part 9).
Western	B-140-02	This species historically occurred in portions of western Colorado; No

Figure III.D.3 - T&E / Special Status Species Wildland Fire Suppression Guidelines

Species	FMUs	Wildland Fire Suppression Guidelines for Federally Threatened, Endangered and Candidate Species
yellow-billed cuckoo		individuals have been recorded or confirmed to nest within the planning area. • Avoid aerial application of retardant or foam within 300 feet of any body of water including lakes, rivers, streams and ponds whether or not they contain aquatic life (as per OF&A - IM No. 2000-011, see FMP Part 9).
Greater sage grouse	A-140-06 B-140-05 B-140-06 B-140-07 C-140-03 (potential in B-140-05)	• Aggressively suppress wildland fires in sagebrush vegetation within mapped sage grouse habitats to minimize expansive losses of sagebrush. • Identify and avoid known lek sites when managing wildland fire and using heavy equipment. • In sage grouse winter habitats, protect unburned patches of sagebrush within the fire perimeter. • Post-fire; Evaluate burned area to determine whether reseeding is necessary to achieve habitat management objectives as recommended in the *Guidelines to manage sage grouse populations and their habitats (Connelly, Schroeder,Sands and Braun 2000)*.
Parachute penstemon	B-140-02 C-140-02	Located on Mt Logan in T7S, R97W, Sections 25, 35, & 36; along Anvil Points Mine Rd. in T6S, R95W, Section 12; and along Anvil Points rim. • Minimize surface disturbance by using retardant, water, engines/wet lines, etc in occupied habitat. • Avoid off-route use of motorized vehicles and mechanical equipment in occupied habitat.
DeBeque phacelia	B-140-02 C-140-02	• Minimize surface disturbance by using retardant, water, engines/wet lines, etc. in occupied habitat. • Avoid off-route use of motorized vehicles and mechanical equipment in occupied habitat.
BLM Sensitive Species		
Colorado River cutthroat trout	A-140-03 B-140-04 B-140-05 C-140-02	• Attempts will be made to minimize losses of vegetation within 100 yards of occupied drainages to minimize the potential for erosion of sediments into occupied waters. • Provide for drainage with water bars on constructed hand/dozer lines and impacted areas in critical watershed areas (see Part 12 for guidelines). • Avoid aerial application of retardant or foam within 300 feet of any body of water including lakes, rivers, streams and ponds whether or not they contain aquatic life. (as per OF&A - IM No. 2000-011, see FMP Part 9).
Northern goshawk	B-140-07 C-140-02 D-140-01	• Fire line construction will attempt to avoid the destruction of known nest trees in the concentrated nesting areas on Castle Peak (FMZ D-140-01), and King Mountain (FMZ B-140-07). Line may be constructed around known nest trees to protect them. All fire line will be obliterated and reclaimed to minimize human use. • Linear openings (fire line, access routes and escape routes) associated with fire suppression will be obliterated and reclaimed in order to deter future human use.
Northern leopard frog	All FMZs	• Avoid aerial application of retardant or foam within 300 feet of any body of water including lakes, rivers, streams and ponds whether or not they contain aquatic life (as per OF&A - IM No. 2000-011, see FMP Part 9).
Great Basin spade-foot toad	B-140-02 (west of Silt)	• Post-fire; Evaluate wildland fires within the lower elevation pinyon-juniper woodlands and sagebrush habitats, within FMZ B-140-02, to assess the need for cheatgrass control and/or re-seeding.
Arapien stickleaf	B-140-02	• Minimize surface disturbance by using retardant, water, engines/wet lines, etc in known habitat for this species. • Avoid off-road use of motorized vehicles and mechanical equipment in occupied habitat.

Figure III.D.3 - T&E / Special Status Species Wildland Fire Suppression Guidelines

Species	FMUs	Wildland Fire Suppression Guidelines for Federally Threatened, Endangered and Candidate Species
Debeque milkvetch	B-140-02 C-140-02	• Post-fire evaluations within the lower elevation pinyon-juniper woodlands and salt desert shrub habitats should review the need for cheatgrass control and/or re-seeding. Re-seeding should emphasize locally-adapted native species or short-lived introduced species that will not out compete the DeBeque milkvetch.

III.D.3.1 Emergency Consultation with the U.S. Fish and Wildlife Service

Fire can and often does destroy endangered species and alters critical habitat. However, fire itself is considered a disaster or an act of God in the sense of 50 CFR 402.05. Consultation is conducted only for the actions (suppression response to the wildland fire emergency) under control of the BLM, not the effects of the fire itself. These consultations are in a special category, *Emergency Consultations*, and are handled in a very expeditious manner. The RA will be responsible for initiating emergency consultation with the U.S. Fish and Wildlife Service (USF&WS). The RA should notify and involve the FO biologist and/or ecologist, as soon as possible.

Typically, the RA contacts the USF&WS by telephone if a wildland fire is determined to involve an endangered species or if response actions may affect the species or habitat. This contact should be made as soon as practicable. The RA should advise the USF&WS contact of: the nature of the emergency, location, fire size, species/critical habitats in the area and the anticipated effects. An emergency consultation number will be provided. Subsequent calls to the USF&WS can add information. An estimate of "incidental take" of the endangered species can be discussed, if specific information is known. After the wildland fire is controlled, the RA will work with the FO biologist or ecologist to provide an oral or written report to the USF&WS. The USF&WS provides an after the fact opinion that documents the effects of the emergency response on the listed species or critical habitat.

IV. Fire Management Components

IV.A. Wildland Fire Suppression

IV.A.1. Fire Planning Unit Fire History

Fire History - Lightning caused fires have been an integral factor in the formation and arrangement of vegetation types in the Rocky Mountains. Ironically, while fire burned UCRs and rangelands, it also renewed them. There is growing recognition that land-use practices, combined with fire suppression, have altered the natural cycle and role of fire. These actions have resulted in; heavy accumulations of dead material (tree and shrub branches, leaves, and decaying organic matter), unnatural vegetative structure and composition, and often a continuous arrangement of fuels. Invasive species have been introduced in to some areas. Cheat grass and tamarisk are species that are fire adapted and tend to become monocultures when fires occur. The Ips beetle is causing a high level of mortality in the Pinon. Ecosystems are said to be out of balance or outside their natural range of variability. When this occurs, wildland fires may ignite more quickly, burn with greater intensity, and spread more rapidly and extensively than in the past.

Occurrence - During the period of 1980 – 2003 the UCR FPU averaged 180 fires per year, burning 167 acres annually. Approximately 99.7% of these wildfires are Size Class A, B, C and D incidents (less than 300 acres in size). On average, lightning accounts for approximately 66% of the annual number of fires while a variety of human caused fires accounts for the remaining 15%, and 19% are unknown cause. While the majority of fires are relatively insignificant in terms of size and fire intensity, periodic stand replacement events typically burn at high fire intensity levels (FIL 5 and 6). These fires can be several thousand acres in size. The Coal Seam Fire (2002) which burned 9,000 acres is the largest historic fire on BLM. The Big Fish WILDLAND FIRE MANAGED FOR RESOURCE BENEFIT (2002) which burned 17,000 acres is the largest fire on the UCR FPU. Large fire (> 1,000 acres) occurrences for the UCR FPU can be found in Appendix G.

Table IV.A.1. Historical Fire Data for the UCR FPU

Area	Avg. # of Starts/Year	Average Total Acres Burned/Yr.	Average Annual % Fire Starts by Cause		
			Lightning	Human Caused	Unknown
GSFO:80-03	55	25	76	07	17
GJFO:80-03	82	40	68	12	20
WRNF:80-02	33	38	38	41	21
CNM:48-02	2	8	78	22	0
GVRD:80-02	8	56	58	20	22
FPU Total	180	167	66	15	19

Range of Potential Fire Behavior - During green-up and following seasonal precipitation events, fire behavior is normally characterized as smoldering or creeping with limited rates of spread. Lightning starts are usually confined to single trees or small clumps of trees and associated vegetation.

Prior to green-up and during peak seasonal burning periods, active fire behavior may be observed with higher rates of spread and intensities that exceed manual and mechanized suppression efforts.

During extreme burning conditions, such as those associated with seasonal drying and/or long duration drought conditions, significant stand replacement events may occur. These events are typically wind-driven and may cover hundreds to tens of thousands of acres during a single burning period.

The western slope of Colorado is experiencing a long-term drought that has led to water-stressed and/or insect-damaged vegetation. As drought conditions persist in the West, there is increased potential for large, high intensity wildland fires indicating the need for a progressive and complete fire management program.

The accumulation of fuels resulting from past management practices and fire protection activities, in addition to insect and disease stressed timber, create a high likelihood of stand replacing, high intensity fires (FIL 5 and 6). These fires could potentially be several thousand acres in size.

IV.A.2. Suppression/Preparedness Actions

Operational Roles - 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.

Suppression - Following direction in the NPS and BLM's RMPs, the UCR FPU suppression strategy is to use RESPONSE TO WILDLAND FIRE on all fires in accordance with management objectives and based on current conditions and fire location. Every wildland fire will receive RESPONSE TO WILDLAND FIRE to protect firefighter and public safety, values at risk, and minimize suppression costs. RESPONSE TO WILDLAND FIRE can vary from aggressive initial action to monitoring. See detailed description of FMUs (section III D) for specific suppression objectives and fire management constraints.

Requirements for fire operations/suppression plans can be found in the "Interagency Standard for Fire and Fire Aviation Operations" (Red Book) (USDI and USDA 2004) and the Office of Fire and Aviation website at http://www.fire.blm.gov/. All plans for fire and resource personnel use can be accessed at the Dispatch Office. See Section V of this document for a complete summary of the preparedness organization including staffing, budget, equipment, etc.

Preparedness Levels - The UCR Operations Specialist or the designated acting will determine daily preparedness level using the processes outlined in the Unit Fire Danger Operating and Preparedness Plan (Appendix H). The two NFDRS components used in developing the adjective rating are energy release component (ERC) and ignition component (IC). Preparedness levels are tracked daily and over a rolling three day period. Guidelines for initiating appropriate management actions for each preparedness level are identified on the following pages. It should be noted that trends will be used to guide appropriate management actions to be undertaken by the UCR staff to avoid rapid changes in management actions in response to short term weather conditions.

Annual Preparedness Reviews - Zone preparedness resources undergo a readiness review by agency/interagency fire management specialists prior to June 15th annually. Readiness reviews may include; Dispatch Center, Helitack and staff management functions at the discretion of the Unit FMO and review team.

Review elements will examine those items on the checklists included in the Fire Readiness Review Guide (1998 as amended) at a minimum.

Employee Participation - Agency Administrators 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.

IV.A.3. Fire Prevention, Community Education, Community Risk Assessment, & Other Community Assistance Activities (Firewise).

IV.A.3.1 Prevention Program

Prevention activities are an integral part of the fire management program within the UCR FPU because a significant percentage of fires are human caused. This is due to population, the amount of intermingled private lands, the interest in outdoor recreation activities, and the large amounts of public land accessible by roads and rivers. The greatest risk for human caused fires exists in areas of high use and major travel corridors (roads, highways, and rivers). When warranted, prevention efforts such as posting signs, increased patrols, and public contact are focused on these areas.

Year round activities include normal fire prevention programs and public awareness of fire conditions. Details of the prevention program may be found in the existing Wildland Fire Prevention Plan for the BLM Grand Junction District available at the West Zone FMO office in Grand Junction. This plan was completed before the advent of the interagency organization and the BLM reorganization into FOs. The activities identified in the plan are still valid. A revised plan encompassing the other participating agencies is targeted for completion by September 2006. Fire prevention activities for the FPU are accomplished by the interagency fire management and visitor information staff groups. A typical range of program efforts is undertaken including signing, press releases and public service announcements, educational programs targeting school children and UCR visitors and coordination with local cooperators during periods of high fire danger.

Smokey Bear Program - The UCR FPU participates in the Smokey Bear Program to maintain public awareness of the need to prevent human caused wildfires. Smokey Bear related fire prevention materials are distributed at agency offices as well as through educational programs that focus on local school children. UCR employees dressed as Smokey Bear participate in local festivals and parades throughout the UCR.

Direct Contacts and Visitor Information – Office and field contacts with public land visitors across the FPU provide opportunities to share information regarding current fire danger and tips for camping and backcountry use. The FPU receives heavy visitor use in dispersed backcountry settings as well as at developed recreation facilities. High recreational use and the potential for human caused fire begins after Memorial Day and continues through the big game hunting seasons in October and November.

Media Contacts - These contacts are made through radio, television, newspapers, and signing. Press releases, informal contacts, and feature articles are also used to get the message to the public. The fire program relies heavily upon the expertise of the agency public affairs officers for professional interaction with the media. In addition a cadre of media liaisons and Type III Information Officers is used to give timely response to media inquiries.

Interagency Fire Prevention Programs - The FPU and Zone FMOs routinely coordinate fire prevention activities with Federal, State and local cooperators and communities.

Risk Assessments and Mitigation Plans - Community risks assessments and mitigation activities are conducted in partnership with the local communities each year. Preparation of a Community Wildfire Protection Plan (CWPP) is the logical next step after a county fire plan has identified communities-at-risk and set mitigation priorities. The CWPP assesses the wildfire threat to a neighborhood or community and the surrounding landscape. It locates values-at-risk in detail and determines the specific vegetation management, road improvements, water sources,

warning systems, evacuation routes, changes to buildings to make then less flammable, fire department preparedness, and other actions needed to reduce the threat of wildfire.

The Colorado State Forest Service takes the lead in community wildfire protection planning but the county fire mitigation specialist, sheriff, American Red Cross, rural fire department, or other organization may carry out the actual planning. In every case, the NPS, USFS, and BLM seek to collaborate as partners in the planning effort and provide technical advice and financial assistance in many cases. To the extent possible, the agencies involve interested community residents and other stakeholders in data collection and analysis for fire planning on neighboring public lands the agency manages and provides advice on fire ecology, vegetation management, and fire preparedness to communities.

Wildfire Investigations - All wildfires are investigated for cause. The FPU has had incidents of arson in the past, but it is not a regularly occurring problem. If human cause is suspected and sufficient evidence is available and/or the cost of the fire is significant, then a fire investigator is called in for investigation.

IV.A.3.2 Special Orders and Closures

Coordination and Authority - Restrictions may be imposed to reduce the risk of human-caused fire during periods of extended high fire danger. Emergency closures have a substantial impact on the public and are only used under the most severe conditions.

The UCR FPU coordinates fire restrictions, recommended by FMOs, and approved by the appropriate land managers, in coordination with local cooperators (primarily county sheriffs and county emergency planners). The County Wildland Fire Operating Plans guide fire restrictions and closures for the UCR FPU. This agreement outlines procedures for cooperative and uniform implementation of fire restrictions when Very High to Extreme fire danger is predicted to continue. A cooperative effort to revise and standardize the fire restriction implementation process was begin late in 2004. The draft process was tested during the 2004 fire season. A final version should be complete in time for implementation during the 2005 fire season.

Restrictions and closures are keyed to the National Fire Danger Rating System ERC Index trend. There are two fire restriction stages and one closure stage. Refer to the Fire Restriction Toolbox (2002) for further information.

Stage I	Restricts open fires to developed recreation sites or improved sites. Restricts smoking to an enclosed vehicle or building, a developed recreation site or while stopped in an area at least three feet in diameter that is barren or cleared or all flammable materials. Use of an approved spark arrestor for use of any internal combustion engine is required.
Stage 2	Stage two prohibits fires or campfires, smoking except within an enclosed vehicle or building, possession and discharge of any fireworks or pyrotechnic device, use of explosives, welding and use of any internal or external combustion engine without an approved spark arrestor. Chainsaw operations as well as other equipment powered by an internal combustion engine are prohibited between 1:00 PM and 1:00 AM. In addition, cross-country use of a motor vehicle off-route is prohibited except when parked in an area devoid of vegetation within 10 feet of the roadway or parked overnight in a developed campground or at a trailhead.
Stage 3	This stage is an area closed to all entry except for individuals carrying a written permit, Federal, State and local officers or members of organized search and rescue or firefighting forces performing official duties and resident landowners and lessees.

IV.A.3.3 Industrial Operations and Fire Precautions

Generally, contractors conducting business on public land are subject to the same provisions defined above for restrictions or closure. Situations or conditions may occur when specific activities may be exempted from restrictions or closures. The process for granting exemptions is clearly defined in the restriction or closure order. The order details when the restriction, closure, or exemption goes into effect, longevity of the restriction, and what activity or equipment is affected.

Structures and Improvements - The Zone fire management staff and/or facility managers or their appointed representatives make inspections of FPU facilities periodically. Measures to reduce the risks of and hazards from wildfire are taken immediately whenever problems are noted.

Right-of-Ways - Rights-of-way in the form of roads and power lines must be periodically reviewed to minimize the potential for fire starts. This is an integral part of the special use inspection process. Inspections and removal of hazardous vegetation may be required under the terms of the permit. (Refer to the Power Line Fire Prevention Handbook FSH 5109.21)

Roads - Public roads are numerous, offer many attractions, and are the primary means of public access into and through the UCR. Fuel loading along major roads is treated in accord with Land and Resource Management Plan direction.

Industrial Operations (Timber and Special Use Operations) – Compliance inspections are completed in accordance with contract requirements or per manual direction in the case of special use permits. Inspections are for the protection of the public land resources and the operators. Agency representatives enforce all requirements of the contract related to fire prevention precautionary measures.

Spark Arresters and Equipment - All internal combustion engines that operate on the UCR FPU must have properly working spark arresters. Spark arrester inspections may be conducted by agency personnel based on high fire danger indices.

IV.A.3.4 Community Education

The UCR FPU works to protect communities through prescribed fire and fuel reduction efforts around communities, and working to ensure adequate federal funding for these efforts. The UCR FPU helps to provide opportunities for education, training, and participation in fuel reduction projects for home and property owners.

The Colorado State Forest Service, Sheriffs, local Offices of Emergency Management, and local fire departments, organize educational programs for residents of the communities-at-risk to encourage fire hazard mitigation on private lands. The NPS, USFS, and BLM provide technical and financial assistance to support the community fire education.

Fire Wise - Fire staff from the UCR FPU, especially the Fire Mitigation Specialist, provide local communities with information about coexisting with wildfire along with mitigation information tailored to our specific area. The UCR Fire Staff, Colorado State Forest Service, American Red Cross, and local Fire Districts routinely make FireWise presentations to homeowners associations and the community at large. The wildland agencies within UCR FPU help communities identify and implement local solutions. The communities are encouraged to take the lead in assessing fire risk and creating a network of cooperating homeowners, agencies and organizations.

IV.A.3.5 Assistance Programs

Recognizing that UCR fire risk mitigation around communities needs to be a collaborative effort between agencies and local citizens, we focus our efforts in the wildland-urban interface and reduce fuel loads on public lands near communities.

In 2001, Colorado Counties, Inc. (An association of county commissioners and administrators) implemented a series of workshops with counties to encourage county-wide fire planning throughout the state. The workshops were funded in part by the BLM and the agency participated as part of the training cadre. The workshops were attended by representatives from most counties in the state. BLM through its community assistance grant program has provided grant funding to county fire planning efforts in all of the UCR counties, Mesa, Garfield, Pitkin, Eagle, and Summit.

IV.A.4. Fire Training and Fitness Activities

Recurring Training Activities - Agency Administrators 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.

Zone FMOs are the primary coordinators of training needs. All agency personnel having wildland fire qualifications in Command and/or Operations functions are required to attend an annual fire refresher. This refresher includes fire shelter deployment and recurrent safety topics such as Standards for Survival; Look Up, Look Down, Look Around; or similar safety oriented training. Attendance at refresher training along with successful completion of the appropriate level of work capacity testing is a pre-requisite for receipt of a red card prior to June 1st annually.

All employees with fire suppression support functions and Agency Administrators are encouraged to attend annual fire refresher training. Basic Firefighter training (S-130, S-190) is offered annually to new employees and interested members of local cooperating agencies and fire departments. Up to twenty-five 100 and 200 level courses are conducted locallyby UCR personnel in order to meet specific field office or crew training needs required in 310-1 or 5109.17.

A formalized UCR training committee with charter will be in place for FY 2005. The committee will consist of two employees (primary and alternate) from each zone and the GJ Air Center. This committee will survey UCR staff for needs and prioritize all local training courses. National training needs accessment request will also be documented by the training committee.

Guideance regarding the new 401 series standards in Biological Science is another topic which the training committee will be looking into for course ideas for UCR and BLM and FS.

Recurring Fitness Activities - Fitness requirements for all personnel involved in fire/suppression support can be found in the Interagency Standards for Fire and Fire Aviation Management. Successful completion of the appropriate level of work capacity testing is a prerequisite for issuance of a red card. Fire staff with a fireline duty or qualification are authorized one hour of physical training per day, when not on fire assignments, to maintain the level of fitness required for rigorous fireline duty.

UCR fire funded personnel are allotted one hour of physical fitness time daily. Each zone has developed their own PT program which promotes cardiovascular, strength training and calisthenics. These PT programs aid with firefighter safety and provide team spirit and unity. UCR Agency Administrators and Fire Management Staff are extremely supportive of fitness activities which promote the goal of" Firefighter and public safety is always the first priority."

IV.A.4.1 Qualifications

The UCR fire management organization will make every reasonable effort to have sufficient numbers of qualified wildland fire and support personnel available to meet current and anticipated fire management needs safely and efficiently. All personnel with fire program responsibilities will meet established agency competencies and associated qualifications, as identified in the Wildland and Prescribed Fire Qualification Systems Guide (NWCG PMS 310-1, and FSH 5109-17), BLM Manual 9214 Fire Training and Qualifications, the Interagency Standards for Fire and Fire Aviation Operations 2004, and other competency guides as applicable.

Agency Administrators and fire management staff will ensure that all able bodied employees are trained, certified and made available to participate in the wildland fire program locally, regionally, and nationally as the situation demands. Employees with operational, administrative, or other skills will support the wildland fire program as necessary. Agency Administrators are responsible and will be held accountable for making employees available.

Critical Qualification and Position Needs for the FPU - The interagency (UCR) Red Card and Qualifications Committee meets annually or as needed to review Wildland Fire qualifications for all agency personnel. This committee reviews the list of personnel qualified by position to undertake assignments in support of wildfire or prescribed fire and identifies positions where insufficient personnel are qualified to meet short term management needs.

The needs assessment is forwarded to the Geographic Area Training Coordinator for discussion at the Area level. The red card/qualifications committee identifies individuals for priority classroom and on-the-job training assignments to address short-term needs by functional area.

Training Budget Needs for the FPU - Increases in training requirements for currency and qualification advancement have increased the training costs per person. The current budget is lagging in meeting these training requirements. FY 2004 budget is five hundred dollars annually per employee. Note: The dollar amount required to ensure a safe and efficient program which meets or exceeds national standards would be two thousand per employee.

IV.A.4.2 Fire Season Readiness

Wildland fire, prescribed fire operations, and aviation preparedness reviews are conducted annually in accordance with the Fire Preparedness Review Guide found in the Interagency Standards for Fire and Fire Aviation Operations, USDI and USDA. National Office reviews are conducted every three years by fire operations personnel in Boise.

Typical Fire Season Dates - The normal fire season start and stop dates for the Colorado National Monument, Grand Junction and Glenwood Springs Field Offices are from May 1st to October 15$^{th.}$ The fire season start and stop dates represent the period of time during which approximately 90% of the fires will occur. The seasonal analysis of fires utility in the Personal Computer Historical Analysis (PCHA) was used to determine these dates for initial attack planning purposes and calculation of the Fire Fighting Production Capability (FFPC) target. These dates are used as guidance for staffing initial attack resources. However, it must be noted that fires can occur any time of year and it is possible for large fires to happen outside of the established fire season. In these instances, permanent employees and local cooperator units will be used to suppress fires on the interagency staff unit pending the arrival of outside ground based and aviation resources.

IV.A.5. Detection

Detection Program - Detection and fire reporting follow state and local operating plans. Wildland fires outside the UCR protection jurisdiction are reported to the appropriate county or neighboring agency dispatch.

The FPU altered the aerial detection program in 1995 in order to save funding and to add flexibility to FMOs. Zone FMOs may request aerial detection services on an as-needed basis from the Grand Junction Interagency Dispatch Center. Currently an air attack platform (ASM) or smokejumper aircraft are requested to under take aerial detection missions subject to their availability.

IV.A.6. Fire Weather and Fire Danger

Climate - Because of the wide variations in elevation and topography, climatic conditions for the GSFO vary considerably. In the lower elevations the average total precipitation is nearly twelve inches, with 30-40 inches of snowfall. Temperatures will generally be cooler, frost-free periods shorter, and both precipitation and relative humidity greater at higher elevations north and south of the I-70 corridor. Climate data from Eagle, Colorado and Rifle, Colorado provides insight into average weather conditions in the Eagle River valley and Colorado River valleys.

Fire Weather - Typical weather patterns consist of hot/dry afternoon winds (10-15 mph) with gusts up to 45 mph near thunderstorms. Thunderstorms/dry lightning and warm unstable conditions are common. Cold fronts and storm squalls can bring sustained winds in excess of 50 mph. Thermal belts are very distinct in the mountainous and canyon country.

Temperatures

- 80-90s in high terrain
- 95-100+ in high desert and plateau areas.
- 45-50s at night

Relative Humidity

- 5%-20+% typical summer lows during burning periods in high desert and plateau areas; 10%-25+% typical lows in high terrain.
- 30%-50+% typical nighttime highs at all elevations
- During extremely hot days, many areas may experience little or no RH recovery

Fire weather is usually at its worst in early summer (mid June) up until monsoon moisture arrives in mid July. After monsoons retreat, a second drying period is common during the fall that runs from mid August up until September or even October in some years. Weather during the second season is typically cooler and days are shorter. While the potential for large fires exists in the fall, the first season has the greatest potential for hot/dry conditions that would sustain large fire spread.

Tables IV.A.6. Monthly Climate Summary

Monthly Climate Summary for UCR FPU at Eagle, Colorado

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean High Temp. (°F)	34	40	48	68	69	80	86	83	76	64	47	35
Mean Low Temp. (°F)	3	9	19	25	33	39	46	44	36	25	15	5
Avg Total Precip.			.80	.81	.85	.86	1.21	1.03	1.09	.94		
Avg. Low Relative Humidity (%)			25	20	17	12	14	15	15	15		

Monthly Climate Summary for UCR FPU at Rifle, Colorado

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean High Temp. (°F)	36	43	53	64	74	84	90	88	79	67	51	39
Mean Low Temp. (degrees)	9	16	24	31	39	45	52	50	41	31	21	12
Avg Total Precip.			.95	1.01	.98	.74	1.03	1.13	1.11	1.21		
Avg. Low Relative Humidity (%)			25	19	18	15	12	17	17	15		

Monthly Climate Summary for UCR FPU at Grand Junction, Colorado

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean High Temp. (°F)	37	44	53	65	79	86	93	89	81	68	51	39
Mean Low Temp. (°F)	17	23	31	39	49	57	64	62	53	42	29	19
Avg Total Precip.	.59	.58	.76	.74	.73	.44	.61	1.03	.89	.90	.59	.58
Avg. Low Relative Humidity (%)	59	25	24	22	20	12	23	20	22	25	49	52

Remote Automated Weather Stations - The BLM utilizes 13 Remote Automated Weather Stations (RAWS) (Table IV.A.6).

Table IV.A.6.a Remote Automated Weather Stations (RAWS) for UCR FPU

Name	NWS ID	NESS ID	Elevation	Latitude	Longitude
Deadhorse	051404	323603A4	8960	40° 04’ 43”	107° 22’ 05”
Dowd Junction	051606	3241B960	8998	39° 37’ 39”	106° 27’ 07”
Soda Creek	051703	323591C8	9600	39° 34’ 00”	105° 59’ 00”
McClure Pass	052810	3235B724	8980	39° 07’ 36”	107° 17’ 03”
Jacks Canyon	052409	325A137C	7660	38° 45’ 12”	108° 34’ 47”
Demaree	051507	3265F06C	7460	39° 27’ 36”	108° 52’ 48”
Carpenter Ridge	053808	323C241A	8088	38° 27’ 34”	109° 02’ 49”
Little Dolores	052410	326607E6	6796	38° 58’ 09”	108° 56’ 40”
Pine Ridge	052407	32778496	6600	39° 15’ 37”	108° 24’ 26”
Rifle	051504	324A7104	6120	39° 30’ 44”	107° 44’ 57”
The Crown	051506	325A9568	8303	39° 21’ 10”	107° 05’ 35”
Gypsum	051607	3259D16C	7340	39° 41’ 43”	106° 58’ 23”
Storm King	051508	324AA76C	8793	39° 33’ 45”	107° 25’ 12”

The UCR also has a portable RAWS station that can be installed to provide site specific weather information for projects where permanent RAWS information is not felt to reflect need site specific conditions. All weather stations use NFDRS fuel models along with the energy release component to develop fire danger ratings on a daily basis.

The **Grand Junction Interagency Dispatch Center** is responsible for recurrent daily activities in order to manage RAWS data and for the input of key dates to initiate seasonal data collection and termination. Dispatch response levels for the UCR FPU are based on the Burning Index (BI) for the day, which also determines the fire danger rating of low, moderate or high. These are utilized to set response levels in Wildland Fire Computer Aided Dispatch (WildCad), which identifies the needed response level and closest available forces for a particular wildland fire start. Dispatch response levels are set at the following break points:

Low	BI = 0 – 59
Moderate	BI = 60 – 75
High	BI = 75+

Fire Danger - Agency policies for both Bureau of Land Management and US Forest Service (see Standards for Fire and Aviation Operations, 2003; FSM 5120) require each dispatch unit to have a Fire Danger Operating and Preparedness Plan (FDOPP) (Appendix H). The Upper Colorado River Interagency Fire Management Unit has combined a Preparedness Plan with the FDOP into a FDOPP. This plan is the basis for the fire danger message provided to the public as well as the decision-making tool for agency administrators, fire managers, dispatchers, agency cooperators, and firefighters for setting planning and dispatch levels using the National Fire Danger Rating System (NFDRS). Activities, events, and fire operations affected by fire danger are identified and appropriate NFDRS components or indices are selected as decision guides.

The Fire Danger Operating and Preparedness Plan addresses fire danger levels and ratings and corresponding appropriate responses, with an emphasis on aggressive information and resource sharing between federal agencies, cooperating state and county agencies, private industry, and the public.

Energy Release Component - The Energy Release Component (ERC) chart, in general, is one of many charts wildland firefighters use to determine what kind of fire behavior that may be expected from a wildland fire, especially in heavier fuels. The chart is derived from data collected at weather stations. The ERC is based on the estimated potential available energy released per unit area in the flaming front of a fire. The day-to-day variations of the ERC are caused by changes in the moisture contents of the various fuel classes, including the 1,000 hour time lag class. The ERC is derived from predictions of; (1) the rate of heat release per unit area during flaming combustion and, (2) the duration of flaming. The 3-Day Average ERC Chart is used to look at the seasonal trends, and as a comparison tool against previous years.

Fire Severity / Severity Guide - Severity planning is done for both short and long duration situations. Short duration considers a period of 1 day to a couple of weeks when conditions are expected to subside. Long duration contingency planning is for an extended time period.

Short duration planning can be an appropriate strategy for conditions when adjective rating class is high or greater. Typical planning would include increased staffing, pre-positioning of local forces, close coordination with fire management partners, escalated interagency prevention efforts, etc. The objective is to get through a short duration critical period, with existing budgets.

Long duration severity planning involves requesting severity funding to supplement existing preparedness resources to increase staffing levels in response to long duration or uncharacteristic weather trends. Severity requests must be submitted two weeks in advance of planned needs.

Severity planning considers the following:

- Energy Release Component (ERC)
- sustained departure from normal long range weather forecasts
- observed fire behavior
- measured departure from normal in live fuel moisture conditions
- abnormal/unforeseen numbers of fire starts
- uncharacteristic fire sizes adjusted for seasonal norms.

Funding requests are based on anticipated needs and are only used if predicted conditions are realized. Severity funds do not make up the difference between the UCR funding level and the

Most Efficient Level (MEL), but rather provide for capability beyond the MEL staffing level identified in the UCR NFMAS analysis.

Severity Index - The Severity Index uses Energy Release Component values (ERC), 1000-hour fuel moisture, current KBDI and local drought conditions represented by percent of normal precipitation as monitored at UCR weather stations.

The following chart describes the Severity Indices and is to be used as a guide for severity planning. Three of the four weather stations must meet the criteria for the UCR to meet the specified severity level.

Table IV.A.6.b. Severity Index Levels

LEVEL	CRITERIA
LOW	ERC is within the 0-24 percentile range for the weather stations within the geographical area. 1000 HR. FUEL MOISTURES greater than 20%. YEARLY PRECIPITATION of weather stations at normal or above. KBDI 0 to 100.
MODERATE	ERC is within the 25-50 percentile range for the weather stations within the geographical area. 1000 HR. FUEL MOISTURES range between 16-20%. YEARLY PRECIPITATION at weather stations averages no more than 10% below normal. KBDI 100 to 300.
HIGH	ERC is within the 51-80 percentile range for the weather stations within the geographical area. 1000 HR. FUEL MOISTURES range between 13-15%. YEARLY PRECIPITATION at weather stations averages 10 to 25% below normal. KBDI 300 to 400.
VERY HIGH	ERC is within the 81-95 percentile range for the weather stations within the geographical area. 1000 HR. FUEL MOISTURES range between 8-12%. YEARLY PRECIPITATION at weather stations averages 25 to 45% below normal. KBDI 400 to 500.
EXTREME	ERC is greater than the 95 percentile range for the weather stations within the geographical area. 1000 HR. FUEL MOISTURES are less than 8%. YEARLY PRECIPITATION at weather stations averages more than 45% below normal. KBDI greater that 500.

Fire Weather Watch/Red Flag Conditions - Fire Weather Watches and Red Flag Warnings are issued to inform land management agencies of the possible development of or actual occurrence of Red Flag conditions. A Red Flag event occurs when critical weather patterns develop that could lead to large and dangerous fires.

Conditions that warrant Fire Weather Watch or Red Flag Warning, either alone or in combination are the expected or actual occurrence of:

1) General dry thunderstorm activity (LAL-6), i.e. considerable lighting but little or no measurable precipitation.
2) The combination of strong winds (usually 25 mph or more), low humidity (15% or lower), and high temperatures (usually 80 degrees and above).
3) Fire danger in the “Very High” or “Extreme” category.
4) In the judgment of the forecaster, weather conditions and fire danger combine to indicate a severe fire weather episode.

Fire Weather Watch – will be issued whenever the potential for Red Flag conditions exists. A watch will normally be issued 12 to 36 hours in advance of the expected onset of Red Flag conditions. If dry lightning is the only condition expected in the 0 to 12 hour time frame, a Fire Weather Watch may be issued or continued in place of a Red Flag Warning.

Red Flag Warning – will be issued whenever Red Flag conditions are imminent or occurring. A warning will generally be issued within 12 hours of the expected onset of Red Flag conditions, or whenever the forecaster becomes aware of an ongoing Red Flag event.

Fire Weather Watches will most likely be issued with the morning or afternoon forecast while Red Flag Warnings may be issued at any time. The Watch or Warning will be headlined in the forecast with information on the affected area, the valid time of the watch or warning, and a description of the expected severe fire weather conditions included. Both Watches and Warnings will continue to be highlighted in the routine fire weather forecast until threatening conditions cease.

Fire Weather Watches and Red Flag Warnings will be entered into WIMS and the affected agencies notified by telephone usually before, but always after a Watch or Warning has been issued. A Watch or Warning will be cancelled by the forecaster when the conditions are no longer expected to occur. During the off-season, if very warm, dry and windy conditions are expected, the NWS will notify the Rocky Mountain Area Coordination Center by phone.

The National Weather Service Fire Weather Watch/Red Flag Warning program is used to warn land management agencies of the onset or occurrence of critical fire weather conditions. The NWS does not make any management decisions as a result of the Fire Weather Watch or Red Flag Warning. Specific actions are determined by user agencies. Preparedness levels will be adjusted commensurate with the Red Flag Warning and Weather Watches based on existing local conditions.

Spot Weather Forecasts - Spot weather forecasts are required for prescribed burning and are commonly needed to assist with plans for wildfire suppression. The procedures for obtaining a spot forecast are as follows:

1) Fire (or prescribed fire) personnel take weather observations at site of fire
2) Observation data is forwarded directly to the Grand Junction Dispatch (GJC) who in turn forwards the information to the NWS.
3) NWS formulates a forecast and either sends a FAX copy to GJC Dispatch or puts the forecast onto the NWS spot weather forecast webpage.
4) GJC forwards the spot weather forecast to the Incident Commander or Zone FMO via FAX or radio. (Radio broadcast is preferred over cell phones to allow field personnel the opportunity to hear the weather forecast.)

Spot Weather Forecasts and other Fire Weather Information are provided through the National Weather Service Offices in Grand Junction for most of the UCR and the Denver office for the East Zone, Dillon Ranger District.

IV.A.7. Aviation Management

The UCR has a varied aviation workload and there is a steady need for agency, contract, and "Call When Needed" aircraft for fire and resource uses. Regional vendors are available to provide point-to-point transportation, aerial ignition platforms, and reconnaissance missions to support resource management activities.

All aviation operations will comply with the UCR Aviation Management Plan, the Air Tanker Base Plan, the Helicopter Operations Plan, and the UCR SEAT Operations Plan, all of which are available at the Grand Junction Dispatch Center.

Aviation resources available to the UCR include:

- Type III exclusive use helicopter and helitack crew from June 1st to September 30th in Rifle

- Type IV air tanker (SEAT) from May 10th to September 12th in Grand Junction
- Smokejumpers from mid-June through September in Grand Junction
- Aerial supervision resources (ASM, Lead plane, Air Attack) in Grand Junction

The Grand Junction Air Center/Air Tanker Base (ATB) located on the west end of the Grand Junction Airport can get extremely busy during fire season, June through September. It is not unheard of to have 20+ aircraft working fires across Colorado and surrounding states, including heavy air tankers to Wyoming, Utah, South Dakota, and New Mexico. Grand Junction ATB historically has dropped more retardant than any other ATB in the country.

Smokejumper operations can add an extra workload by adding up to four aircraft and fifty jumpers during high initial attack periods.

Single Engine Air Tankers (SEATs) and Helicopters (Types 1, 2, and 3) are staged in Grand Junction on a regular basis by Rocky Mountain Coordination Center in Denver throughout fire season for severity. State of Colorado Division of Forestry, Craig District, and Montrose District also utilize the Grand Junction ATB for extended attack and Type I & II Incidents creating an added workload for Air Center/ATB personnel.

IV.A.8. Initial Attack

Annual Operating Plans (AOPs) are in place for Delta, Eagle, Garfield, Mesa, Pitkin, Rio Blanco, and Summit Counties. Participants in the AOPs are the NPS, BLM, USFS, Colorado State Forest Service, and the county sheriffs. Initial attack of wildland fires within the UCR is consistent with the AOPs. The purpose of this FMP is to facilitate cooperation in fire management activities within the protection areas of the signatory parties of the AOPs. On UCR jurisdiction fires, the closest available federal resources will implement initial attack. There may be times when nonfederal cooperators are utilized due to resource shortages, and a federal resource will be dispatched at the earliest opportunity.

All fires on UCR federal lands will be managed with the appropriate management response consistent with preplanned dispatch protocols (agency run cards and preplanned dispatch plans) in conformance with resource management objectives identified in this plan. Tactics and strategies will be based on the current and predicted weather, fire behavior, and risk to Firefighter and public safety. Firefighter and public safety is always the first priority. Use the following information for determining initial attack priorities. For initial attack, FMUs within the UCR are ranked as High, Moderate, or Low (III.C.3).

Initial attack forces are made up of the first suppression personnel to arrive at a fire plus reinforcements arriving during the first burning period. A qualified individual on scene will undertake control of the incident and identify himself or herself as the Incident Commander (IC). This will be communicated over the radio to Dispatch as well as to the remaining initial attack personnel on scene.

Should the fire complexity increase to a level exceeding the qualifications and capability of the Initial Attack IC, that individual will advise Dispatch via the radio that a more qualified Incident Commander is required along with recommendations for additional resources and overhead positions consistent with Incident Response Pocket Guide, and UCR Guidelines – Management of type III incidents complexity and resource requirements (See attachment).

For all initial attack incidents, the Incident Commander and/or Duty Officer shall review the incident organization complexity and complete the Incident Complexity Analysis found in the Interagency Standards for Fire and Fire Aviation Operations or UCR Incident Organizer. This analysis will determine the appropriate level of incident organization.

IV.A.9. Extended Attack and Large Fire Suppression

Extended attack efforts may also involve interagency cooperation and UCR Fire Staff direction for extended attack and large fire suppression is outlined in the Interagency Standards for Fire and Fire Aviation Operations.

A wildfire is considered to be in extended attack status when:

- Suppression efforts have not succeeded or are not expected to reach containment within 24 hours.
- The Initial Attack Incident Commander (ICT4 or ICT5) requests additional resources that result in fire complexity attaining Type III status within or following the first 24 hours following the arrival of the first suppression resources.

During extended attack fire suppression operations the appropriate Agency Administrator or delegated official and Zone FMO are notified, a Resource Advisor(s) identified, and a Wildland Fire Situation Analysis (WFSA) completed.

All fires will remain staffed until declared controlled or out. The Zone FMO will determine continued staffing procedures. At a minimum, regular checks will be made until the IC or Zone FMO declares the fire out.

IV.A.9.1 Wildland Fire Situation Analysis (WFSA) Development

The Agency Administrator is responsible to ensure that a Wildland Fire Situation Analysis (WFSA) is prepared for all wildfires that escape or are expected to escape initial attack. Preparation of the WFSA will be done with assistance from fire management staff and resource specialists.

The Agency Administrator is responsible to select the preferred management strategy for the incident. Selection of the preferred management strategy will not consider positive resource benefits resulting from wildfire as an objective.

Alternatives developed through the WFSA process must be consistent with the goals of the land use plan and must address the following:

- Firefighter and public safety
- The alternative can be implemented.
- Each alternative must be accompanied by a strategic plan of action.
- The probability of success and consequences of failure must be assessed and displayed.
- Each alternative will display the estimated numbers of acres burned, times for containment and control, suppression costs and resource damage.

Approval authorities and qualifications for unit Agency Administrators have been established for certifying a WFSA. In addition, training and experience requirements must be met for a agency administrators to certify a WFSA. The following list identifies qualified Agency Administrators and their respective levels of authority:

Field Manager (BLM) or Park Superintendent (NPS)	Approval authority up to $2,000,000
State Director (BLM) or Regional Director (NPS)	Approval authority from $2,000,000 to $10,000,000

Exceeding Existing WFSA - Selecting a New Strategy - A new WFSA is required when the objectives of the existing WFSA have been compromised (or are expected to be compromised).

The revised WFSA will include a new set of objectives and a range of alternatives and associated fallback strategies and worst case outcomes.

Given the inherent inaccuracies in developing estimated costs associated with each alternative, exceeding the cost estimate for the preferred alternative should not in and of itself generate a need to the revise the existing WFSA.

IV.A.9.2 Incident Management

Type III Incident Management - A Type III Incident Commander will manage incidents that reach a Type III complexity level and the associated overhead positions will be staffed as appropriate for the incident. The UCR maintains a list of local interagency personnel qualified at the Type III level and above. Individuals qualified and current at the Section Chief or Unit Leader level are included on the Type III cadre (Appendix I).

When a situation is beyond UCR capabilities, an overhead team is brought in at the request of the NPS Park Superintendent or BLM Field Manager to manage the incident. The type ordered depends on the complexity and severity of the situation.

Type I or Type II Incident Management - An incident complexity analysis (see appendices) is used to document the rationale of the fire management staff and responsible Agency Administrator in determining whether an extended attack incident is expected to, or has increased in complexity to warrant ordering a Type II or Type I Incident Management Team.

Transition Requirements for Incoming Incident Management Teams - The following elements will be completed prior to the arrival of a Type 2 or Type 1 Incident Management Team:

- Wildland Fire Situation Analysis (WFSA) complete with applicable incident objectives and a selected alternative to guide tactical suppression actions. The line manager will select the preferred alternative and certify the wildland fire situation analysis within their approval authority.
- Agency Administrator Briefing guide completed.
- Delegation of Authority completed and signed by the NPS or BLM Agency Administrator.

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

- Determine the fire camp location.
- Order supplies and equipment (pre-order), as directed by the Logistics Section Chief.
- Make an ample supply of topographic maps, base maps, etc.
- Determine transportation needs of incoming fire teams (from ordering unit mobilization point to fire, and on the fire).
- Determine Agency Administrator briefing time and location.
- Obtain necessary information for the Agency Administrator briefing.
- Order communication equipment for the fire.

The Agency Administrator and FMO will conduct two briefings for the incoming fire team. The first briefing should be by the Agency Administrator at a site away from the fire. The second briefing should be by the current Incident Commander and staff at the fire site.

The Agency Administrator briefing should be as soon as possible after the arrival of the command and general staff. It is impossible to list everything a team needs to know, however, as a minimum the Wildland Fire Situation Analysis and Agency Administrator Briefing Checklist should be completed.

The local Incident Commander briefing shall take place when the incoming team arrives at the fire. The incoming team will not assume responsibility for the fire until they are thoroughly briefed and comfortable with the situation. Both Incident Commanders shall determine the exact time of command change. 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 that they can be rested and ready for initial attack or as reinforcements on other parts of the UCR.

Dispatching Resources - Initial Attack remains an Interagency Dispatch Center responsibility. In most cases when an Incident Management Team has been ordered, the Dispatch Center Manager in consultation with the Unit FMO will initiate an expanded dispatch plan to support the incident management team.

Demobilization - Demobilization shall be carried out in an orderly manner to accomplish a cost effective program commensurate with efficient and effective organization practices. Planning for demobilization shall begin while the fire is being mobilized. Adequate records of personnel, transportation, and equipment used or being moved during mobilization are necessary. In many instances, demobilization occurs at the same time mobilization is occurring elsewhere. Communications for demobilization shall be through established dispatch channels. All release orders shall be recorded on the appropriate Resource Order Form.

The following are guidelines for release priorities. Special situations may exist that will change these priorities.

Crews	Out-of-Region agency regulars (Type II) Region 2 agency regulars (Type II) Out-of-Region Hotshot crews (Type I) Other organized crews (contract, AD, etc., Type II) Region 2 Hotshot crews (Type I)
Helicopters	"Call-when-needed" or rental agreement Within Region helicopters required for initial attack at home unit due to fire activity or potential thereof Out-of-Region helicopters Within Region helicopters **not** required home for initial attack
Radios	Assemble National Fire Cache Radio Systems and ship to Boise via air freight or charter aircraft as soon as possible. Coordinate with Regional dispatch on transportation. DO NOT hold radios on UCR. They must be returned to cache for refurbishing for next fire. RMA Radio Systems may be retained for mop-up and then sent to RMA Cache for refurbishing.
Fire Cache Equipment and Supplies	Local unit cache items Local cooperator cache items Regional cache items Out-of-Region cache items
Engines and Water Tenders	Local units needed for initial attack Local cooperators and other units needed for initial attack Out-of-Region engines Local cooperator and other units not needed for initial attack Local Units not needed for initial attack
Heavy Equipment	Same as Engines. National Guard equipment should be released as soon as local resources can handle or replace National Guard equipment.
Overhead	Overhead releases shall be as required by the fire team and the local unit's needs. Strive to consolidate overhead in groups of common destinations.

Release of Interagency Incident Team - The date and time must be approved by a Agency Administrator or a designated representative. The transition must be as smooth as possible and UCR fire team members should be assigned to start working with interagency team members at a predetermined time. The local fire team should be rested and off fire duty 24 hours prior to takeover.

The Interagency team should begin phasing in the UCR team as soon as demobilization planning is complete and implementation is started. Fire management activity should be at a level and workload that UCR personnel can reasonably handle.
Criteria to be considered before the release of an Interagency team:

- Fire must be controlled.
- Most line crews should be released that are not needed for patrol and/or mop up.
- Base fire camp shut down, reduced, or in the process.
- Plans Chief has prepared a narrative fire report and individual fire report as part of the final fire package.
- Finance Chief should have all known finance problems resolved. Contact made with UCR Budget and Finance personnel. (Finance and/or Logistics Chief may have to stay longer or return to resolve problems.)
- Fire rehabilitation work completed to agency's satisfaction or plan written to satisfaction.
- Overhead ratings completed and submitted to UCR as final package.

Debriefing - Agency Administrator should debrief the Interagency team and prepare evaluation before release. The Agency Administrator should give overall team performance evaluation in writing considering the following:

- Was the incident managed in a manner that provided for firefighter and public safety?
- Were incident operations conducted in a cost effective manner?
- Were other incident objectives met?
- Did the team keep the Agency Administrator and FMO informed of progress and developments?
- Identify outstanding or poor performance of individuals, crews, or others involved in the management of the fire.
- Were there any special problems or recommendations to be brought to the attention of the RMA Fire Coordinator?

IV.A.10. Other Fire Suppression Considerations

IV.A.10.1 Safety

Safety is the number one priority for all personnel engaged in or supporting fire management activities. Fire management work is one of the most hazardous jobs encountered by federal personnel. The Incident Commander and all supervisors will always put the safety of his/her personnel first. **There is no fire situation so serious that the life of anyone should be risked in order to get to the fire sooner, get the fire out quicker, or to keep the burned areas smaller.**

All employees will abide by the **'Safety First'** policy. Each employee has a responsibility for his/her personal safety and that of fellow employees. It is also everyone's responsibility to call attention to any unsafe practice that is observed.

1. All fire personnel will follow the 10 Standard Fire Fighting Orders, emphasize the principles of Lookouts, Communications, Escape Routes, Safety Zones (LCES) and insure mitigation of any of the 18 Watch-Out Situations encountered while taking suppression or prescribed fire actions. These basics of fire fighting survival are utilized as a checklist for supervisory personnel on the fire, and as a source for other

fire line personnel to pose questions to supervisory personnel whenever they have concerns about their personal safety.

2. All Type III and more complex incidents are staffed with a qualified safety officer.

3. Seat belts are used at all times while traveling in any vehicle. Speed limits and other traffic laws will be obeyed at all times.

4. Required personal protective equipment (PPE) will be worn at all times. Job Hazard analyses will dictate appropriate PPE to be utilized for fire management activities other than suppression. Fire shelters will be worn by all firefighters at all times on all wildland fires.

7. Safety rules, standards and accepted procedures will be adhered to at all times.

8. Personnel will be fully qualified and current for the position they are assigned to.

IV.A.10.2 Communications

Firefighters are responsible to maintain radio contact with Grand Junction Dispatch while suppressing fires, and will check in at regular intervals. If the fire is in a location with poor or no radio communications (a 'dead spot'), a relay will be set up and maintained while firefighters are in that area.

Cell Phones - UCR fire management staff and resources use cell phones for routine contacts and coordination. Cell phones should be used by initial and extended attack resources for lengthy conversations regarding operational tactics, logistical needs and coordination and other matters that would unnecessarily tie up available radio frequencies.

Cell phones should **not** be used to contact Dispatch or zone fire management staff during incident size up. Staff members are prohibited from making personnel calls on agency provided cell phones for other than emergency contacts with family members or within the guidelines of agency policy for extended assignments away from home and their duty station.

Radio Communications/Procedures - Fire size-up information shall be communicated to the Interagency Dispatch Center using the appropriate interagency frequency.

During an ongoing fire, interagency dispatchers may request that fire related radio traffic be prioritized over routine resource management traffic on specific agency repeaters.

A list of available radio frequencies is available from the Zone Fire Management staff.

IV.A.10.3 Wilderness Fire Suppression

Within the Colorado National Monument and Grand Junction Field Office, the fire suppression policy for wilderness areas is to conduct all fire management activities in a manner compatible with overall wilderness management objectives.

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The BLM Field Manager and NPS Superintendent are delegated the authority to approve the use of helicopters, and ground based mechanized equipment such as chainsaws and portable pumps within wilderness areas to respond to an emergency fire situation. The responsible Zone Fire Management Officer secures this approval on a case-by-case basis. There is a blanket authorization for the use of helicopter landings in the event of a medical emergency that requires firefighter medevac or transportation of medical personnel.

The UCR utilizes the concept of Minimum Impact Suppression Tactics (MIST) (Appendix E) to effectively achieve the fire management protection objectives consistent with land and resource management objectives.

IV.A.10.4 Critical Incident Management

Tragedies, deaths, serious injuries, hostage situations, and threatening situations are some of events that are critical incidents. In the event of a critical incident a critical incident debriefing team will be ordered through Grand Junction Dispatch. The purpose of this team is to assist managers responsible for dealing with critical incidents that may have long-term adverse effects on an individual, families, communities or the agency.

IV.A.10.5 Field Fatality/Serious Injury Plan

Purpose - The intent of this plan (Appendix J) is to list the steps that must be taken in response to fatalities or serious injury; to list the people/agencies with whom coordination must be maintained; where pertinent information is found.

Responsibility - Until delegated, the Line Officer has the responsibility for implementing the appropriate response(s) to address the situation when a fatality or serious injury occurs.

IV.A.10.6 Interagency Accident/Incident Reporting Guide

This guide was developed to assist first line supervisors, staff members and Agency Administrators in responding to incidents or accidents in the workplace on an interagency basis. Refer to the Guide in the Appendix K for further information.

IV.B. Wildland Fire Use

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IV.B.1. Description of the Wildland Fire Use (WILDLAND FIRE MANAGED FOR RESOURCE BENEFIT) Opportunities for the GSFO

WILDLAND FIRE MANAGED FOR RESOURCE BENEFIT refers to the management of naturally ignited wildland fires to accomplish specific, pre-stated resource management objectives in predefined geographic areas as defined in the agency's land use plan and outlined in this FMP.

Fire regimes may vary between vegetation types and different regions. Parameters for WILDLAND FIRE MANAGED FOR RESOURCE BENEFIT or management ignited fires consider this natural range of variability. For example, if a natural fire regime included very frequent, cool burning surface fires, but also included an occasional long return interval stand replacement fire then that stand replacement fire is within the natural range of variability and will be considered when analyzing WILDLAND FIRE MANAGED FOR RESOURCE BENEFIT.

The desired result is that the landscape should take on an appearance of what would exist naturally and historically. It should display a mosaic of complex vegetation patterns and types that would have evolved naturally with ecological and geological processes. There generally are less continuous, uninterrupted vegetation types, more openings, a variety of seral stages and different communities in a random patchwork.

On public lands managed by the BLM and the COLM within the UCR FPU, there are 10 FMUs where wildland fire maybe used to accomplish specific, pre-stated resource management objectives. These FMUs are:

Table - IV.B.1 - FMUs where wildland fire maybe used to accomplish resource objectives.

GJFO and COLM	GSFO
1.) D-01 Black Ridge 2.) D-02 Bangs Canyon 3.) D-03 Wagon Park/Nine Mile Hill 4.) D-04 Palisade 5.) D-05 Colorado National Monument 6.) D-06 Blue Mesa 7.) D-07 Demaree 8.) D-08 South Shale Ridge	1.) D-140-01 Bull Gulch/Castle Peak/Hack Lake

Wildland fires in "D" FMZs receive a suppression response commensurate with values-to-be-protected, firefighter and public safety and cost efficiency or they may be managed to accomplish resource management goals as specified in Appendix B.

Two types of fires may be approved for use within the D FMZs:

1) Naturally Ignited Wildland Fires - Those allowed to burn under pre-determined conditions. *All ignitions determined to be human caused will be suppressed using an appropriate management response.*

2) Human Ignited Fires - Prescribed fires, with a pre-developed plan and EA, ignited by qualified agency personnel that are designed to reintroduce the type of fire that would be expected to occur naturally.

IV.B.2. Preplanned Implementation Procedures

Annual Activities Required to Implement the Wildland Fire Use Program - Annual activities required to designate and manage incidents for wildland fire use include:

- Wildland Fire Use management procedures must be reviewed and updated to reflect current policy as part of the annual UCR and county annual operating plan and GSFO Fire Management Plan reviews.
- Coordination with key agency staff and stakeholders, focusing on special use permittees, recreationists and public or communities that would be potentially affected by a wildland fire use incident.
- Coordination with agency public affairs staff to prepare pre-season news releases.
- Internal coordination with interagency staff members, particularly with respect to prescriptive elements and weather factors that may affect WILDLAND FIRE MANAGED FOR RESOURCE BENEFIT implementation during the fire season.
- Preparation and receipt of an open burning permit from the Colorado State Department of Health and Environment, Air Pollution Control Division.
- Wildland fire use applications will follow the National Interagency Mobilization Guide direction when in preparedness level IV and V.

Decision Criteria for Wildland Fire Use - The following factors are considered in evaluating a candidate ignition for designation as a wildland fire use incident:

- Firefighter and public safety.
- The ignition must be lightning caused.
- Key management positions such as a fire use manager (FUMA) must be available and dedicated to management of the incident.
- Proximity to boundary of wildland fire use area and/or potential to exceed pre-established boundaries.

- Ability of the incident to meet resource management objectives.
- Potential to damage or destroy significant improvements, natural or cultural resource values.
- Projected scope and duration of impacts to air quality.
- Political considerations and impacts to social values.
- Projected duration of the incident and ability to provide management oversight and necessary implementation actions.
- Fire management activity at the National, Geographic Area and Unit level.
- Current and predicted fire behavior including expected spread into adjacent fuel types.
- Seasonal, current and predicted weather conditions (drought, time of year, probability of a season-ending weather event).
- Historic fire occurrence, historic weather and evaluation of past fire intensity, size and duration.

Wildland Fire Implementation Plan (WFIP) Implementation Stages - The Zone FMO or designee shall initiate a Wildland Fire Implementation Plan (WFIP) for all wildland fires determined to be candidates for management as wildland fire use incidents. Fire and resource managers, with agency administrators, shall then use the WFIP as an analysis tool to determine whether WILDLAND FIRE MANAGED FOR RESOURCE BENEFIT management is the appropriate management response for these candidate wildland fires. The complete implementation process and standardized WFIP format developed by the National Wildfire Coordination Group can be found in the Wildland and Prescribed Fire Management Policy Implementation Procedures Reference Guide (USDA and USDI, 1998), Chapter 4. The WFIP format is also available as part of the WFSAPlusv4.3 software package, available on-line at http://www.fs.fed.us/fire/wfsa/.

The WFIP documents existing conditions, predicted conditions, decisions made, and trigger points for future decisions. Progressive development of the three WFIP stages will occur for wildland fires managed for resource benefits, where initial attack and aggressive suppression are not the selected responses. Most wildland fires will require completion of only stages I and II during their management; only long-term, more complex WILDLAND FIRE MANAGED FOR RESOURCE BENEFIT incidents will require completion of all three stages. When the WFIP is complete, it becomes the WILDLAND FIRE MANAGED FOR RESOURCE BENEFIT incident's strategic management plan.

Table IV.B.2. WFIP Documentation Process

Fire Name	
Fire Number	

Documentation Product	Product Needed	Product Completed
WFIP - Stage I: Initial Fire Assessment		
• Fire Situation		
• Initial GO/NO-GO Decision		
WFIP - Stage II: Short-Term Implementation Actions		
• Short-Term Fire Behavior Predictions And Risk Assessment		
• Short-term Implementation Actions		
• Complexity Analysis		
Stage III Need Assessment Chart		
WFIP - Stage III: Long-Term Implementation Actions		
Periodic Fire Assessment		
• Part 1, Re-validation		
• Part 2, Stage III Need Assessment		
Wildland Fire Situation Analysis		

Figure IV.B.2. - WFIP Implementation Stages

Stage 1	Initial Fire Assessment is completed by the Zone FMO or designee along with the responsible Agency Administrator/Manager within two hours of receipt of size up information that confirms that the ignition was started by lightning. The Stage I assessment provides the decision framework for selecting the appropriate management response. Operational management decisions are described in the WFIP
Stage 2	Short-term Implementation Actions are completed by the Fire Use Manager (FUMA) and staff within twenty-four (24 hours) following the completion of the Stage I assessment. Key components of the Stage II assessment include development of short-term fire behavior predictions, implementation actions required, and incident complexity analysis. Individual wildland fire use plans identify the responsible Agency Administrator who must approve the Stage II assessment. This responsibility is in large part based on the projected complexity of the incident, potential to affect multiple jurisdictions and projected duration of the incident.
Stage 3	Long Term Assessment and Implementation Actions include identification of the maximum manageable areas (MMA) and long-term risk assessment. In addition to the fire use manager (FUMA) a Long Term Fire Analyst (LTAN) or fire behavior analyst (FBAN) is required to complete applicable risk assessments and projections.

Key Considerations in Managing Wildland Fire Use - In addition to the factors listed above, the following considerations should be addressed in the Stage III – Longterm Implementation Actions:

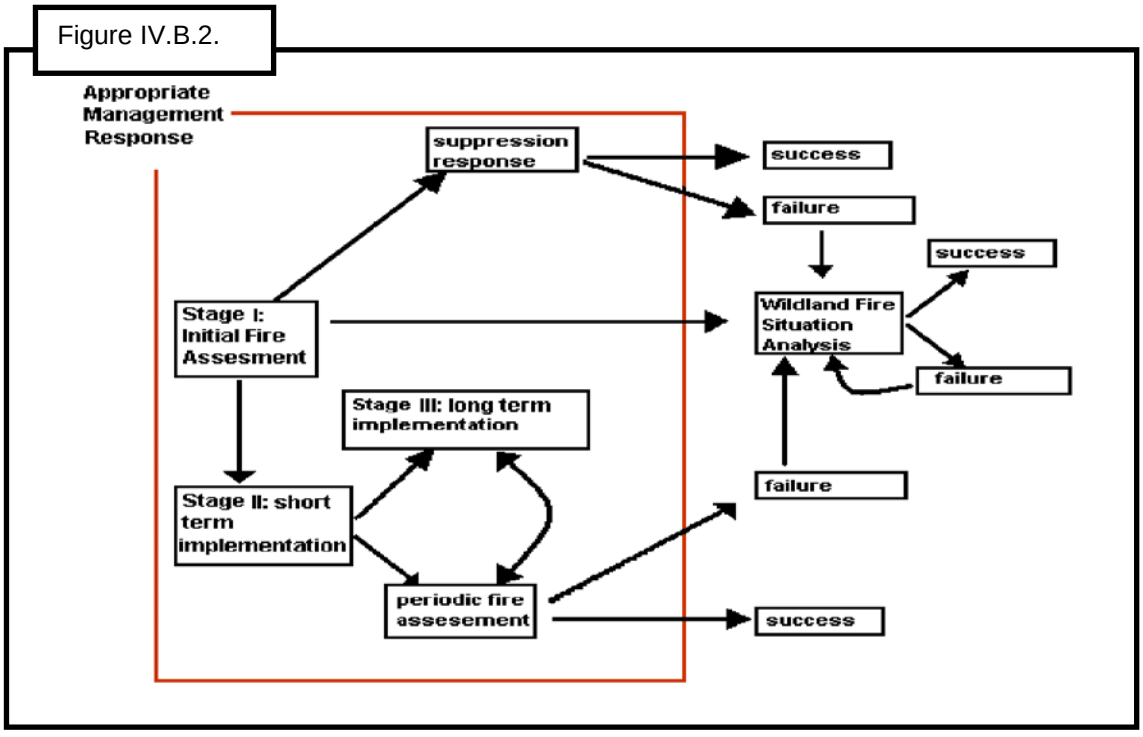
- The proposed maximum Manageable Area (MMA) should be highly defensible.
- The MMA should be large enough to reduce the need for resources to tactically implement management actions at selected trigger points.
- The MMA can be produced in electronic format and added to both the electronic and hard-copy WILDLAND FIRE MANAGED FOR RESOURCE BENEFIT documentation packages.

IV.B.3. Initial Action Procedures

All wildfires will be subject to an initial response. This response will include size up of the current fire situation, determination of probable fire cause and estimate of potential for fire spread. A suppression action will be initiated unless the fire is determined to be a candidate ignition for management as a wildland fire use incident. All candidate ignitions will be managed in accordance with the procedures and requirements outlined in the Wildland and Prescribed Fire Management Policy Implementation Procedures Reference Guide. All ignitions determined to be human caused will be suppressed using an appropriate management response.

Before a wildland fire is managed for resource benefit, authorized and qualified personnel must follow a clearly defined decision making process. Figure IV.B.2 provides a brief overview of the full range of appropriate management responses and necessary steps for evaluation and management of wildland fires to accomplish specific resource management objectives in defined geographic areas.

Figure IV.B.2.



IV.B.4. Required Personnel

The UCR can usually manage wildland fire use incidents up to and including those requiring a FUM2. A Fire Use Management Team will be ordered for incidents exceeding this level of complexity. Current qualified staff members may act as interim fire use managers pending the

arrival of a Fire Use Manager (FUMA) or Fire Use Management Team. A current list of all personnel required and qualified to manage and/or assist in wildland fire use incidents is available in the Grand Junction Interagency Dispatch Center Mobilization Guide.

IV.B.5. Public Information

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

The following agencies and media outlets are generally contacted.

Agency/Media Contacts	
Grand Junction Dispatch	US Fish and Wildlife Service
WRNF Supervisor's Office	CO State Forest Service
BLM - Glenwood Springs Field Office	Colorado Division of Wildlife
BLM – Grand Junction Field Office	Denver Post
NPS – Colorado National Monument	KCNC TV (Channel 4)
Colorado Highway Patrol	KMGH TV (Channel 7)
CO Department of Transportation	KUSA TV (Channel 9)
County Sheriffs	KWGN TV (Channel 2)
County Commissioners	Local Newspapers
County Health Departments	Local Radio Stations
Local Fire Departments	

IV.C. Prescribed Fire

Fire is an essential ecological process in many ecosystems. Protecting lives, property, and natural resources does not mean eliminating fire from the environment. The use of fire to accomplish land and resource management objectives is referred to as prescriptive or prescribed fire, *a management ignited fire that is used to alter, maintain, or restore vegetative communities to achieve desired resource conditions.* Prescribed burning allows fire to play a role in the environment under controlled conditions.

Prescribed burning is a well-established practice utilized by public and private land managers. Often, multiple fire protection and resource management benefits are achieved concurrently. Natural resource managers set "prescribed fires" for many purposes including:

- Reduce accumulated vegetation and hazardous fuels reduction,
- Restore natural conditions by re-introducing fire into the ecosystem,
- Improve ecosystem health,
- Maintain or restore healthy wildlife habitat,
- Create barriers for protecting high-value areas such as timber investments, private property or administrative sites,
- Control spread of noxious weeds,
- Increase water availability by eliminating encroaching plants,
- Stimulate grass/ forb growth in areas to decrease erosion potential, and
- Enhance soil pH and increase soil nutrients.

IV.C.1 Planning and Documentation

The prescribed fire program is supported by BLM and NPS planning documents, appropriate environmental documentation, and is implemented in accordance with NPS manuals and BLM manual sections 9214 and 9211 (USDI BLM 2000).

IV.C.1.1 Summary of Prescribed Fire Program for the GSFO

Planning and Analysis - Prescribed fires are identified by field office specialists and UCR staff to meet resource management objectives as outlined in the Resource Area plans. The proposed treatments have traditionally included wildlife and range habitat improvement, site preparation for artificial and natural regeneration, hazardous fuels reduction and the re-introduction of fire into the ecosystem. Proposals are put together to comprise a 5 year plan of projects. Projects are then reviewed and submitted for funding and implementation on an annual basis as determined by the Field Office Manager (FOM). The design of projects, conducting resource inventories, and writing the NEPA documentation will typically take one to two years in advance of implementation of the planned treatment.

Prior to conducting a prescribed fire, NEPA documentation is prepared and approved. NEPA documentation describes and documents the purpose and need, issues, conformance to Resource Area Plans (including the FMP), the proposed action and alternatives, impacts and mitigation, and public participation.

Priority Setting - Projects are listed on a five year plan located in Table IV.C.1.1. The five year plan and future project workloads will be maintained in the RAMS system.

Projects are selected and recommended to the FOM from the 5 year or new ones added through coordination meetings between the field office and UCR staffs. Prioritization of projects occurs on an annual basis for submittal as target units of accomplishment into the annual work plan for each field office.

Table IV.C.1.1 **-** Summary of 5 year Prescribed Burn Plan for the GSFO

	2004	2005	2006	2007	2008
# of prescribed fire projects proposed.	3	2	4	2	2
# of acres proposed for treatment.	2,162	620	970	320	400
# of projects implemented through local contractors.	0	0	0	0	0
Total acres treated in CC 2 moved to CC 1.	2,162	620	970	320	400
Total acres treated in CC 3 moved to CC 2 or 1.	0	0	0	0	0

Primary Burn Windows - The primary burn windows for UCR occur in the spring. Burning is also accomplished in the summer and fall. Pile burns are planned and implemented during the winter.

Development of Prescribed Fire Plans - The UCR has developed a format for burn plans (Appendix L) used on an interagency basis. Prescribed Fire plans are developed at the Zone level by fire management staff qualified as Level II Burn Bosses (RXB2) or subordinates for developmental training opportunities. Detail in the prescribed fire plan may vary with type and complexity of the job.

Review of Prescribed Fire Plans - All prescribed fire plans are subject to a peer review by other UCR staff members not involved with project planning or implementation. In addition, a technical review is conducted the Unit Operations Specialist and/or Fire Ecologist. This technical review

focuses on development of prescription parameters, complexity analysis, risk assessment and smoke management mitigation activities. A subsequent operational review is conducted by the UCR interagency fire operations specialist focusing on project staffing and organization as well as resource allocation and planning for instances where the fire may exceed planned treatment areas. The Unit Aviation Officer reviews and approves all plans proposing the use of aerial ignition or aviation resources.

Approval of Prescribed Fire Plans - Each prescribed burn plan requires approval by the appropriate Agency Administrator. Once the prescribed burn plan is approved by the appropriate Agency Administrator, the execution, including mop up, must follow that plan. The approving Agency Administrator must authorize any changes to the approved burn plan.

Agency Administrator approval has been delegated to the Field Office Managers for Level I, II and III projects. The Colorado State Office Fire Ecologist provides technical review for Level I (Complex) prescribed burning projects.

Documentation Requirements - Documentation requirements relative to burn plan preparation have been established by the UCR fire management staff. All prescribed fires are documented with the following information:

- Prescribed Fire Plan
- Map of project area and surrounding area
- Monitoring data, including weather, fire behavior, and fire effects observations
- Weather forecasts, spot, short and long-term
- Smoke dispersal information.

Reporting Requirements - Project level reporting and pre-burn notification requirements have been established for the UCR staff group. Separate reporting requirements also include submittal and annual reporting requirements for smoke emissions to the Colorado Department of Health, Air Quality Control Division.

Exceeding Existing Prescribed Fire Plan - Any prescribed fire that exceeds either the maximum manageable area (MMA) or available funding is declared an escaped fire. Following an escaped fire declaration, a Wildland Fire Situation Analysis (WFSA) is completed and approved by the responsible Agency Administrator. This process is the same as previously described for wildfires that escape initial attack.

Prescribed Fire Project Critiques - The burn boss, key subordinates, zone fire management officer or UCR staff representative will conduct and document an informal post-burn critique. Formal project reviews are not required except in the instance of an escaped fire.

IV.C.1.2 Level of Vegetation Treatments

When considering vegetation management goals along with anticipated funding, personnel, planning priorities and climatic conditions; the reasonable foreseeable vegetation treatment level (e.g. level of fuel treatment and amount of prescribed fire) for the GSFO is generally assumed to be no more than 10% of the Resource Area over a 10 year period.

IV.C.1.3 Vegetation Treatment Guidelines

The following guidelines will be considered in site-specific projects. Project-level environmental analyses may determine the need for additional considerations.

- Pile burning of mechanically cleared vegetation/debris is acceptable in “A” FMZs.
- Equipment used in vegetation treatments should be washed and weed-free before arriving onsite.

- Except where specific treatments are designed to control or manage vegetation within riparian areas, treatments will be designed to avoid riparian areas. Adequate buffer strips around water courses and drainages may be necessary to protect riparian areas. The extent of the buffer strip depends on a number of factors such as: the slope, the type of treatment, acres treated, current vegetation condition, etc., and will be determined through a site-specific environmental analysis.
- Vegetation treatments conducted on uplands adjacent to the Colorado River will be designed and conducted in a manner that limits potential for soil erosion and sedimentation and increases vegetative ground cover. This includes riparian restoration work, and salt cedar removal, intended to improve habitats. Where erosion potential is high, establish baseline water quality data prior to conducting vegetation treatments and conduct water quality studies until the site is revegetated and soils are stabilized to determine impacts of vegetation treatments on water quality.
- Consider visual qualities in Visual Resource Management (VRM) Class I and II areas where the classification goal is to preserve the landscape character. Landscape modifications should replicate a natural shape, form, color and texture found in the surrounding area.
- To help maintain the appropriate habitat components on big game ranges, attempt to provide a 40/60 split of forage to cover for mule deer and elk.
- To minimize large losses of key big game winter habitat on Public Lands, limit vegetation changes within localized severe big game winter ranges to 10% of the range per year over a 10 year period.
- Prescriptive treatments with the potential to disrupt visitors, should avoid high use areas and occur outside of high use seasons, such as the fall big game rifle hunting seasons

IV.C.1.4 Species Specific Vegetation Treatment Guidelines

Species	FMUs	Species Specific Vegetation Treatment Guidelines
		Federally Threatened, Endangered and Candidate Species
Big River Fishes (inc. Flannelmouth sucker & Roundtail chub)	B-140-02 C-140-01	• Vegetation treatments conducted on uplands adjacent to the Colorado River will be designed and conducted in a manner that limits potential for soil erosion and sedimentation and increases vegetative ground cover. This includes riparian restoration work, and salt cedar removal, intended to improve habitats.
Bald eagle	A-140-01 A-140-02 A-140-03 A-140-05 A-140-06 B-140-01 B-140-02 B-140-03 B-140-05 B-140-06 B-140-07 C-140-01 C-140-03 D-140-01	• In order to minimize effects, both direct and indirect, to potential nesting bald eagles avoid vegetative treatments, within ½ mile of known bald eagle nest sites between December 15 and June 15. • To reduce indirect effects to bald eagles from potential modification of winter roost sites avoid vegetative treatments within ¼ mile of known roost trees from Nov 16 to April 15.
Greater sage grouse (potential Gunnison	B-140-05 B-140-06 B-140-07 C-140-03	• Vegetative treatments will avoid (1/4 mile radius) around known lek sites, and no activity will be allowed around active lek sites from March 15 to May 31. • Evaluate vegetation treatments to determine whether reseeding is

Species	FMUs	Species Specific Vegetation Treatment Guidelines
sage grouse in B-140-05)		necessary to achieve habitat management objectives as recommended in the *Guidelines to manage sage grouse populations and their habitats (Connelly, Schroeder, Sands and Braun 2000)*. • Develop vegetative treatments to minimize impacts and improve habitats as prescribed in the *Guidelines to manage sage grouse populations and their habitats (Connelly, Schroeder, Sands and Braun 2000)*.
Uinta basin hookless cactus	A-140-01	• Vegetative treatments will avoid known cactus populations. • Vegetative treatments will be designed to limit the spread of cheatgrass and enhance Uinta Basin hookless cactus habitat.
Canada lynx	A-140-02 A-140-03 B-140-01 B-140-02 B-140-03 B-140-04 B-140-05 B-140-06 B-140-07 C-140-01 C-140-03 C-140-04 D-140-01	Vegetation treatments within mapped potential Canada lynx habitats will be planned in a manner consistent with conservation measures outlined in the *Canada Lynx Conservation Assessment and Strategy* (2000) Chapter 7 – Pages 7-1 to 7-17. Considerations include: • Attempts will be made to keep linear openings (fire line, access routes and escape routes) out of mapped potential habitat and away from key components such as denning areas. • Avoid constructing permanent firebreaks on ridges or saddles in lynx habitat. • When planning vegetation treatments, minimize creation of linear openings (fire line, access routes and escape routes) that could result in permanent travel ways for competitors and humans. • Linear openings (fire line, access routes and escape routes) associated with fire suppression or vegetative treatments constructed within lynx habitat will be obliterated and reclaimed in order to deter future human and competitive species use. • Design burn prescriptions to regenerate or create snowshoe hare habitat (e.g., regeneration of aspen and lodgepole pine). • Planning of treatments will ensure that no more than 30% of lynx habitat within a Lynx Analysis Unit will be in unsuitable condition at any time. If the 30% threshold is already exceeded then no further reduction shall occur as a result of vegetation management. In addition, particular consideration will be given to amounts of denning habitat, condition of summer foraging, winter foraging and shrub-steppe habitats, and habitat linkages, to ensure that treatments do not negatively impact lynx.
BLM Sensitive Species		
Colorado river cutthroat trout	A-140-03 B-140-04 B-140-05 C-140-02	• Develop vegetative treatments to minimize impacts to cutthroat trout in consultation with the Field Office biologist and following guidelines outlined in the *Conservation Agreement and Strategy for Colorado River Cutthroat Trout in the States of Colorado, Utah, and Wyoming, April 2001.* • Vegetation treatments conducted on uplands adjacent to streams occupied by Colorado River cutthroat trout will be conducted in a manner that limits potential for soil erosion and sedimentation and increases vegetative ground cover. This includes riparian restoration work intended to improve habitats.
Northern goshawk	B-140-07 C-140-02 D-140-01	• Vegetative treatments will be designed to maintain dense tree canopies in nesting habitats while improving understory vegetation and maintaining foraging habitats. Large blocks of unroaded habitat will be protected or reclaimed. • Vegetation treatments should maintain a 1/4 mile buffer zone around known nest sites from February 1 to August 15**.**
Great Basin spade-foot toad	B-140-02 (west of Silt	• Vegetative treatments will consider the need for re-establishment of desired native species in order to minimize the invasion of cheatgrass.
Harrington's	A-140-05	• Protect Harrington's penstemon populations by treating sufficient

Species	FMUs	Species Specific Vegetation Treatment Guidelines
penstemon	B-140-03 B-140-05 C-140-03	acres of vegetation so as not to create small areas that would lead to concentrated grazing by big game and livestock. • Avoid treatments that create significant amounts of surface disturbances.
Debeque milkvetch	B-140-02 C-140-02	• Vegetative treatments will consider the need for cheatgrass control and/or reseeding. Reseeding should emphasize native species or short-lived introduced species that will not out compete the Debeque milkvetch.

** Consult the Oil and Gas Leasing and Development Record of Decision and Resource Management Plan Amendment, (March 1999) for timing limitation stipulations for other species.*

IV.C.1.5 Numbers and Kinds of Qualified Personnel Necessary to Plan and Execute the Prescribed Fire Program

Qualified personnel required to plan and execute the prescribed fire program are largely involved in the UCR interagency fire management program. At the zone level, a fuels specialist is responsible for project level planning as assigned by the zone fire management officer. The fuels specialist, zone fire management officer and assistant fire management officer typically split the workload on an annual basis. Each individual acts as the interdisciplinary team leader or subject matter specialist on assigned projects.

Several level I and II burn bosses (RXB1 and RXB2) are available from the UCR staff group to assist in project implementation. Subordinate positions may be filled by qualified employees on an interagency basis.

All personnel participating on a prescribed fire will be red-carded and will meet or exceed training and qualification standards.

IV.C.1.6 Short-term and Long-term Program Effectiveness Monitoring Objectives

Short term monitoring requirements include pre-burn fuel moisture sampling conducted by preparedness staff members or designated fuels crew members. Pre-burn monitoring may include vegetative transects or establishing permanent photo points depending on the specific project objectives. Post-burn monitoring conducted by fire management staff or resource specialists includes similar activities as required by the project monitoring plan.

Resource specialists and fire management staff with GIS specialist support conduct long term monitoring at the FPU level.

IV.C.1.7 Fuel Treatment - Past Accomplishments and Proposed Treatments

Past and planned treatment areas are depicted on vegetation maps in Appendix M.

IV.C.2 Air Quality and Smoke Management

Prolonged exposure to smoke can cause significant health problems, especially with the elderly and young populations and for people suffering from respiratory illnesses. Smoke also adversely affects the clarity of our air which impairs our views. Therefore, predicting smoke dispersion and concentration is a major component of wildland fire management and prescribed burn plans.

All prescribed fire and fire use activity shall conform to the state standard to minimize emissions using all available, practicable methods that are technologically feasible and economically

reasonable in order to minimize the impact or reduce the potential for such impact on both the attainment and maintenance of national ambient air quality standards and achievement of federal and state visibility goals.

IV.C.2.1 Pertinent Air Quality Issues

Identification of smoke sensitive areas, Class I airsheds and proposed project mitigation actions are identified in the modeling and project permit submittal forwarded to the Colorado Department of Health and Environment.

Location of Class I Air Sheds and Clean Air Corridors - All designated wilderness areas on the White River National UCR and within Rocky Mountain National Park have been identified as Class I airsheds.

Description of Pre-Identified Smoke Sensitive Areas - Air quality across the FPU is generally good. The community of Aspen has been designated as a non-attainment area for PM10 in the past. Typically, non-attainment has occurred during the winter months and is not a factor in designing or implementing prescribed fire projects.

The following are considered sensitive to the impacts of smoke:

- Schools
- Hospitals
- Communities

Local and Regional Smoke Management Restrictions and Procedures – The UCR and COLM must apply for and obtain a permit for a planned ignition (e.g., human ignited) or unplanned ignition (e.g., lightning ignited) prescribed fire from the Colorado Department of Health and Environment, Air Pollution Control Division (http://apcd.state.co.us/smoke/prescribed/). The Division reviews and approves a smoke permit for each management ignition project prior to implementation. Annual reports on acres treated are submitted for upward reporting at the State level.

IV.C.2.2 Measures to Prevent or Mitigate Adverse Smoke Events

Project planning addresses and quantifies potential levels of emissions incurred through project implementation. The current acceptable smoke model used is SASEM (Simple Approach Smoke Emission Model). The original intent of SASEM was for it to be used as a screening model for exceedances and visibility impairment. As more sophisticated models become available, they will be used for planning purposes within this FMP.

Air Quality and Smoke Management Directive: All prescribed fire and fire use activity shall conform to the state standard to minimize emissions using all available, practicable methods that are technologically feasible and economically reasonable in order to minimize the impact or reduce the potential for such impact on both the attainment and maintenance of national ambient air quality standards and achievement of federal and state visibility goals.

When the UCR FPU or COLM manages wildland fires for resource benefit and conducts prescribed fires, areas affected by the smoke must still meet air quality standards to protect public health. Despite the FMP's anticipated increases in prescriptive fire, clean air and public health goals can be met through careful planning and cooperation among land managers, air quality regulators and local communities. Fire managers realize that suppressing all wildland fires with no preventative fuels treatments would improve air quality in the short term. However, preventing periodic fires has already contributed to unacceptable fuel loadings in many areas, which has increased the risk of larger, more intense wildland fires burning for longer periods. Large uncontrolled wildland fires typically cause greater air pollutant emission levels and more widespread air quality impacts.

The key to successfully balancing prescriptive fire and meeting air quality standards is a smoke management program. The FMP allows proactive management flexibility to control smoke production and impacts in smoke-sensitive areas. In addition, mitigation measures have been built into the FMP to reduce potential negative impacts from smoke pollution. First and foremost, air quality is considered in the Prescriptive Criteria of the "Go/No Go Checklist" to determine the viability of implementing a prescriptive fire treatment. If the established federal and state standards for air quality cannot be met or mitigated in an acceptable manner, the project will not be implemented until conditions change. The Go/No Go Checklist is evaluated on a daily basis.

Secondly, even when these standards are met, the FMP also identifies smoke management techniques and procedures to mitigate the potential impacts of smoke. Application of these techniques will minimize air quality impacts (seeing, smelling, breathing). The techniques are described in the Smoke Management Guide for Prescribed and Wildland Fire 2001 Edition,PMS 420-2, NFES 1279, December 2001.

Best management practices from the Interagency Smoke Management Guide are incorporated into individual prescribed burn plans. Examples of smoke management techniques and procedures include:

1. Authorization to Burn
   - Consultation and approval by the State of Colorado is a continuing process. Interagency fire managers will cooperate with other land managers and the State of Colorado to minimize air quality impacts from smoke. The BLM will obtain all necessary air pollutant emission permits and approvals from the State of Colorado prior to initiating a prescriptive fire. The agency will follow and implement the terms of the Colorado Air Quality Control Commission Regulation No. 9 and the Interagency Colorado Smoke Management Plan and MOU as well as any site specific open burning permit.
2. Actions to Minimize Emissions and Enhance Dispersion
   - Each prescriptive fire has unique characteristics, but in general, smoke impacts can be greatly minimized by burning during weather conditions that provide optimal dispersion and wind conditions for the types of materials being burned.
   - Smoke impacts minimized by limiting the amount of materials and acreage burned at one time.
     Whenever feasible and necessary, mechanical thinning (such as selective timber thinning, pruning or cutting of small trees) used as a "pretreatment" to prescriptive burning.
     Burning with higher intensities when possible provides for more convection and greater dispersion of smoke.
3. Modeling
   - Interagency fire managers assess potential air quality impacts through the use of smoke dispersion modeling techniques (e.g.; SASEM, etc.) to predict particulate matter emissions, smoke plume characteristics, exposure and visibility impacts.
4. Monitoring
   - Once a prescriptive fire is initiated, the agency monitors weather, 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, managers stop the prescriptive treatment or declare the fire an unwanted wildland fire and initiate the Appropriate Management Response.
   - Personnel stationed along roadways to visually monitor for smoke impacts and warn motorists of adverse conditions.
   - The field personnel maintain communications with the dispatch offices. The dispatch office acts as a clearinghouse, providing and maintaining daily information on burning projects throughout the region.
   - Particulate monitors used as a monitoring tool at sensitive receptors.
5. Public Notification and Awareness

- Interagency fire managers inform the general public of the status of wildland fires, prescribed burns and smoke through local press, radio and television.
- Interagency fire managers establish and maintain close communications with State and local agencies regarding the status of prescriptive fire treatments and wildland fires When necessary managers notify concerned smoke-sensitive organizations (i.e. hospitals, schools, retirement centers) of management intentions and burning conditions.
- Implementing fire hazard awareness and mitigation programs for the public.

Air Quality and Smoke Management Personnel - The BLM and USFS have Air Quality Specialist available to assist in modeling projected emissions or monitoring emissions during project implementation.

IV.D. Non-Fire Fuel Treatments

Non-fire fuels treatments are an essential component of the GSFO fire management program. Where prescribed burning is not feasible to accomplish resource objectives, areas may be identified for non-fire fuels treatment. This would consist of manual, mechanical, biological and chemical treatments. Not all treatments are suitable for all vegetation types. Treatments will vary depending on factors including: the condition of the vegetation, vegetation management goals, proximity to development, time of year and various environmental circumstances. Often several types of treatments may be used in combination. For example mechanical treatments may be used to create fuelbreaks before a prescribed fire. Whenever possible, the treatment method will be designed to provide local economic benefits. Examples include post and pole harvesting, provision of firewood, and awarding contracts for the treatment of noxious weed infestations.

Types of treatments to be utilize include:
Manual **-** Non-powered hand tools and powered tools, including chain saws and motorized brushcutters, are used to cut, clear, thin or prune herbaceous and woody vegetation. Hand tools include axes, brushhooks, hoes, and hand clippers.

Mechanical **-** Mechanical methods include thinning and piling, crushing, cutting, chipping, lopping, cutting and chaining. Rubber-tired and treaded heavy equipment outfitted with blades or mowing attachments are most commonly used for mechanical treatments. Often fuelbreaks are created to help change the behavior of a wildland fire by modifying the fuel structure in an area immediately adjacent to or surrounding developments and sites to be protected in the wildland urban interface.

Thinning - Thinning reduces stand density by removing stems in the understory, mid-story and overstory. Once thinning is accomplished, the slash may be treated in several ways, including piling the material so it can be burned. Piles will be burned in the fall and winter season and potentially during the summer if conditions become suitable. The actual piling of the material may be accomplished by hand or machine piled. Equipment such as dozers and small tractors will haul the material to piles. Slash may also pushed or dragged into windrows. Some slash may be "rough-piled" or "jackpot piled" where heavier concentrations of fuel are left where they fell and burned on site. Material that is large enough to be of commercial value, usually > 6"

may be removed to a landing using a rubber-tire skidder, or tracked vehicle. Both rubber-tire skidders and tracked skidders are used**.**

Crushing - Crushing involves dragging a large drum with spokes or spikes protruding over the vegetation, effectively breaking the fuel into smaller pieces.

Chipping - Chipping is a process where slash is forced through a chipping machine, reducing the larger pieces of slash to small chips that are left on site to naturally decompose. Tractors with attached discs, like the Hydro-axe, are also used to remove unwanted vegetation. Machines can either partially or totally clear a site.

Lopping - Lopping is where large cutting tools are attached to a "Bobcat" type tractor and trees are cut off at ground level. The trees can be left to lay where they fall, assisting in soil retention or piled and burned.

Chaining - Dozers can drag cable or chain systems to remove vegetation.

Chemical **-** Herbicides may be used to control competing and unwanted vegetation. These chemicals kill plants by disrupting biochemical growth processes. Herbicides are usually applied as liquids mixed with water or oil carriers. Some herbicides are applied in solid form, usually as granules placed on the soil surface to be absorbed by plant roots.

Four methods of applying herbicides may be considered:

- aerial application
- mechanical equipment, truck or ATV mounted sprayers
- backpack equipment, generally a pressurized container
- hand application, painting cut surfaces or application of granular herbicides to the soil.

Biological **-** Prolonged or forced grazing of cattle, sheep or goats may be used to control both noxious weeds and the composition or amount of vegetation. This differs from the typical grazing program in that vegetation control, rather than animal weight gain or forage utilization, is the primary objective.

IV.D.1 Non-Fire Fuel Treatments Activities for the GSFO

Level of Vegetation Treatments - When considering vegetation management goals along with anticipated funding, personnel, planning priorities and climatic conditions; the reasonable foreseeable vegetation treatment level (e.g. level of fuel treatment and amount of prescribed fire) for the GSFO is generally assumed to be no more than 10% of the Resource Area over a 10 year period.

Table - IV.D.1 **-** Non-Fire Fuel Treatment Summary for the GSFO

	2004	2005	2006	2007	2008
# of projects proposed.	4	3	3	3	3
# of acres treated by non-fire methods.	556	230	200	400	400
# of projects implemented through local contractors.	3	2	2	2	2
Total acres treated in CC 2 moved to CC 1.	556	230	200	200	200
Total acres treated in CC 3 moved to CC 2 or 1.	0	0	0	0	0

Guidelines - The guidelines found in section IV.C.1.3 Vegetation Treatment Guidelines and section IV.C.1.4 Species Specific Vegetation Treatment Guidelines will be considered in site-specific projects. Project-level environmental analyses may determine the need for additional considerations.

Monitoring Requirements - Monitoring requirements are developed in response to resource management and project objectives from interdisciplinary input.

IV.E. Emergency Stabilization and Rehabilitation

Rehabilitation and restoration efforts are undertaken to protect and sustain ecosystems, public health, public safety, and to help communities protect infrastructure. Rehabilitation is any action taken to restore an area to the pre-burn or natural condition. Historically the Emergency Stabilization and Rehabilitation (ESR) workload has been low.

Long-term Rehabilitation - All burned areas are evaluated by a Resource Advisor and if necessary by an interdisciplinary team review to determine whether post-incident rehabilitation is needed. *(i.e. 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 is prepared and implemented in accordance with; the Interagency Burned Area Emergency Stabilization and Rehabilitation Handbook, supplemental guidance (http://fire.r9.fws.gov/ifcc/esr/handbook/), the fire management zone direction, and other applicable guidance.

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.

General Rehabilitation Action Items:

- Linear openings created by wildland fire suppression should be closed and rehabilitated in accordance with RA guidance.
- Washed and weed-free equipment should be used in rehabilitation activities.
- Remove all trash, debris, temporary road signing and flagging.
- Flush cut suppression-created tree stumps down to 2-3 " above ground level along recreational trails, around recreation areas, and within WSAs and ACECs. Cross-cut the top of all 8"+ diameter 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 down into the stream.
- Conduct a Class III cultural resource inventory of all ground disturbing rehabilitation activities and use non-ground disturbing techniques within known or newly identified cultural site boundaries.
- Evaluate road systems for damage and report damage to appropriate FO staff person.
- Evaluate and rehabilitate helispots, camps and parking areas.

Rehabilitation Action Items for Hand Lines/other trails:

- Scatter limbs/deadfall/rocks (weathered side up) to obliterate evidence of fire line.
- Weed-free seeding should occur prior to pulling organic matter back over hand lines.
- Hand lines should be seeded at rates specified for the particular region.
- Where a recreation foot trail was used for fire line, reconstruct the trail tread to 24 inches in width.
- Where fire lines cross recreational trails, discourage recreational use of fire lines, by camouflaging with rocks/debris.
- 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:

- Rip and disturb soil to a depth of 6-12 inches.
- Pull fire line berms onto hand line and blend organic matter with undisturbed soil contours.
- Pull trees/limbs/rocks and other organic material back into line perpendicular to 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.
- Weed-free seeding should occur after pulling organic matter back over dozer lines.

Rehabilitation Action Items for Water Bars:

- Provide for drainage with water bars on constructed hand/dozer lines and impacted areas.
- Place water bars, 20-40 degrees perpendicular to the fall line, where natural drainage occurs.
- Hand line water bars should be 8" deep.
- Water bars for dozer lines should be 12"+ deep and 18-24" high for the berm.
- If soil is loose, augment water bar with woodydebris and/or rocks.
- Ensure that each water bar has a direct outlet and drains into a vegetation or rock filter.
- On slopes >30%, water bars should be installed perpendicular to the fall line and constructed as "cup trenches" rather than drainage features.
- Water bars on steeper slopes (> 50%) may be built from tree boles and should be alternated to opposite sides of the line.
- Water bar spacing and location should consider site-specific topography during installation.

GENERAL WATERBAR SPACING

Grade	Estimated Spacing
1 - 6%	300'
7 - 9%	200'
10-14%	150'
15-20%	90'
21-40%	50'
41% +	25'

Rehabilitation Action Items to Reduce Sedimentation:

- To reduce sedimentation, straw bale 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/branches created natural check dams and were burned out,
  - locations with less steep gradients that will naturally store large quantities of sediment,
  - where there are natural sediment catch basins.

Documentation - Documentation requirements have been established by the resource and fire management staff and are identified in the Normal Year Fire Stabilization and Rehabilitation Plan.

Monitoring - Short-term monitoring requirements include evaluation of treatment implementation and its initial effectiveness. Post-treatment monitoring may include vegetative transects or the establishment of permanent photo points depending on specific project objectives.

IV.F. Community Protection/Community Assistance

As a part of the National Fire Plan, Congress directed the development of a list of WUI communities that are at high risk from wildland fire to assist with hazardous fuel reduction and to promote community assistance. These are referred to as WUI Communities at Risk. The most recent list of Communities at Risk was published in the Federal Register on August 17, 2001 and contains 35 Communities at Risk within the COLM/UCR area. Following is a list of these communities designated Communities at Risk:

Aspen	El Jebel	Palisade
Avon	Frisco	Parachute
Basalt	Gateway	Redlands
Breckenridge	Glade Park	Silt
Carbondale	Glenwood Springs	Snowmass
Collbran	Gypsum	State Bridge
Copper Mountain	Kannah Creek	Unaweep Canyon
Debeque	Mack	Vail
Dillon	McCoy	Vega
Dotsero	Mesa	Ward Lake
Eagle	Mesa Lakes	White Water
Edwards	New Castle	

Rural Fire Assistance Grants - Rural fire assistance grants have been awarded to the following communities:

1. Aspen Fire Department (F.D.).
2. Basalt F.D.
3. Debeque F.D.
4. Gateway F.D.
5. Glade Park F.D.
6. Grand Valley F.D. (Parachute)
7. Mesa County Sheriff Office
8. Palisade F.D.
9. Plateau Valley F.D. (Collbran and Mesa)
10. Snowmass F.D.

The rural fire assistance grants were used for:

- Personal Protective Equipment (primarily fire protective clothing, hard hats, fire shelters, and gloves).
- Fire Suppression Equipment (radios, tools, and other equipment).
- Funding for Firewise and other public education meetings and projects.
- Fuels projects to provide a fuel break between public lands and the communities.

Community Assistance/Protection Protocols Common to all FMUs - Actions include:

- Work with other federal agencies, state, county and private entities to update county mitigation plans.

- Provide RFA, as identified in mitigation plans, to rural fire districts. Assess and increase suppression capabilities and effectiveness by providing RFA to local fire suppression organizations.
- Provide planning and implementation assistance to private landowners so hazardous fuels can be reduced as identified in mitigation plans.
- Provide funding to implement fire education projects identified in mitigation plans.
- Reduce fuel hazards and the threat of catastrophic fire events, including consideration of any local Community at Risk (CAR).
- Obligate adequate funding to the Mesa and Garfield County WUI Coordinators.
- Provide training to local fire protection agencies.

V: Organization and Budget

V.A Organization and Budget

V.A.1 UCR FPU Organization

An organization chart for the UCR FPU is included in Appendix C. Planned and/or unfunded positions are denoted in addition to existing staffing.

Non-fire agency staff and local cooperators supplement the existing interagency staff and associated preparedness resources. Local resources are used for these purposes as well as to suppress escaped fires. Local and national aviation and smokejumper resources will be used subject to their availability as appropriate.

Supplemental resources are ordered to provide increased firefighting capability during periods of high fire danger as well as during periods where ongoing and anticipated levels of initial attack would result in a draw down of local resources. Administratively determined (AD) hiring authority is used on a discretionary basis to supplement agency resources.

COLM Fire Organization - The COLM has no fire management staff or organization. Fire management responsibilities are handled by the COLM Resource Staff and the NPS Zone FMO, who handles fire management for several NPS organizations. There are several fire qualified members of the COLM staff that are available for fire assignments as needed. The COLM relies primarily on the UCR and local cooperators for initial attack fire suppression resources.

V.A.2 Staffing and Budget Requirements Summarized

Each agency's individual NFMAS analysis identified location and distribution of suppression resources according to desired response times and zones. The UCR has worked to use these analyses and budgetary parameters to integrate the various agencies and provide an operationally efficient fire program.

Table V.A.2 - Bureau of Land Management Implemented Fire Resources for the FPU

Resources	Quantity	Number of Personnel	Total Work Months
Number of Engines:	5	9.6	115.2
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:	1	3.3	39.6
Number of Fuels Crews:	1	5	21
Number of Type 2 Crews sponsored:	1		0
Number of Smokejumpers (AK & NIFC only):			
Number of Fire Management Officers:	2		24
Number of Assistant FMOs / FCOs:	3		36
Number of Fire Operations Specialists:	1		12
Number of Dispatchers:	3.8		45.6
Number of Other Aviation Staff (Aviation Mgr., Seat Mgr, etc.):	2.5		30
Number of Mitigation/Education/Prevention Specialists / Techs:	1		12
Number of Resource Specialists:	0		0
Number of Fuels Specialists:	7.1		85
Number of Other Fire Staff:	5		44
Number of PFT funded by Preparedness:	12.5		
Number of Career Seasonals funded by Preparedness:	7.5		
Number of Temporaries funded by Preparedness:	6.9		
Number of PFT funded by Fuels:	4		
Number of Career Seasonals funded by Fuels:	1		
Number of Temporaries funded by Fuels:	5		

Preparedness resource numbers funded by Fire Preparedness (2810) and reflecting the peak fire organization resources for the year. resources funded under severity are not included. The fuels related resources numbers include the resource funded by the non-WUI (2823) and WUI (2824) programs.

Colorado National Monument Planned Fire Resources for the FPU

Resources	Quantity	Number of Personnel	Total Work Months
Number of Engines:	1	0	0
Other Fire Staff:	0.2		2.4
PFT funded by Preparedness:	0		

V.A.3 Staffing and Annual Budget Requirements Summarized by Agency

Each agency within the UCR maintains discrete budgeting, staffing and support services which are combined where appropriate to increase program effectiveness and efficiency to participating units.

	BLM	USFS		NPS	UCR Total
	UCR	GVRD	WRNF	CNM	
Staff					
Suppression	40	1.5	38	1	80
Fuels / WUI	8	4.5	4	0	17
Prevention / Mitigation	1	0	0	0	1
Budget					
Suppression	1,630,000	60,000	1,634,000	2,500	3,326,500
Fuels / WUI	750,000	155,000	1,600,000	0	2,505,000
Prevention / Mitigation	70,000	0	0	0	70,000

V.A.3.1 Equipment Requirements for the Existing Initial Attack and Support Organizations

Table V.A.2.1 is a summary of equipment requirements for the existing initial attack and support organizations.

Table V.A.2.1 Summary of Equipment Needs for Initial Attack and Support Organizations

	Equipment Needs	
	Initial Attack	Support/Chase Vehicles
Engines, Type 4	3	3
Engines, Type 6	7	6
Initial Attack Squads	2	2
Helitack	0	4
Fire Cache	0	3
Prevention/Mitigation	0	2
Fuels	0	9
Aviation Support (Air Center)	0	3
Management	3	6

V.A.3.2 Fire Cache Considerations

The UCR maintains fire caches in each of three Zones. Zone fire caches are located at:

- The Grand Junction Field Office (West Zone)
- The Rifle Interagency Fire Center at the Garfield County Airport (Central Zone)
- The Eagle Ranger District facility (East Zone)

Zone cache inventories will be completed and input into a computerized record keeping system prior to May 1st annually. Zone FMOs are responsible to ensure appropriate stocking levels of fire caches and to provide for receiving and distribution functions as appropriate.

V.A.3.2 Fire Cache Considerations

	East Zone	Central Zone	West Zone	Total
cache size (number of personal supported)	40	70	50	160
staffing	1	1	1	3
annual budget	5,000	5,000	5,000	15,000

V.A.3.3 Interagency Training and Development Considerations

Table V.A.3.3 Desired Training and Development

Functional Area	Type	Sub-Activity	Estimated Cost ($)
Suppression & Prescribed Fire	Recurrent Training	2810 / 2823 / 2824	25,000
Suppression & Prescribed Fire	ICS and Rx Training	2810 / 2823 / 2824	50,000
Estimated Total			**75,000**

V.A.3.4 Interagency Dispatch Considerations

The Grand Junction Interagency Dispatch Center is located at the Grand Junction Air Center (GJAC) at Walker Field, Grand Junction, Colorado. The BLM is responsible for the facilities management, utilities, and fees associated with the Air Center. The GJAC staffs the following non-seasonal positions:

Air Center Manager (GS-455-11), BLM
Assistant Air Center Manager, Dispatch (GS-455-09), WRF
Unit Aviation Officer (GS-455-09), BLM
Lead Initial Attack Dispatcher (GS-455-07), BLM
Lead Aircraft Dispatcher (GS-455-07), BLM
Initial Attack Dispatcher, (GS-462-05), GMF
Air Tanker Base Manager (GS-455-08), BLM
Assistant Airtanker Base Manager (GS-455-07), BLM

V.A.3.5 Fuels Management Considerations

The fuels management program consists of WUI hazard reduction and non-WUI hazardous fuels reduction. The UCR fuels management program is the responsibility of the fire ecology section of the fire management staff. Prescribed fire is conducted with the support of the operations staff. The BLM also hosts a fire use module for prescribed fire and wildland fire use events. There are two Colorado State Office fuels positions, one in Grand Junction and one in Glenwood Springs. These positions assist the FOs in fuels management projects.

The fuels management program consists of WUI hazard reduction, non-WUI hazard fuels reduction, and ecological restoration of impaired landscapes. The UCR fuels management program is the responsibility of the fire ecology section of the fire management staff. The COLM fuels management program is the responsibility of the Dinosaur National Monument (DINO) fuels management specialist. With input from the COLM Chief of Natural Resources, fuels projects are developed and prioritized for funding and implementation.

Prescribed fire is conducted with the support of the operations staff, and will utilize, where possible, an interagency approach to fill required organizational positions for each prescribed

burn. The BLM also hosts a fire use module for prescribed fire and wildland fire use events. There are two Colorado State Office fuels positions, one in Grand Junction and one in Glenwood Springs. These positions assist the FO in fuels management projects.

V.B. Assistance Agreements and Intra/Interagency Agreements

Cooperative Agreements and Interagency Contacts - The UCR conducts the fire management program with Federal and State partners under the terms of the following agreements:

Colorado Interagency Cooperative Fire Management Agreement - between the USDI, Bureau of Land Management, Colorado; USDA Forest Service, Region 2; USDI National Park Service, Intermountain Region; USDI Fish and Wildlife Service, Mountain and Prairie Region; USDI Bureau of Indian Affairs, Southwest Region and Colorado State Forest Service. This agreement establishes statewide authority for interagency fire protection assistance and cooperation between the above agencies for mutual cooperation in fire training, prescribed fire, prevention, preparedness, and suppression activities.

Cooperation exists in fire suppression between Colorado National Guard and USDI, Bureau of Land Management. This agreement permits the use of National Guard resources within the State of Colorado without the State declaring a state of emergency. Activation of this agreement is accomplished through the Rocky Mountain Area Coordination Center (RMACC).

At the unit level, the BLM and NPS have a Memorandum of Agreement that provides the basis for interagency fire management activities and the exchange of funds via reimbursable agreements to support the interagency staff unit.

Both the BLM and NPS are signatories to cooperative fire plans for each county within the affected jurisdictions that are executed on an annual basis to provide for cooperative fire management activities between affected Federal and local jurisdictions.

Copies of these plans are available on CD from agency fire management staff and or Colorado State District Foresters.

V.C. Equipment Rental Agreements

A UCR Service and Supply Plan is prepared annually that includes:

- Emergency Equipment Rental Agreements (EERA)
- Local Vendors who will supply incident support (lodging, meals, equipment and supplies)
- Incident Command Post and Large Helibase locations and points of contact

Hard copies of the above information are in the Service and Supply plan, copies of which are retained by agency procurement specialists and the Interagency Dispatch Center in Grand Junction. Extra copies of the Service and Supply Plan reside at the Grand Junction Air Center and are available for distribution to incoming incident management teams during the incoming IMT briefing.

V.D. Contract Suppression and Prescribed Fire Resources

The UCR does not maintain national contracts for suppression or prescribed fire crews, or equipment. National resources may be ordered as needed during high fire danger and/or severity conditions as warranted and available.

The UCR participates in the national Indefinite Delivery Indefinite Quantity multi-agency fuels reduction contract for treatment of hazardous fuels. The Indefinite Delivery Indefinite Quantity (IDIQ) includes a list of contractors and the types of fuel reduction work they are interested in and qualified for. Units initiating NFP related fuel reduction work are required to utilize the Indefinite Delivery Indefinite Quantity contract. Additional information can be obtained from the UCSC Purchasing Agent in Grand Junction.

VI. Monitoring and Evaluation

VI.A. Monitoring Performance

Fire Behavior and Fire Effects Monitoring - The goal of the monitoring program is to provide fire and resource managers information necessary to better conduct fire management activities. Some uses of this information include:

- Make decisions regarding management strategy and tactics for all ignitions
- Compare actual prescribed fire effects with stated burn objectives
- Validate/refine current management prescriptions
- Assess the efficacy of management techniques
- Suggest improvements or alternatives to existing management techniques
- Identify concerns which require further research
- Guide future decisions pertaining to fire management

Monitoring related to wildland fire or fire related projects falls under the general monitoring and evaluation guidelines outlined in the various agencies LUPs. Site specific monitoring needs are identified in analysis for individual fire related projects.

Fire behavior monitoring is done to help make planning and immediate decisions, which promote firefighter safety and effective use of existing resources.

Fire effects monitoring may be divided into long and short term monitoring. Short-term monitoring will provide nearly immediate information regarding fire effects, serving as a feedback mechanism to assess and evaluate the degree to which fire management objectives are being achieved. Long-term monitoring will track changes in overall resource conditions over one or more complete fire cycles, as they are currently understood.

Short-term and Long-term Program Effectiveness Monitoring Objectives - Short-term monitoring requirements include pre-burn fuel moisture sampling conducted by preparedness staff members or designated fuels crewmembers. Pre-burn monitoring may include vegetative transects or establishing permanent photo points depending on the specific project objectives. Post-burn monitoring conducted by fire management staff or resource specialists includes similar activities as required by the project monitoring plan.

Resource specialists and fire management staff with GIS specialist support conduct long term monitoring at the agency level.

Procedures - Fire effects monitoring, both short and long term, will vary depending on criteria established by the land use plan. General guidelines can be found in the *Fuels Survey Data Dictionary User Manual*. The UCR FPU does not have a FPU monitoring plan, but agencies include monitoring requirements in implementation plans. Monitoring methods may entail the establishment of photo points, vegetation transects, plots or other scientific methods, which will assess the primary and secondary effects of either wildland or prescribed fire.

Timeframes - Fire behavior monitoring will occur at the time of the fire. Fire effects monitoring will occur starting immediately following the fire or vegetation treatment and may continue years later depending on the design and objectives of the project.

Funding - Current BLM National Office direction allows for both prescribed fire and non-fire treatment funds (2823/2824) to be utilized within one-year post fire or non-fire treatment and is designated for monitoring treatment objectives or specific protection objectives.

Responsibilities - Fire behavior monitoring is generally the responsibility of the incident commander or the burn boss of the incident. Monitoring related to fire effects is the responsibility of the district/unit and may be conducted by either/or fire management or resource management personnel.

Reporting Requirements - Reporting requirements for fire behavior monitoring are fairly uniform and concise in light of their immediate relevance. Short and long term reporting requirements vary widely depending on their purpose and the design of the monitoring protocols and procedures.

VI.B. Evaluating Performance

Project Level - Project level plans are evaluated to ensure that the treatment/action meets the purpose and need of the project.

FMP Level - Adaptability is of utmost importance to this FMP. As provided in H-1601-1 - Land Use Planning Handbook, the FMP allows managers seasonal and annual application flexibility, based on factors such as resources, weather and operational capability. 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. Prior to each fire season, managers intend to analyze the cumulative effects of the previous fire seasons, examine monitoring results and incorporate new information into the management strategy. Adjustments (refining zone boundaries, authorizing a more conservative management approach based on the previous years' fire activity, changing the allowable burned acreage, border adjustments as counties and other agencies complete their FMPs, etc.) would not require amending the FMP but would be done through plan maintenance.

LUP Level - Overall FMP performance is reviewed as part of the LUP evaluation process. LUP evaluations use: staff reviews, various monitoring data and GIS analysis. LUP evaluations determine if decisions are being implemented, whether mitigation measures are satisfactory, whether there are significant changes in the related plans of other entities, whether there is new data of significance to the plan, and if decisions should be changed through amendment or revision. The results of evaluations are used by the agencies to determine if LUP decisions and NEPA analyses are appropriate.

VI.C. Reporting Accomplishments

The UCR FPU annually tracks accomplishments through the National Fire Plan Operating and Reporting System (NFPORS), which is required by all federal agencies. The BLM also tracks accomplishments through the BLM management information system (MIS).

GLOSSARY with Acronyms

Please visit http://www.fireplan.gov/resources/glossary/a.html for a more complete glossary.

ACEC - Area of Critical Environmental Concern

AD - Administratively Determined

AFMO - Assistant Fire Management Officer

AOP - Annual Operating Plan

Area of Critical Environmental Concern (ACEC) - Acreage within BLM public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historical, cultural, or visual values; fish and wildlife resources, or other natural systems or processes; or to protect life and safety from natural hazards.

ATB – Air Tanker Base

AWP - Annual Work Plan

BA - Biological Assessment

BI - Burning Index

BLM - Bureau of Land Management

BO - Biological Opinion

Burnable Acres - Any vegetative material/type that is susceptible to burning.

Burned Area Rehabilitation - The treatment of an ecosystem following disturbance to minimize subsequent effects. (1995 Federal Wildland Fire Policy.)

CAR - Communities At Risk

Condition Class (CC) - Based on coarse scale national data**,** Fire Condition Classes measure general wildfire risk as follows:

Condition Class 1	For the most part, fire regimes in this Fire Condition Class are within historical ranges. Vegetation composition and structure are intact. Thus, the risk of losing key ecosystem components from the occurrence of fire remains relatively low.
Condition Class 2	Fire regimes on these lands have been moderately altered from their historical range by either increased or decreased fire frequency. A moderate risk of losing key ecosystem components has been identified on these lands.
Condition Class 3	Fire regimes on these lands have been significantly altered from their historical return interval. The risk of losing key ecosystem components from fire is high. Fire

	frequencies have departed from historical ranges by multiple return intervals. Vegetation composition, structure and diversity have been significantly altered. Consequently, these lands verge on the greatest risk of ecological collapse. (*Cohesive Strategy, 2002, in draft)*

COLM - Colorado National Monument

Critical Habitat - Under the Endangered Species Act, critical habitat is defined as habitat of federally listed threatened or endangered species where those physical and biological features essential to conservation of the species are found and which may require special management considerations or protection. This habitat may currently be occupied or determined by the Secretary of the Interior to be essential for areas outside the species' current range.

CSFS - Colorado State Forest Service

CSO - Colorado State office (BLM)

DINO – Dinosaur National Monument

DOI – Department of Interior

Ecosystem - 1) A community of living plants and animals interacting with each other and with their physical environment; a geographic area where it is meaningful to address the interrelationships with human social systems, sources of energy, and the ecological processes that shape change over time. 2) The complex of a community of organisms and its environment functioning as an ecological unit in nature.

EERA - Emergency Equipment Rental Agreements

EIS - Environmental Impact Statement

Endangered Species - Any species of animal or plant in danger of extinction throughout all or a significant portion of its range and so designated by the Secretary of Interior in accordance with the 1973 Endangered Species Act.

Environmental Assessment (EA) - Environmental Assessments were authorized by the NEPA of 1969. They are concise, analytical documents prepared with public participation that determine if an Environmental Impact Statement (EIS) is needed for a particular project or action. If an EA determines an EIS is not needed, the EA becomes the document allowing agency compliance with NEPA requirements.

Environmental Impact Statement (EIS) - A detailed public document which complies with NEPA law and regulation; an EIS describes a major Federal action which significantly affects the quality of the human environment, provides alternatives to the proposed action, and analyzes the effects of the proposed action.

ERC - Energy Release Component

ESA - Endangered Species Act

ESR - Emergency Stabilization and Rehabilitation

FBAN – Fire Behavior Analyst

FDOP – Fire Danger Operating Plan

FDOP – Fire Danger Operating and Preparedness Plan

FIL - Fire Intensity Level

Fire-Adapted Ecosystem - An ecosystem with the ability to survive and regenerate in a fire-prone environment.

Fire Frequency (Fire Return Interval) - How often fire burns a given area; often expressed in terms of fire return intervals (e.g., fire returns to a site every 5-15 years).

Fire Management Planning - A generic term referring to all levels and categories of fire management planning, including: preparedness, prevention, hazardous risk assessment, and mitigation planning.

Fire Management Unit – A land management area definable by objectives, management constraints, topographic features, access, values to be protected, political boundaries, fuel types, and fire regime groups; that set it apart from the management characteristics of an adjacent FMU.

Fire-prone Ecosystem - Ecosystems that historically burned intensely at low frequencies (stand replacing fires), those that burned with low intensity at a high frequency (understory fires), and those that burned very infrequently historically, but are now subject to much more frequent fires because of changed conditions. These include fire-influenced and fire-adapted ecosystems.

Fire Regime - Periodicity and pattern of naturally occurring fires in a particular area or vegetative type, described in terms of frequency, biological severity, and area of extent.

Fire Severity - Denotes the scale at which vegetation and a site are altered or disrupted by fire, from low to high. It is a combination of the degree of fire effects on vegetation and on soil properties.

Fireline Intensity Level (FIL) - The rate of heat energy released during combustion per unit length of fire front. It is usually expressed in BTUs/second/foot.

Firewise - A public education program developed by the National Wildland Fire Coordinating Group that assists communities located in proximity to fire-prone lands. (For additional information visit the Web site at: http://www.firewise.org)

FM - Field Manager

FMO - Fire Management Officer

FMP - Fire Management Plan

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 FMUs may have dominant management objectives and pre-selected strategies assigned to accomplish these objectives. The development of FMUs should avoid redundancy. Each FMU should be unique as evidenced by management strategies, objectives and attributes.

FO - Field Office

FPA - Fire Program Analysis -- The new fire budget analysis software program that will become available in October 2004.

FPD - Fire Protection District

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.

FRCC - Fire Regime Condition Class

Fuel Model - Simulated fuel complex (or combination of vegetation types) for which all fuel descriptors required for the solution of a mathematical rate of spread model have been specified.

Fuel Type - An identifiable association of fuel elements of distinctive species, form, size, arrangement or other characteristics.

Fuel Reduction - Manipulation, including combustion, or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control.

FUM2 - Fire Use Manager Type 2

FUMA - Fire Use Manager

FWFMP - Federal Wildland Fire Management Policy

GJAC - Grand Junction Air Center

GJC – Grand Junction Dispatch

GJFO - Grand Junction Field Office

GJRA - Grand Junction Resource Area

GMUG - Grand Mesa - Uncompahgre – Gunnison National Forests

GSFO - Glenwood Springs Field Office

GSRA - Glenwood Springs Resource Area

GVRD - Grand Valley Ranger District

Hazardous Fuels - A fuel complex defined by kind, arrangement, volume, condition, and location that forms a special threat of ignition or of suppression difficulty.

HFR - Historic Fire Regime

IC - Incident Commander

ICS - Incident Command System

IDIQ - Indefinite Delivery Indefinite Quantity

IM - Internal Memorandum

Interdisciplinary Team - A group of individuals with different specialized training assembled to solve a problem or perform a task. The team is assembled out of recognition that no one discipline is sufficiently broad to adequately solve the problem; through interaction, participants bring different points of view and a broader range of expertise to bear on the problem.

KBDI - Keetch-Byram Drought Index

LAL - (L)ightning (A)ctivity (L)evels numbered 1 through 6:

- LAL 1 - No thunderstorms.
- LAL 2 - Isolated thunderstorms. Light rain will occasionally reach the ground. Lightning is very infrequent, 1 to 5 cloud to ground strikes in a 5 minute period.
- LAL 3 - Widely scattered thunderstorms. Light to moderate rain will reach the ground. Lightning is infrequent, 6 to 10 cloud to ground strikes in a 5 minute period.
- LAL 4 - Scattered thunderstorms. Moderate rain is commonly produced. Lightning is frequent, 11 to 15 cloud to ground strikes in a 5 minute period.
- LAL 5 - Numerous thunderstorms. Rainfall is moderate to heavy. Lightning is frequent and intense, greater than 15 cloud to ground strikes in a 5 minute period.
- LAL 6 - Dry lightning (same as LAL 3 but without the rain). This type of lightning has the potential for extreme fire activity and is normally highlighted in fire weather forecasts with Red Flag Warning.

LCES - Lookouts, Communications, Escape Routes, Safety Zones

LTAN - Long Term Fire Analyst

LUP - Land Use Plan

MEL - Most Efficient Level

MIS - Management Information System

MIST - Minimum Impact Suppression Tactics

MMA – Maximum Manageable Area

MOU - Memorandum of Understanding

Maximum Manageable Area (MMA) - The maximum manageable area in a Wildland Fire Implementation Plan designates the ultimate acceptable size for a given wildland fire managed for resource benefits.

NEPA - National Environmental Policy Act

NFDRS - National Fire Danger Rating System

NFES - National Fire Equipment System

NFP - National Fire Plan

NFPORS - National Fire Plan Operations Reporting System

NFRP - Normal Year Fire Rehabilitation Plan

Noxious Weeds - Any plant designated by a federal, state, or county government to be injurious to public health, agriculture, recreation, wildlife, or any public or private property. Noxious weeds generally possess one or more of the following characteristics: aggressive and difficult to manage, poisonous, toxic, parasitic, a carrier or host for serious insects or diseases, and generally non-native.

NPS - National Park Service

NWCG - National Wildfire Coordination Group

NWS - National Weather Service

OHV - Off Highway Vehicle

Performance measures - A quantitative or qualitative characterization of performance (Government Performance and Results Act of 1993).

PPE – Personal Protective Equipment

Preparedness - Activities that lead to a safe, efficient, and cost-effective fire management program in support of land and resource management objectives through appropriate planning and coordination.

Prescribed fire - Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist and NEPA requirements must be met prior to ignition.

Prescribed Fire Plan (Burn Plan) - This document provides the prescribed fire burn boss information needed to implement an individual prescribed fire project.

Prescription - Measurable criteria that define conditions under which a prescribed fire may be ignited, guide selection of appropriate management responses, and indicate other required actions. Prescription criteria may include safety, economic, public health, environmental, geographic, administrative, social, or legal considerations.

Prevention - Activities directed at reducing the number of person-caused fires, including public education, law enforcement, dissemination of information, and the reduction of hazards.

RA - Resource Advisor

RAWS - Remote Automated Weather Stations

Rehabilitation - The activities necessary to repair damage or disturbance caused by wildland fires or the fire suppression activity.

Resource Management Plan (RMP) - A document prepared by BLM Field Office staff with public participation and approved by the State Director that provides general guidance and direction for land management activities.

Restoration - The active or passive management of an ecosystem or habitat toward its: original structure, natural compliment of species, and natural functions or ecological processes (Cohesive Strategy, 2000).

RFA - Rural Fire Assistance

RFD - Rural Fire Department

RH – relative humidity

RIPS - Rangeland Improvement Project System

RMACC - Rocky Mountain Area Coordination Center

RMP – Resource Management Plan

RXB1 - Level I Burn Boss

RXB2 – Level II Burn Boss

SASEM - Simple Approach Smoke Emission Model

SEAT – Single Engine Air Tanker

Sensitive Species - Those plant and animal species identified by the BLM State Director as sensitive, usually in cooperation with the State Agency responsible for managing the species. Sensitive species are also defined as those (a) which are under status review by the USFWS or NOAA Fisheries; or (b) whose numbers are declining so rapidly that Federal listing may become necessary; or (c) with typically small and widely dispersed populations; or (d) inhabiting ecological refugia of other specialized or unique habitats.

Severe Wildland Fire - A fire that burns more intensely than the natural or historical range of variability, thereby: fundamentally changing the ecosystem, destroying communities and/or rare or threatened species/habitat, or causing unacceptable erosion (Society of American Foresters, 1998).

SHPO - State Historic Preservation Office

SI - Severity Index

Special Recreation Management Area – BLM administrative units established to direct recreation program priorities, including the allocation of funding and personnel, to those public lands where a commitment has been made to provide specific recreation activities and experience opportunities on a sustained yield basis.

SSS - Special Status Species

Suppression - All the work of extinguishing or containing a fire, beginning with its discovery.

T&E – Threatened & Endangered

Threatened Species - Any species likely to become endangered within the foreseeable future throughout all or a significant portion of its range and that has been designated in the Federal Register by the Secretary of Interior as such.

UCR - Upper Colorado River Interagency Fire Management Unit

Unplanned and Unwanted Wildland Fires - An unplanned and unwanted fire is one burning outside the parameters as defined in land use plans and fire management plans for that location (including areas where the fire can be expected to spread) under current and expected conditions. Unplanned and unwanted fires includes fires burning in areas where fire is specifically excluded; fires that exhibit burning characteristics (intensity, frequency, and seasonality) that are outside prescribed ranges, specifically including fires expected to produce severe fire effects; unauthorized human caused fires (arson, escaped camp fires, equipment fires, etc.); and fires that occur during high fire dangers, or resource shortage, where the resources needed to manage the fire are needed for more critical fire management needs.

USDA - United States Department of Agriculture

USDI - United States Department of the Interior

USFS - United States Forest Service

USFWS - United States Fish and Wildlife Service

Watershed - The area of land bounded by a divide, that drains water, sediment, and dissolved materials to a common outlet at some point along a stream channel, or to a lake, reservoir, or other body of water; also called drainage basin or catchment.

WFIP - Wildland Fire Implementation Plan

WFSA - Wildland Fire Situation Analysis

Wildland - An area in which development is essentially non-existent, except for roads, railroads, powerlines, and similar transportation facilities; structures, if any, are widely scattered.

Wildland Fire for Resource Benefit (also known as Wildland Fire Use) - The management of naturally ignited wildland fires to accomplish specific pre-stated resource management objectives in predefined geographic areas outlined in FMPs.

Wildland Fire Implementation Plan (WFIP) - A progressively developed assessment and operational management plan that documents the analysis and selection of strategies and describes the appropriate management response for a wildland fire being managed for resource benefits.

Wildland Fire Situation Analysis (WFSA) - A decision making process that evaluates alternative management strategies against selected safety, environmental, social, economic, political, and resource management objectives.

Wildland-Urban Interface - The line, area, or zone where structures or other human development meet or intermingle with undeveloped wildland or vegetative fuels.

WIMS - Weather Information Management System

WRNF - White River National Forest

WSA - Wilderness Study Area

WUI - Wildland-Urban Interface

REFERENCES

1. Beetle, A. A. Recognition of Artemisia Subspecies - A Necessity, from Wyoming Shrublands, Proceedings of the 6th Wyoming Shrub Ecology Workshop, Buffalo, Wyoming, May 24-25, 1977.

2. Brown, H.E. 1958. Gambel oak in west-central Colorado. Ecology 39:317-327.

3. Butry, David T., D. E. Mercer, J. P. Prestemon, J M. Pye, and T P. Holmes. 2002. What is the Price of Catastrophic Wildfire? Website: http://www.srs.fs.fed.us/pubs/rpc/2002-01/rpc_02january_24.pdf

4. City of Aspen Environmental Health Department. 2001. 2001 Annual Air Quality Report for the City of Aspen. Website: http://www.aspengov.com/ehnew/city/pdf/2001airrpt.pdf

5. Crane, M.F. 1982. Fire Ecology Of Rocky Mountain Region Forest Habitat Types, Final Report. USDA Forest Service, Region Two. Contract No. 43-82X9-1-884.

6. Lyon, P., Sovell, J., Rocchio, J. 2001.Survey of Critical Biological Resources - Garfield County, Colorado. Colorado Natural Heritage Association. Website http://www.cnhp.colostate.edu.

7. Connelly, J.W., Schroeder, M.A., Sands, A. R. and C. E. Braun. 2000. Guidelines to Manage Sage Grouse Populations and Their Habitats. Wildlife Society Bulletin 2000, 28(4):967-985

8. CRCT Task Force. 2001. Conservation Agreement and Strategy for Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*) in the States of Colorado, Utah, and Wyoming. Colorado Division of Wildlife, Fort Collins. 87p.

9. Ingalsbee, Timothy Ph.D. 2000. Money to Burn: The Economics of Fire and Fuels Management. Website:http://www.americanlands.org/forestweb/fire.htm. Western Fire Ecology Center, American Lands Alliance.

10. Koehler, G. M. 1990. Population and habitat characteristics of lynx and snowshoe hares in north central Washington. Canadian Journal of Zoology 68: 845-851.

11. Lynx Biology Team. 2000. Canada lynx conservation assessment and strategy. Prepared by Ruediger, B., et al. USDA Forest Service. 120 pp.

12. Mowat, G., K. G. Poole, and M. O'Donoghue. 2000. Ecology of lynx in northern Canada and Alaska. Chap. 9 *In* Ruggiero, L. F., K. B. Aubry, S. W. Buskirk, et al. tech. eds. Ecology and conservation of lynx in the United States. Univ. Press of Colorado, Boulder. 480 pp.

13. National Interagency Fire Center. 2002. Firewise website:http://www.firewise.org/co/rxfire.html.

14. National Wildfire Coordinating Group. 2009. Guidance for Implementation of Federal Wildland Fire Management Policy.

15. Omi, P.N. 1982. Prescribed fire impacts on recreational wildlands: A status review and assessment of research needs. USDA Forest Service Eisenhower Consortium Bull. 11. 18 p.

16. Omi, P.N., and D. B. Rideout, 1998. Cost-effectiveness Analysis of Hazard Fuel Reduction Programs Western Forest Fire Research Center (WESTFIRE). Colorado State University, Ft. Collins, CO.

17. Sapsis, David. 2002. Prefire Effectiveness in Fire Management -- A Summary of State-of-Knowledge. Website:http://frap.cdf.ca.gov/projects/prefire_mgmt/prefire.html

18. Squires, J. R. and T. Laurion. 2000. Lynx home range and movement in Montana and Wyoming preliminary results. Chap. 11. *In* Ruggiero, L. F., Aubry, K. B., Buskirk, S. W., et al. tech. eds. Ecology and conservation of lynx in the United States. Univ. Press of Colorado, Boulder. 480 pp.

19. Reudiger, B. et. al. 2000. Canada Lynx Conservation Assessment and Strategy. USDA Forest Service, USDI Fish and Wildlife Service, USDI Bureau of Land Management, and USDI National Park Service. Forest Publication # R1-00-53, Missoula, MT. 142 pp.

20. USDA, USFS. 1999. Fire Effects Information System 1999. Website:http://www.fs.fed.us/database/feis/, Forest Service, Intermountain Research Station, Fire Sciences Laboratory.

21. USDA, USFS. 2001. Eagles nest & Ptarmigan Fire Management Areas Guidebook for Wildland Fire Use. White River National Forest, Rocky Mountain Region.

22. USDA, USFS. 1995. Flat Tops Fire Management Area Guidebook for Prescribed Natural Fire Planning and Implementation. White River National Forest, Rocky Mountain Region.

23. USDA, USFS. 2002. Managing Competing & Unwanted Vegetation.Website:http://www.fs.fed.us/r6/weeds/methods_herbi_pdf.htm, U.S. Dept. Of Agriculture, Forest Service.

24. USDA, USFS. 2002. Role of Wildland Fire in Resource Management. Website:www.fs.fed.us/land/wdfire6.htm, U.S. Dept. Of Agriculture, Forest Service.

25. United States EPA 1999. Fighting Fire with Fire: Keeping Forest Healthy and Protecting Air Quality. EPA-452/F-99-001. Office of Air Quality Planning and Standards. Environmental Protection Agency.

26. USDI, USFWS 1989. Black-Footed Ferret Survey Guidelines for Compliance with Endangered Species Act. Fish and Wildlife Service. Denver, Colorado.

27. USDI, BLM 2000. Bureau of Land Management Grand Junction Field Office Fire Management Plan. BLM Grand Junction Field Office, Grand Junction, Colorado.

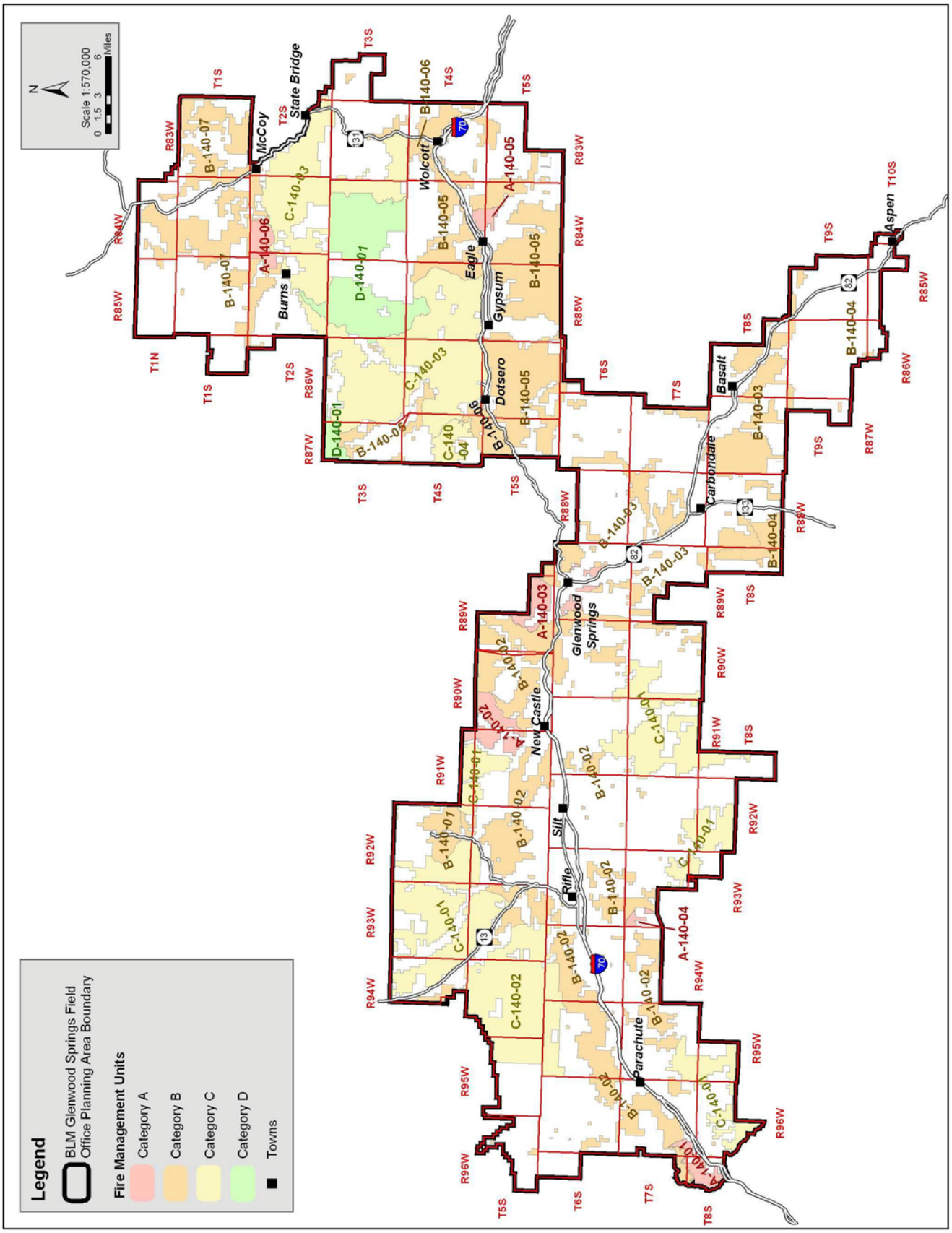
28. USDI, BLM 1999. Bureau of Land Management Uncompahgre Field Office Fire Management Plan. BLM Uncompahgre Field Office, Montrose, Colorado.

29. USDI, BLM 2001. Bureau of Land Management Royal Gorge Field Office Fire Management Plan. BLM Royal Gorge Field Office, Canon City, Colorado.

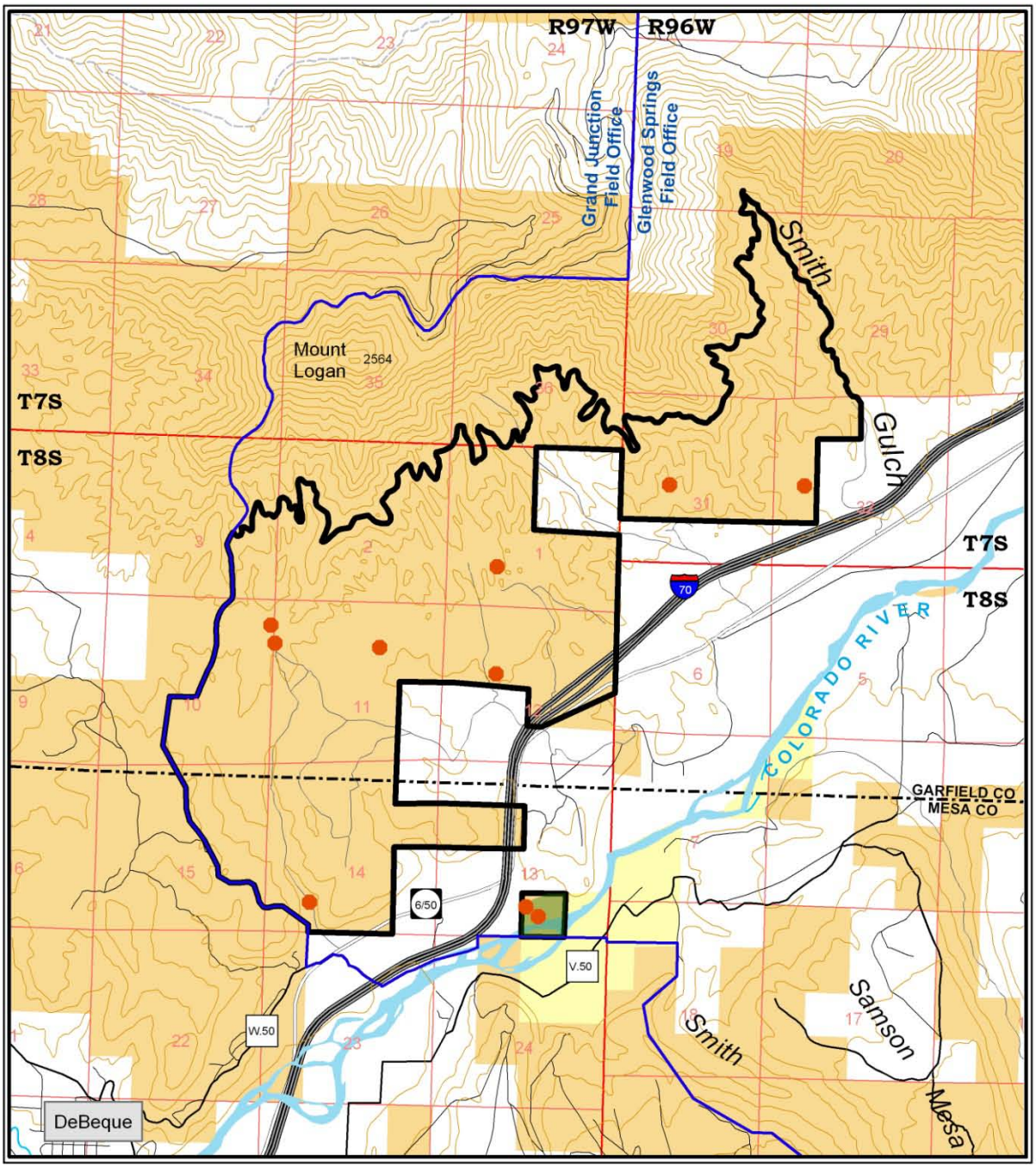
APPENDIX A

FMU Maps

Table of Contents


Legend
BLM Glenwood Springs Field Office Planning Area Boundary
Fire Management Units
Category A
Category B
Category C
Category D
Towns
N
Scale 1:570,000
0 1.5 3 6 Miles
State Bridge
McCoy
Burns
Wolcott
Eagle
Gypsum
Dotsero
Basalt
Carbondale
Aspen
Glenwood Springs
New Castle
Silt
Rifle
Parachute
A-140-01
A-140-02
A-140-03
A-140-04
A-140-05
A-140-06
B-140-01
B-140-02
B-140-03
B-140-04
B-140-05
B-140-06
B-140-07
C-140-01
C-140-02
C-140-03
C-140-04
D-140-01

A-140-01 - Mount Logan Foothills



3,763 acres

N
W E
S

Scale 1 : 50,000

0 0.25 0.5 1 Miles

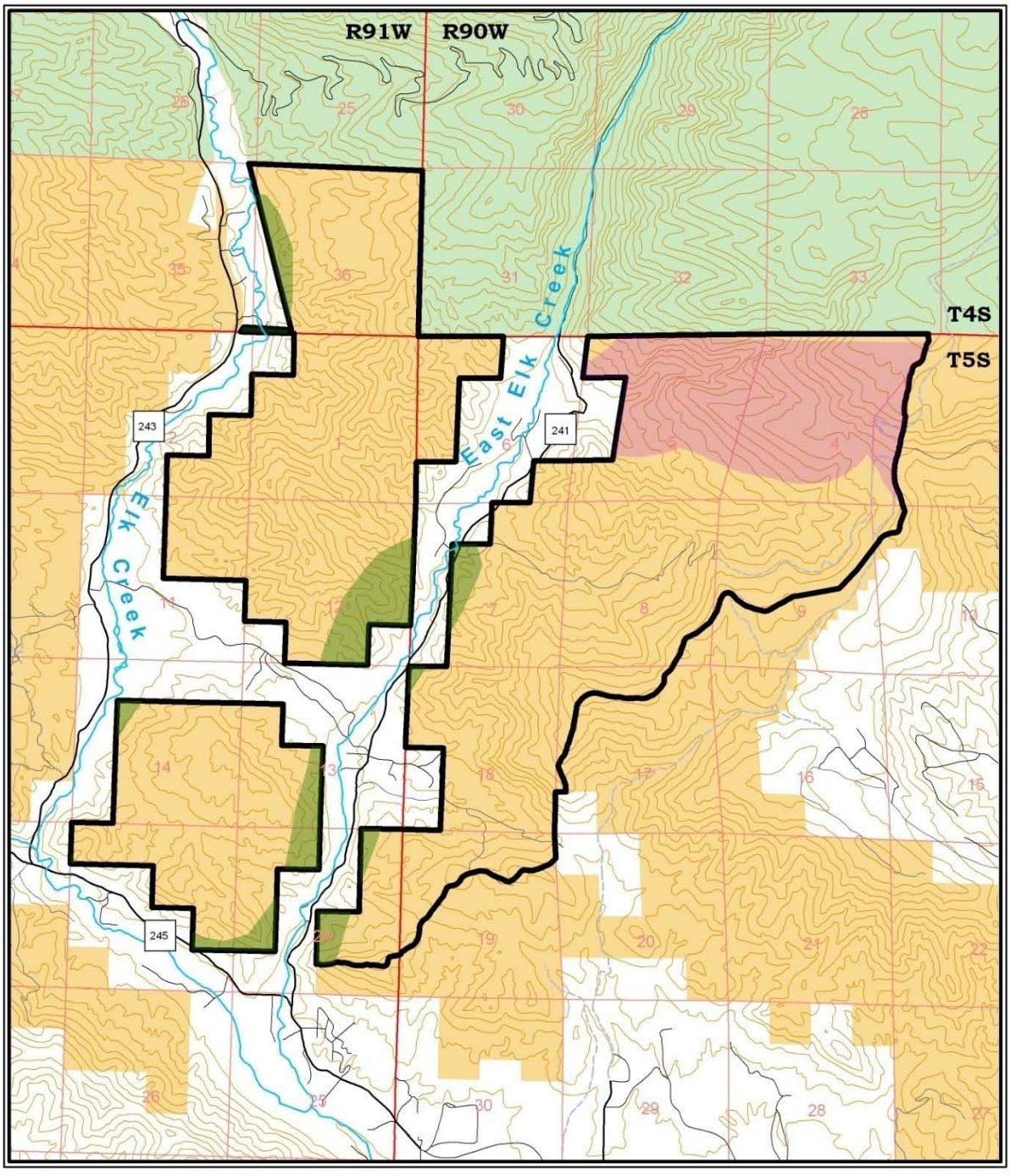
Legend

- Fire Management Zone
- Special Status Plant Species
- Bald Eagle Habitat
- County Line
- BLM Field Office Boundaries

Land Ownership

- BLM Land
- Bureau of Reclamation
- Private Land

A-140- 02 - New Castle Watershed



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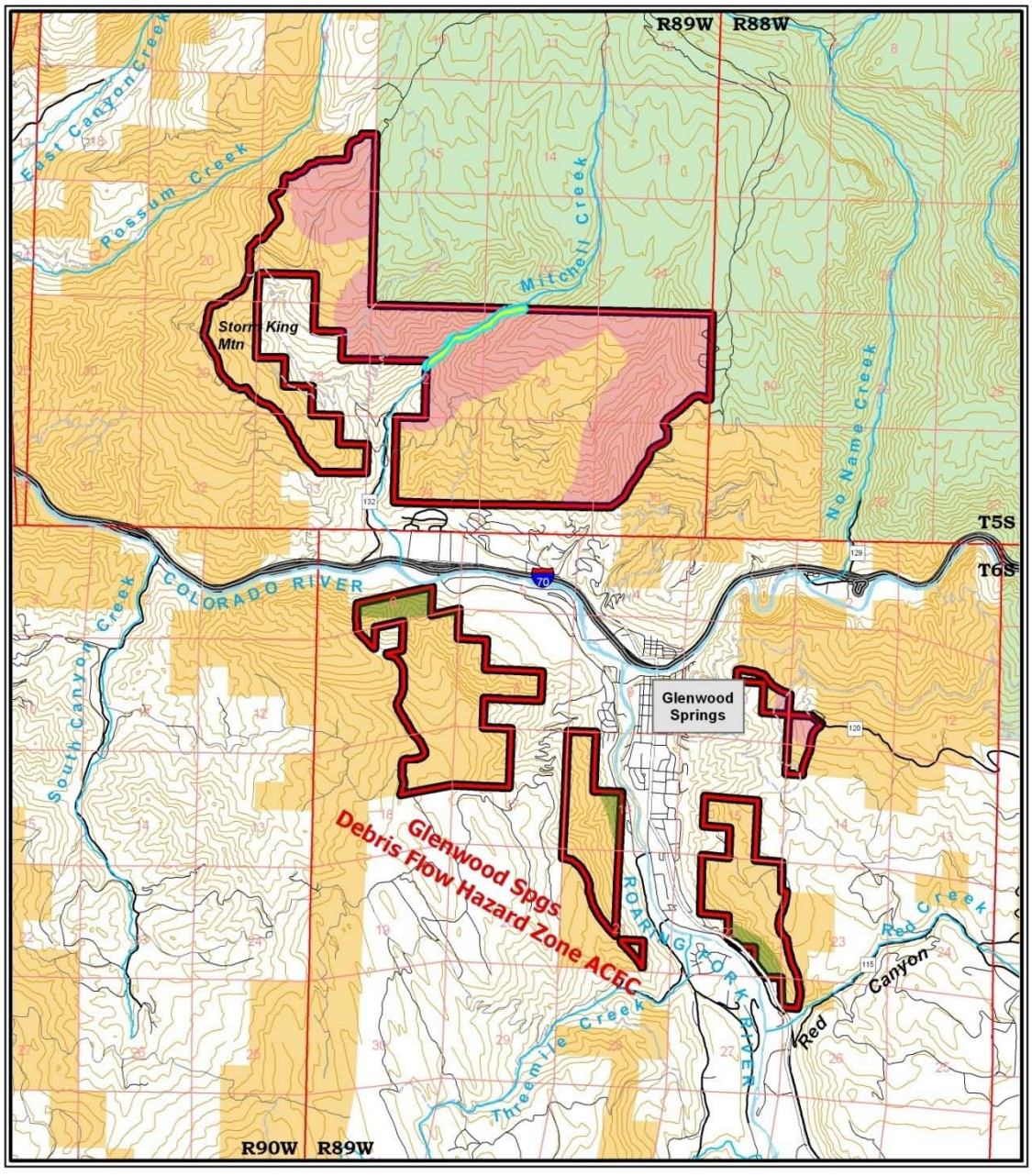


5,933 acres

N W E S

Scale 1 : 50,000

0 0.25 0.5 1 1.5 Miles

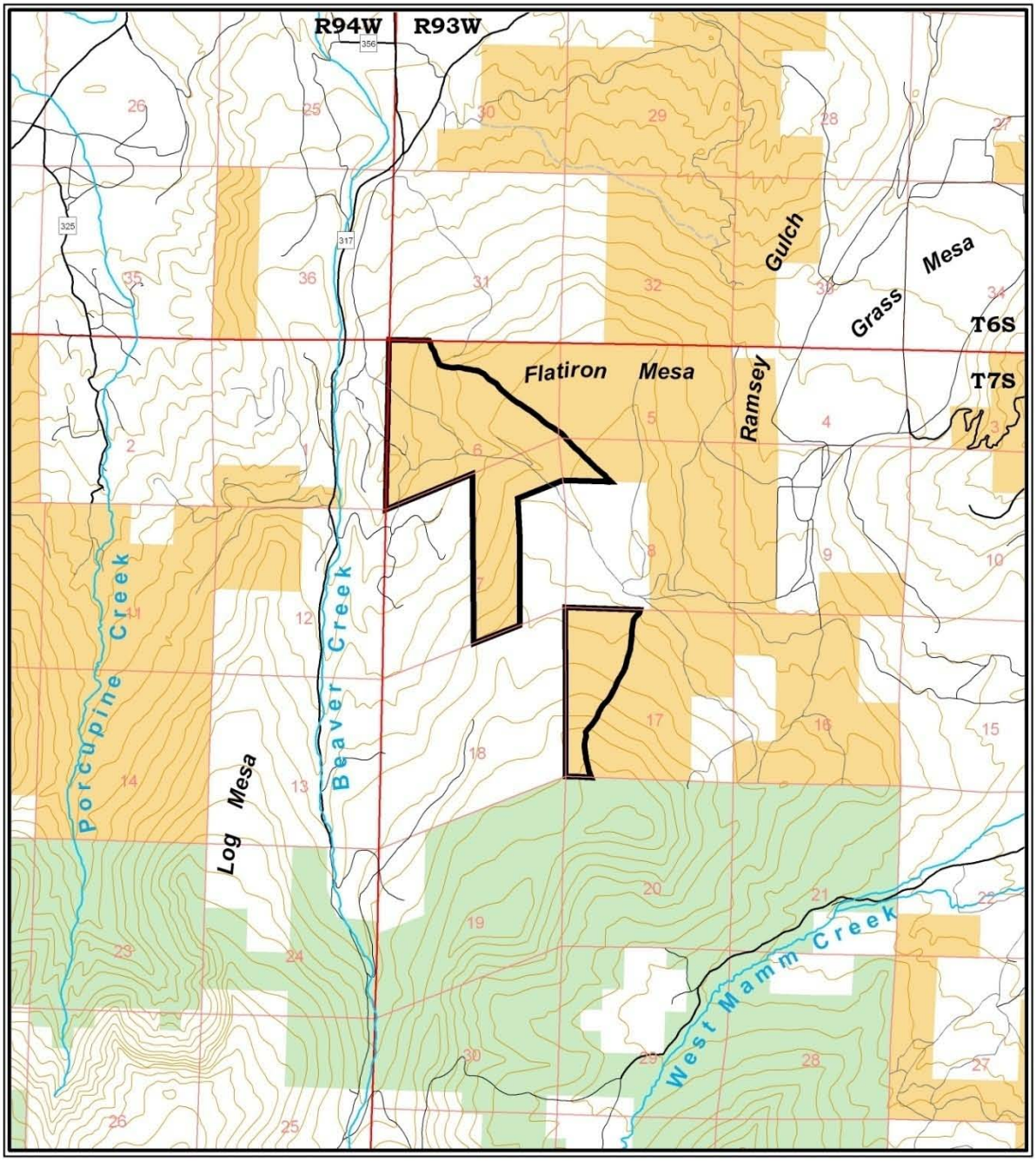
Legend

- Fire Management Zone
- Lynx Habitat
- Bald Eagle Habitat
- Cutthroat Trout Habitat
- Areas of Critical Environmental Concern (ACEC)

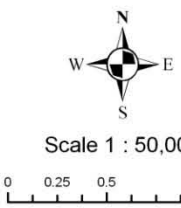
Land Ownership

- BLM Land
- National Forest Land
- Private Land

A-140- 04 - Rifle Municipal Watershed



768 acres

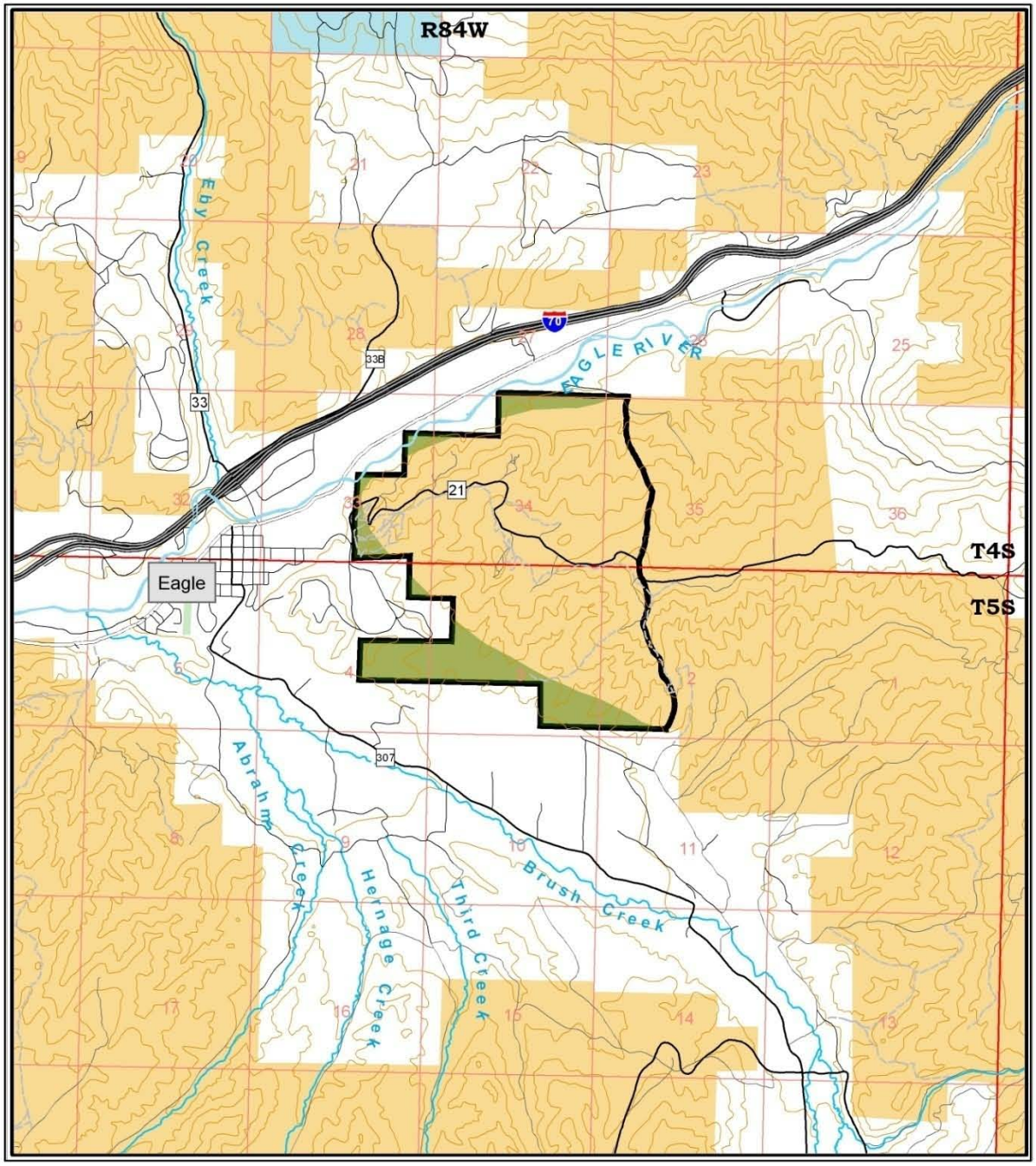


Legend

Fire Management Zone

Land Ownership
- BLM Land
- National Forest Land
- Private Land

A-140- 05 - East Eagle



1,641 acres

N
W E
S

Scale 1 : 50,000

0 0.25 0.5 1 Miles

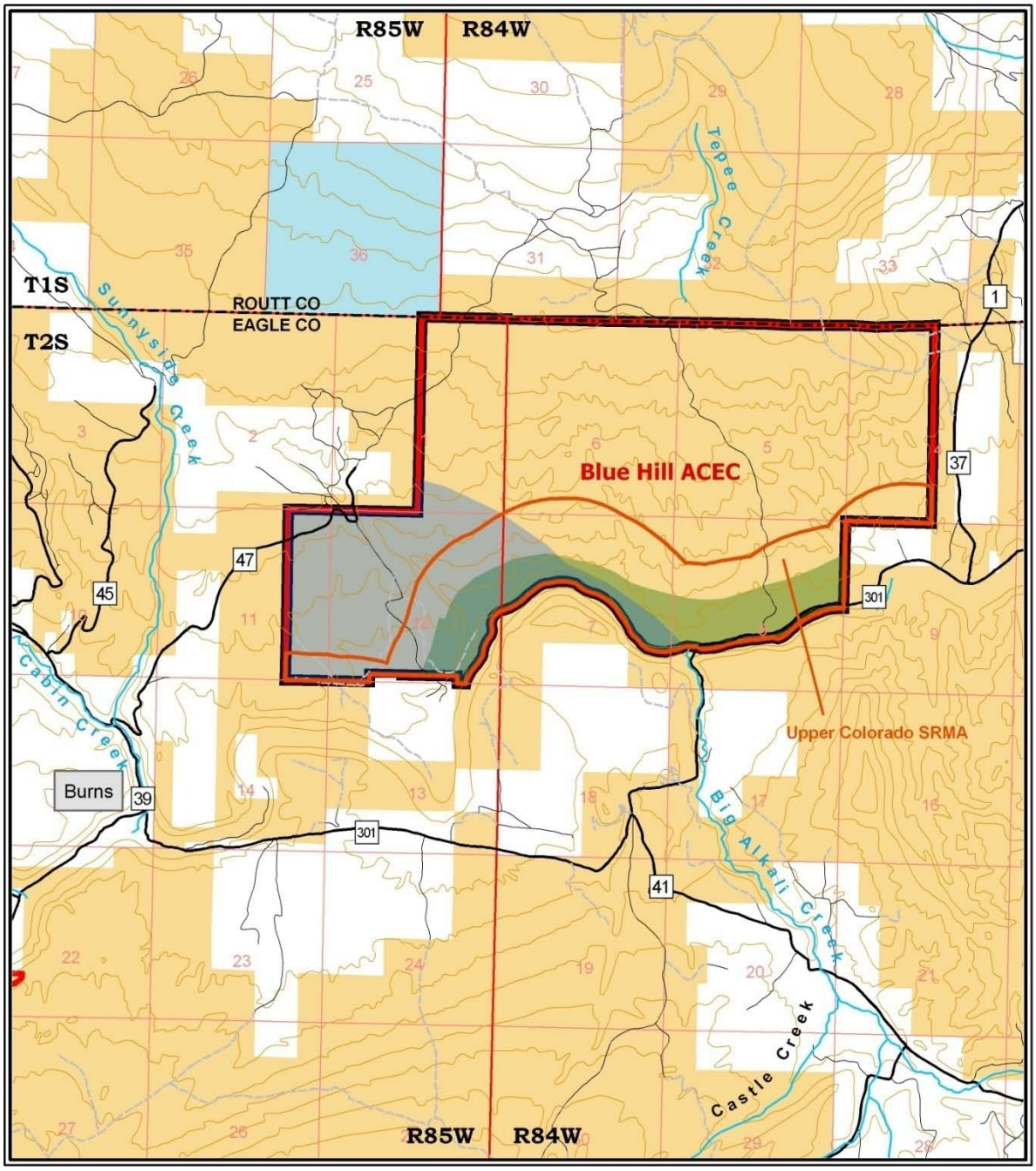
Legend

- Fire Management Zone
- Bald Eagle Habitat

Land Ownership

- BLM Land
- Private Land
- State Land

A-140- 06 - Blue Hill Area of Critical Environmental Concern



3,722 acres

N
W E
S

Scale 1 : 50,000

0 0.25 0.5 1 Miles

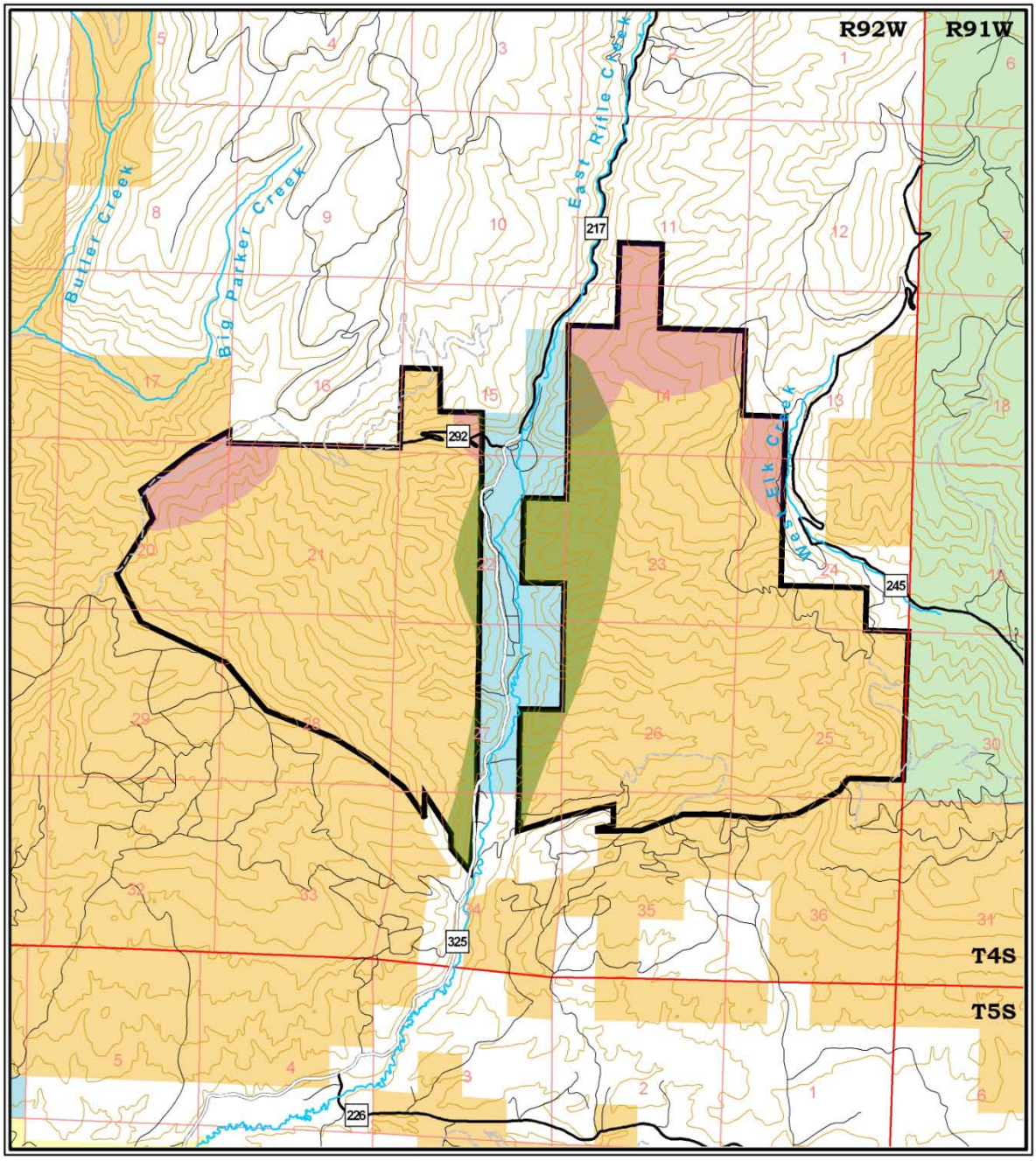
Legend

- Fire Management Zone
- Sage Grouse Habitat
- Bald Eagle Habitat
- Bald Eagle and Sage Grouse Habitat
- County Line
- Area of Critical Environmental Concern (ACEC)

Land Ownership
- BLM Land
- Private Land
- State Land

- Special Recreation Management Area (SRMA)

B-140- 01 - East Rifle Creek



5,301 acres

N
W E
S

Scale 1 : 50,000

0 0.25 0.5 1 Miles

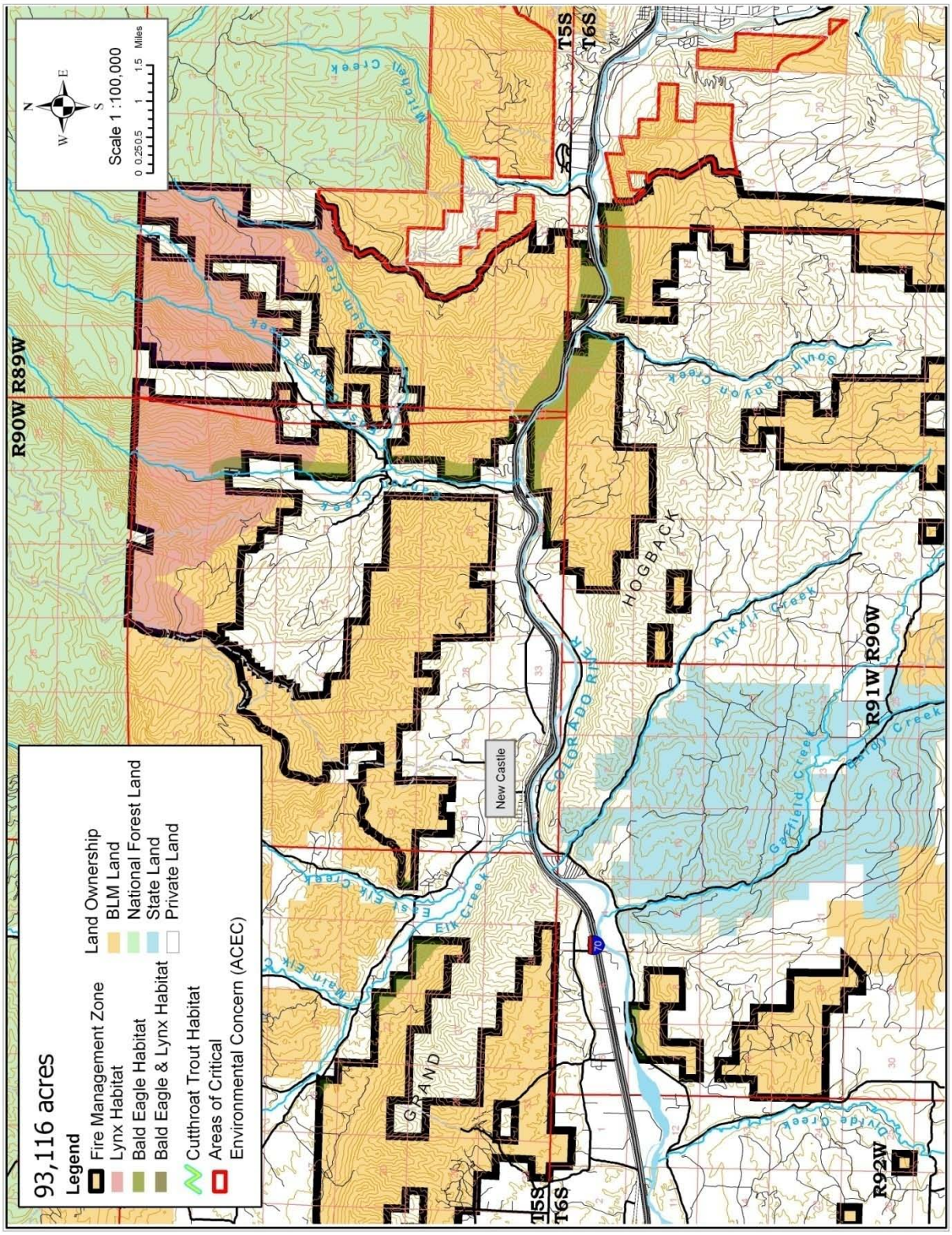
Legend

- Fire Management Zone
- Lynx Habitat
- Bald Eagle Habitat
- Lynx & Bald Eagle Habitat

Land Ownership

- BLM Land
- Private Land
- State Land
- National Forest Land

B-140- 02 - 1-70 Corridor West of Glenwood Springs – *New Castle Area*



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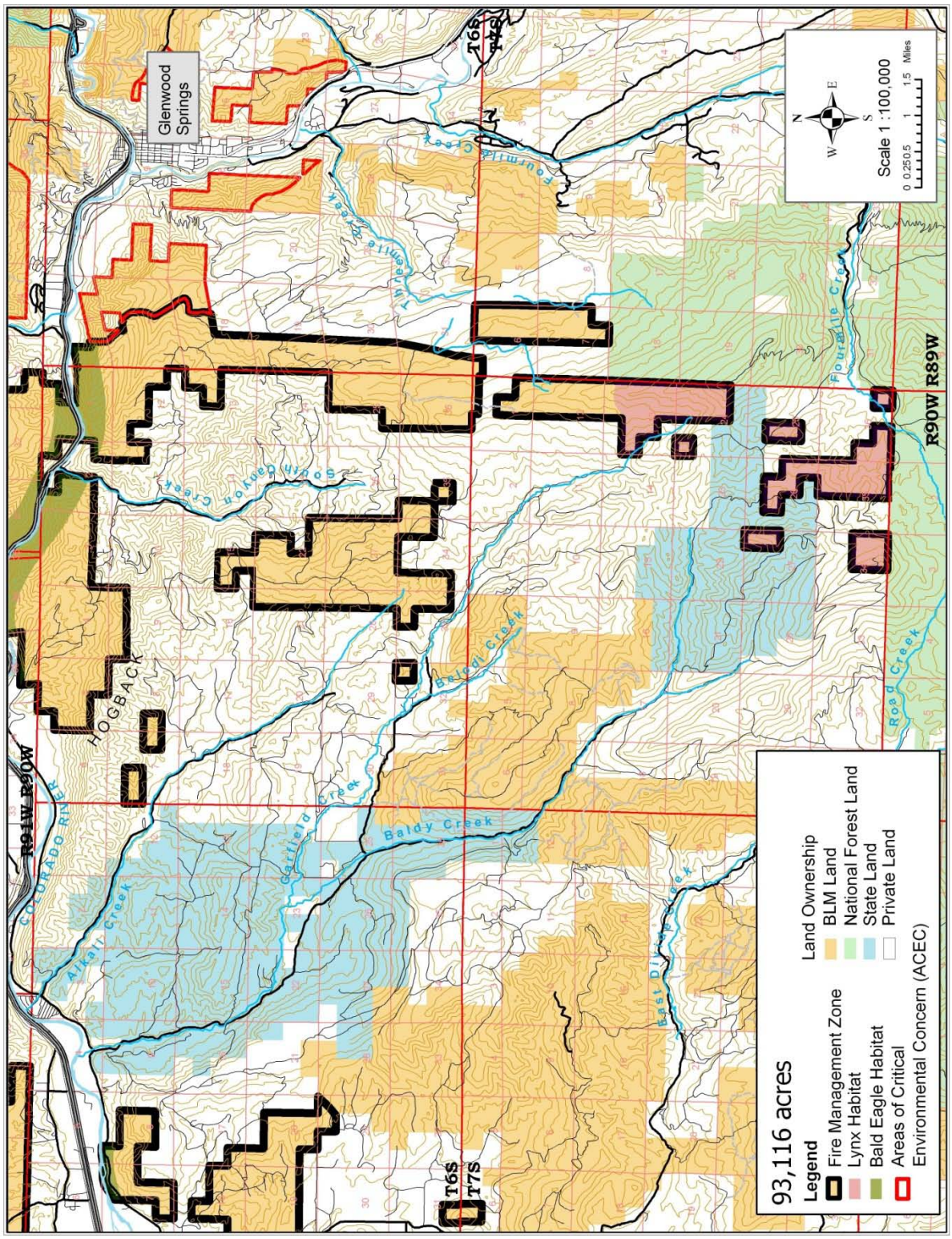

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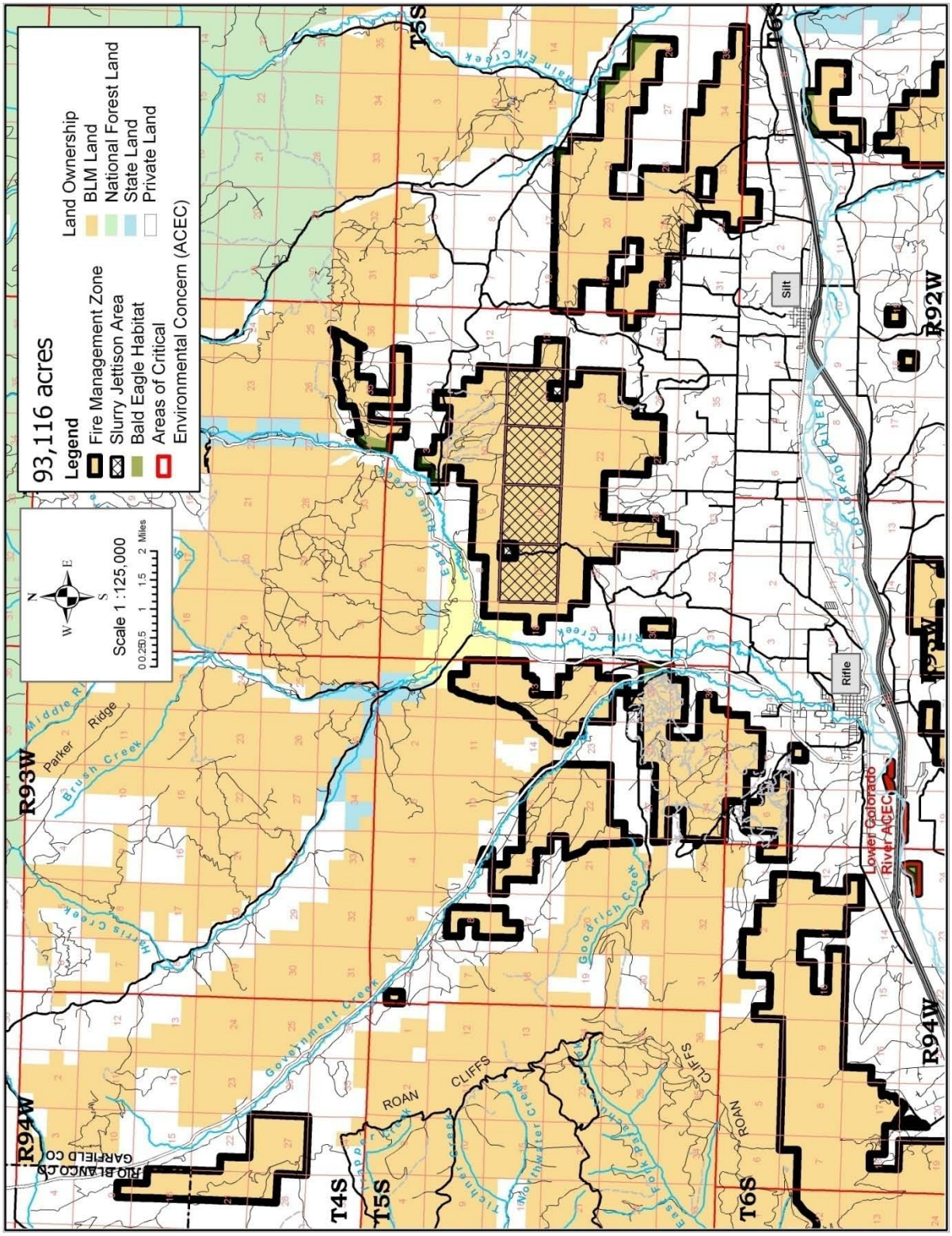

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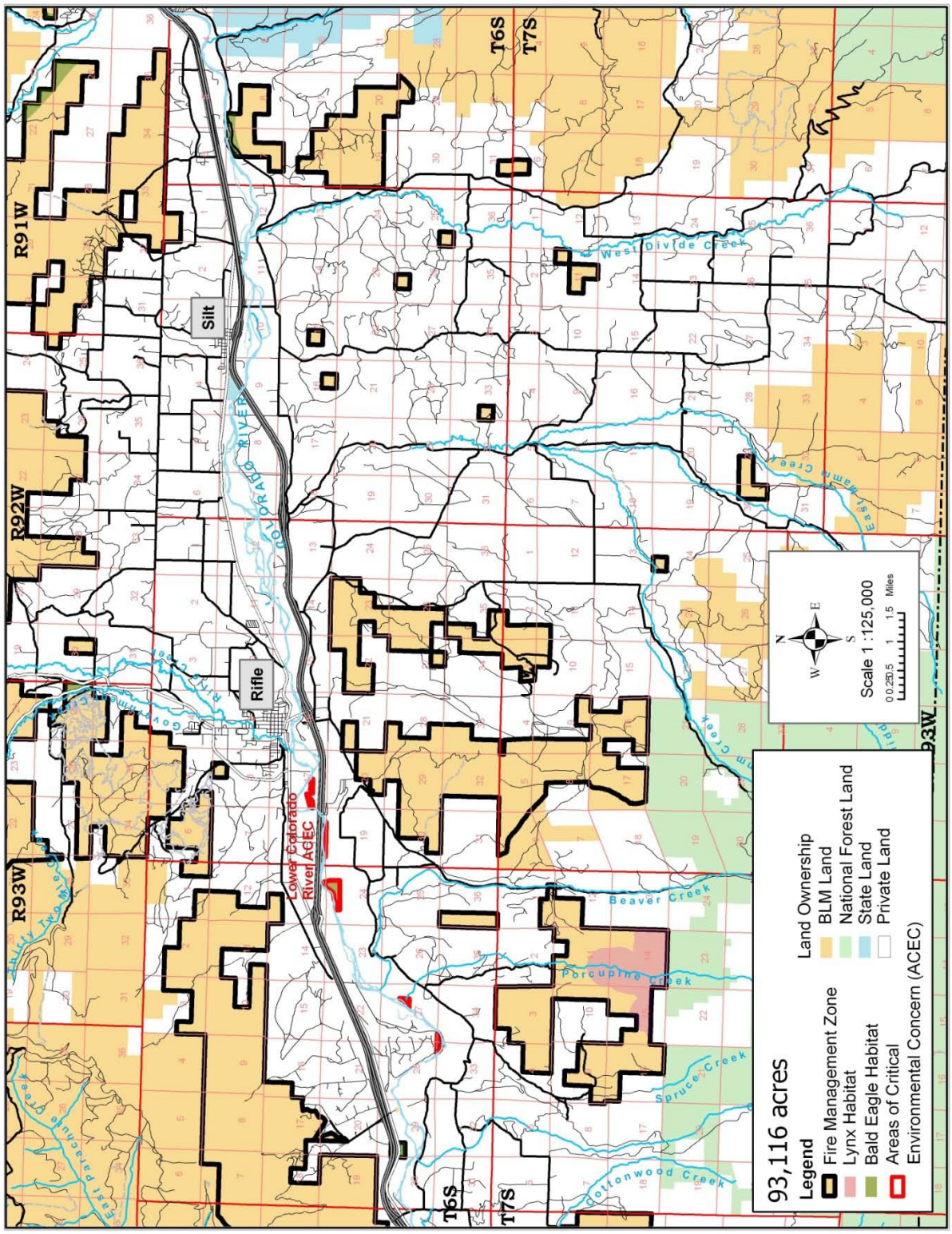

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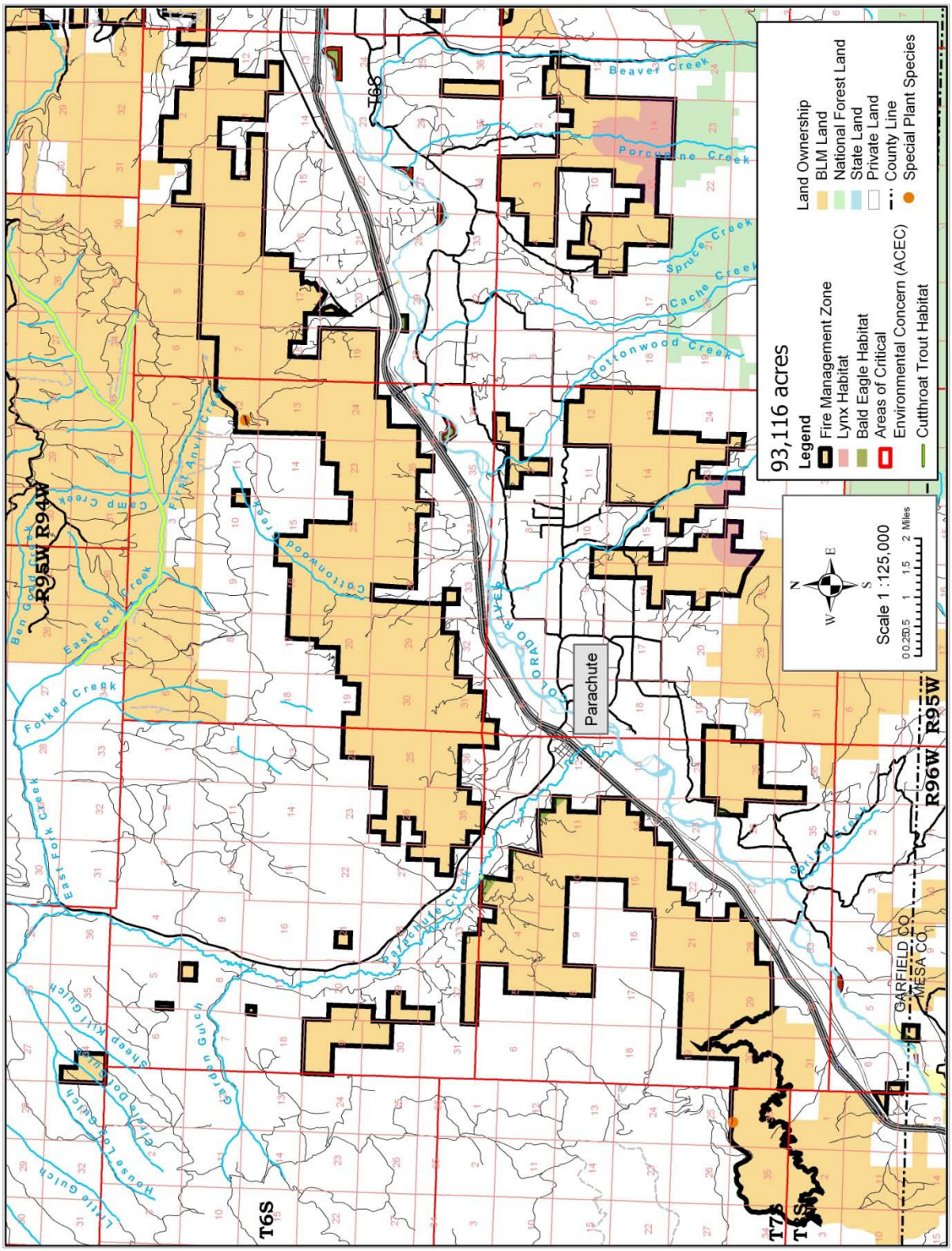
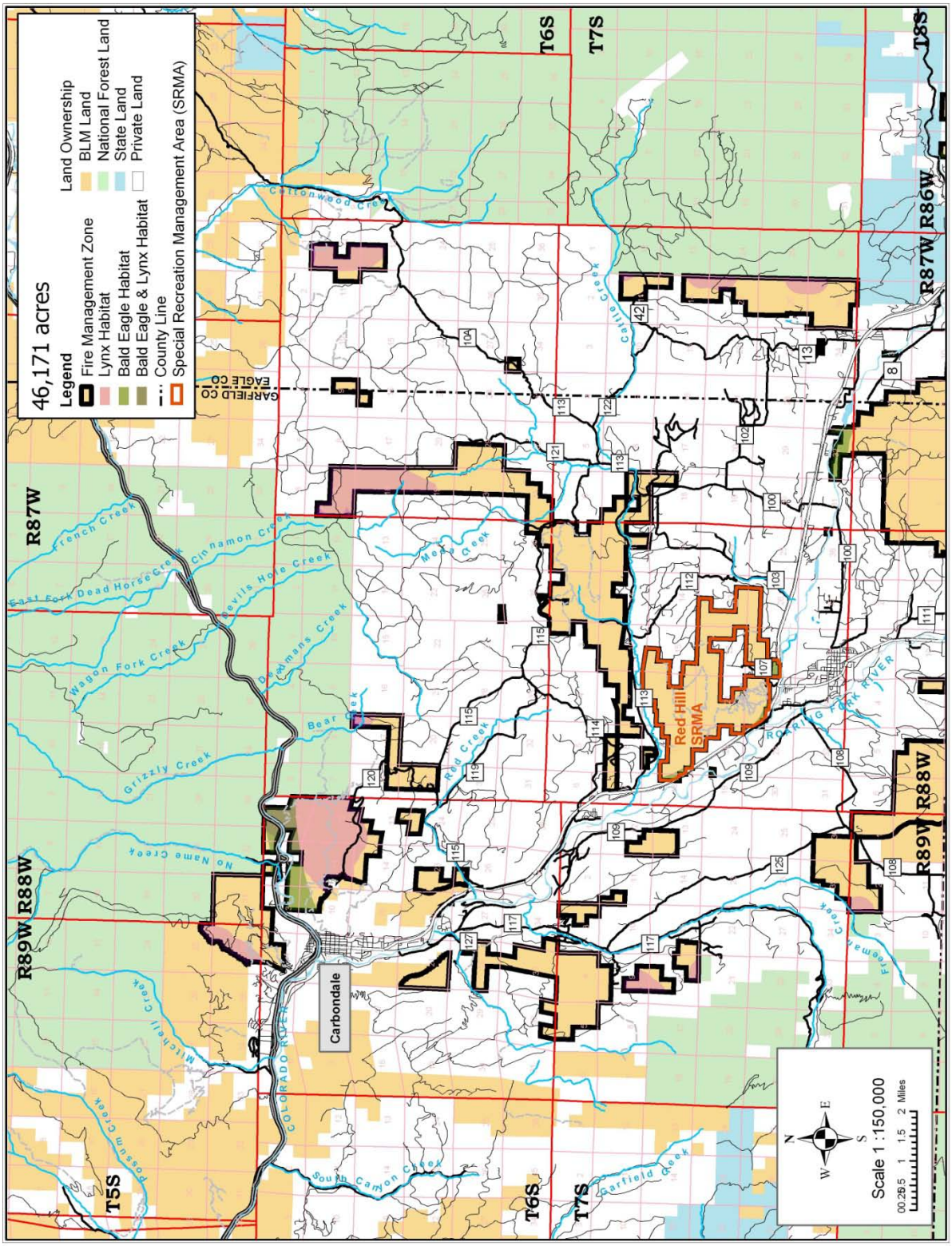
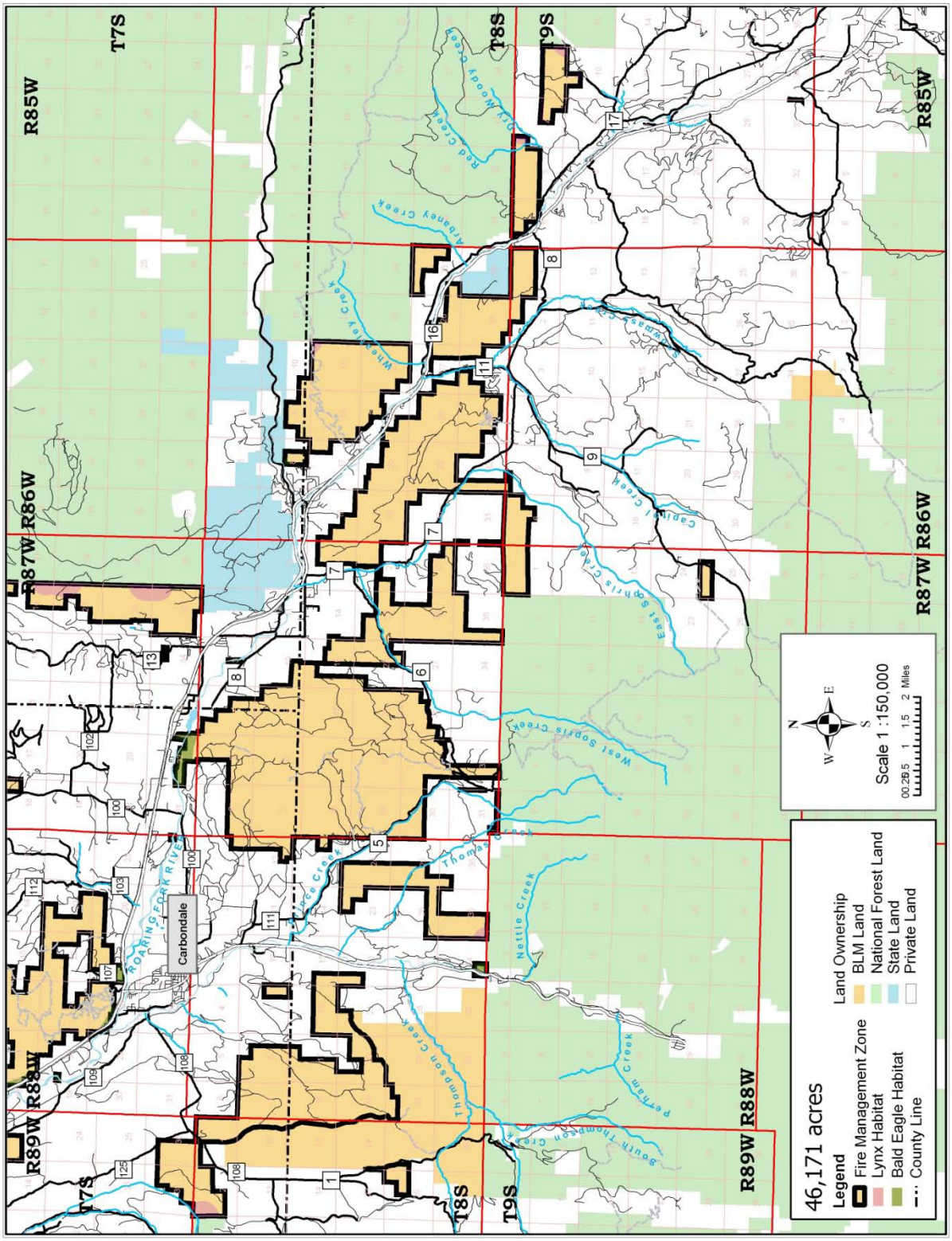


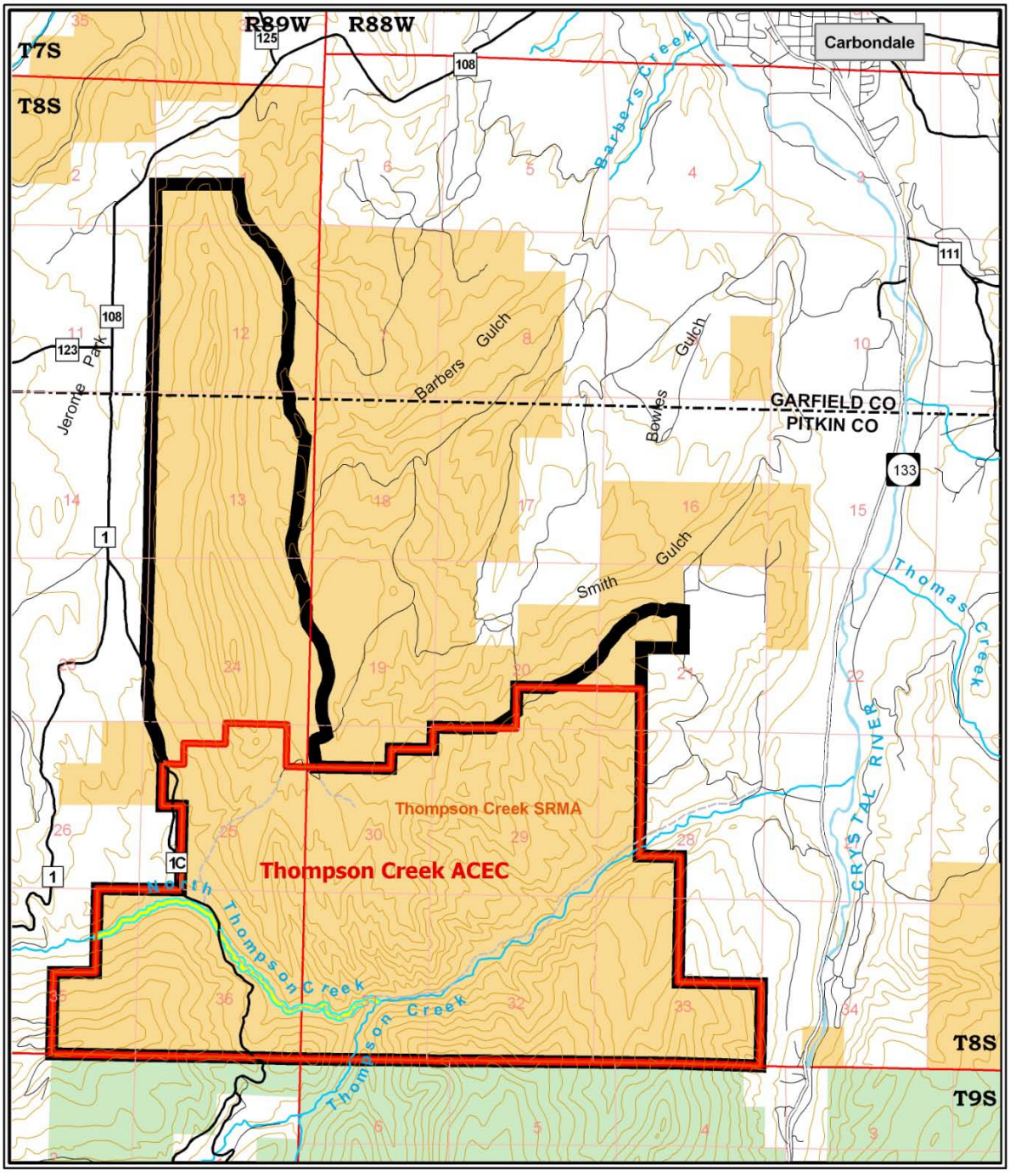
B-140- 03 - Roaring Fork Valley – *Carbondale North*



B-140- 03 - Roaring Fork Valley – *Carbondale South*



B-140- 04 - Thompson Creek / Eagle Mountain – *Thompson Creek Area*



6,230 acres

N
W E
S

Scale 1 :50,000

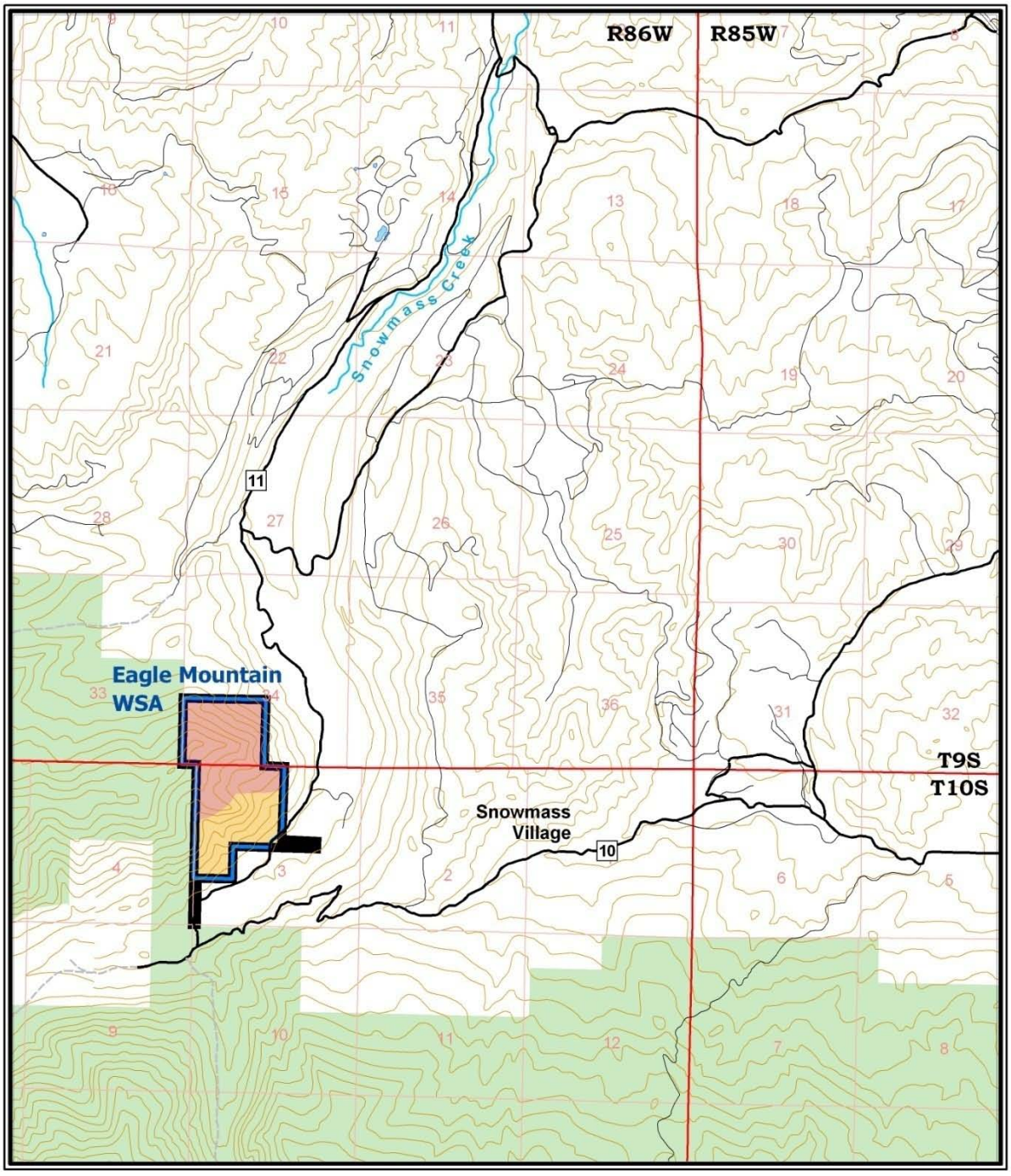
0 0.25 0.5 1 Miles

Legend

- Fire Management Zone
- Cutthroat Trout Habitat
- Areas of Critical Environmental Concern (ACEC)
- Special Recreation Management Area (SRMA)

Land Ownership
- BLM Land
- Private Land
- National Forest Land

B-140- 04 - Thompson Creek / Eagle Mountain – *Eagle Mountain*



331 acres

N
W E
S

Scale 1 :50,000

0 0.25 0.5 1 Miles

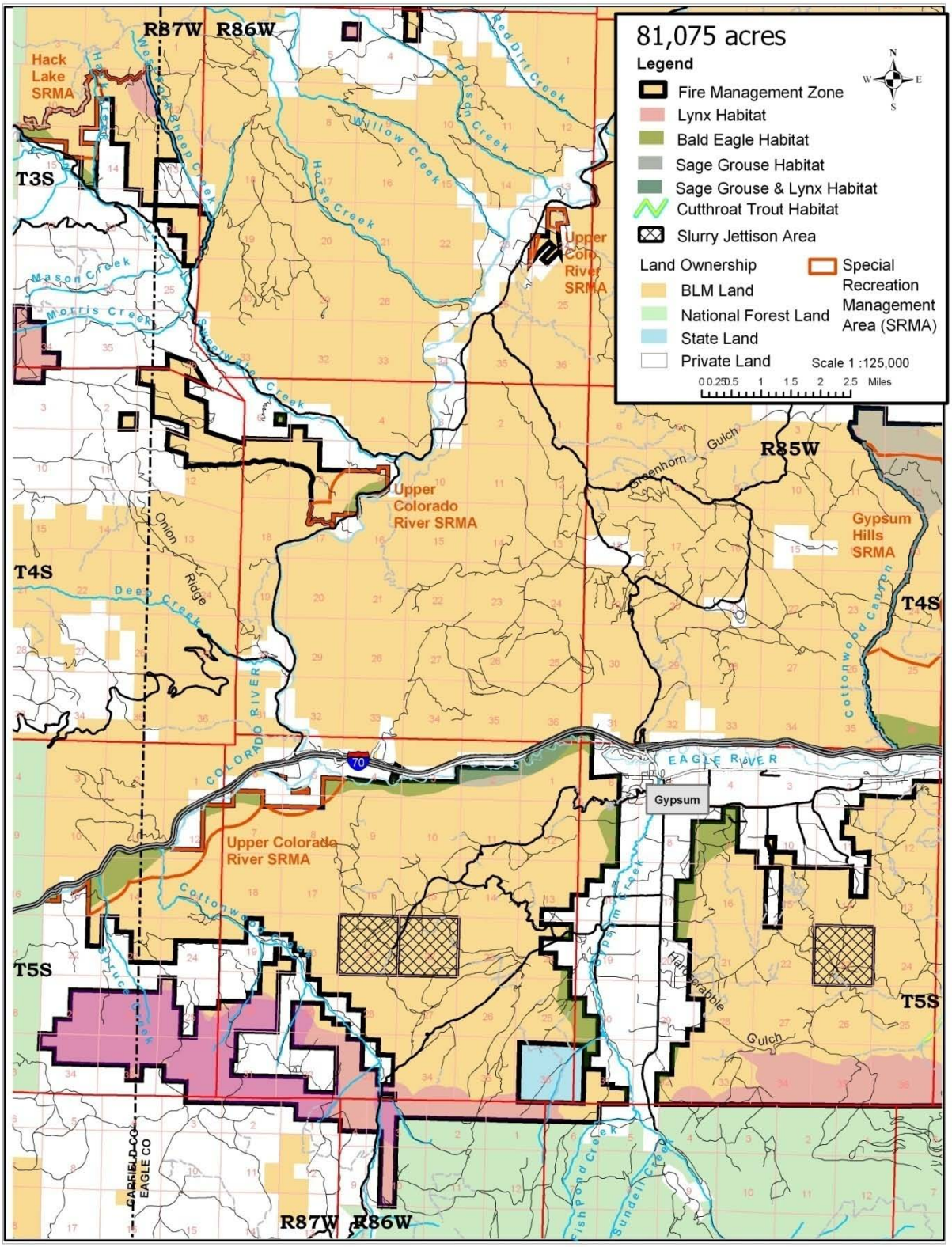
Legend

- Fire Management Zone
- Lynx Habitat
- Wilderness Study Area (WSA)

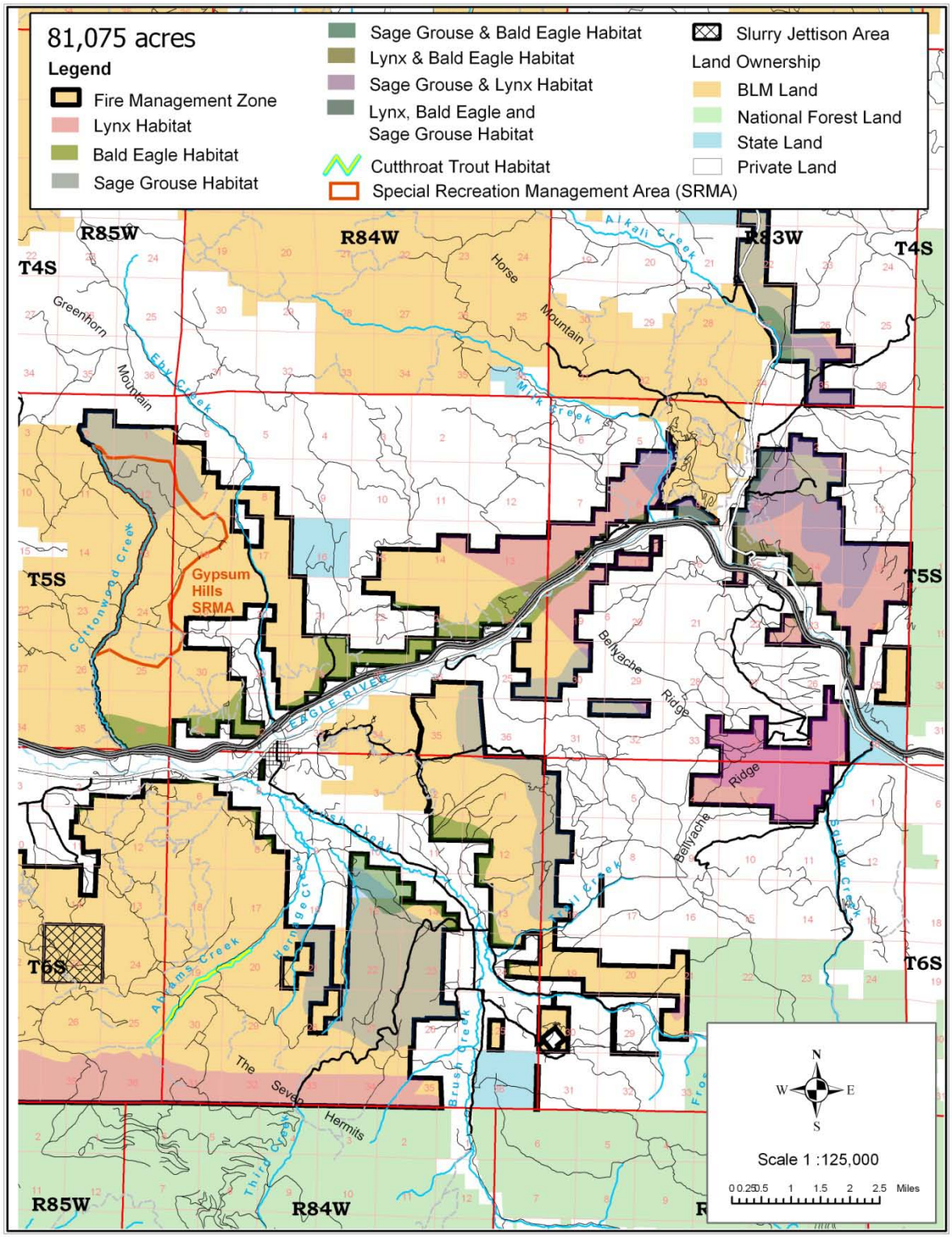
Land Ownership

- BLM Land
- Private Land
- National Forest Land

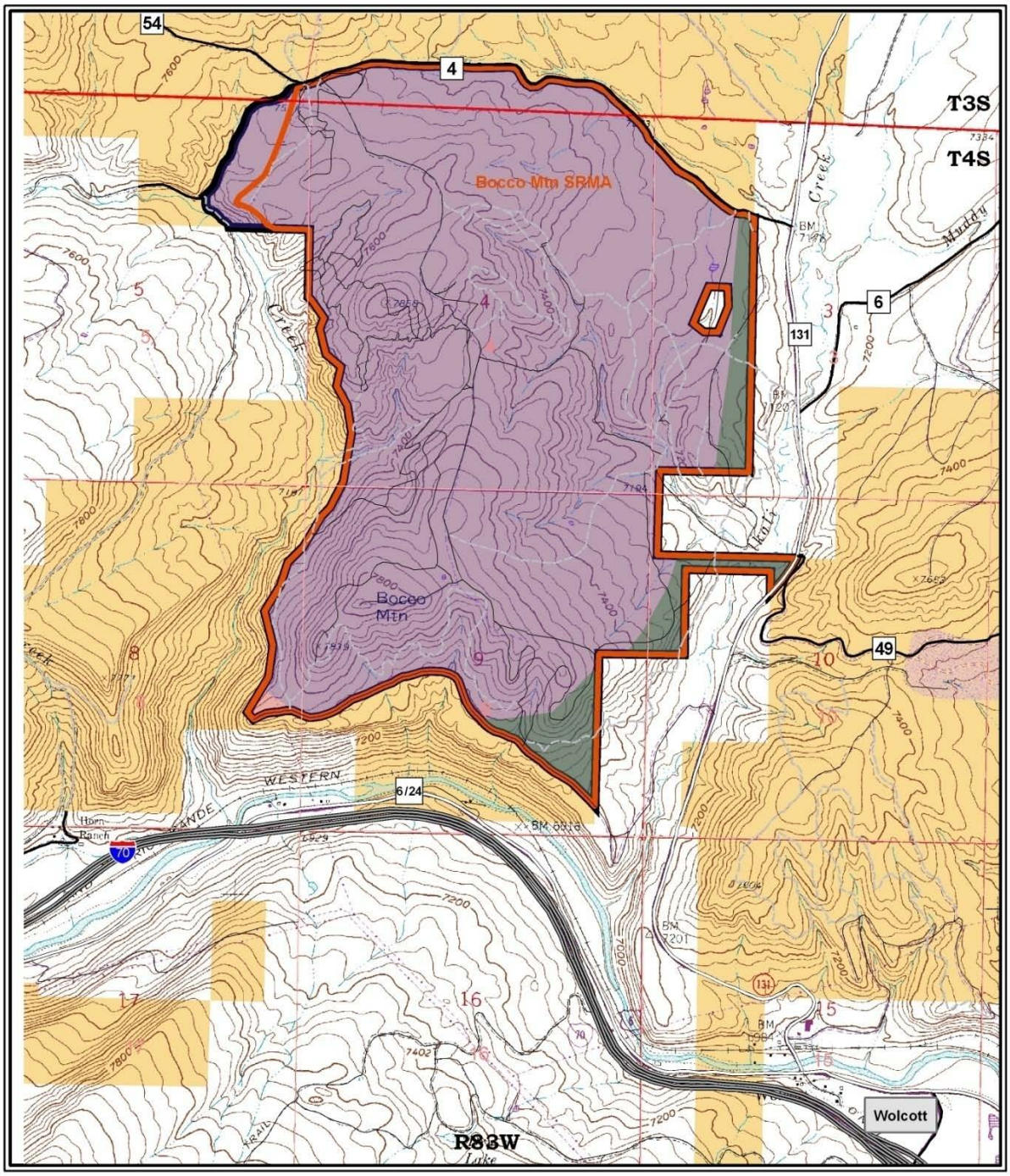
B-140- 05 - Eagle Valley – *Gypsum Area*



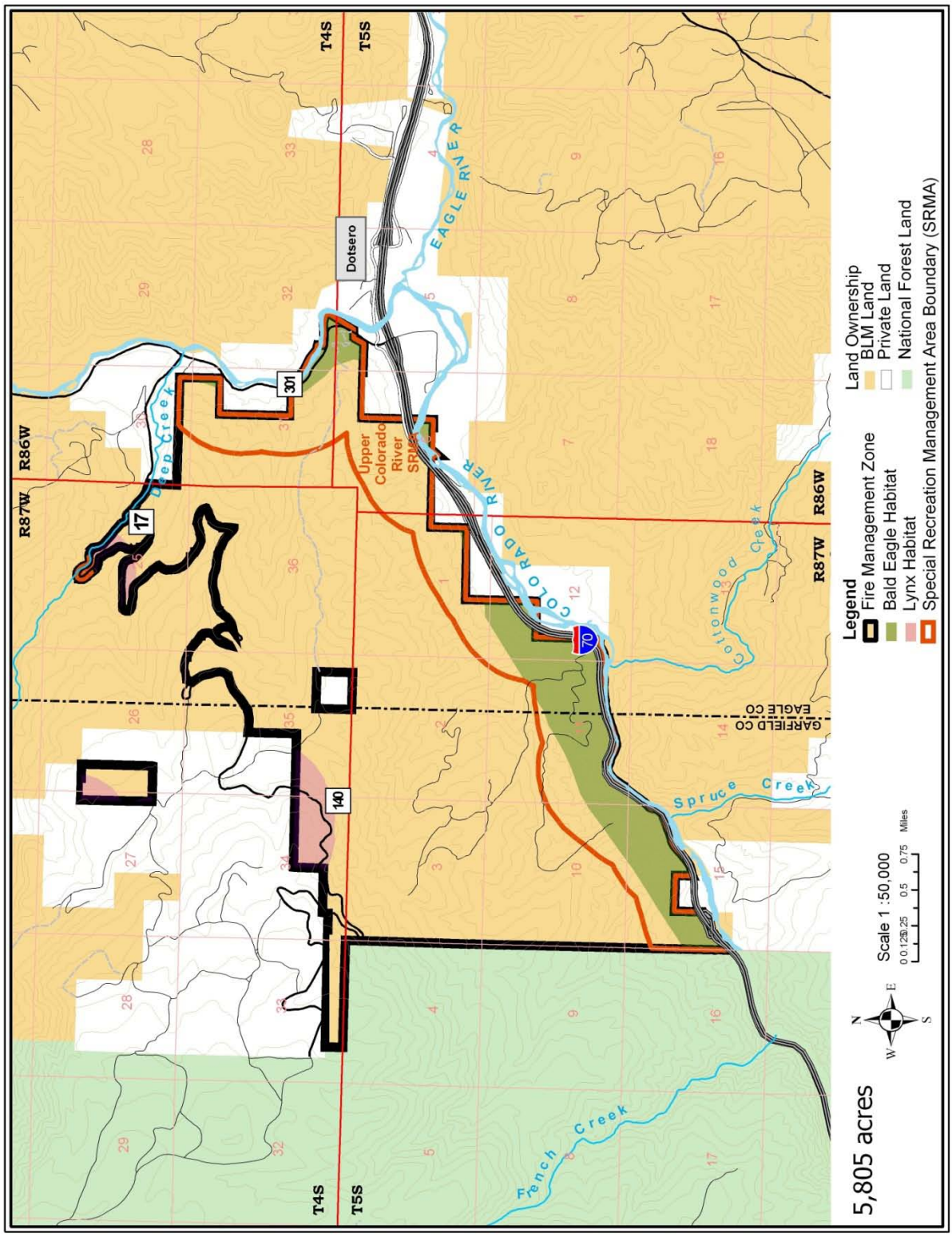
B-140- 05 - Eagle Valley – *Eagle Area*



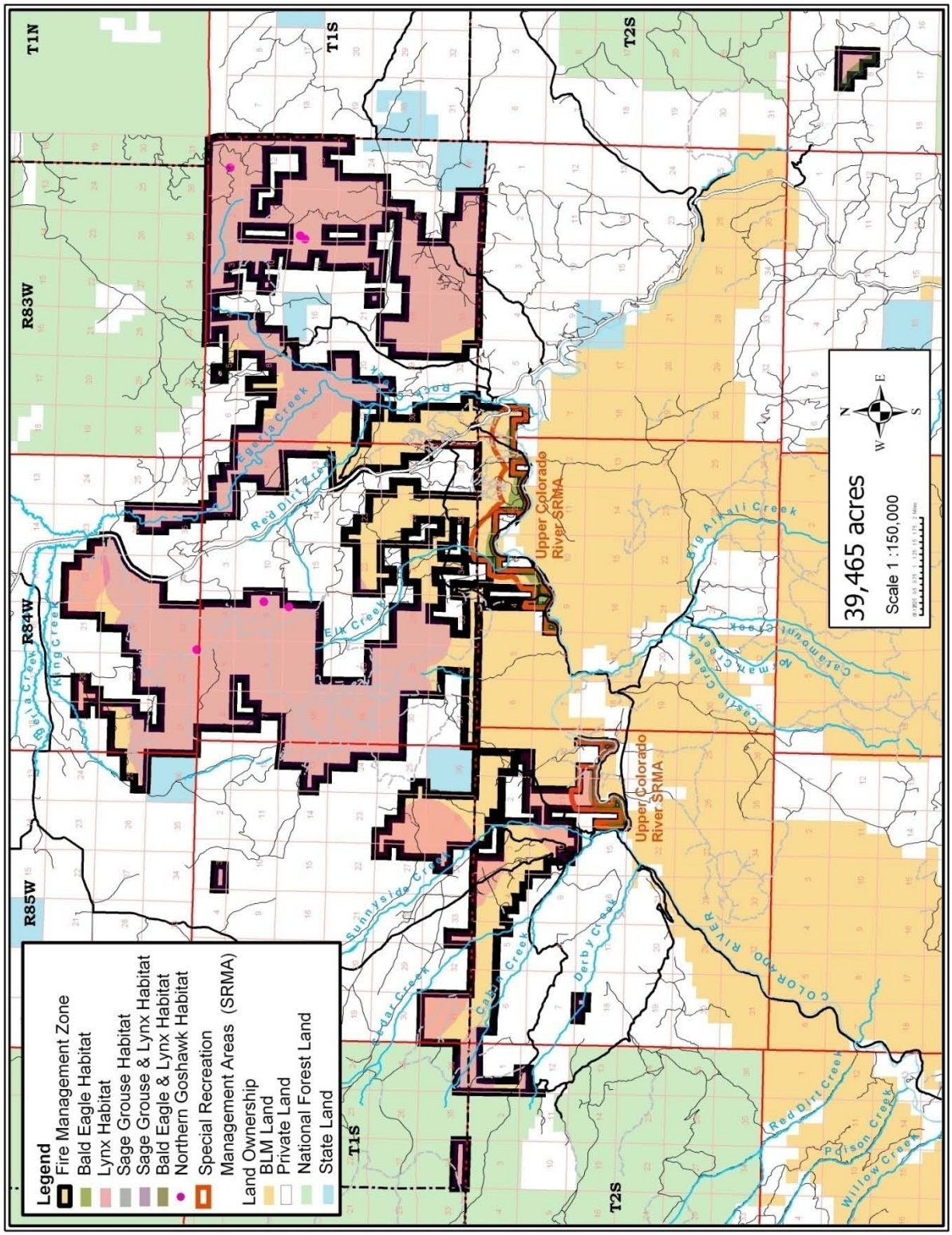
B-140- 06 - Bocco Mountain / Siloam Springs – *Bocco Mountain Area*



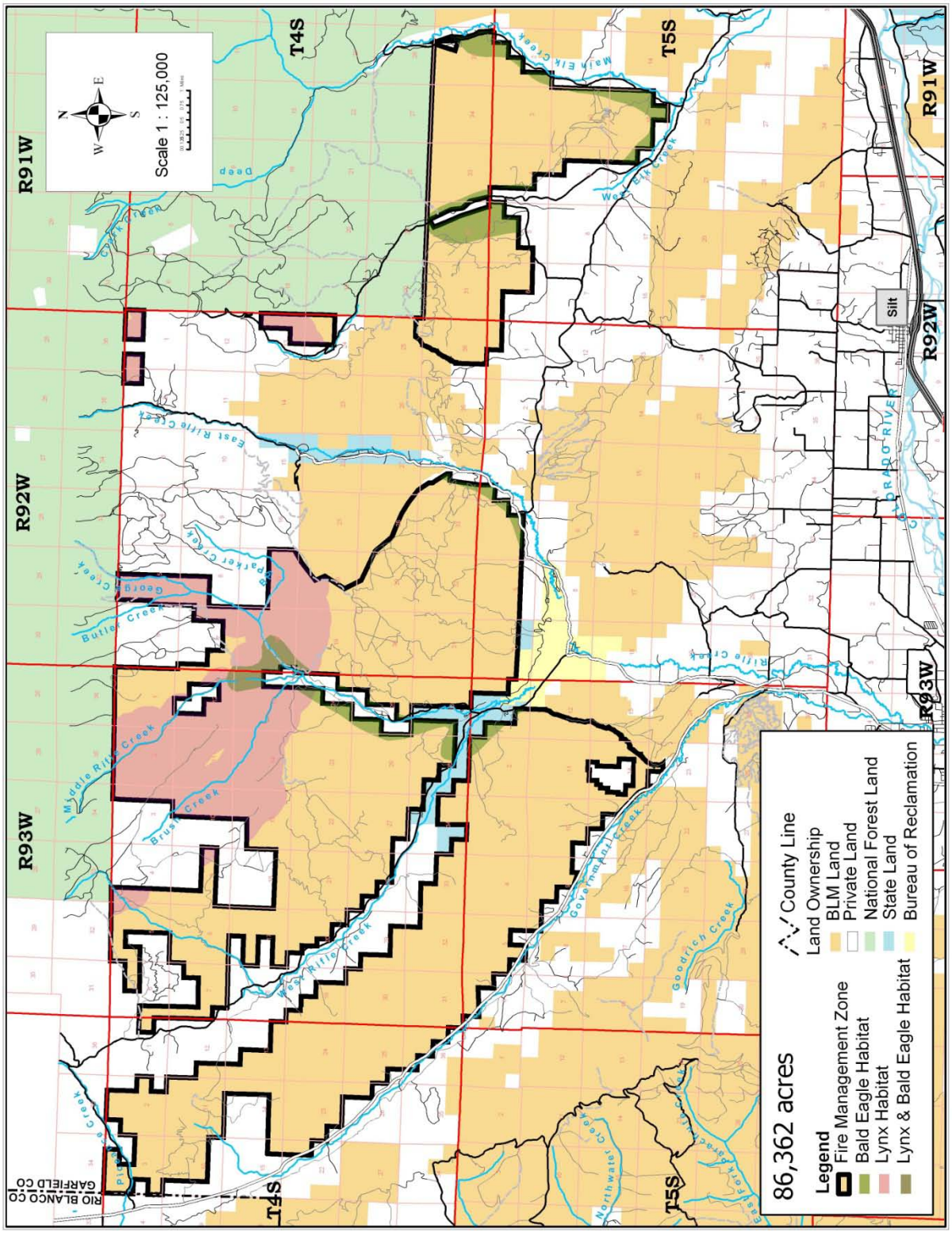
B-140- 06 - Bocco Mountain / Siloam Springs – *Siloam Springs Area*



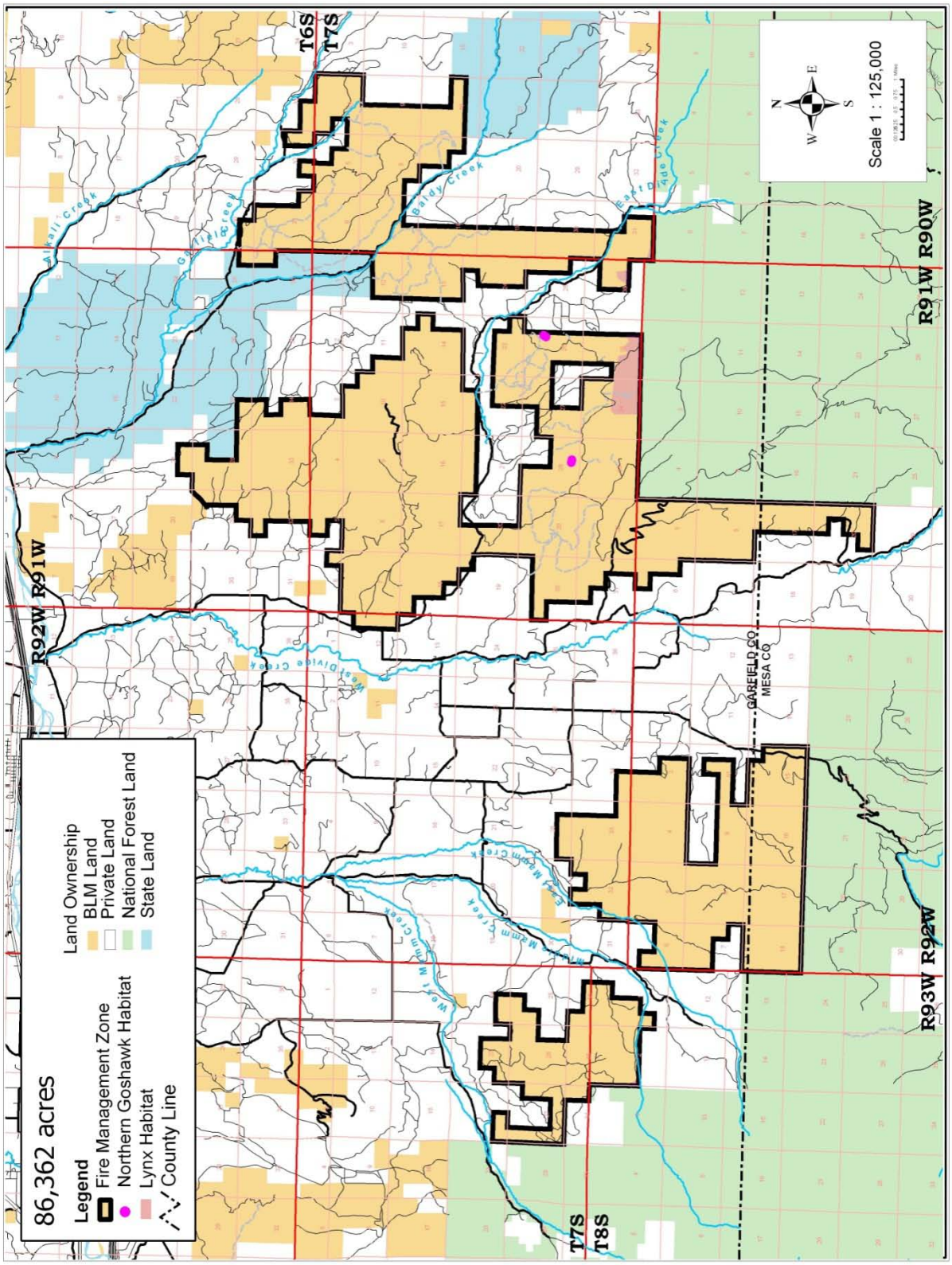
B-140- 07 - King Mountain / Black Mountain



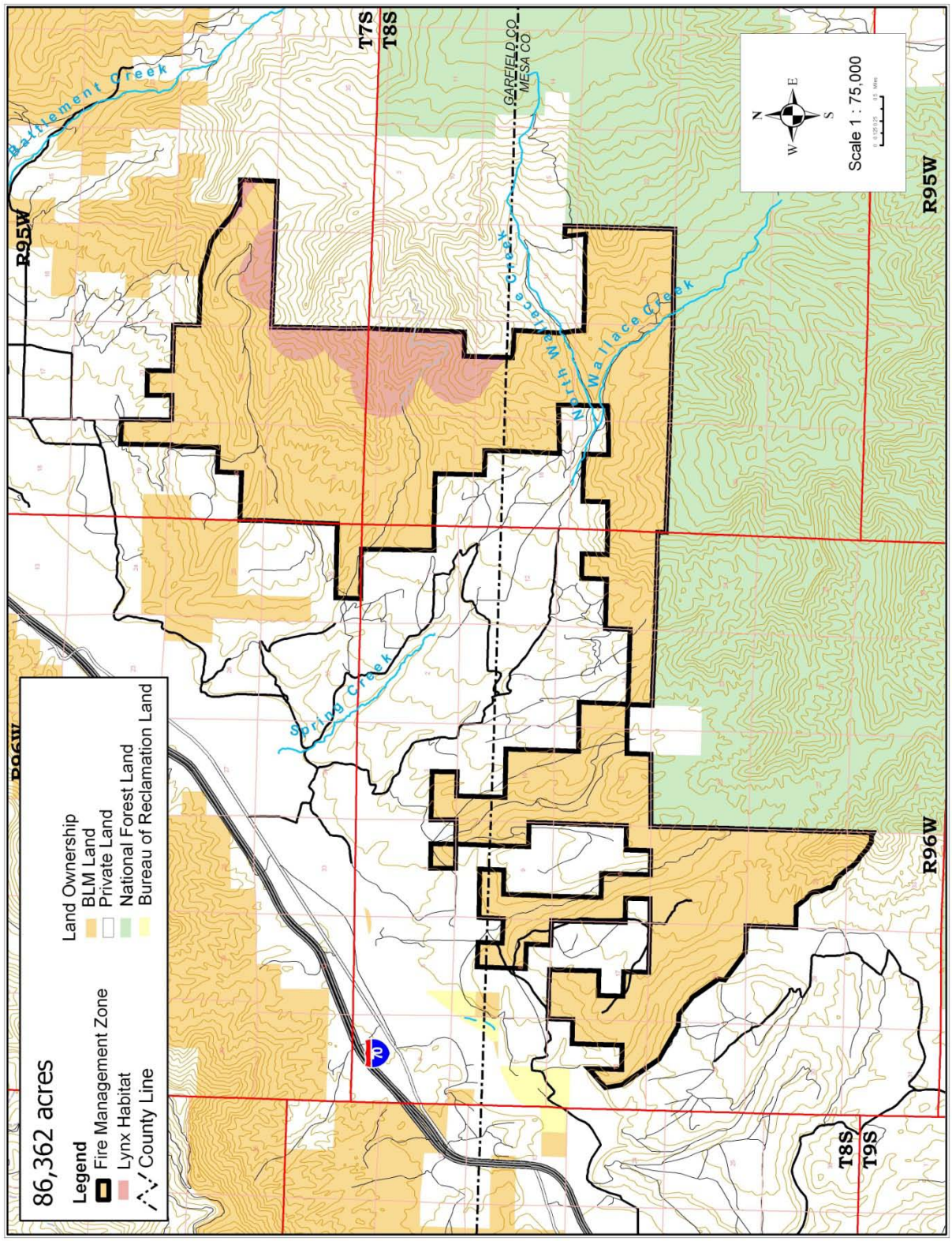
C-140- 01 - West Of Glenwood Springs – *Rifle Gap Reservoir Area*



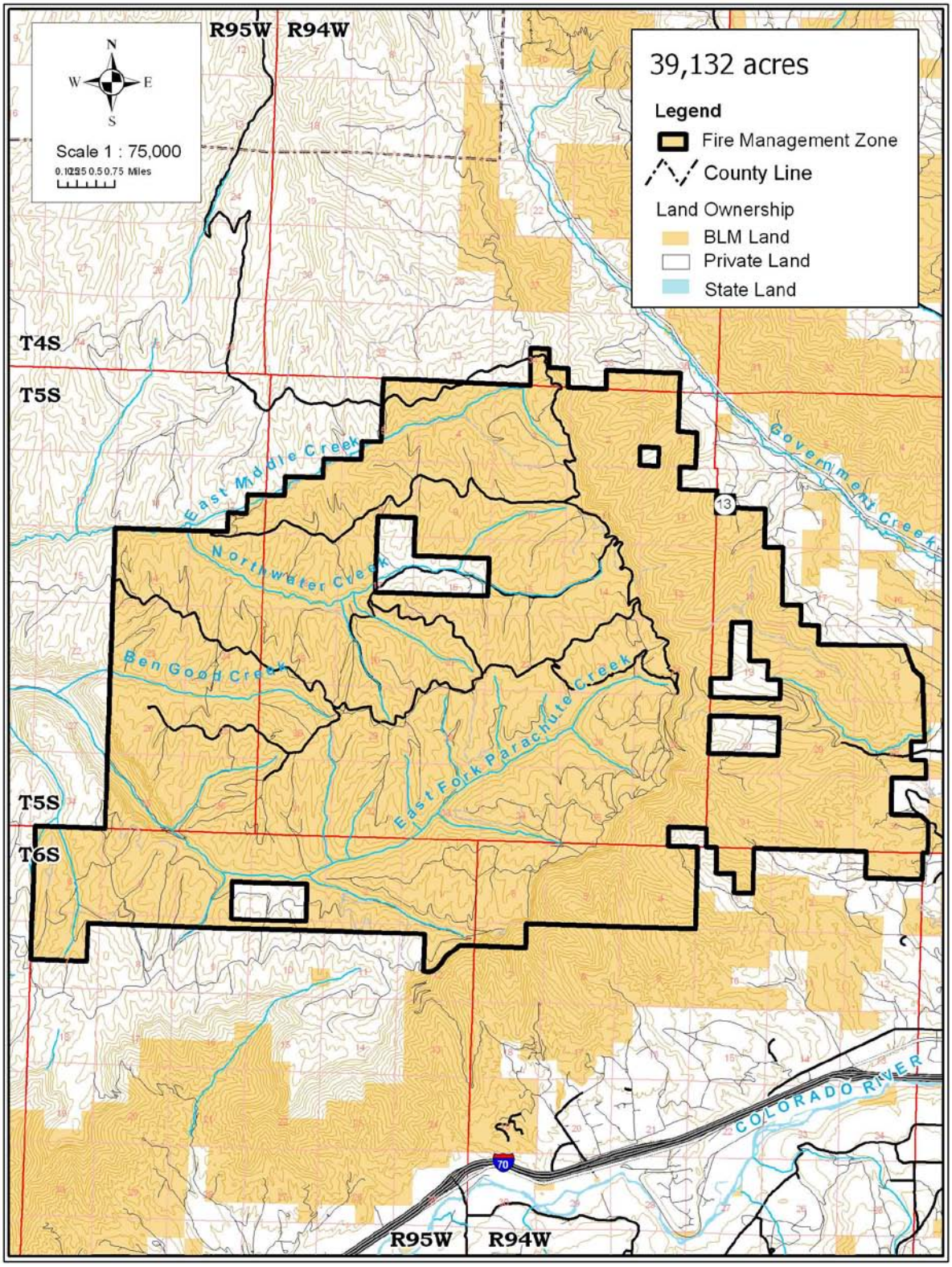
C-140- 01 - West Of Glenwood Springs – *Divide Creek Area*



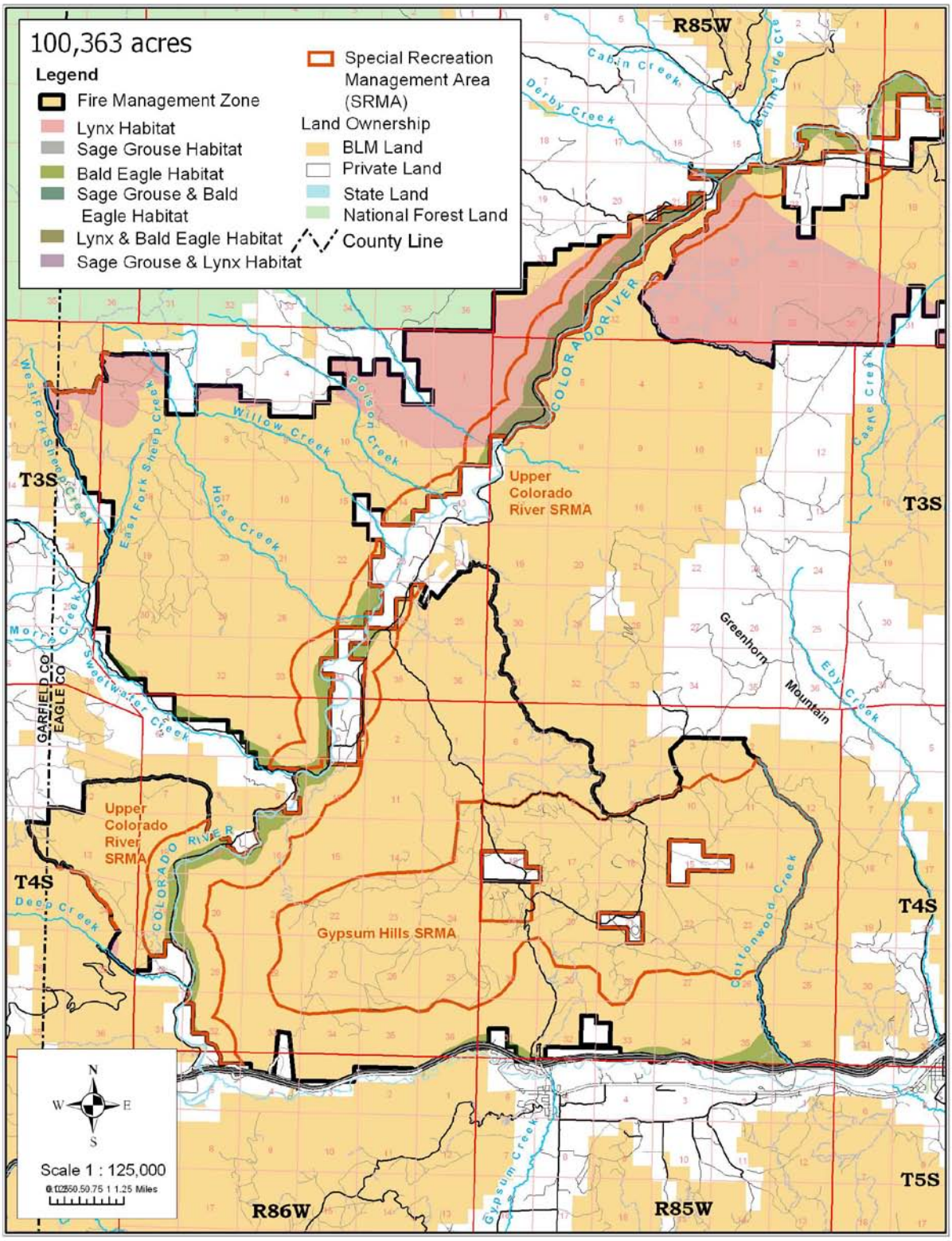
C-140- 01 - West Of Glenwood Springs – *Wallace/Alkali Creek Area*



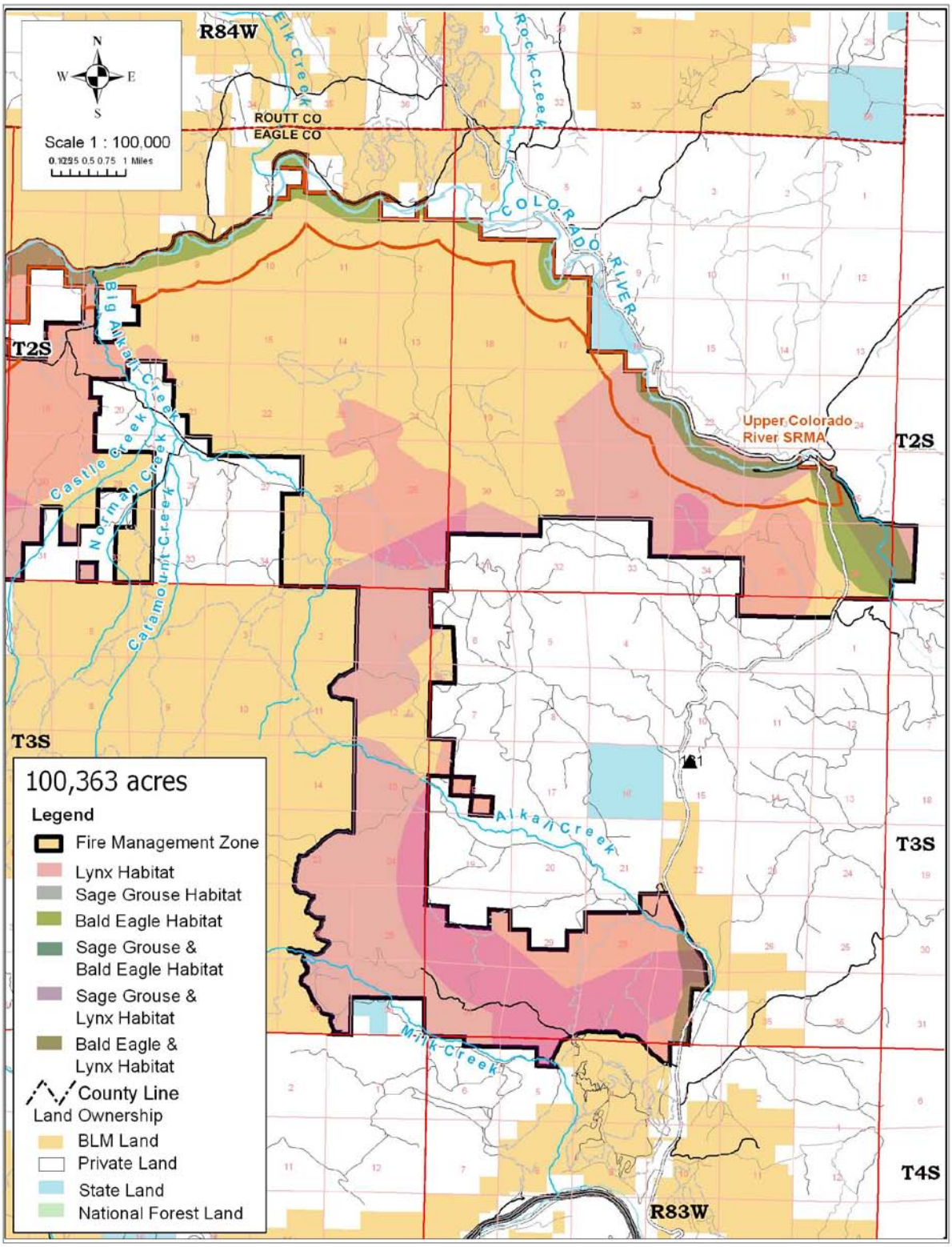
C-140- 02 - Roan Plateau and Cliffs



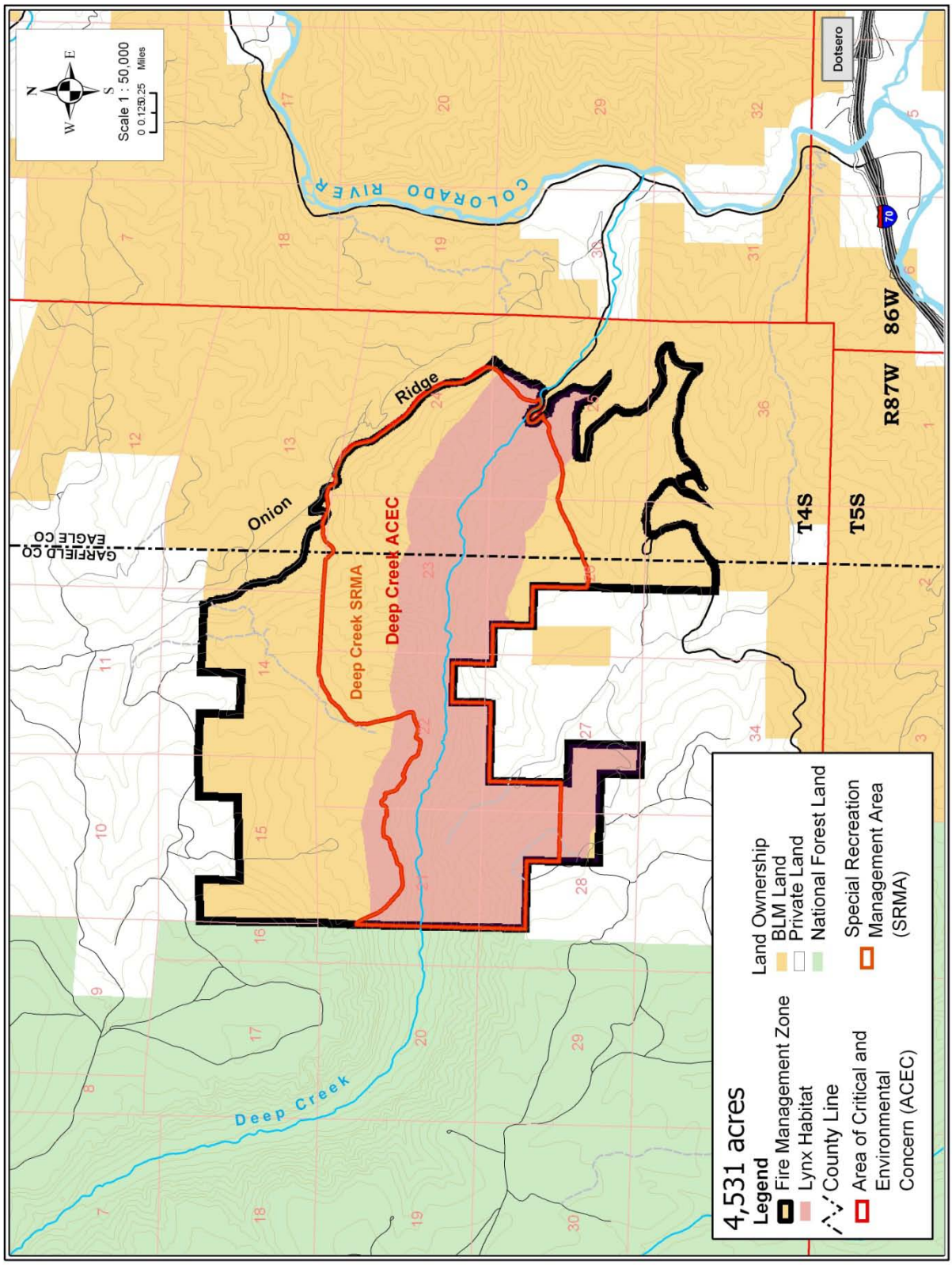
C-140- 03 - Upper Colorado - *Southwest*



C-140- 03 - Upper Colorado - *Northeast*

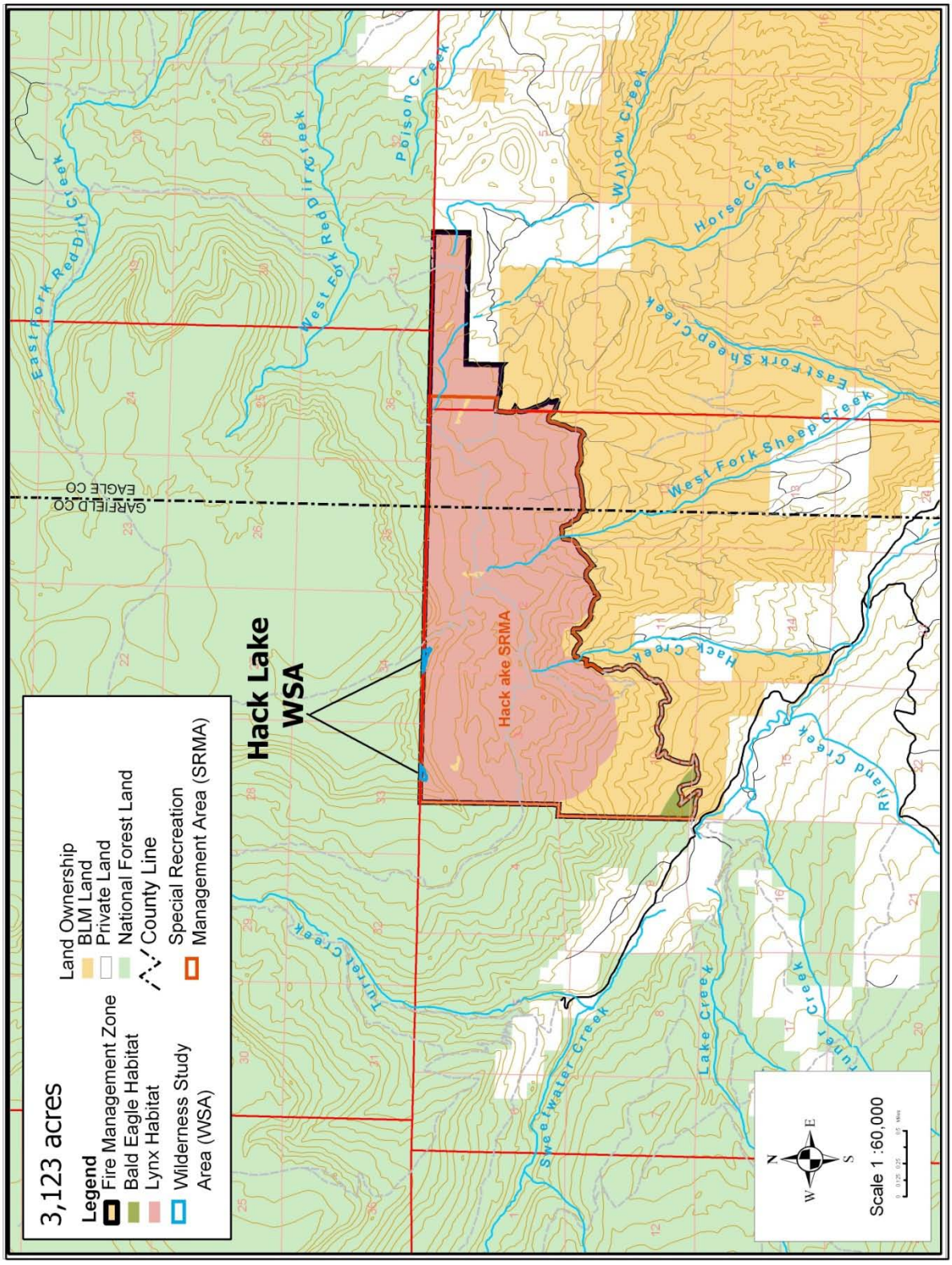


C-140- 04 - Deep Creek



D-140- 01 - Bull Gulch/Castle Peak/Hack Lake – *Bull Gulch/Castle Peak*

D-140- 01 - Bull Gulch/Castle Peak/Hack Lake – *Hack Lake*



APPENDIX B

STRATEGIES BY FMU

A

Fire Management Units

Areas where fire is not desired at all.

General Description:
This category includes areas where mitigation and suppression is required to prevent direct threats to life or property. It includes areas where; fire never played a large role historically in the development and maintenance of the ecosystem, or because of human development fire can no longer be tolerated without significant loss, or where fire return intervals are very long.

Fire Mitigation considerations:
Emphasis should be focused on prevention, detection, and rapid suppression response and techniques that will reduce unwanted ignitions and threats to life, property, natural and cultural resources.

Fire Suppression considerations:
Virtually all wildland fires would be actively suppressed and no fire is prescribed except as required to combat an immediate threat to firefighter or public health and safety.

Fuel Treatment considerations:
Non-fire fuel treatments employed. Unit costs for prescribed fire would be too prohibitive to implement efficiently. Pile burning of mechanically removed vegetation is acceptable.

A-140-01 - Mount Logan Foothills

FMU Description

Location	**Location** - (3,762 acres) Public lands on the south facing slopes of Mount Logan (below 6,000') to the Colorado River from Smith Gulch on the east to the GSFO boundary on the west.
Characteristics	• **Soil** - Exposures of shale rock outcrops and talus slopes in the upper sections. The lower portions consist of colluvial slopes with moderate to shallow, well drained soils that are clayey to loamy and contain visible amounts of gravel and stones. • **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas. • **Vegetation** - Salt desert shrublands including greasewood in the bottomlands and sparse pinyon-juniper woodlands and sagebrush on the south facing foothills of Mount Logan. • **Aquatic Resources** - Springs, seeps, vernal pools, stock ponds, intermittent streams on the uplands, and riparian/riverine along Colorado River. • **Wildlife** - Severe big game winter range at the lower elevations. • **Special Status Species** - The Uinta Basin Hookless Cactus *(Sclerocactus glaucus*) is found on terraces, alluvial benches and along the rims of the gullies. • **Cultural/Historical Resources** - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics. • **Topography** - Vertical cliffs from the escarpment edge of the Roan Plateau to the talus slopes and mesas below. Many eroded gullies dissect the area. • **Vehicle Access** - Access is from the south off I-70 frontage roads. Unmaintained , high clearance roads cross the FMU • **Real Property** - Gas wells, pipelines throughout area.
FPU Goals	• GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals). • Protect salt desert shrub plant community. • Prevent the loss of Uinta Basin Hookless Cactus. • Prevent cheatgrass from increasing in dominance and invading into unaffected areas.
Fire History	**Number of Fire Starts from 1980 to 2003 by Size Class** Total: 12 (A: 10, B: 1, C: 1, D: –, E: –, F: –, G: –) Avg. acres: (A: .1, B: .3, C: 35, D: –, E: –, F: –, G: –) From 1980-2003, there have been 12 fires, all but one started by lightning. Fires seldom escape initial attack (I.A.), due to the sparse and non-continuous fuels. Fires have occurred between the months of May – September.
Fire Regime /Condition Class	The composition and structure of the plant communities within the unit are considered to be within their natural range of variability (NRV). These communities are in a condition class 1 (CC 1).
Values at Risk	Private lands & homes, Archaeological and historical sites, Saltdesert shrub plant community, Federally listed threatened plant - Uinta Basin Hookless Cactus *(Sclerocactus glaucus*)
Communities at Risk	There are no identified communities at risk within this FMU.

Fire Management Objectives

A-140-01 - Mount Logan Foothills	
Fire Suppression Objectives	• All wildland fires, regardless of ignition source, will be high priority and receive prompt suppression action commensurate with human safety in all instances. • Minimize wildland fire size. • FILs 1-6 will be suppressed at < 10 acres 90% of the time. • Emphasis on prevention, detection, rapid response, use of appropriate suppression techniques and tools.
Fire Regime Condition Class Objectives	Maintain the present condition class.
Fire Management Strategies	
Suppression	**Suppression Constraints and Restrictions** • Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2). • T&E / special status species present - Uinta Basin Hookless cactus, Bald eagle winter range and Northern leopard frog (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A). • Use Minimum Impact Suppression Tactics (MIST) to reduce negative effects of suppression (see Appendix E).
	Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety None
Wildland Fire Use	Wildland fire use for resource benefit is not an identified fire management option within this FMU.
Prescriptive Vegetation Treatments	**Goals:** No specific goals
	Prescribed Fire: Non-fire fuel treatments employed in this FMU.
	Non-fire Fuels Treatments: No treatments planned between 2004 and 2009.
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation
Community Protection & Assistance	There are no identified communities at risk in this FMU.

Priority Ranking				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
Low	**No**	**Low**	**Low**	**Low**

<table>
<tr><th colspan="2">A-140- 02 - New Castle Watershed</th></tr>
<tr><th colspan="2">FMU Description</th></tr>
<tr><td>Location</td><td>(6,629 acres) The FMU is located 2 miles north of New Castle, Colorado and includes public lands on both sides of the East Elk Creek drainage and the eastern side of the Main Elk Creek drainage.</td></tr>
<tr><td>Characteristics</td><td>• Soil - Deep well drained soils on mountainsides with a surface layer of loam and various subsoils.
• Air - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas.
• Vegetation - Riparian vegetation and irrigated hay fields in the valley bottom. Vegetation on the upland slopes are a mixture of pinyon-juniper woodlands, small sagebrush parks, thick Gambel's oak and pockets of Douglas fir on the north facing slopes.
• Aquatic Resources - Springs, seeps, vernal pools, stock ponds, intermittent streams on the uplands, and riparian/riverine along East Elk Creek.
• Wildlife - Severe big game winter range at the lower elevations. Big game birthing areas at higher elevations.
• Special Status Species - Colorado River cutthroat trout, Bald eagle winter range, Lynx habitat (see map)
• Cultural/Historical Resources - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics.
• Topography - Narrow, irrigated valley bottom with rugged and rocky upland slopes above.
• Vehicle Access - Access from CR 241 through private property on high clearance and 4x4 roads. Boiler Springs jeep trail is a public access.
• Real Property - Individual homes and subdivisions along the public land boundary. Water ditches along East Elk Creek on both east and west sides. East Elk Creek TV Translator Site @ T5S, R91W, Sec. 13 SESW</td></tr>
<tr><td>FPU Goals</td><td>• GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals).
• Protect water quality and reduce erosion.
• Reduce invading pinyon-juniper tree component.
• Increase vegetation structure and diversity by increasing perennial grasses and forbs (ground cover).</td></tr>
<tr><td>Fire History</td><td>Number of Fire Starts from 1980 to 2003 by Size Class
<table>
<tr><th>Total</th><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th></tr>
<tr><td>22</td><td>19</td><td>3</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Avg. acres</td><td>.1</td><td>.36</td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
Frequent to infrequent occurrence within this unit. . Of the 22 fires recorded, all but one were lightning caused. Fires have occurred between the months of May – September.</td></tr>
<tr><td>Fire Regime /Condition Class</td><td>The vegetative composition of this unit is generally in a late seral stage, with the composition and structure of the pinyon/juniper and mountain shrub communities being moderately departed from their NRV. These communities are considered to be in a CC 2.</td></tr>
<tr><td>Values at Risk</td><td>Town of New Castle Municipal watershed, Private lands & homes.</td></tr>
</table>

A-140- 02 - New Castle Watershed	
Communities at Risk	There are no identified communities at risk within this FMU. Private lands in the canyon bottom are agricultural and residential and are adjacent to public lands that have vegetation with a high fire spread and intensity potential.
Fire Management Objectives	
Fire Suppression Objectives	• All wildland fires, regardless of ignition source, will be high priority and receive prompt suppression action commensurate with human safety in all instances. • Minimize wildland fire size. • FILs 1-6 will be suppressed at < 10 acres 90% of the time. • Emphasis on prevention, detection, rapid response, use of appropriate suppression techniques and tools.
Fire Regime Condition Class Objectives	Maintain the existing CC, and where possible, return those areas to an early seral stage to create a CC 1.
Fire Management Strategies	
Suppression	**Suppression Constraints and Restrictions** • Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2). • T&E / special status species present - Bald eagle winter range, Northern leopard frog and Lynx habitat (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A).
	Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern. • During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions, often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety
Wildland Fire Use	Wildland fire use for resource benefit is not an identified fire management option within this FMU.
Prescriptive Vegetation Treatments	**Goals:** • To reduce hazardous fuel loading & the risks of wildland fire escaping public lands. • To protect water quality and increase vegetation diversity by increasing perennial grasses and forbs (ground cover)and decreasing canopy cover or area extent of old stands of oakbrush and pinyon-juniper woodlands (Fuches Gulch).
	Prescribed Fire: Non-fire fuel treatments employed in this FMU.
	Non-fire Fuels Treatments: No treatments planned between 2004 and 2009.
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation
Community Protection & Assistance	There are no identified communities at risk in this FMU. The first level of risk assessment, the Garfield County Fire Plan, is due to be completed in 2006.

A-140- 02 - New Castle Watershed				
Priority Ranking				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
High	**No**	**High**	**High**	**Moderate**

A-140- 03 - Glenwood Springs Debris Flow

FMU Description

Location	(5,933 acres) The scenic hillsides surrounding Glenwood Springs.
Characteristics	• **Soil** - Deep, well-drained soils on mountainsides and alluvial fans. Slopes of 10-50+ %. Identified in the GSFO land use plan as an erosion hazard zone. • **Air** - The FMU is located in the Western Slope Air Quality Region 11 and 12 of the Colorado Air Pollution Control Division. Three Class I air quality areas are adjacent to public land in GSFO, the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas. • **Vegetation** - The vegetation is mountain shrublands dominated by Gambel's oak and mountain mahogany. Other associated shrubs include: serviceberry, snowberry and chokecherry. Steep, north facing draws contain solid stands of Douglas fir. • **Aquatic Resources** - Springs, seeps, vernal pools, stock ponds, intermittent streams on the uplands, and riparian/riverine along Dolan Gulch, Mitchell Creek, Oasis Creek. • **Wildlife** - Severe big game winter range at the lower elevations. • **Special Status Species** - Colorado River cutthroat trout, Bald eagle winter range, Lynx habitat • **Cultural/Historical Resources** - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics. • **Topography** - Steep, rugged but erosive hillsides and canyons surrounding Glenwood Springs. • **Vehicle Access** - Access from CR 132 (Mitchell Creek) through private property on high clearance and 4x4 roads. On the northside of I-70. A few high clearance and 4x4 roads on the southside of I-70. • **Real Property** - Individual homes, subdivisions and commercial businesses along the public land boundary.
FPU Goals	• GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals). • Reduce erosion.
Fire History	**Number of Fire Starts from 1980 to 2003 by Size Class** Total: 2 (A: 2; B: ; C: ; D: ; E: ; F: ; G:) Avg. acres: .1 (A: .1; B: ; C: ; D: ; E: ; F: ; G:) Fire occurrence infrequent; with the majority of the fires being lightning caused. Two large fires (South Canyon, 1994; and Coal Seam, 2002) have heavily impacted this FMU. Both fires occurred during July.
Fire Regime /Condition Class	Due to the recent large fires, the composition and structure of this unit is moderately departed from the NRV. Also, there is a moderate risk of conversion to cheatgrass of the grass/sage/ P-J communities, especially on the south and west aspects. The condition class of this unit is considered to be in a CC 2.
Values at Risk	Private lands & homes, Glenwood Springs Fish Hatchery on Mitchell Creek, Visibility along I-70 and Town of Glenwood Springs
Communities at Risk	Development has occurred adjacent to public lands that have vegetation with a high fire spread and intensity potential. The Town of Glenwood Springs is adjacent to this FMU.

Fire Management Objectives

A-140- 03 - Glenwood Springs Debris Flow	
Fire Suppression Objectives	• All wildland fires, regardless of ignition source, will be high priority and receive prompt suppression action commensurate with human safety in all instances. • Minimize wildland fire size. • FILs 1-6 will be suppressed at < 10 acres 90% of the time. • Emphasis on prevention, detection, rapid response, use of appropriate suppression techniques and tools. • Emphasis on prevention, detection, rapid response, use of appropriate suppression techniques and tools.
Fire Regime Condition Class Objectives	Maintain the existing condition class within the mountain shrub communities, and restore the grass communities to a CC 1.
Fire Management Strategies	
Suppression	**Suppression Constraints and Restrictions** • Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2). • Glenwood Springs Debris Flow Hazard Zone ACEC present - wildland fire suppression restrictions for special management areas apply (see Chapter III.D.2.4 Restrictions Specific to WSAs and ACECs and map in Appendix A). • T&E / special status species present - Colorado River cutthroat trout (Mitchell Creek), Bald eagle winter range, Northern leopard frog and Lynx habitat (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A).
	Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern. • During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions, often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety
Wildland Fire Use	Wildland fire use for resource benefit is not a fire management option within this FMU.
Prescriptive Vegetation Treatments	**Goals:** • To reduce hazardous fuel loading and the risks of wildland fire escaping public lands.
	Prescribed Fire: Non-fire fuel treatments employed in this FMU.
	Non-fire Fuels Treatments: The Lookout Mountain Project treated 12 acres by hand thinning and herbicide in 2004. An estimated 20 acres are targeted for treatment along Midland Ave. between 2004 and 2009.
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation

A-140- 03 - Glenwood Springs Debris Flow				
Community Protection & Assistance	The Glenwood Springs community needs a risk assessment and hazard mitigation plan. The first level of risk assessment, the Garfield County Fire Plan, is due to be completed in 2006.			
Priority Ranking				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
High	**No**	**High**	**High**	**High**

A-140- 04 - Rifle Municipal Watershed

FMU Description

Location	(768 acres) The FMU is located 5 miles south of Rifle, Colorado and includes public lands in the upland portion of the Beaver Creek watershed providing water for the City of Rifle.
Characteristics	• **Soil** - Deep, well-drained moderately sloping to moderately steep loam soils on mesas, mountainsides and alluvial fans. • **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas. • **Vegetation** - The higher elevations or north-facing slopes are mountain shrublands dominated by Gambel's oak with associated mixed mountain shrubs that include mountain mahogany, serviceberry, chokecherry and snowberry. Slightly drier sites support big sagebrush, rabbitbrush, and numerous grasses and forbs. South and west-facing slopes are made up of pinyon-juniper woodlands that can include; sagebrush, oak, serviceberry, and mountain mahogany, mixed with grasses and forbs. • **Aquatic Resources** - Springs, seeps, vernal pools, stock ponds, intermittent streams on the uplands, and riparian/riverine along Beaver Creek. • **Wildlife** - Nothing of note. • **Special Status Species -** Harrington's penstemon • **Cultural/Historical Resources -** Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics. • **Topography** - Gently sloping mesa. • **Vehicle Access** - Access from CR 317 (Beaver Creek) via high clearance and 4x4 roads. • **Real Property** - None
FPU Goals	• GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals). • Protect water quality and reduce erosion. • Maintain vegetative structure and diversity.
Fire History	**Number of Fire Starts from 1980 to 2003 by Size Class** Total: 2 (A: 2; B: .1; C: ; D: ; E: ; F: ; G:) Avg. acres: .1 Fire occurrence is rare within this unit. All of the recorded fires are lightning caused and occurred between June and August.
Fire Regime /Condition Class	The composition and structure of this unit is within the NRV. It is considered to be in a CC 1.
Values at Risk	Private lands & homes, Municipal watershed, Gas development
Communities at Risk	There are no identified communities at risk within this FMU.

Fire Management Objectives

A-140- 04 - Rifle Municipal Watershed	
Fire Suppression Objectives	• All wildland fires, regardless of ignition source, will be high priority and receive prompt suppression action commensurate with human safety in all instances. • Minimize wildland fire size. • FILs 1-6 will be suppressed at < 10 acres 90% of the time. • Emphasis on prevention, detection, rapid response, use of appropriate suppression techniques and tools.
Fire Regime Condition Class Objectives	Maintain the existing condition class.
Fire Management Strategies	
Suppression	**Suppression Constraints and Restrictions** • Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2). • T&E / special status species present - Northern leopard frog (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A).
	Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern. • During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions, often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety
Wildland Fire Use	Wildland fire use for resource benefit is not a fire management option within this FMU.
Prescriptive Vegetation Treatments	**Goals:** • To reduce hazardous fuel loading and the risks of wildland fire escaping public lands. • To protect water quality and enhance vegetative diversity by increasing perennial grasses and forbs (ground cover)and decreasing canopy coverage of oakbrush and pinyon-juniper woodlands.
	Prescribed Fire: Non-fire fuel treatments employed in this FMU.
	Non-fire Fuels Treatments: No treatments planned between 2004 and 2009.
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation
Community Protection & Assistance	There are no identified communities at risk in this FMU.
Priority Ranking	

A-140- 04 - Rifle Municipal Watershed				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
High	**No**	**Moderate**	**High**	**Moderate**

A-140- 05 - East Eagle

FMU Description

Location

(1,641 acres) Public lands immediately east of Eagle, Colorado in T4S, R84W, Sections 33, 34 and west half of 35; T5S, R 84W, Sections 2 (west half), 3 and 4.

Characteristics

- **Soil** - Gypsum land consisting of exposed parent material and eroded hills with a fine sandy loam surface layer. The GSFO RMP identified the areas as an erosion hazard area.
- **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas.
- **Vegetation** - The higher elevation vegetation is mountain shrublands dominated by Gambel's oak with associated shrubs that include mountain mahogany, serviceberry, chokecherry and snowberry. The drier sites are typically dominated by mountain sagebrush, with some grasses and rabbitbrush. Lower elevations are made up of open (bare ground) pinyon-juniper woodlands that can include; sagebrush, serviceberry, and mountain mahogany, mixed with grasses and forbs.
- **Aquatic Resources** - No perennial water present. Vernal pools and stock ponds.
- **Wildlife** - Important for sagebrush dependent species. Big game severe winter range at the lower elevations.
- **Special Status Species** - Bald eagle winter range.
- **Cultural/Historical Resources** - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics.
- **Topography** - General east-west running ridgeline. Western portion has short sections of slopes up to 55%, averaging 28-30%. Eastern portion has 0-25% slopes.
- **Vehicle Access** - CR 21 bisects the FMU east to west. OHV routes off CR 21 were rehabilitated in 2003 and 2004.
- **Real Property** - Individual homes and subdivisions along the public land boundary. East Eagle communication site in T4S, R84W, Sec. 34 SENW.

FPU Goals

- GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals).
- Protection of penstemon study area from fire and surface disturbances.
- Protect water quality and reduce erosion.
- Increase vegetation diversity by increasing perennial grasses and forbs (ground cover) and decreasing the area and/or canopy cover of pinyon-juniper woodlands.

Fire History

Number of Fire Starts from 1980 to 2003 by Size Class

Total	A	B	C	D	E	F	G
6	5	1					
Avg. acres	.1	3					

Fire occurrence in this unit is infrequent. The majority of the fires are lightning caused and have occurred between June – August.

Fire Regime /Condition Class

This plant community is generally in a late seral stage, with the composition and structure of the mountain shrub, sage/grass, and pinyon/juniper woodlands being moderately departed from the NRV. It is considered to be in a CC 2.

Values at Risk

Private lands & homes, Rare Plant Study Area-*Penstemon harringtonii*

Communities at Risk

Residential development occurring to the west and south adjacent to public lands that have vegetation with a high fire spread and intensity potential. The Town of Eagle is located adjacent to the westside of the FMU.

A-140- 05 - East Eagle	
Fire Management Objectives	
Fire Suppression Objectives	• All wildland fires, regardless of ignition source, will be high priority and receive prompt suppression action commensurate with human safety in all instances. • Minimize wildland fire size. • FILs 1-6 will be suppressed at < 10 acres 90% of the time. • Emphasis on prevention, detection, rapid response, use of appropriate suppression techniques and tools. (No fires within rare plant study area until 2006. Based on the study results this FMU could be incorporated into the surrounding fire management Unit.)
Fire Regime Condition Class Objectives	Maintain the current CC, and where possible, improve those areas to a CC 1.
Fire Management Strategies	
Suppression	**Suppression Constraints and Restrictions** • Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2). • Harrington's Penstemon Study Area - Establish fire lines and fuel breaks outside study area. Avoid off-route use of motorized vehicles and mechanical equipment. • T&E / special status species present - Bald eagle winter range and Northern leopard frog (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A). • NOTE: Based on the study results this FPU may be incorporated into FMU B-140-05 in 2006.
	Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern. • During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions , often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety
Wildland Fire Use	Wildland fire use for resource benefit is not a fire management option within this FMU.
Prescriptive Vegetation Treatments	**Goals:** • To reduce hazardous fuel loading and the risks of wildland fire escaping public lands. • To reduce the risks of large-scale fires in critical watershed areas. • To protect water quality, reduce erosion and increase vegetation diversity by increasing sagebrush, perennial grasses and forbs (ground cover) and decreasing old stands of oakbrush and pinyon-juniper woodlands.
	Prescribed Fire: Non-fire fuel treatments employed in this FMU.
	Non-fire Fuels Treatments: An estimated 100 acres will be mechanically treated in 2004 and another 50 acres will be treated between 2004 and 2009.

A-140- 05 - East Eagle				
	Vegetation Treatment Guidelines: Prescribed vegetation treatments should be performed with plant survey and ecologist consultation. Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.			
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation			
Community Protection & Assistance	The first level of risk assessment, the Eagle County Fire Plan, is due to be completed in 2004.			
Priority Ranking				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
High	**No**	**High**	**High**	**High**

A-140- 06 - Blue Hill Area of Critical Environmental Concern

FMU Description

Location	(3,722 acres) Public lands north of the Colorado River 3 miles northeast of Burns, Colorado.
Characteristics	• **Soil** - Loam surface layer with a clay loam subsoils. The GSFO RMP identified the areas as an erosion hazard area. • **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas. • **Vegetation** - The higher elevation vegetation is mountain shrublands dominated by Gambel's oak with associated shrubs that include mountain mahogany, serviceberry, chockeberry and snowberry. Typical species in the drier sites include mountain sagebrush, rabbitbrush, and grasses. Lower elevations are made up of open (bare ground) pinyon-juniper woodlands that can include; sagebrush, oak, serviceberry, and mountain mahogany, mixed with grasses and forbs. • **Aquatic Resources** - Springs, seeps, vernal pools, stock ponds, and intermittent streams. • **Wildlife** - Important for sagebrush dependent species. Big game severe winter range at the lower elevations. • **Special Status Species** - Bald eagle winter range. • **Cultural/Historical Resources** - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics. • **Topography** - Ridges and drainages running north-south. • **Vehicle Access** - The westside is accessible by high clearance roads from CR 47. The southeast side is accessible by high clearance roads from Highway 301**.** • **Real Property** - Individual homes and ranches along the public land boundary.
FPU Goals	• GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals). • Reduce erosion.
Fire History	**Number of Fire Starts from 1980 to 2003 by Size Class** Total | A | B | C | D | E | F | G 1 | | 1 | | | | | | Avg. acres | | 8 | | | | | | Fire occurrence is rare within this unit. The one fire occurred in August.
Fire Regime /Condition Class	The vegetative communities in this unit are generally in a late seral state, and are considered to be in a CC 2.
Values at Risk	Private lands & homes
Communities at Risk	There are no identified communities at risk within this FMU.

Fire Management Objectives

Fire Suppression Objectives	• All wildland fires, regardless of ignition source, will be high priority and receive prompt suppression action commensurate with human safety in all instances. • Minimize wildland fire size. • FILs 1-6 will be suppressed at < 10 acres 90% of the time. • Emphasis on prevention, detection, rapid response, use of appropriate suppression techniques and tools.

A-140- 06 - Blue Hill Area of Critical Environmental Concern	
Fire Regime Condition Class Objectives	Maintain the existing CC, and return to a CC 1 where possible.
Fire Management Strategies	
Suppression	**Suppression Constraints and Restrictions** • Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2). • Blue Hill ACEC present - wildland fire suppression restrictions for special management areas apply (see Chapter III.D.2.4 Restrictions Specific to WSAs and ACECs and map in Appendix A). • T&E / special status species present - Bald eagle winter range, Greater sage grouse and Northern leopard frog (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A). • Resource advisor and/or archaeologist monitor/consultation as soon as possible after initial attack.
	Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern. • During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions, often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety
Wildland Fire Use	Wildland fire use for resource benefit is not a fire management option within this FMU.
Prescriptive Vegetation Treatments	**Goals:** • Reduce hazardous fuel loading and the risks of wildland fire escaping public lands. • To reduce fuels around significant cultural sites. • To reduce the risks of large-scale fires in critical watershed areas.
	Prescribed Fire: Non-fire fuel treatments employed in this FMU.
	Non-fire Fuels Treatments: No treatments planned between 2004 and 2009.
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation
Community Protection & Assistance	There are no identified communities at risk in this FMU.

Priority Ranking				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
Moderate	**No**	**Moderate**	**Low**	**Low**

B

Fire Management Units

Areas where unplanned wildland fire is not desired because of current conditions.

General Description:
Fire plays a natural role in the function of the ecosystem, however these are areas where an unplanned ignition could have negative effects unless/until some form of mitigation takes place. Sagebrush ecosystems, for example, can fall into this category because of encroachment of cheatgrass or a prolonged lack of fire which leads to large monotypic stands of sagebrush that won't burn as they would have historically.

Fire Mitigation considerations:
Emphasize prevention/mitigation programs that reduce unplanned ignitions and threats to life, property, natural and cultural resources.

Fire Suppression/use considerations:
Fire suppression is usually aggressive.

Fuel Treatment considerations:
Fuel hazard reduction as a major means of mitigation potential risks and associated loss are a priority. Fire and non-fire fuels treatments are utilized to reduce the hazardous effects of unplanned wildland fire. Restorative treatments may consist of multiple non-fire treatments before the use of fire will be considered. Unit costs for prescribed fire are high and require stringent mitigation and contingencies. Try to concurrently achieve fire protection and resource benefits, when possible.

B-140- 01 - East Rifle Creek

FMU Description

Location

(5,301 acres) Public lands within the East Rifle Creek drainage surrounding the Rifle Falls State Recreation Area

Characteristics

- **Soil** - Shallow well-drained loam soils with a sandy clay loam to a gravelly loam subsoil. Western portion of the FMU is within the Cedar Mountain/Ward Gulch erosion hazard area.
- **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas.
- **Vegetation -** Steep upper elevation hillsides are mountain shrublands dominated by Gambel's oak and serviceberry with mountain mahogany, mountain sagebrush, chokecherry and snowberry as associated shrub species. Typical species in the drier sites include mountain sagebrush, rabbitbrush, and grasses. Lower elevations are made up of open (bare ground) pinyon-juniper woodlands that can include; sagebrush, oak, serviceberry, and mountain mahogany, mixed with grasses and forbs. Pockets of mature douglas fir are found on steep, north-facing draws.
- **Aquatic Resources** - Springs, seeps, vernal pools, stock ponds, intermittent streams on the uplands, and riparian/riverine along East Rifle Creek and connected gulches.
- **Wildlife** – Rifle Falls Fish Hatchery uses water from area springs and East Rifle Creek .
- **Special Status Species** - Bald eagle winter range, Lynx habitat.
- **Cultural/Historical Resources** - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics.
- **Topography** - Steep draws, mesas, rock outcroppings
- **Vehicle Access** - The westside is accessible by 4x4 roads from Ward Gulch and through private/state property from Highway 325. The southeast side is accessible by 4x4 roads through private/state property from Highway 325 and Highway 245**.**
- **Real Property** - Individual homes along the public land boundary.

FPU Goals

- GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals).
- Protect water quality and increase vegetation diversity by increasing perennial grasses and forbs (ground cover) and decreasing pinyon-juniper woodlands.

Fire History

Number of Fire Starts from 1980 to 2003 by Size Class

Total	A	B	C	D	E	F	G
7	4	2	1				
Avg. acres	.1	.4	20				

Fire occurrence is infrequent within this unit. Most of the ignitions have been lightning caused and have occurred between May – July.

Fire Regime /Condition Class

The composition and structure of the plant communities in this unit are moderately departed from the NRV. It is considered to be in a CC 2.

Values at Risk

Private lands & homes, Aesthetic values around Rifle Falls State Recreation Area/ Rifle Falls City Park

Communities at Risk

Private lands in the canyon bottom are agricultural and residential and are adjacent to public lands that have vegetation with a high fire spread and intensity potential. There are no identified communities at risk within this FMU.

B-140- 01 - East Rifle Creek	
Fire Management Objectives	
Fire Suppression Objectives	• All wildland fires, regardless of ignition source, will be high priority and receive prompt suppression action commensurate with human safety in all instances. • Minimize wildland fire size. • FILs 1-6 will be suppressed at < 10 acres 80% of the time. • Protect mature Douglas fir stands to maintain vegetation type diversity and protect erosive soils.
Fire Regime Condition Class Objectives	Where possible, return the sage/grass areas to a CC 1.
Fire Management Strategies	
Suppression	**Suppression Constraints and Restrictions** • Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2). • T&E / special status species present - Bald eagle winter range, Northern leopard frog and Lynx habitat (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A).
	Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern. • During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions , often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety
Wildland Fire Use	Wildland fire use for resource benefit is not a fire management option within this FMU.
Prescriptive Vegetation Treatments	**Goals:** • Reduce hazardous fuel loading and the risks of wildland fire escaping public lands. • To maintain or create diverse seral stages and improve herbaceous understory in mixed sagebrush and mountain shrublands/oakbrush vegetation types. • To reduce fuels around significant cultural sites.
	Prescribed Fire: No treatments planned between 2004 and 2009.
	Non-fire Fuels Treatments: No treatments planned between 2004 and 2009.
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation
Community Protection & Assistance	There are no identified communities at risk in this FMU. The first level of risk assessment, the Garfield County Fire Plan, is due to be completed in 2006.
Priority Ranking	

B-140- 01 - East Rifle Creek				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
Low	**No**	**Moderate**	**High**	**Moderate**

B-140- 02 - 1-70 Corridor West of Glenwood Springs	
FMU Description	
Location	(93,116 acres) Generally the lower elevation, non-contiguous blocks of public lands mixed with private lands public lands west of Glenwood Springs, Colorado.
Characteristics	• **Soil** - Deep well-drained loam or silt loam soils and various loam substrata. • **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas. The City of Aspen is a non-attainment area for PM 10 (http://www.cdphe.state.co.us/ap/down/SIPaspenPM.pdf). Land-use practices within or adjacent to this non-attainment area are closely scrutinized by local and state regulatory agencies to ensure that violations do not occur. • **Vegetation -** Shale barrens occupy the uppermost slopes along the Roan Cliffs. Below the cliffs and in the higher elevations throughout the Unit, vegetation is mountain shrublands consisting of Gambel's oak, serviceberry, snowberry, mountain mahogany, sagebrush and chokecherry. Mid-elevation mesas, terraces and alluvial fans are primarily big sagebrush, rabbitbrush, and grasses. The lower elevations, saline or alkaline soils are mostly salt-desert shrubs such as shadscale and greasewood, with a sparse cover of grasses and forbs. Pinyon-juniper woodlands are found generally on dry, rocky hillsides and mesas. Understory species usually consist of scattered shrubs, grasses, and forbs. • **Aquatic Resources** - Springs, seeps, wet meadows, vernal pools, stock ponds, reservoirs, intermittent streams on the uplands, and riparian/riverine in gulches, draws and valley bottoms. • **Wildlife -** Important for sagebrush dependent species. Big game severe winter range at the lower elevations. • **Special Status Species -** Colorado River cutthroat trout, Bald eagle winter range, Lynx habitat, Big river fishes, rare plants (Debeque phacelia, Debeque milkvetch). The Green River shale formation supports the Candidate plant, Parachute penstemon and the BLM Sensitive plant, Arapien stickleaf. • **Cultural/Historical Resources** - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics. • **Topography** - Broad valley bottom associated with the Colorado River, sloping mesas, high rolling plateaus dissected by steep canyons. • **Vehicle Access** - Vehicle access via; State, County, BLM and unmaintained roads. • **Real Property** - Individual homes and subdivisions along the public land boundary. Powerlines; gas wells; communication sites including: New Castle @T6S R90W Sec. 1., Anvil Points @T6S, R95W, Sec. 12 SW, Harvey Gap T5S, R91W, Sect 19; Doghead @ T7S, R95W, Sec. 14 NW; and Sunlight Peak @ T7S, R90W, Sec. 24..

B-140- 02 - 1-70 Corridor West of Glenwood Springs

FPU Goals

- GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals).
- Protect populations of Candidate plants, i.e. Parachute penstemon along the Anvil Points Mine Road in T6S, R95W, Section 12 and Debeque phacelia in the sparsely vegetated footslopes above the Garfield County landfill.
- Increase the quantity and quality of sagebrush shrublands for sagebrush-dependent species.
- Increase diversity of seral stages within mature mountain shrub communities.
- Improve diversity and cover of herbaceous species under sagebrush and pinyon-juniper communities and decrease the area and/or canopy cover of pinon-juniper woodlands.

Fire History

Number of Fire Starts from 1980 to 2003 by Size Class

Total	A	B	C	D	E	F	G
294	259	29	3	2	0	1	0
Avg. acres	.15	1.4	37	150	0	2115	0

Most of the ignitions have been lightning caused and have occurred between April – September. Fire is a frequent disturbance within this unit. From 1980-2003, there have been 294 fires within this unit, with 7 of those being human-caused. Large fires within this unit include Coal Seam (12,000 acres), South Canyon, Battlement Mesa #s 1-3, and West Divide. Large fires within this FMU will always include some private land, due to the land-patterns found in this area.

Fire Regime /Condition Class

This FMU has experienced a lot of disturbance, It would be considered in a CC 1, but due to the risk of conversion to cheatgrass, it is in a CC 2, trending towards a CC 3.

Values at Risk

Private lands & homes, Natural gas production, Recreation - high use off-highway vehicle (OHV) and mountain biking in the Hubbard Gulch area

Communities at Risk

Private lands are agricultural, residential and commercial and are intermingled with public lands that have vegetation with a high fire spread and intensity potential. CAR within this FPU include Battlement Mesa, New Castle, Rulison, and Silt.

Fire Management Objectives

Fire Suppression Objectives

- All wildland fires, regardless of ignition source, will be high priority and receive prompt suppression action commensurate with human safety in all instances.
- Minimize wildland fire size.
- FILs 1-6 will be suppressed at < 10 acres 80% of the time.

Fire Regime Condition Class Objectives

Maintain the present CC.

Fire Management Strategies

B-140- 02 - 1-70 Corridor West of Glenwood Springs	
Suppression	**Suppression Constraints and Restrictions** • Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2). • Colorado River ACEC present - wildland fire suppression restrictions for special management areas apply (see Chapter III.D.2.4 Restrictions Specific to WSAs and ACECs and map in Appendix A). • T&E / special status species present - Parachute penstemon, Debeque phacelia, Bald eagle winter range, Big river fishes, Lynx habitat, Great Basin spade-foot toad (west of Silt), Western yellow-billed cuckoo, and Northern leopard frog (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A). • Locate pipelines before bulldozing in gas production areas.
	Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern. • During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions, often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety
Wildland Fire Use	Wildland fire use for resource benefit is not a fire management option within this FMU.
Prescriptive Vegetation Treatments	**Goals:** • Reduce hazardous fuel loading and the risks of wildland fire escaping public lands (treatment areas include Porcupine Creek-Battlement Creek-Dry Creek). • Maintain or restore shrublands by reducing the encroachment of pinyon-juniper woodlands on shrub and sagebrush communities. • Improve quality of decadent sagebrush communities with poor herbaceous understory (possible treatment areas include Cook Gulch, Yellowslide Gulch, and Sharrard Park) • To maintain or create diverse seral stages and improve herbaceous understory in mixed mountain shrublands/oakbrush vegetation types (treatment areas include Roan Cliffs area). • To reduce fuels around significant cultural sites.
	Prescribed Fire: No treatments planned between 2004 and 2009.
	Non-fire Fuels Treatments: No treatments planned between 2004 and 2009.
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation
Community Protection & Assistance	There are 4 communities that need a risk assessment and hazard mitigation plan. They include: Battlement Mesa, New Castle, Rulison, and Silt. The first level of risk assessment, the Garfield County Fire Plan, is due to be completed in 2006.
Priority Ranking	

B-140- 02 - 1-70 Corridor West of Glenwood Springs				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
High	**No**	**High**	**High**	**High**

B-140- 03 - Roaring Fork Valley	
FMU Description	
Location	(46,171 acres) The many small non-contiguous blocks of public lands mixed with private lands between Glenwood Springs and Aspen, Colorado.
Characteristics	• **Soil** - Gently sloping to very steep, well-drained, deep loam soils. "The Crown" area, east of Carbondale is identified in the GSFO land use plan as an erosion hazard zone. • **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas. The City of Aspen is a non-attainment area for PM 10 (http://www.cdphe.state.co.us/ap/down/SIPaspenPM.pdf).. Land-use practices within or adjacent to this non-attainment area are closely scrutinized by local and state regulatory agencies to ensure that violations do not occur. • **Vegetation -** The dominant community in the higher elevations of this zone is mountain shrublands. Shrub species include Gambel's oak with mountain mahogany, serviceberry, chokecherry, snowberry and mountain sagebrush. Typical species in the drier sites include big sagebrush, rabbitbrush, and grasses. Lower elevations are made up of open (bare ground) pinyon-juniper woodlands that can include; sagebrush, serviceberry, and mountain mahogany, mixed with grasses and forbs. • **Aquatic Resources** - Springs, seeps, wet meadows, vernal pools, stock ponds, reservoirs, intermittent streams on the uplands, and riparian/riverine in gulches, draws and valley bottoms. • **Wildlife** - Important for sagebrush dependent species. Big game severe winter range at the lower elevations. Bighorn sheep range in Glenwood Canyon and Crystal River drainage. Black bear fall concentration areas on all public lands east of Carbondale. • **Special Status Species -** Colorado River cuttroat trout, Bald eagle winter range, Lynx habitat, Harrington's penstemon populations. • **Cultural/Historical Resources** - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics. • **Topography** - Lower reaches consist of a medium valley bottom with steep sloping hillsides. The upper reaches consist of a narrow valley bottom with steep mountainous uplands. • **Vehicle Access** - Vehicle access via; State, County, BLM and unmaintained roads. • **Real Property -** Individual homes and subdivisions along the public land boundary. Powerlines; communication sites including: Crown Mountain @ T8S, R87W, Sec. 15 SWSE and Williams Hill @ T8S, R86W, Sect 35 SWSE; Transfer Trail passive repeater @T5S, R89W, Sec. 36 SWNWNE.
FPU Goals	• GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals). • Reduce erosion (Crown area). • Increase the quantity and quality of sagebrush shrublands for sagebrush-dependent species. • Increase the quality of public land forage/cover for elk to lessen impacts on private lands.

B-140- 03 - Roaring Fork Valley

Fire History

Number of Fire Starts from 1980 to 2003 by Size Class

Total	A	B	C	D	E	F	G
39	33	5	1				
Avg. acres	.07	1.12	50				

Wildland fires have occurred between April – September. Of these, 6 were human caused ignitions.

Fire Regime /Condition Class

The composition and structure of the mountain shrub and pinyon/juniper communities are generally in a mid to late seral stage, but within the NRV. The sage/grass community is considered to be moderately departed from the NRV. The outbreak within the pinyon pine stands of the Ips beetle is a cause for concern, but the long-term effect is unknown at this time. Generally the unit is a CC 2.

Values at Risk

Private lands & homes, Visual aesthetics, Air quality (Aspen area), Red Hill Special Recreation Management Area (SRMA)

Communities at Risk

Private lands are agricultural, residential and commercial and are adjacent to public lands that have vegetation with a high fire spread and intensity potential. CAR within this FPU include Carbondale and El Jebel.

Fire Management Objectives

Fire Suppression Objectives

- All wildland fires, regardless of ignition source, will be high priority and receive prompt suppression action commensurate with human safety in all instances.
- Minimize wildland fire size.
- FILs 1-6 will be suppressed at < 10 acres 80% of the time.

Fire Regime Condition Class Objectives

Maintain the existing CC

Fire Management Strategies

Suppression

Suppression Constraints and Restrictions

- Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2).
- T&E / special status species present - Bald eagle winter range, Northern leopard frog and Lynx habitat (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A).

Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety

Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern.

- During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions , often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety

Wildland Fire Use

Wildland fire use for resource benefit is not a fire management option within this FMU.

B-140- 03 - Roaring Fork Valley	
Prescriptive Vegetation Treatments	**Goals:** • Reduce hazardous fuel loading and the risks of wildland fire escaping public lands • Maintain or restore shrublands by reducing the encroachment of pinyon-juniper woodlands on shrub and sagebrush communities. • To maintain or create diverse seral stages and improve herbaceous understory in sagebrush and mixed mountain shrubslands/oakbrush vegetation types (treatment areas include Light Hill, Williams Hill, Arbaney-Kittle area). • To reduce fuels around significant cultural sites.
	Prescribed Fire: 100 acres were treated in 2004. An additional 400 acres are targeted for treatment through 2009.
	Non-fire Fuels Treatments: The El Jebel Thinning Project treated 100 acres by hand thinning combined with herbicide. Twenty acres are targeted for treatment on Transfer Trail/Iron Mountain. An additional 140 acres are targeted for treatment through 2009 in the Carbondale, Cattle Creek and Oak Meadows areas.
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation
Community Protection & Assistance	There are 3 communities that need a risk assessment and hazard mitigation plan. They include: Carbondale, Glenwood Springs, and El Jebel. The first level of risk assessment, the Garfield County Fire Plan, is due to be completed in 2006.

Priority Ranking				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
High	**No**	**High**	**High**	**High**

B-140- 04 - Thompson Creek / Eagle Mountain	
FMU Description	
Location	(6,560 total acres: Eagle Mountain - 330 acres; Thompson Cr. - 6,230 acres) Eagle Mountain is a small Wilderness Study Area (WSA) 2 miles west of Snowmass village adjacent to the White River National Forest. Thompson Creek is located 5 miles southwest of Carbondale, Colorado adjacent to the White River National Forest.
Characteristics	• **Soil** - Moderate to very steep, well-drained, shallow to moderately deep loam soils with rock outcrops . • **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas. The City of Aspen is a non-attainment area for PM 10 (http://www.cdphe.state.co.us/ap/down/SIPaspenPM.pdf). Land-use practices within or adjacent to this non-attainment area are closely scrutinized by local and state regulatory agencies to ensure that violations do not occur. • **Vegetation** - Elevations range from 8,280 feet to 9,937 feet. Eagle Mountain is a steep mountain side-slope with varied vegetation including spruce, fir, Ponderosa pine, aspen, Gambel's oak and some sagebrush. Vegetation in the Thompson Creek area is also varied with Douglas fir stands mixed with Ponderosa pine, mountain shrublands of Gambel's oak, mountain mahogany, serviceberry, chokecherry and snowberry. Typical species on the flatter sites include mountain sagebrush, rabbitbrush, and grasses. Lower slopes are made up of pinyon-juniper woodlands. Fire suppression has increased the average age of the shrublands, making them more susceptible to fires and less valuable as wildlife habitat. • **Aquatic Resources** - Springs, seeps, vernal pools, stock ponds, intermittent streams on the uplands, and riparian/riverine in Thompson Creek. • **Wildlife** - Important for sagebrush dependent species. Big game severe winter range at the lower elevations. Black bear fall concentration areas on all public lands east of Carbondale and southern portion of Thompson Creek.. • **Special Status Species** - Colorado River cuttroat trout, Bald eagle winter range, Lynx habitat, Harrington's penstemon populations. • **Cultural/Historical Resources** - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics. • **Topography** - Thompson Creek is characterized by ridges, draws and rock outcrops. Eagle Mountain consists of a step sidehill and rock outcrops. • **Vehicle Access** – CR 11 accesses the east side of Eagle Mountain. • **Real Property** - Individual homes and ranches along the public land boundary.
FPU Goals	• GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals). • Maintain wilderness characteristics (naturalness & roadlessness) within Eagle Mountain WSA. • Protection of scenic (Class 1 VRM) and geologic values within Thompson Creek ACEC.

B-140- 04 - Thompson Creek / Eagle Mountain

Fire History

Number of Fire Starts from 1980 to 2003 by Size Class

Total	A	B	C	D	E	F	G
6	3	3					
Avg. acres	.1	.7					

Wildland fires have occurred between May – August. Two of the 6 recorded wildland fires were human-caused. There was one Rx fire conducted within Thompson Crk. in the mid-'80s (approx.300 acres.)

Fire Regime /Condition Class

The composition and structure of the plant communities are moderately departed from the NRV, and are considered to be in a CC 2

Values at Risk

Private lands & homes, Erosion hazard area, Visual aesthetics and scenic values, Geologic values, Wilderness characteristics (naturalness and roadlessness), Air quality (Aspen), Visibility, Thompson Creek SRMA

Communities at Risk

Private lands are agricultural, residential and commercial and are adjacent to public lands that have vegetation with a high fire spread and intensity potential. Snowmass Village is immediately east of Eagle Mountain.

Fire Management Objectives

Fire Suppression Objectives

- All wildland fires, regardless of ignition source, will be high priority and receive prompt suppression action commensurate with human safety in all instances.
- Minimize wildland fire size.
- FILs 1-6 will be suppressed at < 10 acres 80% of the time.

Fire Regime Condition Class Objectives

Fire Management Strategies

Suppression

Suppression Constraints and Restrictions

- Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2).
- Eagle Mountain WSA and Thompson Creek ACEC present - wildland fire suppression restrictions for special management areas apply (see Chapter III.D.2.4 Restrictions Specific to WSAs and ACECs and maps in Appendix A).
- T&E / special status species present - Colorado River cutthroat trout (North Thompson Creek) and Northern leopard frog and Lynx habitat (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A).

Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety

Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern.

- During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions , often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety

Wildland Fire Use

Wildland fire use for resource benefit is not a fire management option within this FMU.

B-140- 04 - Thompson Creek / Eagle Mountain	
Prescriptive Vegetation Treatments	**Goals:** • Reduce hazardous fuel loading and the risks of wildland fire escaping public lands. • Supplement the development of vegetation types that natural events would produce within Eagle Mountain WSA and Thompson Creek ACEC. • To reduce fuels around significant cultural sites.
	Prescribed Fire: No treatments planned between 2004 and 2009.
	Non-fire Fuels Treatments: No treatments planned between 2004 and 2009.
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation
Community Protection & Assistance	The Town of Snowmass needs a risk assessment and hazard mitigation plan. The first level of risk assessment, the Pitkin County Fire Plan, is due to be completed in 2005.

Priority Ranking				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
Moderate	**No**	**Moderate**	**Moderate**	**Moderate**

B-140- 05 - Eagle Valley	
FMU Description	
Location	(81,074 acres) Various size blocks of public lands in the Eagle and upper Colorado River drainages that are adjacent to or in close proximity to resident development or ranch lands.
Characteristics	• **Soil** - Varying soil types exist. Gently sloping to very steep, well drained to excessively drained, shallow to moderately deep soils mixed with gypsum lands of exposed parent material. Erosion hazard areas on Red Mountain west of Gypsum and Tenderfoot Gulch east of Gypsum. • **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas. • **Vegetation** - The higher elevation vegetation is Spruce-fir-lodgepole forest intermingled with aspen stands. The middle elevations consist of mountain shrublands dominated by Gambel's oak with associated shrubs that include mountain mahogany, serviceberry, chokecherry and snowberry. Typical species in the drier sites include mountain sagebrush, rabbitbrush, and grasses. Lower elevations are made up of open (bare ground) pinyon-juniper woodlands that can include; sagebrush, oak, serviceberry, and mountain mahogany, mixed with grasses and forbs. Riparian vegetation is found along perennial streams. • **Aquatic Resources** - Springs, seeps, wet meadows, vernal pools, stock ponds, reservoirs, intermittent streams on the uplands, and riparian/riverine in gulches, draws and valley bottoms. • **Wildlife -** Important for sagebrush dependent species. Big game severe winter range at the lower elevations. Black bear fall concentration areas on public lands along USFS border in the southern portion of the FMU. • **Special Status Species** - Colorado River cuttroat trout, Sage grouse, Bald eagle winter range, Lynx habitat, harrington's penstemon populations. • **Cultural/Historical Resources** - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics. • **Topography** - Lower reaches consist of a medium valley bottom with steep sloping hillsides. The upper reaches consist of a narrow valley bottom with steep mountainous uplands. • **Vehicle Access** - Vehicle access via; State, County, BLM and unmaintained roads. • **Real Property** - Individual homes and subdivisions along the public land boundary. Powerlines; airport beacons in T5S R85W Sec. 12 SW and T5S, R84W Sec. 6 NWSW; communication sites at; Gypsum Point @ T4S, R86W, Sec. 35 NENW; Bellyache Ridge @ T4s, R83W, Sec. 34 and Gypsum Watertank @ T5S, R85W, Sec. 9.
FPU Goals	• GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals). • To support the conservation plan for the Eagle/southern Routt population of Greater sage grouse. • Increase the quantity and quality of sagebrush shrublands for sagebrush-dependent species.

B-140- 05 - Eagle Valley

Fire History

Number of Fire Starts from 1980 to 2003 by Size Class

Total	A	B	C	D	E	F	G
144	112	27	5				
Avg. acres	.1	1.4	42				

Wildland fires have occurred between April – October.
Fires are frequent within this unit. From 1980-2003, there have been 144 fires in the Eagle Valley FMU. Of these, 15 were human caused. There have been several large, landscape size Rx burn projects over the last 20 years within this FMU

Fire Regime /Condition Class

Generally, the plant communities within this unit are in a late seral stage. Typically, the sage/grass community is either decadent, or being severely encroached upon by pinyon/juniper or Rocky Mountain juniper. These areas are considered to be in a CC 2 or CC3. Some of the other sites of mountain shrub, or old growth pinyon/juniper are in a CC 1, trending toward a CC 2. So far, cheatgrass has not become well-established, although that may be changing if drought conditions persist

Values at Risk

Private lands & homes, Visual aesthetics, Eagle River SRMA

Communities at Risk

Private lands are agricultural, residential and commercial and are adjacent to public lands that have vegetation with a high fire spread and intensity potential. The Town of Eagle and the community of Cordillera are adjacent to the FMU.

Fire Management Objectives

Fire Suppression Objectives

- All wildland fires, regardless of ignition source, will be high priority and receive prompt suppression action commensurate with human safety in all instances.
- Minimize wildland fire size, especially acres of sagebrush burned.
- FILs 1-6 will be suppressed at < 10 acres 80% of the time.

Fire Regime Condition Class Objectives

Maintain the existing CC.

Fire Management Strategies

Suppression

Suppression Constraints and Restrictions

- Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2).
- T&E / special status species present - Colorado River cutthroat trout (Abrams Creek), Greater sage grouse (Gunnison sage grouse), Bald eagle winter range, Northern leopard frog and Lynx habitat (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A).
- Erosion control and rehabilitation required on surface disturbances (Old Man Gulch and Hardscrabble areas).

Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety

Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern.

- During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions , often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety

B-140- 05 - Eagle Valley	
Wildland Fire Use	Wildland fire use for resource benefit is not a fire management option within this FMU.
Prescriptive Vegetation Treatments	**Goals:** • Reduce hazardous fuel loading and the risks of wildland fire escaping public lands. • To reduce the risks of large-scale fires in critical watershed areas. • Maintain or restore shrublands by reducing the encroachment of pinyon-juniper woodlands on shrub and sagebrush communities. • To maintain or create diverse seral stages and improve herbaceous understory in vegetation types (sagebrush, mixed mountain shrublands/oakbrush, aspen). • To reduce fuels around significant cultural sites.
	Prescribed Fire: 1662 acres were treated in 2004 no further treatments are planned through 2009. Also see Chapter IV.C. Prescribed Fire
	Non-fire Fuels Treatments: 130 acres are planned for mechanical treatment on Red Hill in 2004. An additional 400 acres are targeted for mechanical treatment west of Gypsum through 2009.
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.
Post Fire Restoration / Rehabilitation	Erosion control and rehabilitation required on surface disturbances (Red Hill, Tenderfoot Gulch, Old Man Gulch and Hardscrabble areas). See Chapter IV.E. Emergency Stabilization and Rehabilitation
Community Protection & Assistance	The communities of Eagle and Cordillera need a risk assessment and hazard mitigation plan. The first level of risk assessment, the Eagle County Fire Plan, is due to be completed in 2004.

Priority Ranking				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
High	**No**	**High**	**High**	**High**

B-140- 06 - Bocco Mountain / Siloam Springs

FMU Description

Location

(7,216 total acres: Bocco Mtn. - 1,411 acres; Siloam Springs - 5,805 acres) Bocco Mountain is northwest of the community of Wolcott on the westside of Highway 131. Siloam Springs is northwest of the community of Dotsero on the Westside of Highway 301.

Characteristics

- **Soil** - Gently sloping to very steep, well drained, shallow to deep loam soils.
- **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas.
- **Vegetation** - Bocco Mountain - the higher elevation vegetation consists of Rocky Mountain juniper-mixed mountain shrub community. Dominant shrubs are mountain mahogany, serviceberry, and sagebrush. At lower elevations are sagebrush and rabbitbrush, with grasses and forbs. Riparian areas are dominated by cottonwood/blue spruce. Siloam Springs is predominantly pinyon-juniper woodlands with sagebrush parks.
- **Aquatic Resources** - Springs, seeps, wet meadows, vernal pools, stock ponds, reservoirs, intermittent streams on the uplands, and riparian/riverine in Alkali Creek and the Colorado River.
- **Wildlife** - Big game severe winter range on Bocco Mountain.
- **Special Status Species** - Sage grouse habitat, Bald eagle winter range, Harrington's penstemon
- **Cultural/Historical Resources** - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics.
- **Topography** – Bocco Mountain - Small hill with steep southern and western faces and gently sloping ridges on the north and east. Siloam Springs - East-west running ridge with steep draws descending to the Colorado River.
- **Vehicle Access** – Bocco Mountain can be accessed via CR 4 on the north and by HW 131 on the East through private property. The remainder of the FPU contains only system of single-track motorcycle trails. Siloam Springs – is a non-motorized area. The northern boundary is accessible via CR 140 (Coffee Pot Road). The eastern boundary is accessible via HW 301. The southern boundary is accessible via the north frontage road of I-70.
- **Real Property** - Individual homes along the public land boundary.

FPU Goals

- GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals).

Fire History

Number of Fire Starts from 1980 to 2003 by Size Class

Total	A	B	C	D	E	F	G
28	22	3	2	1			
Avg. acres	.1	1.6	16	175			

Wildland fires have occurred between May – October. The largest fire occurred in September. 5 of the ignitions were human caused.

Fire Regime /Condition Class

Generally, the plant communities within this unit are in a late seral stage. Typically, the sage/grass community is either decadent, or being severely encroached upon by pinyon/juniper or Rocky Mountain juniper. These areas are considered to be in a CC 2 or CC 3 . Some of the other sites of mountain shrub, or old growth pinyon/juniper are in a CC 1, trending toward a CC 2. So far, cheatgrass has not become well-established, although that may be changing if drought conditions persist

Values at Risk

Private lands & homes, Bocco Mountain SRMA

B-140- 06 - Bocco Mountain / Siloam Springs	
Communities at Risk	There are no identified communities at risk within this FMU.
Fire Management Objectives	
Fire Suppression Objectives	• All wildland fires, regardless of ignition source, will be high priority and receive prompt suppression action commensurate with human safety in all instances. • Minimize wildland fire size. • FILs 1-6 will be suppressed at < 10 acres 80% of the time.
Fire Regime Condition Class Objectives	Where possible, return areas to a CC 1.
Fire Management Strategies	
Suppression	**Suppression Constraints and Restrictions** • Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2). • Glenwood Springs Debris Flow Hazard Zone ACEC present - wildland fire suppression restrictions for special management areas apply (see Chapter III.D.2.4 Restrictions Specific to WSAs and ACECs and map in Appendix A). • T&E / special status species present - Colorado River cutthroat trout (Mitchell Creek), Bald eagle winter range, Northern leopard frog and Lynx habitat (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A).
	Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern. • During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions, often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety
Suppression Constraints and Restrictions	• Wildland fire suppression restrictions & recommendations apply (see Chapter III.D.3 Wildland Fire Suppression Restrictions and Recommendations). • T&E / special status species present - Greater sage grouse, Northern leopard frog, Bald eagle winter range and Lynx habitat (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A). • Resource advisor and/or archaeological monitor/ consultation as soon as possible after initial attack.
Wildland Fire Use	Wildland fire use for resource benefit is not a fire management option within this FMU.
Prescriptive Vegetation Treatments	**Goals:** • Reduce hazardous fuel loading and the risks of wildland fire escaping public lands. • To reduce fuels around significant cultural sites.
	Prescribed Fire: No treatments planned between 2004 and 2009.
	Non-fire Fuels Treatments: No treatments planned between 2004 and 2009.

B-140- 06 - Bocco Mountain / Siloam Springs				
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.			
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation			
Community Protection & Assistance	There are no identified communities at risk in this FMU.			
Priority Ranking				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
Low	**No**	**Low**	**Low**	**Moderate**

B-140- 07 - King Mountain / Black Mountain	
FMU Description	
Location	(39,466 acres) Moderate in size, irregular, non-contiguous blocks of public lands somewhat intermingled with private lands that are predominately agricultural/ranching lying north of Burns and McCoy and southwest of Toponas.
Characteristics	• **Soil** - Gently sloping to very steep, well drained, shallow to deep loam soils. • **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas. • **Vegetation** - The higher elevation vegetation is spruce-fir-lodgepole forest. Aspen groves with large expansive sagebrush shrublands. The mid-elevation mountain shrublands are dominated by Gambel's oak with associated shrubs that include mountain mahogany, serviceberry, chokecherry and snowberry. Typical species in the drier sites include mountain sagebrush, rabbitbrush, and grasses. Lower elevations are made up of pinyon-juniper woodlands that can include; sagebrush, serviceberry, and mountain mahogany, mixed with grasses and forbs. Riparian vegetation is found along perennial streams. • **Aquatic Resources** - Springs, seeps, wet meadows, vernal pools, stock ponds, reservoirs, intermittent streams on the uplands, and riparian/riverine in gulches, draws and valley bottoms. • **Wildlife -** Important for sagebrush dependent species. Big game severe winter range at the lower elevations. Bighorn sheep range near Burns. • **Special Status Species** - Sage grouse, Bald eagle winter range, Lynx habitat, Harrington's, penstemon. • **Cultural/Historical Resources -** Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics. • **Topography** - The southern portions consists of rugged hillsides sloping south to the Colorado River. The higher elevation northern reaches consist of high mountain valleys with moderately steep mountainous uplands. • **Vehicle Access** - Vehicle access via; State, County, BLM and unmaintained roads. Many access roads are through private propert. King Mountain has roads that are closed to the public by locked gates but accessible to wildland firefighters. • **Real Property** – Individual homes and subdivisions along the public land boundary. King Mountain Communication Site @ T1N R84W Sec. 27 SW.
FPU Goals	• GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals). • Increase the quantity and quality of sagebrush shrublands for sagebrush-dependent species. • Protect water quality from sediment loading and turbidity in critical watershed areas (Sunnyside Creek, Tepee Creek, Stifel Creek, & Antelope Creek drainages. • Increase the quality and quantity of public land forage for elk to lessen impacts on private lands. • To support the conservation of the Eagle/southern Routt population of Greater sage grouse.

B-140- 07 - King Mountain / Black Mountain

Fire History

Number of Fire Starts from 1980 to 2003 by Size Class

Total	A	B	C	D	E	F	G
13	8	4	1				
Avg. acres	.1	1.4	15				

Wildland fires have occurred between May – October.

Fire Regime /Condition Class

Generally, the plant communities within the FMU are in a late seral stage. The spruce/fir and lodgepole pine communities are within the NRV, while the aspen and mountain shrub communities are moderately de parted from their NRV. This unit is considered to be in either a CC 1 to CC 2.

Values at Risk

Private lands & homes, Visual aesthetics

Communities at Risk

Adjacent private lands are varied density residential and agricultural and are bordering public lands that have vegetation with a high fire spread and intensity potential. There are no identified communities at risk within this FMU.

Fire Management Objectives

Fire Suppression Objectives

- All wildland fires, regardless of ignition source, will be high priority and receive prompt suppression action commensurate with human safety in all instances.
- Minimize wildland fire size, especially acres of sagebrush burned.
- FILs 1-6 will be suppressed at < 10 acres 80% of the time.

Fire Regime Condition Class Objectives

Maintain existing CC, and where possible return areas to a CC 1.

Fire Management Strategies

Suppression

Suppression Constraints and Restrictions

- Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2).
- T&E / special status species present - Bald eagle winter range, Greater sage grouse, Northern goshawk, Northern leopard frog and Lynx habitat (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A).

Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety

Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern.

- During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions , often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety

Wildland Fire Use

Wildland fire use for resource benefit is not a fire management option within this FMU.

B-140- 07 - King Mountain / Black Mountain				
Prescriptive Vegetation Treatments	**Goals:** • Reduce hazardous fuel loading and the risks of wildland fire escaping public lands. • To maintain or create diverse seral stages and improve herbaceous understory in vegetation types (sagebrush, lodgepole, aspen). • Maintain or restore shrublands by reducing the encroachment of pinyon-juniper woodlands on shrub and sagebrush communities. • To reduce the risks of large-scale fires in critical watershed areas.			
	Prescribed Fire: Planned vegetation treatments may include prescriptive fire use.			
	Non-fire Fuels Treatments: An estimated 500 acres will be treated in the Rock Creek area between 2005 and 2009. An estimated 500 acres will be treated in the King Mountain area between 2005 and 2009.			
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.			
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation			
Community Protection & Assistance	There are no identified communities at risk in this FMU.			
Priority Ranking				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
Low	**No**	**High**	**Low**	**Moderate**

C

Fire Management Units

Areas where wildland fire is desired, but there are significant constraints that must be considered for its use.

General Description:
Fire is a desirable component of the ecosystem, however, ecological, social or political constraints must be considered. These constraints could include air quality, threatened and endangered species considerations (effect of fire on survival of species), or wildlife habitat considerations.

Fire Mitigation considerations:
Programs should mitigate potential threats to values before ignitions occur and reduce unwanted human ignitions.

Fire Suppression/use considerations:
Ecological and resource constraints along with human health and safety, etc., are utilized in determining the appropriate suppression response on a case by case basis by the incident commander and sub-unit line officer. Areas in this category would generally receive lower suppression priority in multiple wildland fire situations than would areas in “A” or “B” FMZs.

Fuel Treatment considerations:
Fire and non-fire fuels treatments may be utilized to ensure constraints are met or to reduce any hazardous effects of unplanned wildland fire. Significant prescriptive fire activity would be expected to help attain desirable resource/ecological conditions. Prescribed fire for hazard/fuel reduction are of a lower priority than in “B” zones. Prescribed fire unit costs are low to moderate and are generally non-complex. Try to concurrently achieve fire protection and resource benefits, when possible.

C-140- 01 - West Of Glenwood Springs	
FMU Description	
Location	(86,567 acres) Generally the higher elevation BLM managed public lands west of Glenwood Springs, Colorado. They tend to be moderate in size, irregular, non-contiguous blocks of public lands somewhat intermingled with private lands that are predominately agricultural/ranching.
Characteristics	• **Soil** - Dominantly shallow to deep, well drained, sloping to extremely steep loam soils and Rock outcrop. FMU has three erosion hazard areas: Cedar Mountain/Ward Gulch, Gibson Gulch and Center Mountain. • **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas. The City of Aspen is a non-attainment area for PM 10 (http://www.cdphe.state.co.us/ap/down/SIPaspenPM.pdf). Land-use practices within or adjacent to this non-attainment area are closely scrutinized by local and state regulatory agencies to ensure that violations do not occur. • **Vegetation** - At higher elevations vegetation is mountain shrublands dominated by Gambel's oak with associated shrubs that include mountain mahogany, serviceberry, chokecherry and snowberry. Typical species in the drier sites include mountain sagebrush, rabbitbrush, and grasses. Lower elevations are made up of open pinyon-juniper woodlands that can include; sagebrush, oak, serviceberry, and mountain mahogany, mixed with grasses and forbs. North facing slopes include stands of Douglas fir. • **Aquatic Resources** - Springs, seeps, wet meadows, vernal pools, stock ponds, reservoirs, intermittent streams on the uplands, and riparian/riverine in gulches, draws and valley bottoms. • **Wildlife** - Big game severe winter range at the lower elevations. Bighorn Sheep range in Smith Gulch. Black bear fall concentration areas on higher elevation public lands south of I-70. • **Special Status Species** - Colorado River cutthroat trout, Bald eagle winter range, Lynx habitat, Big River fishes, Southwestern willow flycatcher. • **Cultural/Historical Resources** - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics. • **Topography** - Generally broad foothill valleys, narrow mountain valleys, sloping mesas, high rolling plateaus dissected by steep canyons and gulches. • **Vehicle Access** - Generally access is provided by a mixture of: paved roads, maintained county and BLM roads, high clearance and 4x4 routes, and ATV routes. • **Real Property** - Individual homes and subdivisions along the public land boundary. Monument Peak Communication Site @ T4S R94W Sec. 11 NW.
FPU Goals	• GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals). • Increase the quantity and quality of sagebrush shrublands for sagebrush-dependent species. • Protect water quality from sediment loading and turbidity in water quality management areas (East and West Divide Creeks). • Reduce erosion in erosion hazard areas (Center Mtn./East Divide Cr. area, Reservoir Gulch area, north of Rifle Gap Res.). • Work cooperatively with the Division of Wildlife in the Garfield Creek area to meet area vegetation goals as outlined in the *Garfield Creek State Wildlife Area Master Management Plan (May 2001)*.

C-140- 01 - West Of Glenwood Springs

Fire History

Number of Fire Starts from 1980 to 2003 by Size Class

Total	A	B	C	D	E	F	G
130	101	23	3	2	0	1	0
Avg. acres	.1	1.2	34	128	0	1472	0

Wildland fires have occurred between April – October. Of these 130 fires, 5 were human caused ignitions. There have been several large Rx burn projects in this FMU, predominantly in the mountain shrub stands at the upper elevations.

Fire Regime /Condition Class

Generally, the plant communities within this unit are in a late seral stage. Typically, the sage/grass community is either decadent, or being severely encroached upon by pinyon/juniper. These areas are considered to be in a CC 2 or CC3 . Some of the other sites of mountain shrub, or old growth pinyon/juniper are in a CC 1, trending toward a CC 2. So far, cheatgrass has not become well-established, although that may be changing if drought conditions persist

Values at Risk

Private lands & homes, Visual aesthetics

Communities at Risk

Adjacent private lands are varied density residential and agricultural and are bordering public lands that have vegetation with a high fire spread and intensity potential. There are no identified communities at risk within this FMU.

Fire Management Objectives

Fire Suppression Objectives

- Lower suppression priority in multiple wildland fire situations than “A” or “B” FMUs.
- Managed using the appropriate management response commensurate with pre-determined constraints (negative affects to values and zone goals).
- Ensure that wildland fire is contained within natural or man-made barriers/firebreaks.
- No more than 50% of this area should burn over a 10 year period.
- FILs 1-6 will be suppressed at < 10 acres 60% of the time.

Fire Regime Condition Class Objectives

Maintain existing CC, and in the sage/grass communities, return to a CC 1.

Fire Management Strategies

Suppression

Suppression Constraints and Restrictions

- Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2).
- T&E / special status species present - Bald eagle winter range and Lynx habitat, Big River fishes, Northern Goshawk, Northern leopard frog and Southwestern willow flycatcher (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A).

Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety

Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern.

- During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions , often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety

C-140- 01 - West Of Glenwood Springs	
Wildland Fire Use	Wildland fire use for resource benefit is not a fire management option within this FMU.
Prescriptive Vegetation Treatments	**Goals:** • Reduce hazardous fuel loading and the risks of wildland fire escaping public lands. • To maintain or create diverse seral stages and improve herbaceous understory in aspen stands (treatment areas include Center Mountain/Gibson Gulch) and mixed mountain shrublands (treatment areas include Wallace Gulch-Smith Gulch, Cedar Mountain, Hogback, West Elk and Main Elk areas, Pete and Bill Gulch, Reservoir Gulch). • Maintain or restore shrublands by reducing the encroachment of pinyon-juniper woodlands on shrub and sagebrush communities. • Improve quality of decadent sagebrush communities with poor herbaceous understory (treatment areas include Alkali Creek, Little Alkali Creek, East Divide Cr area). • To reduce the risks of large-scale fires in critical watershed areas. • To reduce fuels around significant cultural sites.
	Prescribed Fire: Planned vegetation treatments may include prescriptive fire use.
	Non-fire Fuels Treatments: 400 acres in the Reservoir Gulch area are targeted for treatment through 2009.
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation
Community Protection & Assistance	There are no identified communities at risk in this FMU.

Priority Ranking				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
Moderate	**No**	**Moderate**	**Moderate**	**Moderate**

C-140- 02 - Roan Cliffs & Plateau	
FMU Description	
Location	(39,130 acres) The top of the Roan Plateau is the western end of this zone. The rolling plateau is above the scenic shale cliffs northwest of Rifle, dissected by east-west running drainages. The Roan Cliffs are the eastern end of this zone. The cliffs and foothills of the eastern edge of the Roan Plateau form the visual backdrop for the City of Rifle.

C-140- 02 - Roan Cliffs & Plateau	
Characteristics	• **Soil** – Green River shale barrens occur along the rim and on steep slopes above the canyons. Exposures of shale rock outcrops and talus slopes in the upper sections. The lower portions consist of colluvial slopes with moderate to shallow, well drained soils that are clayey to loamy and contain visible amounts of gravel and stones. • **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas. The City of Aspen is a non-attainment area for PM 10 (http://www.cdphe.state.co.us/ap/down/SIPaspenPM.pdf). Land-use practices within or adjacent to this non-attainment area are closely scrutinized by local and state regulatory agencies to ensure that violations do not occur. **Vegetation** - The top of the plateau is a botanically diverse area with a mixture of aspen and conifer forests, sagebrush and mixed mountain shrublands, mountain grasslands, riparian vegetation and shale barrens. The scattered aspen stands have very diverse understory of grasses, forbs and shrubs. Conifers (Douglas fir, subalpine fir, Englemann's spruce, lodgepole pine) are located on northern aspects with an understory of low growing shrubs. Mixed mountain shrublands (oakbrush, serviceberry, chokecherry, snowberry, mountain mahogany, sagebrush) usually have a well developed understory of grasses, forbs, and sedges. Mountain grasslands are generally found on knolls and near the rim and are dominated by grasses and a mixture of forbs. Riparian/wetland vegetation is found along the perennial streams and consist of; cottonwood, willow, red osier dogwood alder, sedges, and rushes. Shale barrens occur along the rim and on steep slopes above the canyons. These areas are sparsely vegetated but support a population of the Candidate plant, Parachute penstemon, as well as the BLM Sensitive plant, Arapien stickleaf. Several significant natural plant communities are found on the Roan Plateau, including several high quality riparian communities, and several rare shrubland and grassland communities. The East Fork and East Middle Fork of Parachute Creek have carved deep canyons on the western side of the Roan Plateau. Private lands are generally undeveloped rangeland. The cliffs have two rare and endemic plant species, the Arapien stickleaf (*Nuttallia argillosa*) and Debeque milkvetch (*Astragalus debequeaus*), are found along the footslopes of the cliffs. Several stands of douglas fir are present along the upper slopes of these cliffs. Shale barrens transition to mountain shrublands dominated by Gambel's oak with associated shrubs that include mountain mahogany, serviceberry, chokecherry and snowberry. Typical species in the drier sites include Wyoming and Basin sagebrush, rabbitbrush, and grasses. Lower elevations are made up of open pinyon-juniper woodlands that can include; sagebrush, oak, serviceberry, and mountain mahogany, mixed with grasses and forbs. Fire suppression has likely caused an increase in the number of acres of pinon-juniper stands and increased the average age of the oakbrush/shrublands, making them more susceptible to fires and less valuable as wildlife habitat. Private lands are generally agricultural with a couple home sites. Cheatgrass is also present at many areas of this zone at lower elevations. • **Aquatic Resources -** Springs, seeps, wet meadows, vernal pools, stock ponds, intermittent streams on the uplands, and riparian/riverine in gulches, draws and valley bottoms**.** • **Wildlife** – Big game summer range and birthing areas. • **Special Status Species** - Colorado River cutthroat trout live in Northwater, Trapper, and East Fork of Parachute Creeks, and JQS Gulch. Special status plant species (Parachute penstemon, Arapien stickleaf) grow in the sparsely vegetated shale barrens located along Trapper Creek, Northwater Creek, East Fork of Parachute Creek, Ben Good Creek, Anvil Points rim and Northeast Cliffs rim. Also, Debeque milkvetch grows in the Roan Cliffs area. • **Cultural/Historical Resources** - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics. • **Topography** - High rolling plateaus dissected by steep canyons (East Fork and East Middle Fork of Parachute Creek). Also rugged foothills ascending to steep shale cliffs below.

C-140- 02 - Roan Cliffs & Plateau

FPU Goals

- GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals).
- Maintain wilderness characteristics (naturalness & remoteness) within Northeast and Southeast Cliff Units as identified in the Roan Plateau Wilderness Inventory Findings (2000).
- Protect the old growth douglas-fir community to the north of the JQS Road.
- Prevent irreversible and irretrievable impacts to naturalness in non-WSA lands with wilderness characteristics.
- Protection of visual aesthetics and scenic values of the Roan Cliffs.
- Increase seral stages within mature mountain shrub and pinyon-juniper vegetation types.
- Conservation of SSS and plant communities (along Trapper Creek, Northwater Creek, East Fork of Parachute Creek, Ben Good Creek, Anvil Points rim and Northeast cliffs rim).
- Increase the quantity and quality of sagebrush shrublands for sagebrush-dependent species.
- Protect watershed values.
- Rejuvenate aspen stands.

Fire History

Number of Fire Starts from 1980 to 2003 by Size Class

Total	A	B	C	D	E	F	G
50	45	5					
Avg. acres	.1	.6					

Wildland fires have occurred between June - September. Two fires were determined to be human caused. There have been 2 Rx burns within this unit, treating approximately 500 acres.

Fire Regime /Condition Class

Generally, the plant communities are in a late seral stage, and are considered to be in a CC 2.

Values at Risk

Private lands, cabins & homes (several homes on private south of Yellow Slide), Natural gas facilities and infrastructure, Archaeological and historical sites, Visual aesthetics and scenic values, Wilderness characteristics, Rare plants (Arapien stickleaf and Debeque milkvetch), Old growth douglas fir community. Special status wildlife species - Colorado River cuttroat trout in Northwater, Trapper, and East Fork of Parachute Creeks, and JQS Gulch, Special status plant species and significant plant communities located along Trapper Creek, Northwater Creek, East Fork of Parachute Creek, Ben Good Creek, Anvil Points rim and Northeast Cliffs rim.

Communities at Risk

Adjacent private lands are agricultural. There are no identified communities at risk within this FMU.

Fire Management Objectives

Fire Suppression Objectives

- Lower suppression priority in multiple wildland fire situations than “A” or “B” FMUs
- Managed using the appropriate management response commensurate with pre-determined constraints (negative affects to values and zone goals).
- Ensure that wildland fire is contained within natural or man-made barriers/firebreaks.
- No more than 50% of this area should burn over a 10 year period.
- FILs 1-6 will be suppressed at < 10 acres 60% of the time.

C-140- 02 - Roan Cliffs & Plateau	
Fire Regime Condition Class Objectives	Return areas to a CC 1 where possible, especially in the sage/grass communities with P/J encroachment.
Fire Management Strategies	
Suppression	**Suppression Constraints and Restrictions** • Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2). • WSA, ACEC, and/or non-WSA lands with wilderness characteristics present, wildland fire suppression restrictions for special management areas apply. • T&E / special status species present - Northern leopard frog (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A).
	Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern. • During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions , often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety.
Wildland Fire Use	Wildland fire use for resource benefit is not a fire management option within this FMU.
Prescriptive Vegetation Treatments	**Goals:** • Reduce hazardous fuel loading and the risks of wildland fire escaping public lands. • Allow for the development of vegetation types that natural events would produce within WSAs and ACECs. • Perform rehabilitation of fire suppression impacts as defined by the resource advisor to restore wilderness characteristics. • To maintain or create diverse seral stages and improve herbaceous understory in mixed mountain shrublands/oakbrush vegetation types. • To reduce fuels around significant cultural sites.
	Prescribed Fire: No treatments planned between 2004 and 2009.
	Non-fire Fuels Treatments: No treatments planned between 2004 and 2009.
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation
Community Protection & Assistance	There are no identified communities at risk in this FMU.

Priority Ranking				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**

C-140- 02 - Roan Cliffs & Plateau				
Moderate	No	Moderate	Moderate	Moderate

C-140- 03 - Upper Colorado	
FMU Description	
Location	(100,355 total acres) Generally the larger, irregular, non-contiguous blocks of public lands lying along the Colorado river between Dotsero and State Bridge that are somewhat intermingled with private lands that are predominately agricultural/ranching
Characteristics	• **Soil** - Varying soil types exist. Gently sloping to very steep, well drained to excessively drained, shallow to moderately deep soils mixed with gypsum lands of exposed parent material. • **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas. • **Vegetation** - The higher elevation vegetation is mountain shrublands dominated by Gambel's oak with associated shrubs that include mountain mahogany, serviceberry, chokecherry and snowberry. Typical species in the drier sites include mountain sagebrush, rabbitbrush, and grasses. Lower elevations are made up of open pinyon-juniper woodlands that can include; sagebrush, oak, serviceberry, and mountain mahogany, mixed with grasses and forbs. North facing slopes include stands of Douglas fir. Riparian vegetation is found along perennial streams. • **Aquatic Resources** - Springs, seeps, wet meadows, vernal pools, stock ponds, reservoirs, intermittent streams on the uplands, and riparian/riverine in gulches, draws and valley bottoms. • **Wildlife** - Big game severe winter range at the lower elevations. Bighorn Sheep range along the Colorado River drainage. • **Special Status Species** - Sage grouse, Bald eagle winter range, Lynx habitat, Harrington's penstemon habitat • **Cultural/Historical Resources** - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics. • **Topography** - Lower elevations are generally rugged canyons descending to the Colorado River. The upper reaches consist of a mountainous uplands. • **Vehicle Access** - Access is some what restricted in the southwest (Blowout Hill) by the Colorado River. Generally access is provided by a mixture of: maintained county and BLM roads, high clearance and 4x4 routes, and ATV routes. • **Real Property** - Individual homes and subdivisions along the public land boundary. Blowout communication site @ T4S, R86W Sec. 21 SE.
FPU Goals	• GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals). • Protect water quality from sediment loading and turbidity (Big Alkali Creek east to State Bridge). • Increase the quality of public land forage/cover for elk to lessen impacts on private lands. • To support the conservation of the Eagle/southern Routt population of Greater sage grouse. • Increase the quantity and quality of sagebrush shrublands for sagebrush-dependent species. • Provision of recreation in Gypsum Hills SRMA and in Upper Colo. River SRMA.

C-140- 03 - Upper Colorado

Fire History

Number of Fire Starts from 1980 to 2003 by Size Class

Total	A	B	C	D	E	F	G
120	91	22	5	0	2	0	0
Avg. acres	.1	2.5	24	0	720	0	0

Wildland fires have occurred between February – October. Of these, 25 were determined to be human caused.

Fire Regime /Condition Class

The composition and structure of the sage/grass communities are moderately departed from the NRV, primarily due to the encroachment of pinyon/juniper, and Rocky Mtn. juniper. The mountain shrub and P/J plant communities are generally in a late seral stage, and the unit is considered to be generally in a CC 2.

Values at Risk

Private lands & homes, Visual aesthetics and scenic values, Upper Colorado River and Gypsum Hills SRMAs

Communities at Risk

Adjacent private lands are generally agricultural and are bordering public lands that have vegetation with a high fire spread and intensity potential. There are no identified communities at risk within this FMU.

Fire Management Objectives

Fire Suppression Objectives

- Lower suppression priority in multiple wildland fire situations than “A” or “B” FMUs
- Managed using the appropriate management response commensurate with pre-determined constraints (negative affects to values and zone goals).
- Ensure that wildland fire is contained within natural or man-made barriers/firebreaks.
- I-70 viewshed fires may require aggressive containment actions because people burden emergency management services with calls.
- No more than 50% of this area should burn over a 10 year period.
- Minimize acres of sagebrush burned.
- FILs 1-6 will be suppressed at < 10 acres 60% of the time.

Fire Regime Condition Class Objectives

Enhance the existing CC within the sage/grass communities where P/J encroachment is occurring.

Fire Management Strategies

Suppression

Suppression Constraints and Restrictions

- Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2).
- T&E / special status species present - Bald eagle winter range, Greater sage grouse, Northern leopard frog and Lynx habitat (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A).

Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety

Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern.

- During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions , often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety.

C-140- 03 - Upper Colorado	
Wildland Fire Use	Wildland fire use for resource benefit is not a fire management option within this FMU.
Prescriptive Vegetation Treatments	**Goals:** • Reduce hazardous fuel loading and the risks of wildland fire escaping public lands. • To maintain or create diverse seral stages and improve herbaceous understory in mixed mountain shrublands/oakbrush vegetation types • To maintain a diversity of vegetation types and vegetation cover. • Maintain or restore shrublands by reducing the encroachment of pinyon-juniper woodlands on shrub and sagebrush communities. • To reduce the risks of large-scale fires in critical watershed areas. • To reduce fuels around significant cultural sites.
	Prescribed Fire: An estimated 2,000 acres are targeted for treatment through 2009.
	Non-fire Fuels Treatments: Non-fire treatments may be used to support prescribed fire treatments between 2004 and 2009.
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation
Community Protection & Assistance	The community of Bond, Colorado needs a risk assessment and hazard mitigation plan. The first level of risk assessment, the Eagle County Fire Plan, is due to be completed in 2004.

Priority Ranking				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
Moderate	**No**	**Moderate**	**Moderate**	**Moderate**

C-140- 04 - Deep Creek

FMU Description

Location	(4,531 acres) Scenic canyon with Onion Ridge to the East, Coffee Pot Road on the south, the forest boundary on the west and private lands on the north.
Characteristics	• **Soil** - Rock outcrops. Moderately steep to very steep, well drained and somewhat excessively drained, shallow and moderately deep soils: on mountainsides, ridges, hills and mesa side slopes. • **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas. • **Vegetation** - Cottonwoods, Colorado blue spruce and Douglas fir dominate the entire canyon bottom. The arid hillsides are scattered pinyon-juniper woodlands and sagebrush parks. Deeper soils and flatter sites are dominated by mountain shrublands consisting of Gambel's oak mixed with serviceberry, chokecherry, and mountain mahogany. • **Aquatic Resources** - Springs, seeps, wet meadows, vernal pools, stock ponds, intermittent streams on the uplands, and riparian/riverine in Deep Creek and related drainages. • **Wildlife** – Deep Creek canyon is Bighorn sheep range. Eastern portion of FMU is severe big game winter range. • **Special Status Species** - Lynx habitat, and Harrington's penstemon populations • **Cultural/Historical Resources** - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics. • **Topography -** Deep Creek has carved a rugged and remote limestone gorge. • **Vehicle Access** – Access on the south east via CR 14 (Coffee Pot Road). Access on the east and north via the Onion Ridge Road (high-clearance) through private property. No vehicle access to interior of FMU. • **Real Property** - Irrigation ditches.
FPU Goals	• GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals). • Protection of scenic (Class 1 VRM) values within Deep Creek ACEC. • Protection of riparian/canyon corridor.
Fire History	**Number of Fire Starts from 1980 to 2003 by Size Class** Total: 3 (A: 2, B: 0, C: 1, D: –, E: –, F: –, G: –) Avg. acres: .1 (A: .1, B: 0, C: 14, D: –, E: –, F: –, G: –) Wildland fires have occurred between July – August.
Fire Regime /Condition Class	The plant communities of the unit are considered to be within the NRV, and a CC 1.
Values at Risk	Private lands & homes, Visual aesthetics and scenic values of canyon corridor, Caves, Characteristics of naturalness and roadlessness
Communities at Risk	Private lands are generally agricultural and are adjacent to public lands that have vegetation with a high fire spread and intensity potential. There are no identified communities at risk within this FMU.

Fire Management Objectives

C-140- 04 - Deep Creek	
Fire Suppression Objectives	• Lower suppression priority in multiple wildland fire situations than "A" or "B" FMUs • Managed using the appropriate management response commensurate with pre-determined constraints (negative affects to values and zone goals). • Ensure that wildland fire is contained within natural or man-made barriers/firebreaks. • No more than 50% of this area should burn over a 10 year period. • Minimize the size of wildland fires in canyon corridor. • FILs 1-6 will be suppressed at < 10 acres 60% of the time.
Fire Regime Condition Class Objectives	Maintain the existing CC.
Fire Management Strategies	
Suppression	**Suppression Constraints and Restrictions** • Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2). • Deep Creek ACEC present - wildland fire suppression restrictions for special management areas apply (see Chapter III.D.2.4 Restrictions Specific to WSAs and ACECs and map in Appendix A). • T&E / special status species present - Northern leopard frog and Lynx habitat (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A).
	Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern. • During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions, often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety.
Wildland Fire Use	Wildland fire use for resource benefit is not a fire management option within this FMU.
Prescriptive Vegetation Treatments	**Goals:** • Reduce hazardous fuel loading and the risks of wildland fire escaping public lands. • Complement the development of vegetation types that natural events would produce within Deep Creek ACEC.
	Prescribed Fire: No treatments planned between 2004 and 2009.
	Non-fire Fuels Treatments: No treatments planned between 2004 and 2009.
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation
Community Protection & Assistance	There are no identified communities at risk in this FMU.
Priority Ranking	

C-140- 04 - Deep Creek				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**
Low	**No**	**Low**	**High**	**Low**

D

Fire Management Units

Areas where wildland fire is desired, and there are few or no constraints for its use.

General Description:
Areas where unplanned and planned wildland fire may be used to achieve desired objectives such as to improve vegetation, wildlife habitat or watershed conditions.

Fire Mitigation considerations:
Implement programs that reduce unwanted human-caused ignitions, as needed.

Fire Suppression/use considerations:
These areas offer the greatest opportunity to take advantage of the full range of options available for managing wildland fire under the appropriate management response. Health and safety constraints will apply. Resource use considerations similar to those described for Category C may be identified if needed to achieve resource objectives. Areas in this category would be the lowest suppression priority in a multiple fire situation.

Fuel Treatment considerations:
There is generally less need for hazard fuel treatment in this category. Prescribed fire for fuel hazard reduction is not a priority except where there is an immediate threat to public health and safety. If treatment is necessary, both fire and non-fire treatments may be utilized, as allowed by the land use plan. Prescribed fire to obtain desired resource/ecological condition is appropriate.

D-140- 01 - Bull Gulch/Castle Peak/Hack Lake	
FMU Description	
Location	(22,794 total acres: Bull Gulch -16,412 acres; Castle Peak - 16,577 acres; Hack Lake - 3,562 acres). Separate units lying on the east flank of the Flat Tops north and northeast of Dotsero.
Characteristics	• **Soil** - Varying soil types exist. Gently sloping to very steep, well drained to excessively drained, shallow to moderately deep loam soils. • **Air** - Three Class I air quality areas are adjacent/near to public lands: the Flat Tops, Eagles Nest, and the Maroon Bells-Snowmass Wilderness Areas. • **Vegetation** - Higher elevation vegetation is spruce-fir-lodgepole forest intermingled with aspen stands with large expansive sagebrush shrublands. Mid-elevation mountain shrublands include mountain mahogany, Gambel's oak, serviceberry, chokecherry and snowberry. Lower elevations are pinyon-juniper woodlands that can include; sagebrush, oak, serviceberry, and mountain mahogany, mixed with grasses and forbs. Typical species in the drier sites include mountain sagebrush, rabbitbrush, and grasses. Riparian vegetation is found along perennial streams and seeps. • **Aquatic Resources** - Springs, seeps, wet meadows, vernal pools, stock ponds, reservoirs, intermittent streams on the uplands, and riparian/riverine in gulches, draws and valley bottoms. • **Wildlife** - Important for sagebrush dependent species. Big game severe winter range at the lower elevations. Bighorn sheep range in Bull Gulch WSA. • **Special Status Species** - Sage Grouse, Bald eagle winter range, Lynx habitat, Boreal Toads • **Cultural/Historical Resources** - Archaeological and historical sites may be affected by wildland fire and suppression activities. Contact the resource advisor or archeologist for specifics. • **Topography -** Bull Gulch; Dropping precipitously from a forested rim at 9,700 feet, Bull Gulch contains rugged, colorful, sandstone canyons and cliffs. Castle Peak; Castle Peak contains a wide variety of topography and vegetation, from gently rolling slopes at lower elevations to rocky vertical cliffs of Castle Peak. Elevation ranges from 8,000' near upper Alkali Creek to 11,275' at Castle Peak in the west central part of the unit. Hack Lake; Hack Lake contains a mixture of rolling hills, cliffs and steep terrain. Elevation ranges from 7,700' near Sweetwater to 11,000' at the northwest corner. • **Vehicle Access** - Bull Gulch - Unmaintained routes and rough 4x4 roads provide access to the southern boundary. Road access through private property provides access to the eastside. The Colorado River restricts vehicle access from the west. Castle Peak - BLM maintained routes provide access from the north and east. Road access through private property provides access to the west (radio towers) and southwest side. No vehicle access exists to the interior of the area. Hack Lake - The Sheep Creek (East Fork) Road from Eagle County Road 40, provides the main access to the Hack Lake Trailhead and the Hack Lake area. No vehicle routes beyond the trailhead. A road across private property accesses the Hack Creek drainage. • **Real Property** - Communication site located @ T3S R84W Sec. 19 SW.

D-140- 01 - Bull Gulch/Castle Peak/Hack Lake

FPU Goals

- GSFO Resource Area-wide management goals (see III.B. GSFO Resource Area-wide Fire Management Goals).
- Protection of scenic (Class 1 VRM) values within Bull Gulch ACEC.
- Maintain wilderness characteristics (naturalness & roadlessness) within WSAs.
- To support the conservation of the Eagle/southern Routt population of Greater sage grouse.
- Increase the quantity and quality of sagebrush shrublands for sagebrush-dependent species.

Fire History

Number of Fire Starts from 1980 to 2003 by Size Class

Total	A	B	C	D	E	F	G
22	11	10	1				
Avg. acres	.1	2	26				

Wildland fires have occurred between May - September.

Fire Regime /Condition Class

Generally, the plant communities within the unit are considered to be in a CC 1.

Values at Risk

Private lands & homes, Visual aesthetics and scenic values, wilderness characteristics, Upper Colorado River/Bull Gulch/Hack Lake SRMAs

Communities at Risk

Surrounding private lands are generally agricultural. There are no identified communities at risk within this FMU.

Fire Management Objectives

Fire Suppression Objectives

- Lowest priority for suppression in a multiple fire situation.
- Wildland fires under a suppression strategy will be managed using the appropriate management response commensurate with pre-determined constraints (negative affects to values and zone goals).
- Ensure that wildland fires under a suppression strategy are contained within natural or man-made barriers/firebreaks.
- Fires at FILs 1-6, not managed for WFU, will be will be suppressed at < 25 acres 60% of the time.
- No more than 50% of each area should burn over a 10 year period.

NOTE: A portion of Hack Lake (generally above the rim in T. 3 S., R. 87 W., Sections 2 and 3) is included within the Turret Fire Management Unit - 1504-5 of the *Flat Tops Fire Management Area Guidebook for Prescribed Natural Fire Planning and Implementation (1995).*

Fire Regime Condition Class Objectives

Maintain the existing CC.

Fire Management Strategies

D-140- 01 - Bull Gulch/Castle Peak/Hack Lake	
Suppression	**Suppression Constraints and Restrictions** • Wildland fire suppression protocols (restrictions & recommendations) apply (see Chapter III.D.2). • Bull Gulch ACEC, Bull Gulch WSA, Castle Peak WSA and Hack Lake WSA present - wildland fire suppression restrictions for special management areas apply (see Chapter III.D.2.4 Restrictions Specific to WSAs and ACECs and map in Appendix A). • T&E / special status species present - Bald eagle winter range, Northern goshawk, Northern leopard frog, Boreal toad and Lynx habitat (see Chapter III.D.3 Threatened & Endangered / Special Status Species Wildland Fire Suppression Guidelines and Map in Appendix A). • Use Minimum Impact Suppression Tactics (MIST) to reduce negative effects of suppression (see Appendix E).
	Special Conditions that Result in Extreme Fire Behavior, Resistance to Control or Safety Killing frost that occur post-greenup in the spring can result in top-kill in the mountain shrub community, especially Gambels Oak. This large component of dead material in the crowns can contribute to extreme fire behavior in those years, and is a major cause for concern. • During the spring and early summer (mid-April to early July), pre-frontal or dry cold fronts can create extremely windy conditions, often exceeding 45-50 mph. This can result in large, wind driven fires, with extreme fie behavior and great concern for firefighter and public safety.
Wildland Fire Use	If pre-determined Decision Criteria for Wildland Fire Use in Chapter IV.B. are met, fires may be managed under a Wildland Fire Use strategy.
Prescriptive Vegetation Treatments	**Goals:** • Reduce hazardous fuel loading and the risks of wildland fire escaping public lands. • Reduce to an acceptable level, the risks and consequences of unwanted wildland fires within "D" FMUs or wildland fires escaping from "D" FMUs. • Complement the development of vegetation types that natural events would produce within WSAs and ACECs. • Create diverse seral stages and improve herbaceous understory in sagebrush, mixed mountain shrublands/aspen vegetation types. • To reduce fuels around significant cultural sites.
	Prescribed Fire: No treatments planned between 2004 and 2009.
	Non-fire Fuels Treatments: No treatments planned between 2004 and 2009.
	Vegetation Treatment Guidelines: Vegetation treatment guidelines found in Chapter IV.C.1.3 General Vegetation Treatment Guidelines and Chapter IV.C.1.4 Species Specific Vegetation Treatment Guidelines apply to site-specific projects.
Post Fire Restoration / Rehabilitation	See Chapter IV.E. Emergency Stabilization and Rehabilitation
Community Protection & Assistance	There are no identified communities at risk in this FMU.

Priority Ranking				
Suppression	**WFU**	**Emphasis on Fuels Treatments**	**Emphasis on ESR**	**Community Assistance & Protection**

D-140- 01 - Bull Gulch/Castle Peak/Hack Lake				
Low	High	Low	High	Low

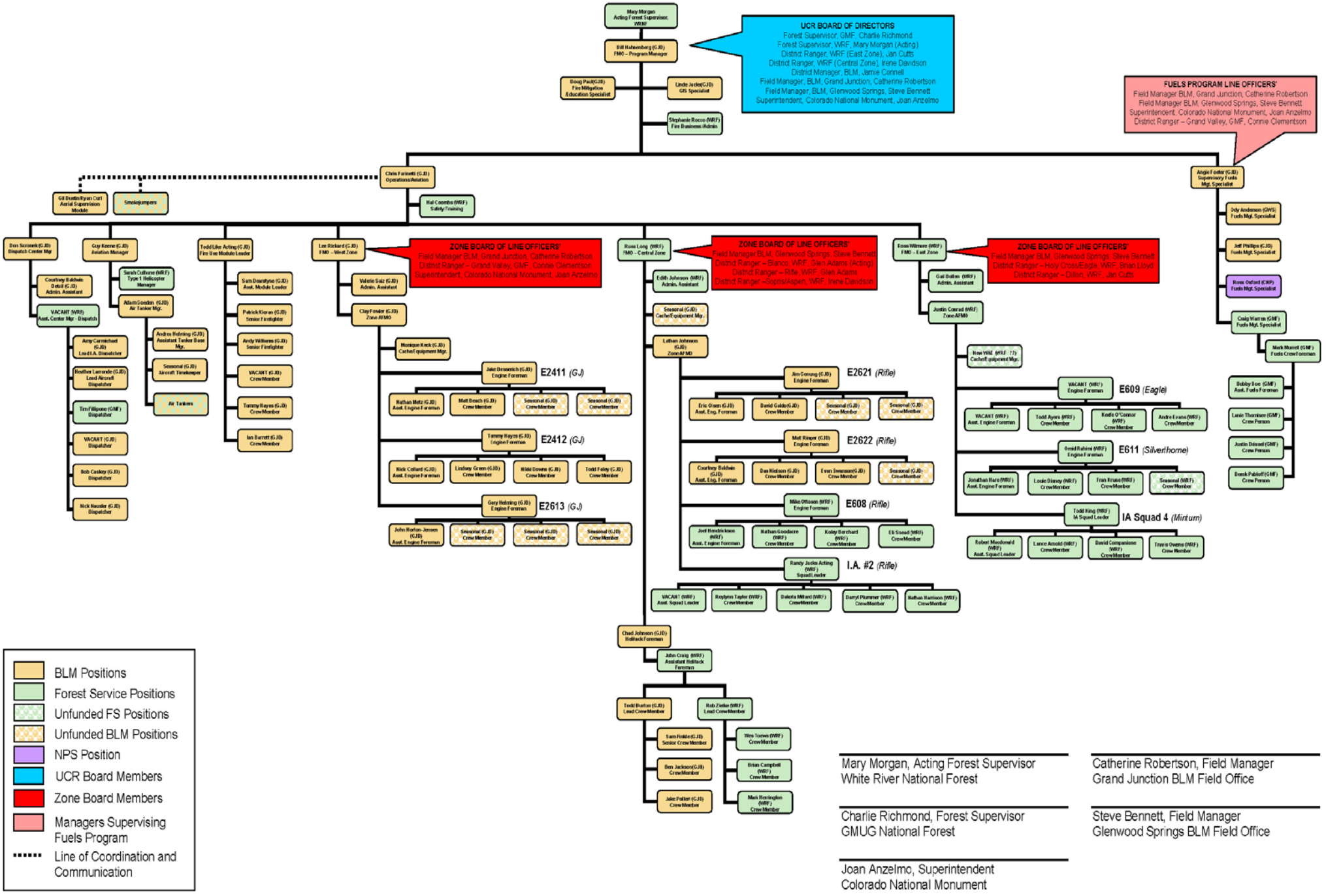
APPENDIX C

Organizational Chart

for the
UCR Interagency
Fire Planning Unit

Upper Colorado River Interagency Fire Management Unit

**** 05-26-09 ****



Mary Morgan, Acting Forest Supervisor
White River National Forest

Catherine Robertson, Field Manager
Grand Junction BLM Field Office

Charlie Richmond, Forest Supervisor
GMUG National Forest

Steve Bennett, Field Manager
Glenwood Springs BLM Field Office

Joan Anzelmo, Superintendent
Colorado National Monument

APPENDIX D

Crosswalk between the 17 Federal Fire Policy Statements and the GSFO FMP

1. **Safety** - Firefighter and public safety is the first priority. All FMPs and activities must reflect this commitment.

   Reference: II.A, III.B, III.C, III.D, IV.A, IV.B, IV.E, VI.A

2. **Fire Management and Ecosystem Sustainability** - The full range of fire management activities will be used to help achieve ecosystem sustainability, including its interrelated ecological, economic, and social components.

   Reference: II.A, III.C, IV.A, IV.C, IV.E

3. **Response to Wildland Fire** - Fire, as a critical natural process, will be integrated into land and resource management plans and activities on a landscape scale, and across agency boundaries. Response to wildland fire is based on ecological, social, and legal consequences of the fire. The circumstances under which a fire occurs; the likely consequences on firefighter and public safety; the welfare of natural and cultural resources; and the values to be protected dictate the appropriate management response to the wildland fire.

   Reference: II.A, III.C, III.D, IV.A, IV.B, IV.C, IV.D, Appendix B

4. **Use of Wildland Fire** - Wildland fire will be used to: protect, maintain, and enhance resources and, as nearly as possible, be allowed to function in its natural ecological role. Use of fire will be based on approved FMPs and will follow specific prescriptions contained in operational plans.

   Reference: I.A, II.A, III.B, III.C, IV.A, IV.B, IV.C, VI.A Appendix B

5. **Rehabilitation and Restoration** - Rehabilitation and restoration efforts will be undertaken to protect and sustain ecosystems, public health, and safety, and to help communities protect infrastructure.

   Reference: I.A, I.C, II.A, III.C, III.D, IV.A, IV.C, IV.E, V.A Appendix B

6. **Protection Priorities** - The protection of human life is the single, overriding priority. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources will be based on the values to be protected, human health and safety, and the costs of protection. Once people have been committed to an incident, these human resources become the highest value to be protected.

   Reference: I.A, II.A, III.A, III.B, III.C, III.D, IV.A, IV.C, IV.F, V.B, VI.A

7. **Wildland Urban Interface (WUI)** - The operational roles of federal agencies as partners in the WUI are: wildland firefighting, hazardous fuels reduction, cooperative prevention and education, and technical assistance. Structural fire suppression is the responsibility of tribal, State, or local governments. Federal agencies may assist with exterior structural protection activities under formal Fire Protection Agreements that specify the mutual responsibilities of the partners, including funding. (Some federal agencies have full structural protection authority for their facilities on lands they administer, and may also enter into formal agreements to assist State and local governments with full structural protection.)

   Reference: I.C, II.A, III.C, III.D, IV.F, V.A

8. **Planning** - Every area with burnable vegetation must have an approved FMP. FMPs are strategic plans that define a program to manage wildland and prescribed fires based on the area's approved land management plan. Fire Management Plans must provide for firefighter and public safety; include fire management strategies, tactics, and alternatives; address values to be protected and public health issues; and be consistent with resource management objective, activities of the area, and environmental laws and regulations.

   Reference: I.A, I.B, I.C, II.A, III.A, III.B, III.C, IV.A, IV.B, IV.C, VI.A, VI.B

9. **Science** - FMPs and programs will be based on a foundation of sound science. Research will support ongoing efforts to increase our scientific knowledge of biological, physical, and sociological factors. Information needed to support fire management will be developed through an integrated interagency fire science program. Scientific results must be made available to managers in a timely manner and must be used in the development of land management plans, FMPs, and implementation plans.

   Reference: II.A, IV.C, IV.A

10. **Preparedness** - Agencies will ensure their capability to provide safe, cost-effective fire management programs in support of land and resource management plans through appropriate planning, staffing, training, equipment, and management oversight.

    Reference: I.C, II.A, III.A, IV.A, V.A, V.B, VI.A

11. **Suppression** - Fires are suppressed at minimum cost, considering firefighter and public safety, benefits, and values to be protected, consistent with resource objectives.

    Reference: I.A, I.B, I.C, II.A, III.A, III.C, III.D, IV.A, IV.B, IV.E, V.A. V.B, V.D, Appendix B

12. **Prevention** - Agencies will work together with local partners and other affected groups and individuals to prevent unauthorized ignition of wildland fires.

    Reference: I.C, II.A, III.C, IV.A, V.A, V.B

13. **Standardization** - Agencies will use compatible planning processes, funding mechanisms, training and qualification requirements, operational procedures, value-to-be-protected methodologies, and public education programs for all fire management activities.

    Reference: Template Format, I.C, II.A, III.A, IV.A, IV.B, IV.C

14. **Interagency Cooperation and Coordination** - Fire management planning, preparedness, prevention, suppression, fire use, restoration and rehabilitation,

monitoring, research, and education will be conducted on an interagency basis with the involvement of cooperators and partners.

Reference: I.C, II.A, III.A, IV.A, IV.B, IV.C, IV.F, V.A, V.B

15. **Communication and Education** - Agencies will enhance knowledge and understanding of wildland fire management policies and practices through internal and external communication and education programs. These programs will be continuously improved through the timely and effective exchange of information among all affected agencies and organizations.

    Reference: I.C, II.A, IV.A, IV.F, V.A

16. **Agency Administrators and Employee Roles** - Agency administrators will ensure that their employees are trained, certified, and made available to participate in the wildland fire program locally, regionally, and nationally as the situation demands. Employees with operational, administrative, or other skills will support the wildland fire program as necessary. Agency administrators are responsible and will be held accountable for making employees available.

    Reference: II.A, IV.A

17. **Evaluation** - Agencies will develop and implement a systematic method of evaluation to determine effectiveness of projects through implementation of the 2001 Federal Fire Policy. The evaluation will assure accountability, facilitate resolution of areas of conflict, and identify resource shortages and agency priorities.

    Reference: II.A, III.A, IV.A, IV.C, IV.E, VI.A, VI.B

APPENDIX E

Minimum Impact Suppression Tactics (MIST) Guidelines

MINIMUM IMPACT SUPPRESSION TACTICS GUIDELINES

CONTENTS

CONCEPT

The concept of Minimum Impact Suppression Tactics (MIST) is to use the minimum amount of forces necessary to effectively achieve the fire management protection objectives consistent with land and resource management objectives. It implies a greater sensitivity to the impacts of suppression tactics and their long-term effects when determining how to implement an appropriate suppression response. In some cases MIST may indicate cold trailing or wet line may be more appropriate than constructed hand line. In another example, the use of an excavator may be used rather than a dozer. Individual determinations will be dependent on the specific situation and circumstances of each fire.

MIST is not intended to represent a separate or distinct classification of firefighting tactics but rather a mind set of how to suppress a wildfire while minimizing the long-term effects of the suppression action. When the term MIST is used in this document it reflects the above principle.

Suppression actions on all wildfires will be those having a minimum impact on the physical resources associated with each site. In so doing, the principle of fighting fire aggressively but providing for safety first will not be compromised.

The key challenge to the line officer, fire manager and firefighter is to be able to select the wildfire suppression tactics that are appropriate given the fire's probable or potential behavior. The guiding principle is always least cost plus loss while meeting land and resource management objectives. It is the second part of this statement which must be recognized more than it has in the past. Appreciations of the values associated with wilderness have been more difficult to articulate but, nevertheless, are important. As this recognition emerges, actions must be modified to accommodate a new awareness of them.

These actions, or MIST, may result in an increase in the amount of time spent watching, rather than disturbing, a dying fire to insure it does not rise again. They may also involve additional rehabilitation measures on the site that were not previously carried out.

When selecting an appropriate suppression response, firefighter safety must remain the highest concern. In addition, fire managers must be assured the planned actions will be effective and will remain effective over the expected duration of the fire.

Other guides, like the grizzly bear or salmon guides, will also have a bearing on what type of tactics are used.

GOAL

The goal of MIST is to halt or delay fire spread in order to maintain the fire within predetermined parameters while producing the least possible impact on the resource being protected. These parameters are represented by the initial attack incident commander's size-up of the situation in the case of a new start or by the escaped fire situation analysis (EFSA) in case of an escaped fire.

It is important to consider probable rehabilitation need as a part of selecting the appropriate suppression response. Tactics that reduce the need for rehab are preferred whenever feasible.

SUPPRESSION RESPONSIBILITY

As stated previously, safety is the highest priority. All action will be anchored to the standard fire orders and watch out situations. Safety will remain the responsibility of each person involved with the incident.

Initial/Extended Attack

Incident Commander – To understand and carry out an appropriate suppression response, which will best meet the land management objectives of the area at the least cost plus loss. Insure all forces used on the fire understand the plan for suppressing the fire in conjunction with MIST.

Keep in communication with responsible fire management or line officer to insure understanding and support of tactics being used on the fire. Evaluate and provide feedback as to the tactical effectiveness during and after fire incident.

Project Fire

Type 1/ Type 2 Incident Commander – To carry out instructions given by the responsible line officer both verbally and through the EFSA. Establish and nurture a close dialogue with the resource advisor assigned to the fire team. Review actions on site and evaluate for compliance with land line officer direction and effectiveness at meeting fire management protection objectives.

Responsible Line Officer – To transmit the land management objectives of the fire area to the fire team and to define specific fire management protection objectives. Periodically review for compliance.

Resource Advisor – To insure the interpretation and implementation of EFSA and other oral or written line officer direction is adequately carried out. Provide specific direction and guidelines as needed. Participate at fire team planning sessions, review incident action plans and attend daily briefings to emphasize resource concerns and management's expectations. Provide assistance in updating EFSA when necessary. Participate in incident management team debriefing and assist in evaluation of team performance related to MIST.

GUIDELINES

Following is a list of considerations for each fire situation.

Hot-Line/Ground Fuels

- Allow fire to burn to natural barriers.
- Use cold-trail, wet line or combination when appropriate.
- If constructed fireline is necessary, use only width and depth to check fire spread.
- Consider use of fireline explosives for line construction.
- Burn out and use low impact tools like swatter or 'gunny' sack.
- Minimize bucking and cutting of trees to establish fireline; build line around logs when possible.
- Use alternative mechanized equipment such as excavators, rubber tired skidders, etc. rather than tracked vehicles. Use high pressure type sprayers on equipment prior to assigning to incident to help prevent spread of noxious weeds.
- Constantly re-check cold trailed fireline.

Hot-Line/Aerial Fuels

- Limb vegetation adjacent to fireline only as needed to prevent additional fire spread.
- During fireline construction, cut shrubs or small trees only when necessary. Make all cuts flush with the ground.
- Minimize felling of trees and snags unless they threaten the fireline or seriously endanger workers. In lieu of felling, identify hazard trees with a lookout or flagging.
- Scrape around tree bases near fireline if it is likely they will ignite.
- Use fireline explosives for felling when possible to meet the need for more natural appearing stumps.

Mopup/Ground Fuels

- Do minimal spading; restrict spading to hot areas near fireline.
- Cold-trail charred logs near fireline; do minimal tool scarring.
- Minimize bucking of logs to extinguish fire or to check for hotspots; roll the logs instead if possible.
- Return logs to original position after checking and when ground is cool.
- Refrain from making bone yards; burned and partially burned fuels that were moved should be returned to a natural arrangement.
- Consider allowing large logs to burnout. Use a lever rather than bucking to manage large logs which must be extinguished.
- Use gravity socks in stream sources and/or a combination of water blivits and fold-a-tanks to minimize impacts to streams.
- Consider using infrared detection devices along perimeter to reduce risk.
- Personnel should avoid using rehabilitated firelines as travel corridors whenever possible because of potential soil compaction and possible detrimental impacts to rehab work, i.e. water bars.

Mopup/Aerial Fuels

- Remove or limb only those fuels which if ignited have potential to spread fire outside the fireline.
- Before felling consider allowing ignited tree/snag to burn itself out. Ensure adequate safety measures are communicated if this option is chosen.
- Identify hazard trees with a lookout or flagging.
- If burning trees/snag pose a serious threat of spreading fire brands, extinguish fire with water or dirt whenever possible. Consider felling by blasting when feasible. Felling by crosscut or chainsaw should be the last resort.
- Align saw cuts to minimize visual impacts from more heavily traveled corridors. Slope cut away from line of sight when possible.

LOGISTICS

Campsite Considerations

- Locate facilities outside of wilderness whenever possible.
- Coordinate with the Resource Advisor in choosing a site with the most reasonable qualities of resource protection and safety concerns.
- Evaluate short-term low impact camps such as coyote or spike versus use of longer-term higher impact camps.
- Use existing campsites such as reserved sites used by outfitters if possible.
- New site locations should be on impact resistant and naturally draining areas such as rocky or sandy soils, or openings with heavy timber.
- Avoid camps in meadows, along streams or on lakeshores. Located at least 200 feet from lakes, streams, trails, or other sensitive areas.
- Consider impacts on both present and future users. An agency commitment to wilderness values will promote those values to the public.
- Lay out the camp components carefully from the start. Define cooking, sleeping, latrine, and water supply.
- Minimize the number of trails and ensure adequate marking.
- Consider fabric ground cloth for protection in high use areas such as around cooking facilities.
- Use commercial portable toilet facilities where available. If these cannot be used a latrine hole should be utilized.
- Select latrine sites a minimum of 200 feet from water sources with natural screening.
- Do not use nails in trees.
- Constantly evaluate the impacts which will occur, both short and long term.

Personal Camp Conduct

- Use “leave no trace” camping techniques.
- Minimize disturbance to land when preparing bedding site. Do not clear vegetation or trench to create bedding sites.
- Use stoves for cooking, when possible. If a campfire is used limit to one site and keep it as small as reasonable. Build either a “pit” or “mound” type fire. Avoid use of rocks to ring fires.
- Use down and dead firewood. Use small diameter wood, which burns down more cleanly.
- Don’t burn plastics or aluminum – “pack it out” with other garbage.
- Keep a clean camp and store food and garbage so it is unavailable to bears. Ensure items such as empty food containers are clean and odor free, never bury them.
- Select travel routes between camp and fire and define clearly.
- Carry water and bathe away from lakes and streams. Personnel must not introduce soaps, shampoos or other personal grooming chemicals into waterways.

AVIATION MANAGEMENT

One of the goals of wilderness managers is to minimize the disturbance caused by air operations during an incident.

Aviation Use Guidelines

- Maximize back haul flights as much as possible.
- Use long line remote hook in lieu of constructed helispots for delivery or retrieval of supplies and gear.
- Take precautions to insure noxious weeds are not inadvertently spread through the deployment of cargo nets and other external loads.
- Use natural openings for helispots and paracargo landing zones as far as practical. If construction is necessary, avoid high visitor use areas.
- Consider maintenance of existing helispots over creating new sites.
- Obtain specific instructions for appropriate helispot construction prior to the commencement of any ground work.
- Consider directional falling of trees and snags so they will be in a natural appearing arrangement.
- Buck and limb only what is necessary to achieve safe/practical operating space in and around the landing pad area.

Retardant Use

During initial attack, fire managers must weigh the non-use of retardant with the probability of initial attack crews being able to successfully control or contain a wildfire. If it is determined that use of retardant may prevent a larger, more damaging wildfire, then the manager might consider retardant use even in sensitive areas. This decision must take into account all values at risk and the consequences of larger firefighting forces' impact on the land.

- Consider impacts of water drops versus use of foam/retardant. If foam/retardant is deemed necessary, consider use of foam before retardant use.

HAZARDOUS MATERIALS

Flammable/Combustible Liquids

- Store and dispense aircraft and equipment fuels in accordance with National Fire Protection Association (NFPA) and Health and Safety Handbook requirements.
- Avoid spilling or leakage of oil or fuel, from sources such as portable pumps, into water sources or soils.
- Store any liquid petroleum gas (propane) downhill and downwind from firecamps and away from ignition sources.

Flammable Solids

- Pick up residual fusees debris from the fireline and dispose of properly.

Fire Retardant/Foaming Agents

- Do not drop retardant or other suppressants near surface waters.
- Use caution when operating pumps or engines with foaming agents to avoid contamination of water sources.

Fireline Explosives

- Remove all undetonated fireline explosives from storage areas and fireline at the conclusion of the incident and dispose of according to Bureau of Alcohol, Tobacco, and Firearms (BATF) and Fireline Blaster Handbook requirements. Properly dispose of all packaging materials.

FIRE REHABILITATION

Rehabilitation is a critical need. This need arises primarily because of the impacts associated with fire suppression and the logistics that support it. The process of constructing control lines, transport of personnel and materials, providing food and shelter for personnel, and other suppression activities has a significant impact on sensitive resources regardless of the mitigating measures used. Therefore, rehabilitation must be undertaken in a timely, professional manner.

During implementation, the resource advisor should be available for expert advice and support of personnel doing this work as well as quality control.

Rehabilitation Guidelines

- Pick up and remove all flagging, garbage, litter, and equipment. Dispose of trash appropriately.
- Clean fire pit of unburned materials and fill back in.
- Discourage use of newly established trails created during the suppression effort by covering with brush, limbs, small diameter poles, and rotten logs in a naturally appearing arrangement.
- Replace dug-out soil and/or duff and obliterate any berms created during the suppression effort.
- If impacted trails have developed on slopes greater than six percent, construct waterbars according to the following waterbar spacing (see IV.E):
- Where soil has been exposed and compacted, such as in camps, on user-trails, at helispots and pump sites, scarify the top 2-4 inches and scatter with needles, twigs, rocks, and dead branches. It is unlikely that seed and fertilizer for barren areas will be appropriate, in order to maintain the genetic integrity of the area. It may be possible, depending on the time of year and/or possibility of a rainy period, to harvest and scatter nearby seed, or to transplant certain native vegetation.
- Blend campsites with natural surroundings, by filling in and covering latrine with soil, rocks, and other natural material. Naturalize campfire area by scattering ashes in nearby brush (after making sure any sparks are out) and returning site to a natural appearance.

- Where trees were cut or limbed, cut stumps flush with ground, scatter limbs and boles, out of sight in unburned area. Camouflage stumps and tree boles using rocks, dead woody material, fragments of stumps, bolewood, limbs, soil and fallen or broken green branches. Scattered sawdust and shavings will assist in decomposition and be less noticeable. Use native materials from adjacent, unimpacted areas if necessary.
- Remove newly cut tree boles that are visible from trails or meadows. Drag other highly visible woody debris created during the suppression effort into timbered areas and disburse. Tree boles that are too large to move should be slant cut so a minimal amount of the cut surface is exposed to view. Chopping up the surface with an axe or pulaski, to make it jagged and rough, will speed natural decomposition.
- Leave tops of felled trees attached. This will appear more natural than scattering the debris.
- Consider using explosives on some stumps and cut faces of the bolewood for a more natural appearance.
- Consider, if no other alternatives are available, helicopter sling loading rounds and tops from a disturbed site when there has been an excessive amount of bucking, limbing and topping.
- Tear out sumps or dams, where they have been used, and return site to natural condition. Replace any displaced rocks or streambed material that has been moved. Reclaim streambed to its predistrubed state, when appropriate.
- Walk through adjacent undisturbed area and take a look at your rehab efforts to determine your success at returning the area to as natural a state as possible. Good examples should be documented and shared with others!

DEMOBILIZATION

Because demob is often a time when people are tired or when weather conditions are less than ideal, enough time must be allowed to do a good job. When moving people and equipment, choose the most efficient and least impactive method to both the landscape and fire organization mission. An on-the-ground analysis of “How Things Went” will be important.

POST-FIRE EVALUATION

Post-fire evaluation is important for any fire occurrence so management can find out how things went. Identify areas needing improvement, to formulate strategies and to produce quality work in the future. This activity is especially important in wilderness and like sensitive areas due to their fragility and inclination to long-term damage by human impacts.

Resource advisors and functional specialists such as wilderness rangers will be responsible for conducting the post-fire evaluation. They are the people who have the experience and knowledge to provide information required to make the evaluation meaningful and productive.

Post-fire evaluation will consist of data collection, documentation and recommendations. This process and report will, in most cases, be fairly simple and to the point. It should be

accomplished before an overhead team departs from the fire. The evaluation emphasis should be on the MIST actions and not on the effects on the fire.

Evaluation will be completed on wildfires exceeding 100 acres and on a sample of fires less than 100 acres. It is appropriate to evaluate a diversity of fires, ranging from a spot fire suppressed by smokechasers or jumpers to a large project fire managed by an overhead team.

Region 1 is proposing a post-fire evaluation of sites, which includes data collection on campsites and helispots, using Cole's Site Inventory System report INT-259, "Wilderness Campsite Monitoring Methods: A Source Book". Data collected will be added to inventories already completed for recreational impacts in wilderness. This information should provide managers with a clearer picture of which activities affect these "last, best places".

Data Collection/Documentation/Recommendations

This phase will be completed by a review of the rehab plan and visit to the fire site as soon after demobilization as possible. An inventory of comps and helispots will be completed using Cole's Inventory System. This will also include an objective overview of other areas covered by the rehab plan.

Observations will be documented in a brief report to the line officer with a copy to the appropriate incident commander. In the report, the evaluator will include recommendations for ensuing fire suppression activities on similar lands. It is important that the evaluator recognize and commend the initial attack forces or overhead team for positive activities. Make special note of the extra efforts and sensitivity to suppression impacts.

Attached is a sample format for a Post-Fire Evaluation Report:

POST-FIRE EVALUATION

for
(Name of Fire)

EXISTING DIRECTION PERTINENT FOR FIRE

Forest Land Use Plan Allocation: Management Area
(THIS SPACE CAN BE USED TO INSERT THE GENERAL AND SPECIFIC FOREST PLAN DIRECTION FOR THE MANAGEMENT AREA)
Other Management Concerns/Guides: T & E Plants and Animals:

FINDINGS

A. Resource Advisor Input and/or Actions:
(SHOULD INCLUDE A SYNOPSIS OF THE ACTIONS OF THE RESOURCE ADVISOR AND HIS INPUT INTO SUPPRESSION STRATEGIES/TACTICS)
B. Escaped Fire Situation Analysis (EFSA)
(HOW DID THE EFSA RESPOND TO THE SENSITIVITIES OF THIS FIRE AREA)
C. Line Direction to Incident Commander
(SYNOPSIS OF WHAT THE LINE OFFICER TOLD THE INCIDENT COMMANDER TO DO)
D. Incident Action Plan
(SYNOPSIS OF HOW INCIDENT ACTION PLAN RESPONDED TO FIRE AREA)

ON-SITE VERIFICATION

(STATE HERE WHO MADE THE FIELD VISIT, THE DATE, AND WHAT OBSERVATIONS WERE MADE IN TERMS OF MEETING THE GUIDELINES FOR MIST)

OVERALL REVIEW EVALUATION

(INCLUDE OVERALL FINDINGS OF HOW WELL OBJECTIVES WERE ACCOMPLISHED IN TERMS OF MINIMUM IMPACT ACTIVITIES)

FOLLOWING IS AN EXAMPLE FROM A FIRE IN THE HELL'S CANYON NATIONAL RECREATION AREA:

"Although not specifically documented as stated in the Forest Plan, Manuals or other directives, nor clearly visible in all the documents reviewed, the majority of pertinent management direction/resource objectives for this fire appeared to have been known, and were implemented."
"Although it was recognized that the fire's location may not result in adverse impact to salmon habitat, it wasn't clear that the Operation or Logistics sections were aware that some of the 'Wildfire Suppression Guidelines for Salmon Habitat' relate to potential stream contamination during activities not directly performed on the fire site. (It is realized that these "Regional Guidelines" were issued 8/11/92 via D.G. and have not yet had wide distribution; therefore it is the intent of this review to help increase the awareness of the recent guidelines)."

REVIEW RECOMMENDATIONS

(WHAT AREAS CAN WE IMPROVE ON, WHERE DID WE DO GOOD, ETC.)

STANDARD FIRE ORDERS

F Fight fire aggressively but provide for safety first.
I Initiate all actions based on current and expected fire behavior.
R Recognize current weather conditions and obtain forecast.
E Ensure instructions are given and understood.

O Obtain current information on fire status.
R Remain in communication with crew members, your supervisor, and adjoining forces.
D Determine safety zones and escape routes.
E Establish lookouts in potentially hazardous situations.
R Retain control at all times.
S Stay alert, keep calm, think clearly, act decisively.

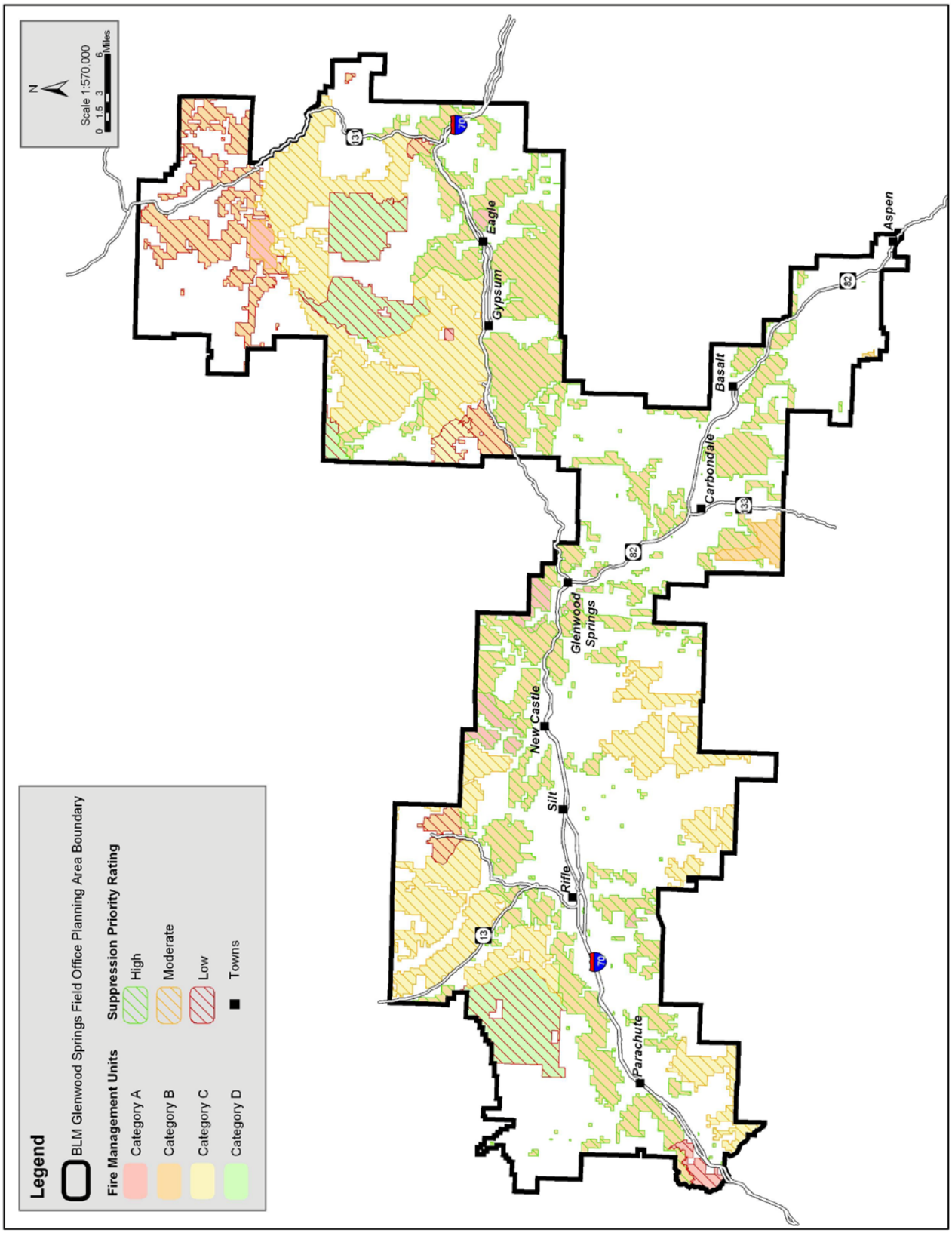
WATCH OUT SITUATIONS

1. Fire not scouted and sized up.
2. In country not seen in daylight.
3. Safety zones and escape routes not identified.
4. Unfamiliar with weather and local factors influencing fire behavior.
5. Uninformed on strategy, tactics and hazards.
6. Instructions and assignments not clear.
7. No communication link with crew members/supervisor.
8. Constructing fireline without safe anchor point.
9. Building fireline downhill with fire below.
10. Attempting frontal assault on fire.
11. Unburned fuel between you and the fire.
12. Cannot see main fire, not in contact with anyone who can.
13. On a hillside where rolling material can ignite fuel below.
14. Weather is getting hotter and drier.
15. Wind increases and/or changes direction.
16. Getting frequent spot fires across line.
17. Terrain and fuels make escape to safety zone difficult.

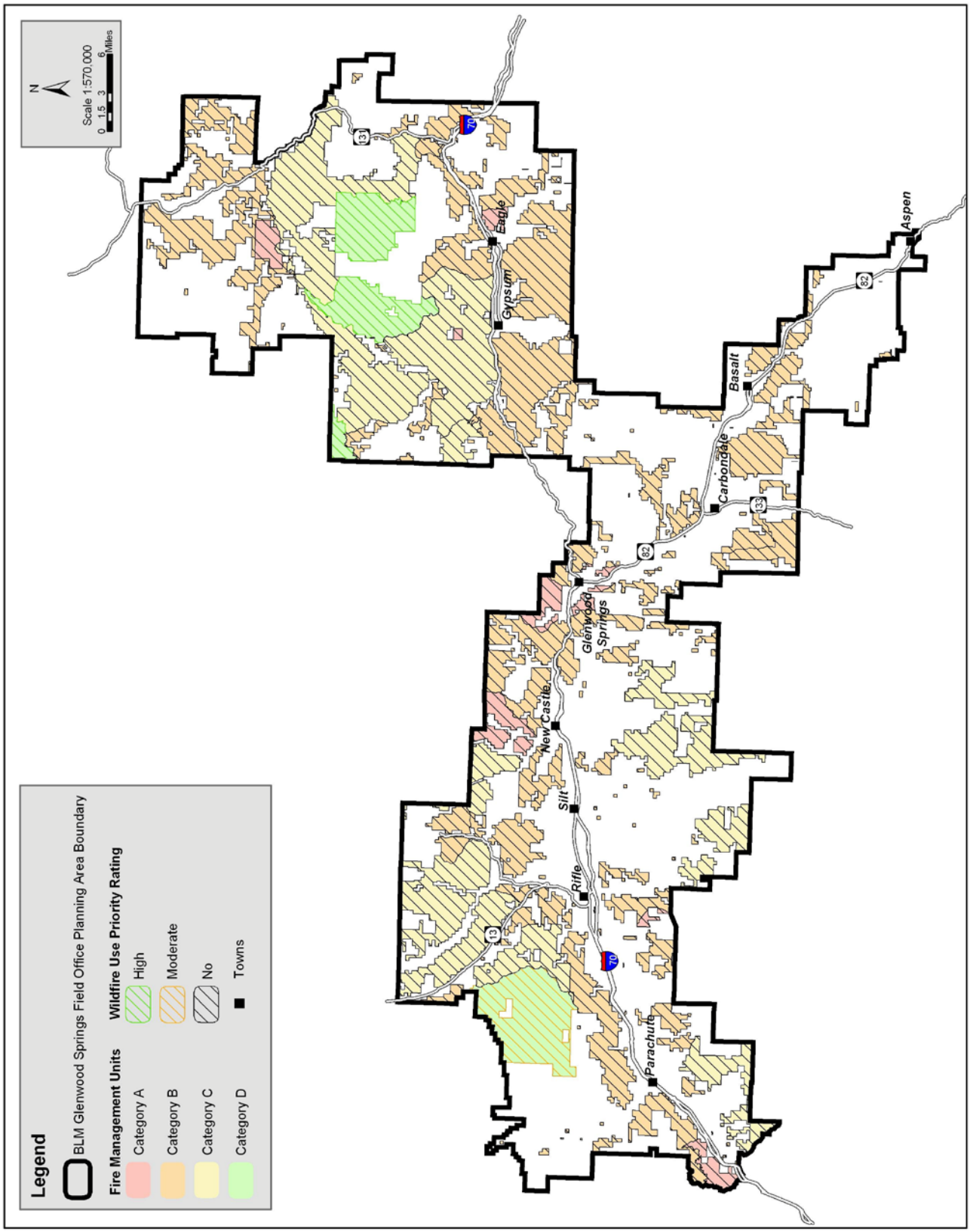
APPENDIX F

FMU Pioritization

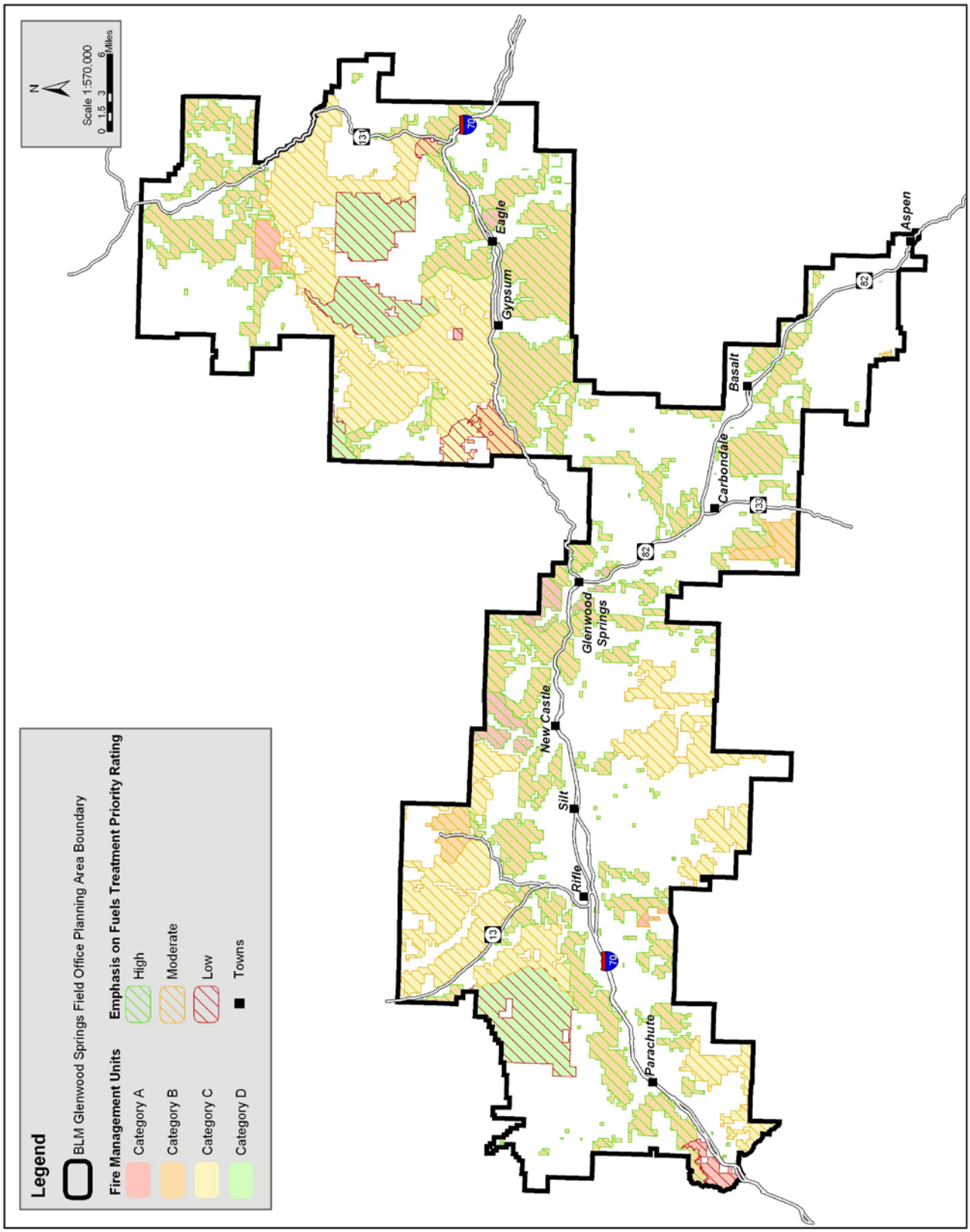
FMU Prioritization - Suppression



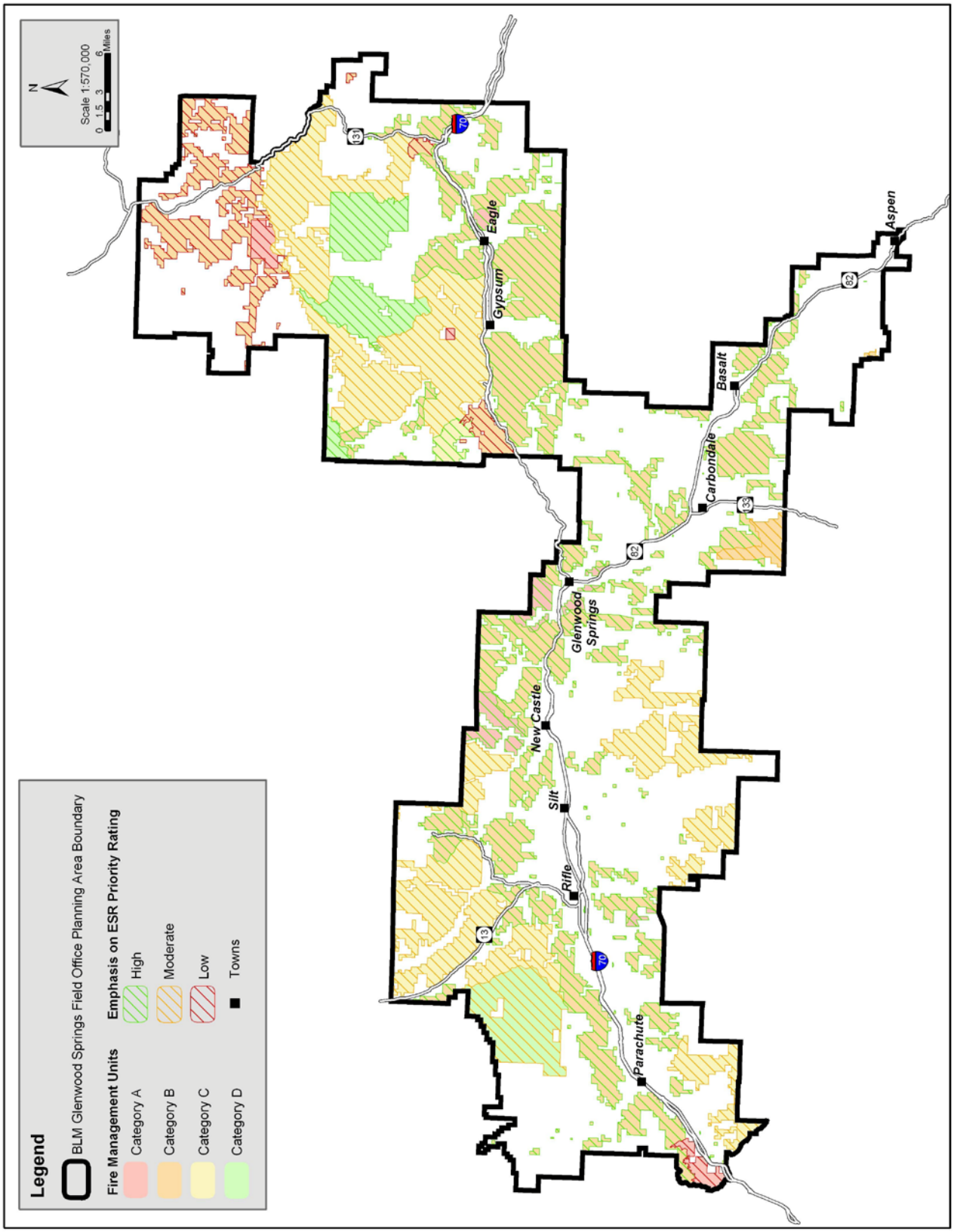
FMU Prioritization – Wildland Fire Use



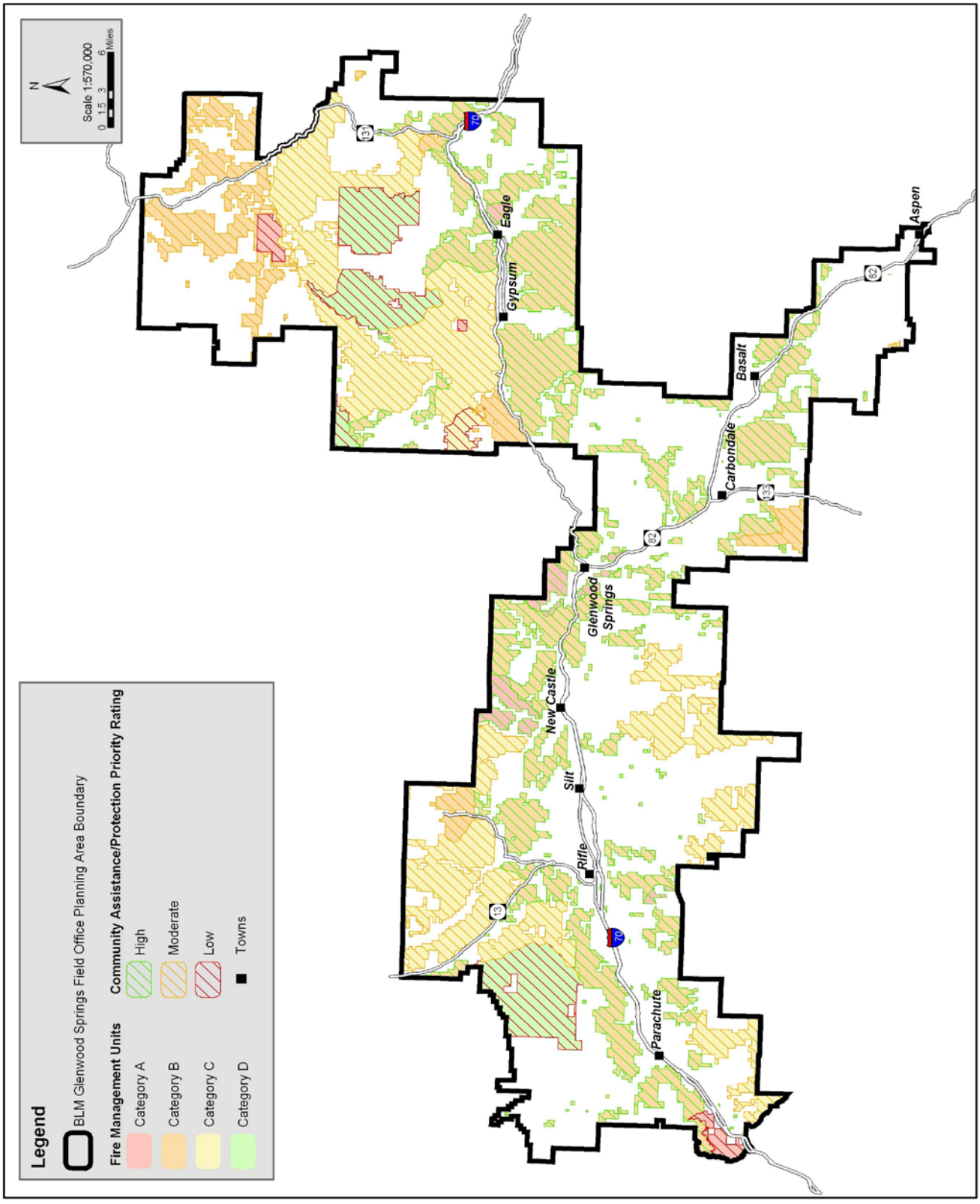
FMU Prioritization – Emphasis on Fuels Treatments



FMU Prioritization – Emphasis on Emergency & Rehabilitation

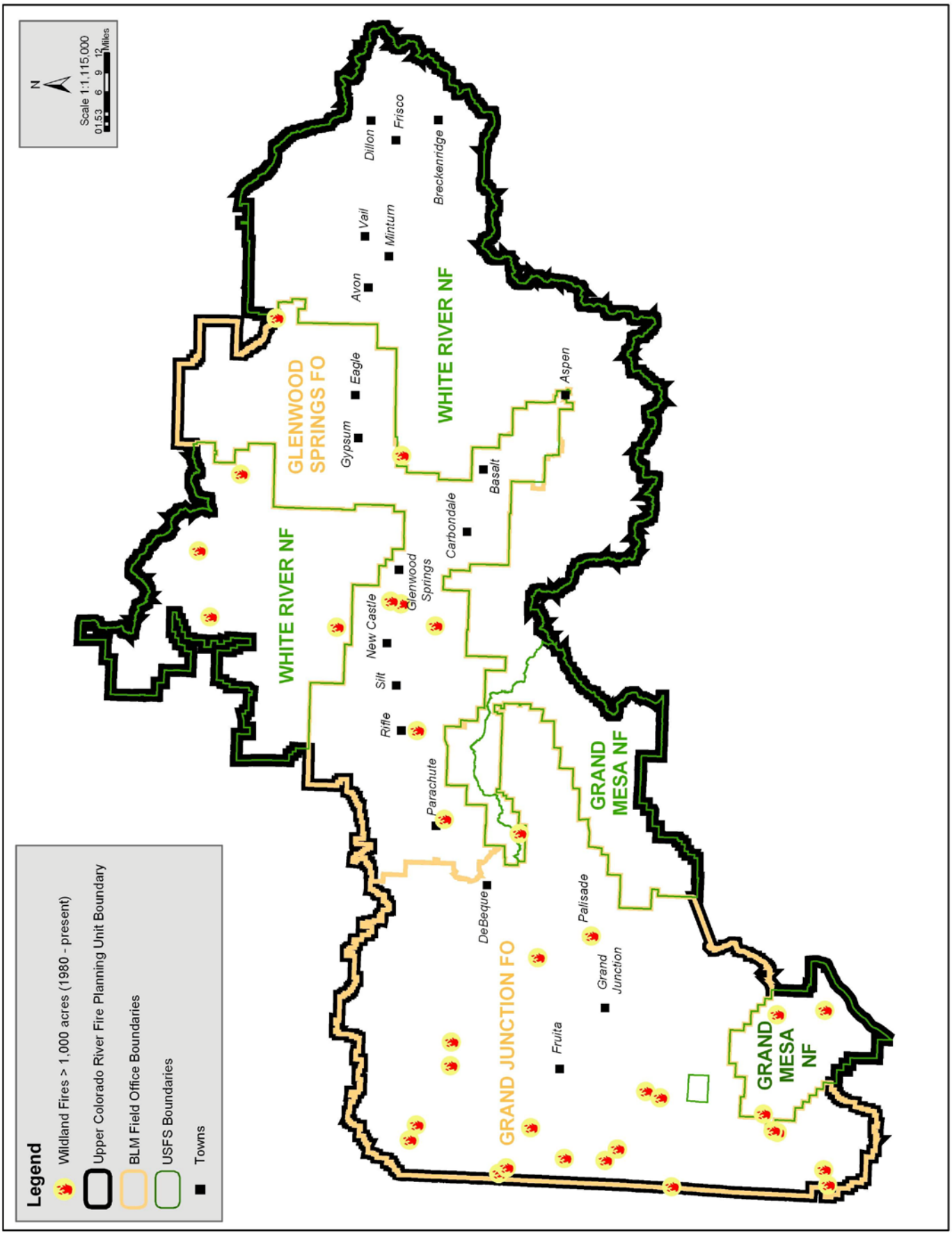


FMU Prioritization – Community Assistance & Protection



APPENDIX G

Large Fire Occurrence within the UCR FPU


N
Scale 1:1,115,000
0 1.5 3 6 9 12 Miles
Legend
Wildland Fires > 1,000 acres (1980 - present)
Upper Colorado River Fire Planning Unit Boundary
BLM Field Office Boundaries
USFS Boundaries
Towns
GLENWOOD SPRINGS FO
GRAND JUNCTION FO
WHITE RIVER NF
WHITE RIVER NF
GRAND MESA NF
GRAND MESA NF
Dillon
Frisco
Breckenridge
Vail
Minturn
Avon
Eagle
Gypsum
Aspen
Basalt
Carbondale
Glenwood Springs
New Castle
Silt
Rifle
Parachute
DeBeque
Palisade
Grand Junction
Fruita

APPENDIX H

Fire Danger Operating & Preparedness Plan

Fire Danger Operating and Preparedness Plan
Effective Date
June 2004

Prepared By UCRIFMU Fire Danger Working Team

Frankie Romero, Central Zone Fire Management Officer
Stephanie Brown, Grand Junction Air Center Manager
Winslow Robertson, Acting Unit Assistant Fire Management Officer - Operations
Linde Fanscher, GIS Specialist

Table of Contents

Acronyms

AFDR	Adjective Fire Danger Rating
AFMO	Assistant Fire Management Officer
BI	Burning Index (NFDRS output)
BLM	Bureau of Land Management
DL	Dispatch Level
RMCC	Rocky Mountain Coordination Center
ERC	Energy Release Component (NFDRS output)
FDOP	Fire Danger Operating Plan
FDRA	Fire Danger Rating Area
FINV	Fire Investigator
FMO	Fire Management Officer
FPT	Fire Prevention Technician
GJAC	Grand Junction Air Center (Dispatch Center)
GJFO	Grand Junction Field Office
GMF	Grand Mesa National Forest
GWFO	Glenwood Springs Field Office
IC	Ignition Component (NFDRS output)
LEO	Law Enforcement Officer
NFDRS	National Fire Danger Rating System
NFMAS	National Fire Management Analysis System
NIFC	National Interagency Fire Center
NIFMID	National Integrated Fire Management Information Database
NWCG	National Wildfire Coordinating Group
NWS	National Weather Service
PIO	Public Information Officer
PL	Preparedness Level
R2	Region 2 (USDA Forest Service Rocky Mt. Region)
RAWS	Remote Automated Weather Station
SC	Staffing Class
SFMO	State Fire Management Officer (BLM)
SIG	Special Interest Group (group of weather stations)
UCRIFMU	Upper Colorado River Interagency Fire Management Unit
VIS	Visitor Information Specialist
WIMS	Weather Information Management System
WRF	White River National Forest
ZFMO	Zone Fire Management Officer

Objectives

1. Provide a tool for agency administrators, fire managers, dispatchers, agency cooperators, and firefighters to gauge fire danger within the administrative boundary of the Upper Colorado Interagency Fire Management Unit.

2. Define fire danger rating areas with similar weather, fuels, topography, and fire occurrence within existing fire management zones.

3. Identify the fire danger rating areas that best represent individual counties so as to compute geographically relevant fire danger values that can aid interagency coordination of restrictions between federal, state, and county governments.

4. Establish appropriate breakpoints and procedures for determining Preparedness Level, Dispatch Level and Adjective Fire Danger Rating.

5. Define roles and responsibilities for making preparedness planning decisions, managing weather information, maintaining the fire weather monitoring network, providing weather forecasts, and making available pertinent fire danger information to ensure that agency administrators, fire managers, cooperating agencies, private industry (permitees, oil/gas operators, etc.), and the public, are notified of the Adjective Fire Danger Rating in a timely fashion.

6. Define daily preparedness procedures for UCRIFMU and WRF/GWSFO/GJFO/GMF personnel to follow throughout the fire season, as well as specific actions to take at each Preparedness Level.

7. Develop and distribute fire danger pocket cards to all personnel involved with fire suppression activities within the UCRIFM boundary.

Introduction

Agency policies for both Bureau of Land Management and US Forest Service (see Standards for Fire and Aviation Operations, 2003; FSM 5120) require each dispatch unit to have a Fire Danger Operating Plan (FDOP). The Upper Colorado River Interagency Fire Management Unit (UCRIFMU) has combined a Preparedness Plan with the FDOP into a Fire Danger Operating and Preparedness Plan. This plan will clarify the fire danger message provided to the public as well as simplify the decision-making process for agency administrators, fire managers, dispatchers, agency cooperators, and firefighters by setting planning and dispatch levels using National Fire Danger Rating System (NFDRS) thresholds, also called breakpoints. These breakpoints are used to define fire danger input for management decisions in each fire danger rating area. Activities, events, and fire operations affected by fire danger are identified and appropriate NFDRS components or indices are selected as decision guides.

This plan addresses fire danger levels and ratings and corresponding appropriate responses, with an emphasis on aggressive information and resource sharing between federal agencies, cooperating state and county agencies, private industry, and the public.

Roles And Responsibilities-By Task

Fire Danger Operating and Preparedness Plan Updates:

a. ***AFMO-Operations:***

1. Will ensure that necessary amendments or updates to this plan are performed. This plan is to be reviewed each year by April 1 and updated by April 30. Annual updates to the plan will be approved by the Forest Supervisors and Field Office Managers.
2. Will distribute revised copies to the individuals on the primary distribution list (Appendix F).

b. ***Unit FMO:***

1. Interim updates can be approved by the Unit FMO.

Coordination of Suppression Resources:

a. ***Unit FMO & AFMO's:***

1. Will coordinate with Colorado State Office (BLM) and Region 2 (FS) fire managers to meet suppression resource needs during Preparedness Levels of 3 or higher.
2. Will determine the need to request/release off-unit resources or support personnel throughout the fire season.

Fire Weather Forecasting:

a. ***National Weather Service:***

1. Daily fire weather forecasts will be developed by the National Weather Service, Grand Junction Fire Weather Forecast Office, and posted on the Internet and in WIMS by 1530.

b. ***Grand Junction Air Center (GJAC):***

1. Will be capable of retrieving weather and NFDRS indices from WIMS and/or Internet and will do so daily at 1600.

Weather Station Maintenance:

a. ***The Remote Sensing Laboratory:***

1. Located at the National Interagency Fire Center (NIFC), RSL maintains and calibrates the RAWS stations on an annual basis.

b. ***GJAC Manager:***

1. Will provide qualified first responders to RAWS malfunctions.

WIMS Access and Station Catalog Editing:

a. ***GJAC Manager:***

1. Along with the ZFMO's, will maintain the WIMS Access Control List (ACL) and will ensure appropriate editing of the RAWS catalogs.
2. Will ensure the timely editing of daily 1300 weather observations.

b. ***Zone FMO's:***

1. Are listed as the station owner for their respective RAWS and along with GJAC Manager, will maintain the WIMS Access Control List (ACL) and will ensure appropriate editing of the RAWS catalogs.

Preparedness and Dispatch Level Guidelines:

a. ***Unit FMO, Unit AFMO's, and GJAC Manager:***
   1. Will be responsible for establishing and reviewing the preparedness and dispatch level guidelines on an annual basis, as a minimum.

Preparedness and Dispatch Level Determination:

a. ***GJAC Manager:***
   1. Will ensure that the daily fire weather forecast (including NFDRS indices) is retrieved and that the daily Preparedness and Dispatch Levels as well as Adjective Ratings are determined and distributed or made available.
   2. Will ensure that daily NFDRS values (ERC, IC), Adjective Ratings, and Preparedness Levels are included in the fire weather forecast radio broadcast.

b. ***AFMO-Operations:***
   1. Provides input and guidance regarding preparedness and dispatch levels. It is the decision of the AFMO-Operations to interpret and modify the daily Preparedness and Dispatch Levels as deemed necessary.
   2. May interpret and modify daily Preparedness by recognizing factors not addressed by this plan.

Preparedness Level and Adjective Fire Danger Notifications:

a. ***AFMO-Operations:***
   1. Provides input and guidance regarding preparedness and dispatch levels.

b. ***GJAC Manager:***
   1. Will ensure that all initial agency notifications are based on the preparedness level procedures and direction provided by the AFMO-Operations.

c. ***Zone FMO's:***
   1. Will ensure that agency administrators are updated as needed.

Public and Industrial Awareness:

a. ***Agency Administrators:***
   1. Will ensure Fire Danger signs are updated accordingly and industrial and public interests are made aware of current fire danger as appropriate.
   2. Will confer with UCRIFMU staff as appropriate to determine need for fire restrictions.

b. ***Zone FMO's, PIO's, FPT's, LEO's, etc.:***
   1. Per Agency Administrator direction, will implement awareness and prevention programs based on Preparedness Level Guidelines. Will implement and enforce restrictions and/or closures per Agency Administrator direction.

NFDRS and Adjective Fire Danger Breakpoints:

a. ***Unit FMO & AFMO's:***

1. Will analyze weather and fire data on an annual basis and will ensure that the breakpoints reflect the most accurate information.

Fire Danger Pocket Cards:

a. ***AFMO-Operations:***

1. Will ensure that pocket cards are reviewed on an annual basis as a minimum and updated at least every other year.
2. Will ensure updated pocket cards are posted on the Rocky Mountain Coordination Center web site under "Fire Danger" at www.fs.fed.us/r2/fire/rmacc.html (contact Flint Cheney).

b. ***Zone FMO's:***

1. Will insure pocket cards are distributed to all local and incoming firefighters as well as overhead and are posted at local fire crew work stations.
2. Will utilize pockets cards to train and brief suppression personnel.

Roles And Responsibilities-By Function

Agency Administrator(s)

1. Will review revisions to Fire Danger Operating Plan and amend/approve in a timely manner.
2. Will ensure Fire Danger signs are updated accordingly and industrial and public interests are made aware of current fire danger as appropriate.
3. Will direct staff as appropriate to implement awareness and prevention programs based on Preparedness Level Guidelines and input provided by UCRIFMU staff.
4. Will confer with UCRIFMU staff as appropriate to determine need for fire restrictions.

Unit FMO

1. Interim updates can be approved by the Unit FMO.
2. Will coordinate with Colorado State Office (BLM) and Region 2 (FS) fire managers to meet suppression resource needs during Preparedness Levels of 3 or higher.
3. Will determine the need to request/release off-unit resources or support personnel throughout the fire season.
4. Will be responsible for establishing and reviewing the preparedness and dispatch level guidelines on an annual basis, as a minimum.
5. Will analyze weather and fire data on an annual basis and will ensure that the breakpoints reflect the most accurate information.

Unit AFMO's

1. Will coordinate with Colorado State Office (BLM) and Region 2 (FS) fire managers to meet suppression resource needs during Preparedness Levels of 3 or higher fire danger.
2. Will determine the need to request/release off-unit resources or support personnel throughout the fire season.
3. Will be responsible for establishing and reviewing the preparedness and dispatch level guidelines on an annual basis, as a minimum.
4. Will analyze weather and fire data on an annual basis and will ensure that the breakpoints reflect the most accurate information.

Unit AFMO-Operations

1. Will ensure that necessary amendments or updates to this plan are performed. This plan is to be reviewed each year by April 1 and updated by April 30. Annual updates to the plan will be approved by the UCR Forest Supervisors, Field Office Managers, or their delegates.
2. Will distribute revised copies to the individuals on the primary distribution list (Appendix F).
3. Provides input and guidance regarding preparedness and dispatch levels. It is the decision of the AFMO-Operations to interpret and modify the daily preparedness and dispatch levels as required.
4. May interpret and modify daily preparedness by recognizing factors not addressed by this plan.

5. Provides input and guidance regarding preparedness and dispatch levels.
6. Will ensure that pocket cards are prepared on an annual basis as a minimum.
7. Will ensure updated pocket cards are posted on the Rocky Mountain Coordination Center web site under "Fire Danger".

Zone FMO's

1. Are listed as the station owner for their respective RAWS and along with GJAC Manager, will maintain the WIMS Access Control List (ACL) and will ensure appropriate editing of the RAWS catalogs.
2. Will ensure periodic fuel moisture samples are taken from established sites and recorded appropriately.
3. Will ensure that agency administrators are updated as needed.
4. Per Agency Administrator direction, will implement awareness and prevention programs based on Preparedness Level Guidelines. Will implement and enforce restrictions and/or closures per Agency Administrator direction.
5. Will insure pocket cards are distributed to all local and incoming firefighters as well as overhead and are posted at local fire crew work stations.
6. Will utilize pockets cards to train and brief suppression personnel.

GJAC Dispatchers

1. Will be capable of retrieving weather and NFDRS indices from WIMS and/or Internet and will do so daily at 1600.

GJAC Manager

1. Will ensure that the daily fire weather forecast (including NFDRS indices) is retrieved and that the daily preparedness and dispatch levels as well as adjective ratings are determined and distributed or made available.
2. Will ensure that daily NFDRS values (ERC, BI), adjective ratings, and preparedness levels are included in the fire weather forecast radio broadcast.
3. Will provide qualified first responders to RAWS malfunctions.
4. Along with the ZFMO's, will maintain the WIMS Access Control List (ACL) and will ensure appropriate editing of the RAWS catalogs.
5. Will ensure the timely editing of daily 1300 weather observations.
6. Will be responsible for establishing and reviewing the preparedness and dispatch level guidelines on an annual basis, as a minimum.
7. Will ensure that all initial agency notifications are based on the preparedness level procedures and direction provided by the AFMO-Operations.

NWS-GJ Office

1. Daily fire weather forecasts will be developed by the National Weather Service, Grand Junction Fire Weather Forecast Office, and posted on the Internet and in WIMS by 1530.

PIO, FPT, VIS, LEO, etc

1. Per Agency Administrator direction, will implement awareness and prevention programs based on Preparedness Level Guidelines. Will implement and enforce restrictions and/or closures per Agency Administrator direction.

Remote Sensing Laboratory-Boise

1. Located at the National Interagency Fire Center (NIFC), RSL maintains and calibrates the RAWS stations on an annual basis.

Fire Danger Rating

The National Fire Danger Rating System (NFDRS) utilizes the WIMS processor to manipulate weather data stored in the NIFMID data base to produce fire danger ratings within a pre-determined Fire Danger Rating Area (FDRA). The system is designed to calculate worst-case scenario fire danger. For the purposes of this plan, NFDRS will be utilized to compute four fire-danger rating values, which are Staffing Class, Preparedness Level, Dispatch Level, and Adjective Fire Danger.

A. Definitions

1. **Staffing Class:** Staffing Class is the basis for determining Preparedness Level, which in turn is used to make daily internal fire operations decisions. Staffing Class is made of 5 classes (1, 2, 3, 4, 5) and the breakpoints for these classes are based on analysis of staffing indices (ERC, BI, 1000hr FM, etc) and fire occurrence (number and size). Using Fire Family Plus, the relationship between historical fire occurrence and the various staffing index values as calculated from the 1300 RAWS weather observations, are examined to assess at which index levels do we see changes in fire frequency and resistance to control (i.e. size). The concept behind staffing level is that the fire danger continuum can be divided into classes to which preplanned management actions can be tied, hence each threshold value reflects the relevant decision points for a response area. For this plan, ERC was determined to be the NFDRS index best suited for calculating Staffing Class as this component tracks seasonal trends in the heavier fuel types found over the majority of our rating area.

2. **Dispatch Level:** Aided by the use of agency "run cards" (Appendix D), the Dispatch Level is a decision tool that guides agency dispatchers when assigning resources to initial attack fire responses. It is a four level system derived from the Preparedness Level. The levels include low (PL=1), moderate(PL=2), high (PL=3,4), and extreme (PL=5).

3. **Preparedness Level:** The Preparedness Level is a derivative of the Staffing Class, and is used to trigger pre-determined management actions such as pre-positioning of suppression resources, step-up of prevention work, need to consider fire restrictions on public and commercial activities such as campfire use, smoking, logging, construction, and woodcutting, etc. The preparedness level is a five tier (1-5) rating system with 1 being the lowest level of preparedness and 5 being the highest. The initial value for the preparedness level is determined by the staffing class, which is then modified according to one or more indicators of current and expected fire business. The fire business indicators used to calculate the final preparedness level are large/multiple fire activity, Red Flag Warnings or Fire Weather Watches, Haines Index, fuel moistures, ignition risk, and crew commitment. A flow chart guides personnel through the process. Each level is associated with the expected wildland fire workload potential on the unit. For each level, there are designated management actions defined which help the unit to achieve an appropriate state of readiness for fire prevention and suppression resources.

4. **Adjective Fire Danger:** This rating is used by agency personnel to inform the public, our cooperators, and industrial interests about current fire danger in specific geographical areas.

The five categories for Adjective Fire Danger Rating are Low, Moderate, High, Very High, and Extreme. As with Staffing Class, Energy Release Component (ERC) is used in determining the adjective rating, however a strict percentile breakpoint is used rather than the more subjective Staffing Classes.

Fire Danger Inventory

A. Fire Danger Rating Areas

As part of the Units' existing NFMAS planning effort, the URIFMU has already defined four Fire Management Zones (FMZ) which represent the general fuel and topographic features of the unit. The four FMZ's are Grass/Sage, Pinon/Juniper, Mt. Brush/Aspen, and Timber. For the purpose of creating Fire Danger Rating Areas (FDRA) for this preparedness plan, these FMZ's have been combined to create three FDRA's for the unit. They are identified as Grass/Sage/PJ, Mt. Brush/Aspen, and Timber. These areas were defined due to their unique fuel, weather, topography, and fire history characteristics. The combination of the Grass/Sage and Pinon/Juniper FMZ's in particular was done to a) account for the fact that these fuel types are often intermingled, and b) to give a better indicator of long-term drought and seasonal drying trends than what is evident by using Grass/Sage alone.

1. Grass/Sage/PJ

a. Location/Topography: The Grass/Sage/PJ FDRA is found throughout the UCRIFMU, however the heaviest concentrations are located towards the western 1/3 of the unit. This FDRA is found primarily in low elevation valley bottoms where the valley's themselves are mostly open and generally accessible to vehicle travel. A significant amount of the Grass/Sage/PJ FDRA however, is composed of transition areas where valley floor rises to meet the foothills that rise to mesa tops, and these areas are generally steep, rocky, and usually inaccessible by vehicle or in some cases even foot travel. The bulk of the Grass/Sage/PJ FDRA lies between 4,300 and 7,500 ft. elevation and its total cover within the unit is 2,264,922 acres or about 3,539 square miles.

b. Fuels: Consist largely of forbs, perennial grasses, western annual grasses, sagebrush, and pinyon-juniper. The fuels are best represented by NFDRS fuel models T-Sagebrush/Grass, and H-Short-Needle Pine/Normal Dead. Most large fires in this area are the result of wind-driven events moving through light ground fuels and/or pinyon-juniper fuels.

c. Weather: Hot and dry weather typically dominates the Grass/Sage/PJ FDRA during fire season. Temperatures rise to the high 90's to over 100 degrees on a regular basis while relative humidity in the teens is common. Summer weather patterns that affect the area are westerly and southwesterly flows as well as the sometimes' dominant "Four Corners High". Westerly flows generally bring low-pressure systems or upper level disturbances through the area with enough energy and moisture to initiate thunderstorm activity and erratic winds but without significant precipitation. Southwesterly flows typically bring monsoonal moisture into the region from Mexico. Large-fire potential typically remains high from late spring until the latter half of the monsoon season, typically late May through mid July. While fire

frequency may increase due to additional thunderstorm activity brought on by the monsoon, fire growth potential typically declines until the monsoons end. The Four Corners High refers to the tendency for high-pressure systems to form over the desert southwest (Utah, Colorado, Arizona, New Mexico), which during the fire season, creates stable yet dry conditions over the area. Small disturbances are often shunned by the high and are thus kept from bringing moisture in the form of precipitation or even cloud cover into the area dominated by the high. This persistent clear, warm condition prolongs and exacerbates the drying of fuels throughout the area. After the monsoon season subsides, a second drying period begins around mid August and lasts until winter weather arrives in late October.

d. Fire Occurrence: Fire occurrence records are available for the Grass/Sage/PJ FDRA for years 1948, 1955, 1962, 1963, 1968, 1969, 1971, 1974-2001. During this time there have been 2,149 action fires burning approximately 81,148 acres within the Grass/Sage/PJ FDRA. Approximately 68% of these were lightning caused with the rest human caused.

2. Mt. Brush/Aspen

a. Location/Topography: The Mt. Brush/Aspen FDRA is also found throughout the UCRIFMU, however the heaviest concentrations are located in the middle 1/3 of the unit. This FDRA is found primarily in mid-elevation foothills and transition zones where brush cover gives way to high elevation timber. Some of the foothills are rolling and moderately sloped allowing some access to vehicle travel, however much of the area is broken and steep. A significant amount of the Mt. Brush/Aspen FDRA is found in transition zones where the foothills and cliff-faces rise to meet the mesa tops, thus only limited vehicle access is available along draw bottoms and ridge lines while the majority of the area is usually inaccessible by vehicle or in some cases even foot travel. The bulk of the Mt. Brush/Aspen FDRA lies between 6,000 and 8,500 ft. elevation and its total cover within the unit is 2,048,119 acres or about 3,200 square miles.

b. Fuels: Consist largely of forbs, perennial and western annual grasses, Gambel oak, serviceberry, bitter brush, mountain mahogany, and aspen. The shrub fuels are best represented by NFDRS fuel model F-Intermediate Brush, while the aspen is best represented by fuel model R-Hardwoods (summer). Most large fires in this area are the result of wind-driven events, however the steep slopes also allow for rapid fire spread without high winds. Whether topography or wind driven, most large fires tend to move initially through brush fuels until they eventually reach higher elevations where they often encounter changes in weather, fuel type and moisture condition.

c. Weather: Hot and dry weather typically dominates the Mt. Brush/Aspen FDRA during fire season but these conditions are often tempered in the higher elevations. Temperatures rise to the high nineties and while relative humidity in the teens to low twenties is most common, single digit values have been know to occur. General summer weather patterns are the same as those described for the Grass/Sage/PJ FDRA above. Large-fire potential typically remains high from mid June through mid July and while fire frequency may increase due to additional thunderstorm activity brought on by the monsoon, fire growth potential typically declines

until the monsoons end. After the monsoon season subsides, a second drying period usually begins in late August and lasts until winter weather arrives in late October.

d. Fire Occurrence: Fire occurrence records are available for the Mt. Brush/Aspen FDRA for years 1980-2001. During this time there have been 1,040 action fires burning approximately 13,261 acres within the Mt. Brush/Aspen FDRA. Approximately 70% of these were lightning caused with the rest human caused.

3. Timber

a. Location/Topography: The Timber FDRA is also found throughout the UCRIFMU, however the heaviest concentrations are located in the eastern 1/3 of the unit. This FDRA is found primarily in high elevations where brush cover has become mostly timber and alpine. The Timber FDRA is made up of both high-elevation mesas (Grand Mesa, Flat Tops) as well as steep mountain peaks (Sawatch and Gore Ranges, Maroon Bells, etc.). Mesas are generally accessible by vehicle (except in wilderness areas) and foot and horse travel are mostly good throughout. The steeper peaks are extremely rugged and travel is difficult at best and only possible on foot or horse throughout most of the mountain ranges, regardless of wilderness designation. The bulk of the Timber FDRA lies between 8,500 and 11,000 ft. elevation and its total cover within the unit is 2,045,962 acres or about 3,197 square miles.

b. Fuels: Consist primarily of alpine meadows, lodgepole pine, Englemann and Colorado blue spruce, sub-alpine fir, and nominal amounts of Douglas-fir. Large volumes of dead fuel are often found as well, which have resulted from natural attrition, periodic wind-throw and periodic insect infestations. Fuels are best represented by NFDRS fuel model G-Short-Needle Pine (Heavy Dead). Large fires have rarely been encountered in this FDRA, however during periods of extended drought, the potential does exist to experience large-scale fires. Some of these may start within the FDRA but many will have started in brush fuels at lower elevations and then move upslope into the Timber FDRA.

c. Weather: Warm and dry weather typically dominates the Timber FDRA during fire season although precipitation tends to favor this area over the other two FDRA's due to its' elevation, which can cause disturbances to release moisture in order to make their way over the mountains. Temperatures are typically in the eighties and relative humidity in the teens to low twenties, however single digit values can be reached in extreme years. Summer weather patterns are similar to those described for the other FDRA's with some exceptions. Low pressure systems which initiate thunderstorm activity and winds without significant precipitation in Grass/Sage/PJ and Mt. Brush/Aspen FDRA's may release moisture over portions of the Timber FDRA in order to make their way over the higher terrain. During the monsoon period, it is possible for snow to accumulate at higher elevations in the Timber FDRA, even during the summer. Large-fire potential is typically moderate during the pre-monsoon lightning season (June to mid-July) due to snow pack continuing to melt and fuel moistures typically remaining high right up until the arrival of the monsoons. After the monsoon season subsides, a second and more severe drying period begins during which large fire potential remains high from late August until arrival of winter weather in late October.

d. Fire Occurrence: Fire occurrence records are available for the Timber FDRA for years 1976, 1981-2001. During this time there have been 532 action fires burning approximately 10,371 acres within the Timber FDRA. Approximately 36% of these were lightning caused with the rest human caused.

FDRA Characteristics Summary Table

	Grass/Sage/PJ	Mt. Brush/Aspen	Timber
Dominant NFDRS Fuel Model	H-Short-Needle Pine (Normal Dead)	F-Intermediate Brush	G-Short-Needle Pine (Heavy Dead)
Secondary NFDRS Fuel Model	T-Sagebrush, Grass	R-Hardwoods (summer)	N/A
Avg. Annual Precipitation	13 in.	18 in.	22 in.
Bottom Elevation	~4,300	~6,000	~8,500
Top Elevation	~7,500	~8,500	11,000+
Acres	2,264,922	2,048,119	2,045,962
Avg. # Fires/yr	61	47	24
Avg. Fire size	37.8 ac	12.8 ac	19.5 ac
Example of Potential Large Fire Size	Hatchet – 5,580 ac	Coal Seam – 12,209 ac	Big Fish - 17,056 ac
% Lightning Cause	68%	70%	36%
Administrative Units Best Represented By the FDRA	Grand Junction BLM Colorado Nat. Mt.	Glenwood Springs BLM Rifle RD Sopris RD	Aspen RD Blanco RD Dillon RD Holy Cross RD Eagle RD Grand Valley RD
Colorado Counties Best Represented By the FDRA	Mesa (66%)	Garfield (42%) Rio Blanco (58%) Pitkin (55%)	Eagle (41%) Summit (100%)

B. Weather Stations

1. Weather Station Descriptions

The Forest Service and BLM own and operate a total of 13 weather stations within the UCRIFMU, 12 are Remote Automated Weather Stations (RAWS) and 1 is a manual weather station. These stations are described in the table below.

Fire Weather Stations - UCRIFMU

Name	Station ID	Type	Primary NFDRS Fuel Model	Secondary NFDRS Fuel Model	First Data Year	Elevation
Dead Horse	051404	RAWS	G	---	1984	8960
Rifle	051504	RAWS	H	F	1984	6120
Crown	051506	RAWS	F	---	1991	8340
Demaree	051507	RAWS	H		1995	7460
Storm King	051508	RAWS	F	G	1992	8640
Dowd Jct	051606	RAWS	G	---	1986	8998
Gypsum	051607	RAWS	H	---	1991	7340
Soda Creek	051703	RAWS	G	---	1986	9600
Pine Ridge	052407	RAWS	H	F	1973	6660
Walker Field	052408	Manual	T	---	1974	4840
Jacks Canyon	052409	RAWS	T	---	1991	7660
Little Dolores	052410	RAWS	T	F	1995	6800
McClure Pass	052810	RAWS	G	---	1985	8980

* Fuel Models: F – Intermediate Brush
G – Short-Needle Pine (Heavy Dead)
H – Short-Needle Pine (Normal Dead)
T – Sagebrush & Grass

2. Special Interest Groups (SIGS)

For each Fire Danger Rating Area, a specific group of weather stations are selected that best represent that FDRA. This group is called a Special Interest Group or SIG. To establish SIG's, we look at the representative area for each weather station with significant portions of a given FDRA, thus weather stations with only nominal area in a given FDRA are not considered. We have defined "significant portions" as those stations representing more than 100,000 acres of an FDRA. In addition, those weather stations that are more than 1,000 ft above or below the elevational range for a given FDRA (see FDRA Characteristics Table above) were not considered representative of that FDRA and were not included in the SIG. Three SIG's, one for each FDRA, were defined (see Staffing Class tables below). These have been created in WIMS and will need to be maintained over the life of this plan.

Breakpoint Determination

Breakpoints are determined for Staffing Class and Adjective Fire Danger Rating. Preparedness Level is determined from Staffing Class and Dispatch Level is determined from Preparedness, thus breakpoints are not required for these ratings.

A. Staffing Class Breakpoints

Staffing Class breakpoints are thresholds at which the appropriate NFDRS index, in this case ERC, correlates to a change in historical fire activity. Using data from select weather stations

representing the individual FDRA's, a statistical analysis of historical weather and fire occurrence is performed in the Fire Family Plus software package to establish the Staffing Class breakpoints.

1. Staffing Class Weighting Factors

Because some weather stations represent larger areas within each FDRA than others, weights are assigned to each of the weather stations according to percent of area within the FDRA that they represent in order to increase or decrease the influence of that station on the overall fire danger rating. The table below illustrates the calculations used to determine weighting factors for the weather stations within each SIG that are used in determining Staffing Class for each FDRA.

Staffing Class Weighting Factor Calculations – Grass/Sage/PJ FDRA

STATIONS REPRESENTING Grass/Sage/PJ SIG	FUEL MODEL	ACRES OF Grass/Sage/PJ FDRA REPRESENTED BY THIS STATION	% OF TOTAL (2,198,250)
Walker Field (052408)	T	445,066	20
Jacks Canyon (052409)	T	434,208	20
Little Dolores (052410)	T	313,532	14
Rifle (051504)	H	287,763	13
Pine Ridge (052407)	H	350,529	16
Gypsum (051607)	H	367,152	17

Staffing Class Weighting Factor Calculations – Mt. Shrub/Aspen FDRA

STATIONS REPRESENTING Mt. Shrub/Aspen SIG	FUEL MODEL	ACRES OF Mt. Shrub/Aspen FDRA REPRESENTED BY THIS STATION	% OF TOTAL (1,770,055)
Rifle (051504)	F	254,790	14
Crown (051506)	F	159,617	10
Storm King (051508)	F	533,786	30
Dowd Jct. (051606)	F	175,569	10
McClure Pass (052810)	F	308,805	17
Pine Ridge (052407)	F	183,978	10
Little Dolores (052410)	F	153,510	9

Staffing Class Weighting Factor Calculations – Timber FDRA

STATION REPRESENTING Timber SIG	FUEL MODEL	ACRES OF Timber FDRA REPRESENTED BY THIS STATION	% OF TOTAL (1,825,114)
McClure Pass (052810)	G	644,518	35
Storm King (051508)	G	105,455	6
Soda Creek (051703)	G	390,016	21
Dead Horse (051404)	G	276,293	15
Dowd Jct. (051606)	G	408,832	23

2. Staffing Class Breakpoint Determination

The Staffing Class Breakpoints for each FDRA are determined using the following criteria:

		Breakpoint for this class defined by smaller of:		
Staffing Class	**Description**	**Fire Days**	**Multiple Fire Days**	**Large Fire Days**
1	Little to no fire activity	N/A	N/A	N/A
2	Few fires, mostly small	Noticeable increase	---	---
3	Some fires, mostly small	50th percentile	50th percentile	---
4	Several fires, some large	---	80th percentile	50th percentile
5	Several fires, several large	---	---	80th percentile

Using the above criteria, the breakpoints shown below were established using Fire Family+ (Appendix B).

Staffing Class Breakpoint Determinations using ERC – UCRIFMU

	Staffing Class				
	1	**2**	**3**	**4**	**5**
Grass/Sage/PJ FDRA	0-13	14-22	23-29	30-34	35+
Mt. Shrub/Aspen FDRA	0-13	14-21	22-30	31-43	44+
Timber FDRA	0-38	39-51	52-60	61-67	68+

B. Adjective Fire Danger Rating Breakpoints

Two NFDRS components are used to compute the Adjective Rating, these are Energy Release Component (ERC) and Ignition Component (IC). Unlike the Staffing Class where breakpoints were determined according to analysis of fire occurrence, the Adjective Rating breakpoints are determined using strict percentile classes. The UCRIFMU has determined that the Forest Service standard breakpoints for Adjective Rating (90th & 97th percentiles) are more appropriate for our terrain and fuel types than the BLM standard (80th & 95th percentile), hence the 90th & 97th percentile values for ERC will define the Very High and Extreme categories along with consideration of Ignition Component as described in the table below.

1. Adjective Fire Danger Rating Weighting Factors

The Adjective Rating is calculated using weighting factors that adjust the influence of individual weather stations based on the percentage area for that particular FDRA contained within the stations' representative area. The same SIGs and weighting factors used to calculate Staffing Class are also used to calculate Adjective Rating for each FDRA.

2. Adjective Fire Danger Rating Determination

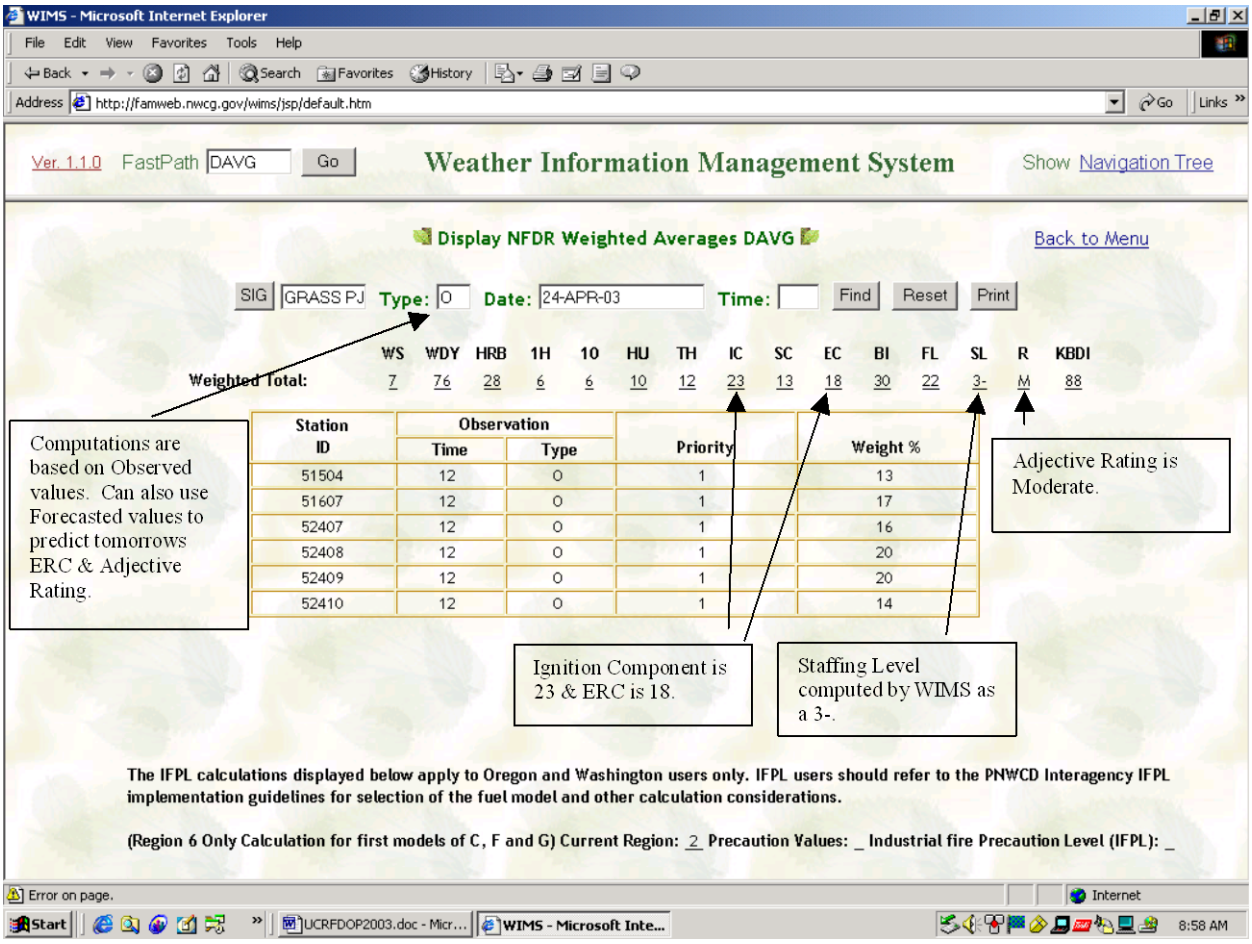
Based on the ERC value, WIMS makes its' own determination of Staffing Level (not to be confused with Staffing Class) by dividing the spectrum of potential ERC values into five

categories. Staffing Levels 4 & 5 are equivalent to the 90th and 97th percentile break points where as Staffing Levels 2 & 3 are approximately equal to the 30th, and 60th percentiles respectively and Staffing Level 1 is anything below the 30th percentile. The "+" & "-" signs simply indicate if the computed value is at the very low or very high end of the range. The WIMS system automatically calculates the Adjective Rating using the computed Staffing Level (computed using ERC for the SIG) and the computed value for Ignition Component using the table below.

Adjective Fire Danger Rating Determinations

SIG Staffing Level Value (Based on ERC)	Adjective Fire Danger Rating				
1-, 1, 1+	**L**	**L**	**L**	**M**	**M**
2-, 2, 2+	**L**	**M**	**M**	**M**	**H**
3-, 3, 3+	**M**	**M**	**H**	**H**	**VH**
4-, 4, 4+	**M**	**H**	**VH**	**VH**	**E**
5	**H**	**VH**	**VH**	**E**	**E**
Ignition Component	0-20	21-45	46-65	66-80	80-100

Below is a sample screen from WIMS showing the Calculated ERC, Staffing Level, and resulting Adjective Rating for the Grass/Sage/PJ SIG group.



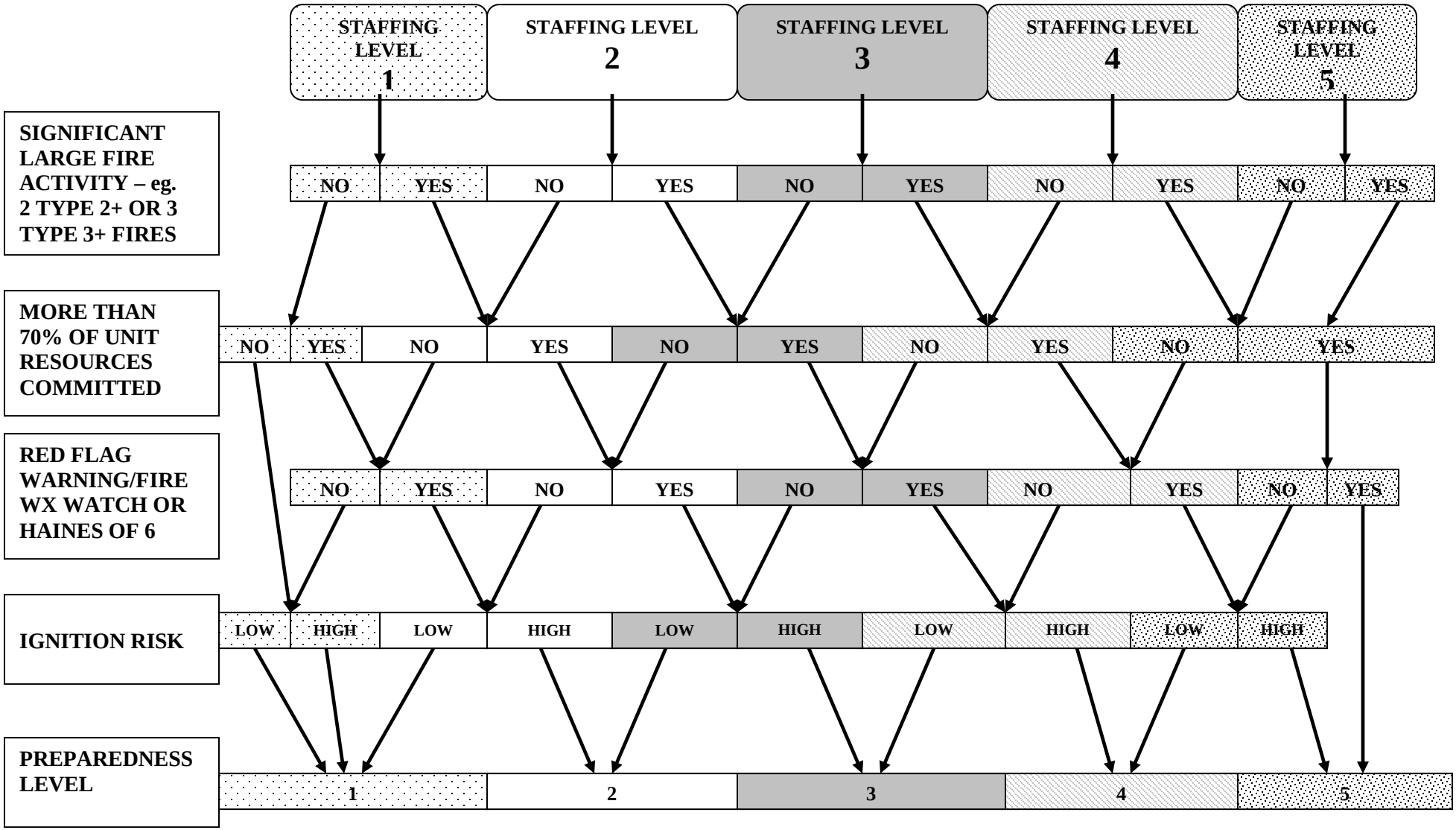
Preparedness Level

A Preparedness Level Worksheet will be used to set the daily Preparedness Level and compute the 3-day running average. The resultant Preparedness Levels for the UCRIFMU will be broadcast in conjunction with the morning information report and documented on the daily resource status report. Instructions are found on the following page.

A. Preparedness Level Worksheet

1	**Enter numerical average of Staffing Class for the 3 FDRA's here** → (round fractions)	
2	**Run through Preparedness Level Flowchart and record answers below:**	
	Fire Business Indicators	
	Significant Large Fire Activity – eg. 2 Type II+ or 3 Type 3+ Fires	
	More than 70% of Unit Resources Committed	
	Red Flag Warning/Fire Wx Watch, or Haines of 6	
	Ignition Risk	
3	**Record Today's Preparedness Level Below and compute 3 day average:**	
Today's Date_____	**Today's Preparedness Level is:**	
	Yesterdays' Preparedness Level:	
	Day Before Yesterdays' Preparedness Level:	
	Enter 3-day Average Here:	

B. Preparedness Level Flowchart



C. Preparedness Level Worksheet Instructions

1. **Enter Staffing Class:** Enter the numerical average of the Staffing Classes from each of the FDRA's. Do this by adding the Staffing Class values and dividing by three (see Note below). Round fractions to nearest whole number. Value should be between 1 & 5.
    - **NOTE:** During early spring or late fall, WIMS does not recognize the fact that snow covers much of the Timber FDRA, thus it will still compute values that indicate there is fire potential in the Timber FDRA even though that is not the case. To account for this, enter 1 as the PL value for the Timber SIG in the Staffing Class average until Pre-green or Green-up and again after significant snow arrives in late fall (i.e. won't melt until spring).
2. **Run Through Preparedness Level Flowchart:** Definitions and aids to evaluating the fire business indicators are found below. Use your answers to guide you through the flowchart to determine today's Preparedness Level:
    a. *Significant Large Fire Activity:* Is defined as any fire or fires that require the commitment of a large percentage of available suppression resources and/or time commitment by fire management staff. General rule for when this unit reaches the threshold for large fire activity is when there are 2 Type II-I fires or 3 Type III fires on unit. The evaluator however, may answer "Yes" or "No" based on their own determination that current large fire activity is becoming over-taxing on managements' ability to provide oversight and/or availability of suppression resources for IA.
    b. *More than 70% of Unit Resources Committed:* 70% is generally a good indicator of when resource commitments are high, however it is not a hard & fast rule, thus the evaluator may answer "Yes" when actual commitments are lower than 70% based on their own determination that current crew commitments to prescribed fire, fire suppression, or off-unit assignments has depleted the available work force to a level that is inadequate to meet the potential needs of the unit.
    c. *Ignition Risk:* Is "High" if predicted Lightning Activity Level (LAL) is 2 or higher and/or if special events, hunting seasons, holidays or similar factors make risk of human ignition higher than what is considered normal.
    d. *Red Flag Warning, Fire Weather Watch, or Haines of 6:* Answer "Yes" anytime these advisories are in place or expected to be put in place.
3. **Record Today's Preparedness Level and Compute 3-day Average:**
    a. Enter Today's date and Preparedness Level as determined from the flowchart.
    b. **Enter Yesterday's Preparedness Level.**
    c. **Enter Day Before Yesterday's Preparedness Level.**
    d. **Compute 3-day Average PL,** by adding PL's from today, yesterday, & day before yesterday and dividing by 3. The Preparedness Level scale goes from 1 to 5, so if the result is greater than 5, simply enter 5 to indicate the highest Preparedness Level is prescribed.

Dispatch Level

Agency personnel use the dispatch level to assign initial attack resources based on agency "run cards." The Dispatch Level is determined by the Preparedness Level according to the following table.

Dispatch Level Determination – UCRIFMU

Preparedness Level	**1**	**2**	**3 - 4**	**5**
Dispatch Level	**Low**	**Moderate**	**High**	**Extreme**

Daily Preparedness Level Procedures

The following daily procedures should be followed regardless of the preparedness level.

Daily Procedures	Responsibility
Consult with Agency Administrator and AFMO Operations as needed regarding current fire danger, preparedness level, and resource status.	Unit FMO
Confirm daily Preparedness and Dispatch Levels with GJAC.	AFMO Operations
Provide further guidance to GJAC, Zones, and Agency Administrators as needed regarding preparedness actions.	AFMO Operations
Determine the preparedness, dispatch, and adjective fire danger ratings for the day and broadcast them in the morning information report and post on GJAC web-page.	GJAC Manager
Ensure dispatch systems are functional and that weather information is managed properly in WIMS.	GJAC Manager
Ensure that pilots and air-support resources are aware of the Preparedness, Dispatch, and Adjective Fire Danger levels.	GJAC Manager
Ensure that firefighters are aware of the Preparedness, Dispatch, and Adjective Fire Danger levels.	Zone FMO's
Ensure public display fire prevention signs reflect the current Adjective Fire Danger Rating.	Agency Administrator(s) or designees

A. Suggested Planning Level Actions

Planning Level actions are guidelines for agency personnel to refer to when Planning Level thresholds are reached. They are discretionary in nature and usually will require a consensus between interagency personnel prior to implementation.

Preparedness Level 1

Management Direction	Responsibility
Analyze preparedness parameters to insure accuracy.	AFMO-Operations
Consult with Zone FMO's & GJAC Manager to consider release of unit resources for details and training opportunities.	AFMO-Operations
Validate prescribed burn projects in prescription and that adequate resources are available to execute	Zone FMO's
Consider release of resources for out-of-area fire assignments	AFMO-Operations & Zone FMO's
Evaluate Work/Rest needs of crews. Insure days off are taken and request relief if needed.	Zone AFMO's, Module Leaders

Preparedness Level 2

All items identified at lower preparedness levels are occurring plus the following:

Management Direction	Responsibility
Initiate Monday/Friday morning unit conference calls (0900)	AFMO-Operations
Alert public affairs staff. Coordinate news releases and fire information as appropriate.	GJAC Manager
Maintain communication with sub-units regarding needs (prevention, preparedness, detection and suppression)	Zone FMO's /Dispatch
Identify and fill vacancies for Dispatch and Preparedness resources such as EDRC, ENGB, ICT3, HECM, FFT1, FFT2, etc.	AFMO-Operations/ Zone FMO's/GJAC Manager/Agency Administrator(s)
Notify adjacent centers and RMACC of ongoing, expected activity levels	Dispatch
If Preparedness Level is decreasing, consult with Zone FMO's/GJAC Manager and consider release of unit personnel for off-unit assignments.	AFMO-Operations

Preparedness Level 3

All items identified at lower preparedness levels are occurring plus the following:

Management Direction	Responsibility
Develop constraints for contractor and permittee activities as deemed necessary.	Agency Administrator(s)/Zone FMO's
Review geographical and national preparedness levels and evaluate need to modify/suspend certain local prescribed fire activities.	Unit FMO/AFMO-Operations
Evaluate the need for additional Unit/Zone level extended attack positions (ICT3, SOF2, FBAN, DIVS, EDRC, etc).	AFMO-Operations, Zone FMO's/Agency Administrator(s)/ Dispatch
Evaluate the need for Stage I Fire Restrictions.	Unit FMO/Agency Administrator(s)/Zone FMO's
Consider pre-positioning resources and/or extended standby	AFMO-Operations/ Zone FMO's
Evaluate need to communicate with local MAC group members.	Unit FMO
Consider need for additional resources – severity funding.	Unit FMO/Agency Administrator(s)
Secure availability information from all agency employees.	Dispatch
Evaluate need to increase staffing at Dispatch and Zone level (eg. office help, cache help, etc).	Zone FMO's/Dispatch
Consider pre-positioning of IA resources as appropriate.	AFMO-Operations/ Zone FMO's
Consider extended stand-by and/or increased staffing levels during periods of potentially high fire activity. Also consider suspension of project work away from high fire danger areas.	AFMO-Operations/ Zone FMO's
Consider increased patrol in high fire danger areas such as high-use recreation areas.	Zone FMO's
Re-evaluate range of appropriate management response(s) in A, B, C & D Zones. (i.e. are more aggressive or less aggressive actions appropriate given changing environmental conditions?)	Agency Administrator(s)/Unit FMO
Provide AFMO-Operations with feedback regarding unique/unexpected fire behavior and severity conditions and the need to increase IA capabilities.	Zone FMO's/Module Leaders
If Preparedness Level is decreasing, consult with Zone FMO's/GJAC Manager and consider release of pre-positioned or detailed personnel.	AFMO-Operations

Preparedness Level 4

All items identified at lower preparedness levels are occurring plus the following:

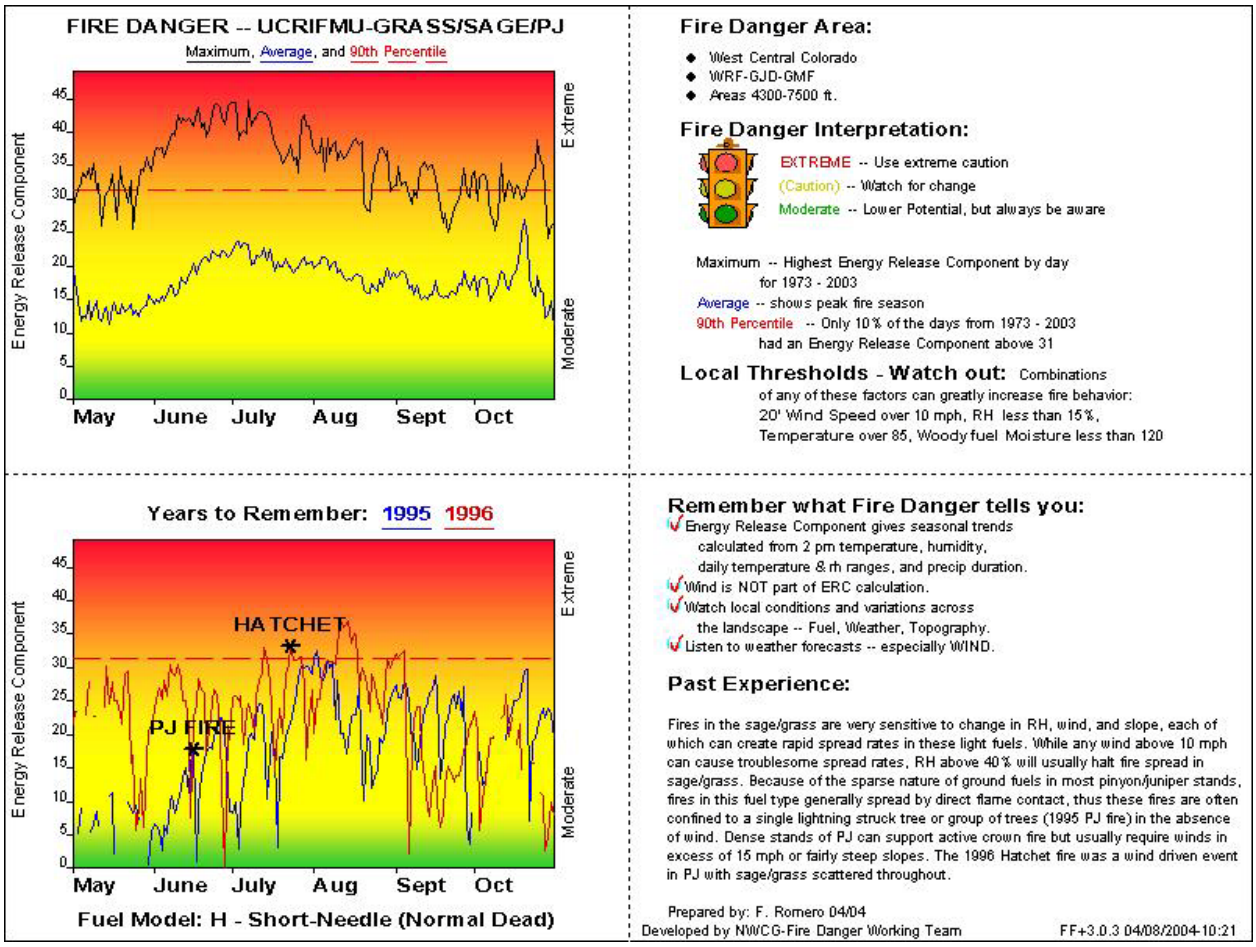
Management Direction	Responsibility
Issue guidance to agency employees indicating severity of the season and increased need and availability for fire support personnel.	Agency Administrator(s)
Evaluate need to increase staffing in Dispatch and Zone/Unit level (eg. Unit level management assistance, Zone level management assistance, dispatch help, etc.)	Unit FMO/Dispatch
Conference calls between Dispatch and RMACC and/or Unit level FMO and COSO/Regional Office.	Dispatch/Unit FMO
Consider activation of local area MAC Group.	Unit FMO/Zone FMO's/GJAC Manager
Coordinate severity request within interagency staff group.	Unit FMO/Agency Administrator(s)
Review state of readiness of initial attack resources. Evaluate equipment readiness, fatigue of staff members and compliance with work/rest guidelines.	Zone FMO's
Evaluate current and proposed prescribed fire ignitions and fire-use activity to ensure that staffing needs can be accomplished with current resource commitments.	FMO/Agency Administrator(s)
Obtain State FMO (BLM) and/or Region 2 (FS) concurrence for any new prescribed fire or fire use activity.	FMO/Agency Administrator(s)
Resource Advisors for all sub-Units on two hour call.	Agency Administrator(s)
Consider requesting IMT2 to manage initial attack needs.	Unit FMO/Agency Administrator/MAC group
Evaluate needs for Stage I or higher fire restrictions.	MAC group
Initiate daily unit conference calls (0900).	AFMO-Operations, Dispatch, Zone FMO's

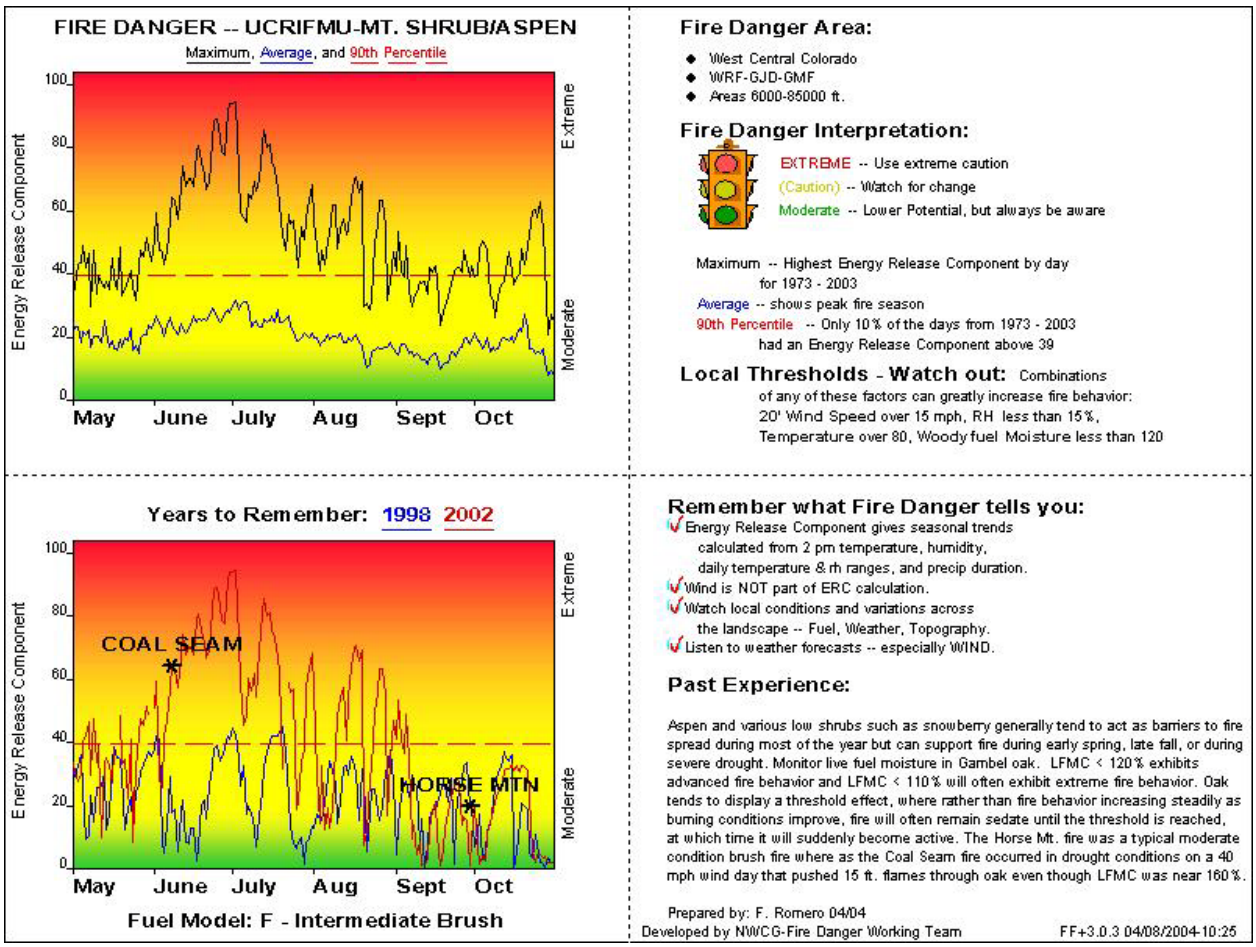
Preparedness Level 5

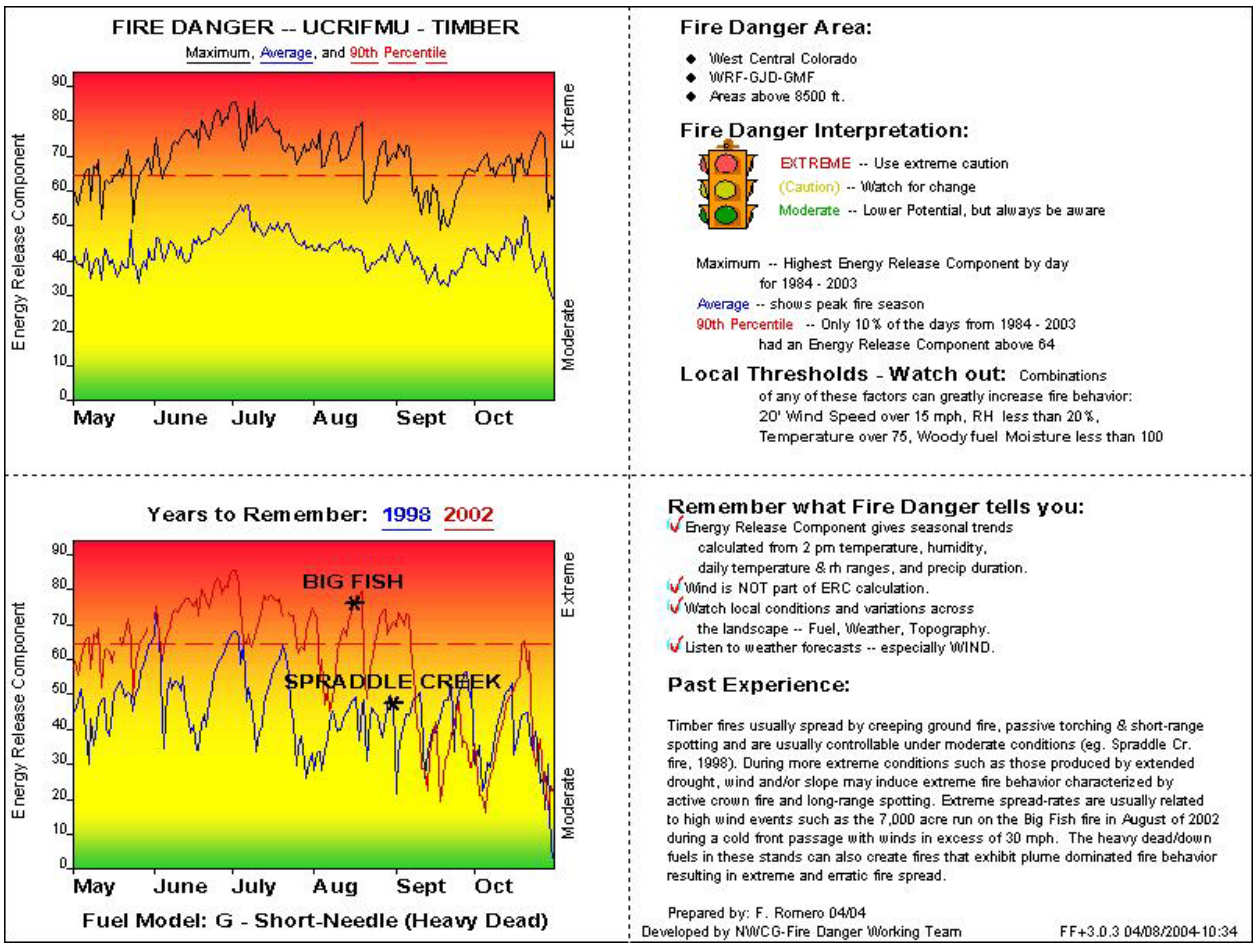
All items identified at lower preparedness levels are occurring plus the following:

Management Direction	Responsibility
Do not permit additional prescribed fire project implementation. Require Zones with ongoing prescribed fire activity to assess their ability to maintain projects within their MMA.	Unit FMO/Agency Administrator(s)
Evaluate current level of fire-use activity and suspend additional fire-use declarations if staffing needs cannot be met with current resource commitments.	FMO/Agency Administrator(s)
Obtain State FMO (BLM) and/or Region 2 (FS) concurrence as well as National Level concurrence for any new fire-use activity.	Unit FMO/Agency Administrator(s)
Evaluate needs for Stage I or higher fire restrictions and/or area closures.	MAC group

Appendix A
Fire Danger Pocket Cards




FIRE DANGER -- UCRIFMU-MT. SHRUB/ASPEN
Maximum, Average, and 90th Percentile
Energy Release Component
100
80
60
40
20
0
May
June
July
Aug
Sept
Oct
Extreme
Moderate
Fire Danger Area:
West Central Colorado
WRF-GJD-GMF
Areas 6000-85000 ft.
Fire Danger Interpretation:
EXTREME -- Use extreme caution
(Caution) -- Watch for change
Moderate -- Lower Potential, but always be aware
Maximum -- Highest Energy Release Component by day for 1973 - 2003
Average -- shows peak fire season
90th Percentile -- Only 10% of the days from 1973 - 2003 had an Energy Release Component above 39
Local Thresholds - Watch out: Combinations of any of these factors can greatly increase fire behavior: 20' Wind Speed over 15 mph, RH less than 15%, Temperature over 80, Woody fuel Moisture less than 120
Years to Remember: 1998 2002
COAL SEAM
HORSE MTN
Fuel Model: F - Intermediate Brush
Remember what Fire Danger tells you:
Energy Release Component gives seasonal trends calculated from 2 pm temperature, humidity, daily temperature & rh ranges, and precip duration.
Wind is NOT part of ERC calculation.
Watch local conditions and variations across the landscape -- Fuel, Weather, Topography.
Listen to weather forecasts -- especially WIND.
Past Experience:
Aspen and various low shrubs such as snowberry generally tend to act as barriers to fire spread during most of the year but can support fire during early spring, late fall, or during severe drought. Monitor live fuel moisture in Gambel oak. LFMC < 120% exhibits advanced fire behavior and LFMC < 110% will often exhibit extreme fire behavior. Oak tends to display a threshold effect, where rather than fire behavior increasing steadily as burning conditions improve, fire will often remain sedate until the threshold is reached, at which time it will suddenly become active. The Horse Mt. fire was a typical moderate condition brush fire where as the Coal Seam fire occurred in drought conditions on a 40 mph wind day that pushed 15 ft. flames through oak even though LFMC was near 160%.
Prepared by: F. Romero 04/04
Developed by NWCG-Fire Danger Working Team
FF+3.0.3 04/08/2004-10:25


FIRE DANGER -- UCRIFMU - TIMBER
Maximum, Average, and 90th Percentile
Energy Release Component
Extreme
Moderate
May June July Aug Sept Oct
Fire Danger Area:
West Central Colorado
WRF-GJD-GMF
Areas above 8500 ft.
Fire Danger Interpretation:
EXTREME -- Use extreme caution
(Caution) -- Watch for change
Moderate -- Lower Potential, but always be aware
Maximum -- Highest Energy Release Component by day for 1984 - 2003
Average -- shows peak fire season
90th Percentile -- Only 10 % of the days from 1984 - 2003 had an Energy Release Component above 64
Local Thresholds - Watch out: Combinations of any of these factors can greatly increase fire behavior: 20' Wind Speed over 15 mph, RH less than 20 %, Temperature over 75, Woody fuel Moisture less than 100
Years to Remember: 1998 2002
BIG FISH
SPRADDLE CREEK
Fuel Model: G - Short-Needle (Heavy Dead)
Remember what Fire Danger tells you:
Energy Release Component gives seasonal trends calculated from 2 pm temperature, humidity, daily temperature & rh ranges, and precip duration.
Wind is NOT part of ERC calculation.
Watch local conditions and variations across the landscape -- Fuel, Weather, Topography.
Listen to weather forecasts -- especially WIND.
Past Experience:
Timber fires usually spread by creeping ground fire, passive torching & short-range spotting and are usually controllable under moderate conditions (eg. Spraddle Cr. fire, 1998). During more extreme conditions such as those produced by extended drought, wind and/or slope may induce extreme fire behavior characterized by active crown fire and long-range spotting. Extreme spread-rates are usually related to high wind events such as the 7,000 acre run on the Big Fish fire in August of 2002 during a cold front passage with winds in excess of 30 mph. The heavy dead/down fuels in these stands can also create fires that exhibit plume dominated fire behavior resulting in extreme and erratic fire spread.
Prepared by: F. Romero 04/04
Developed by NWCG-Fire Danger Working Team
FF+3.0.3 04/08/2004-10:34

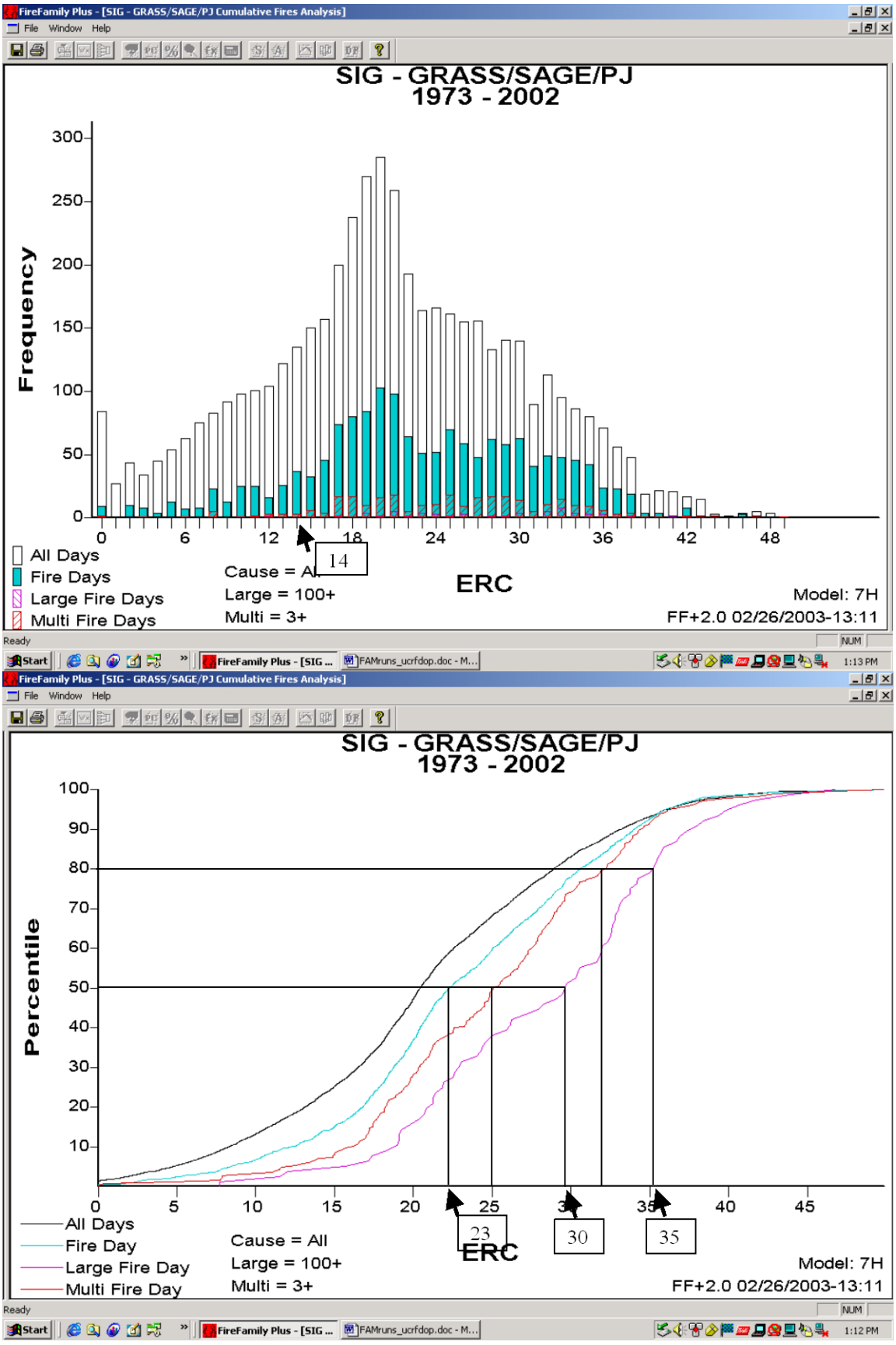
Appendix B
Fire Family Plus Analysis

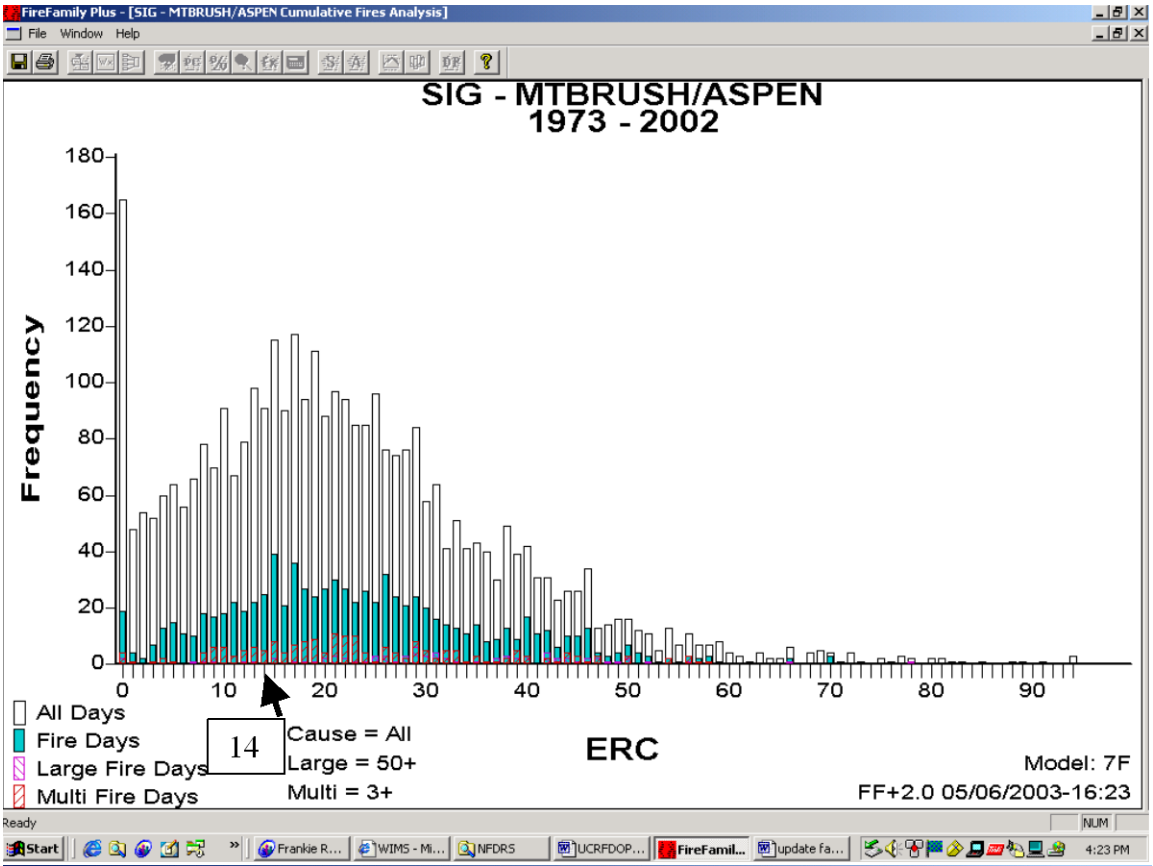
Assumptions:

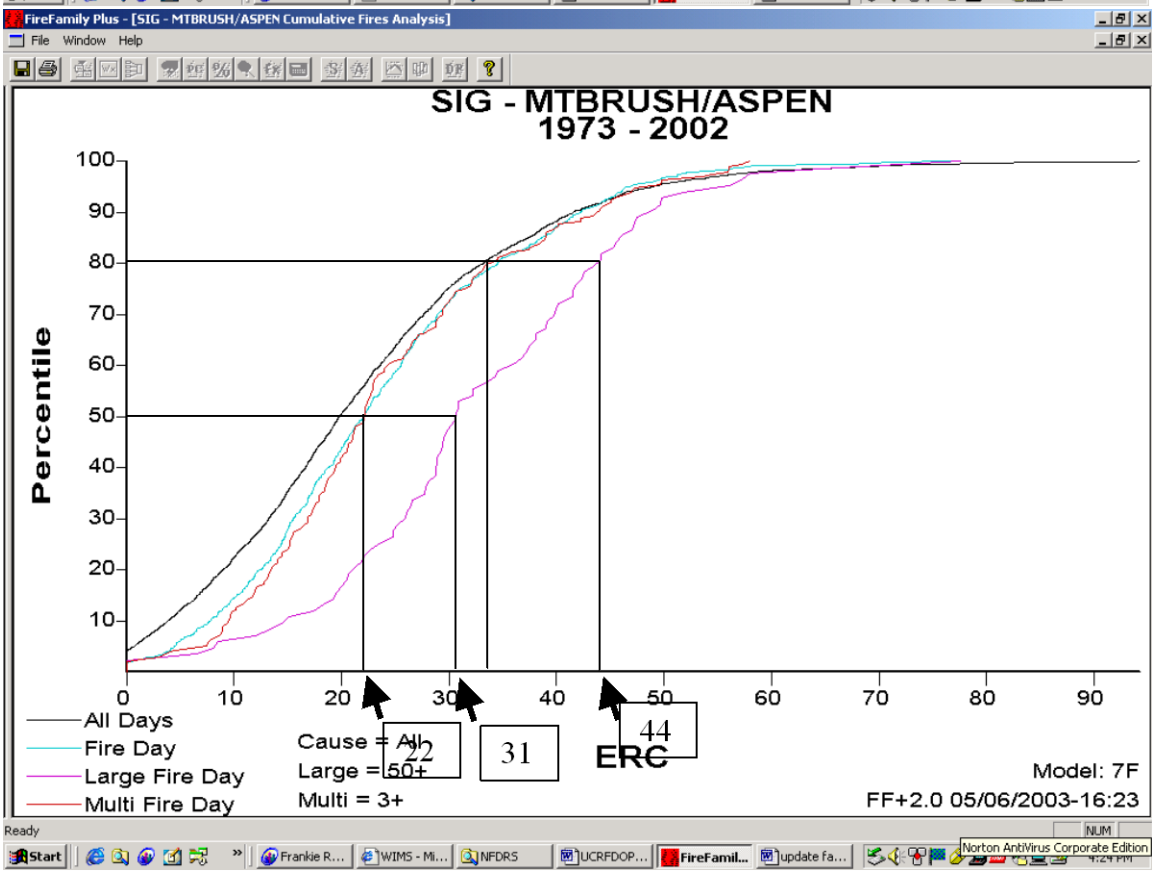
Large fire in Grass/Sage/PJ is 100 acres
Large fire in Mt. Shrub/Aspen is 50 acres
Large fire in Timber is 10 acres
Multiple fire day is any day with 3 fires or more
Core fire season runs from May 1 to October 31

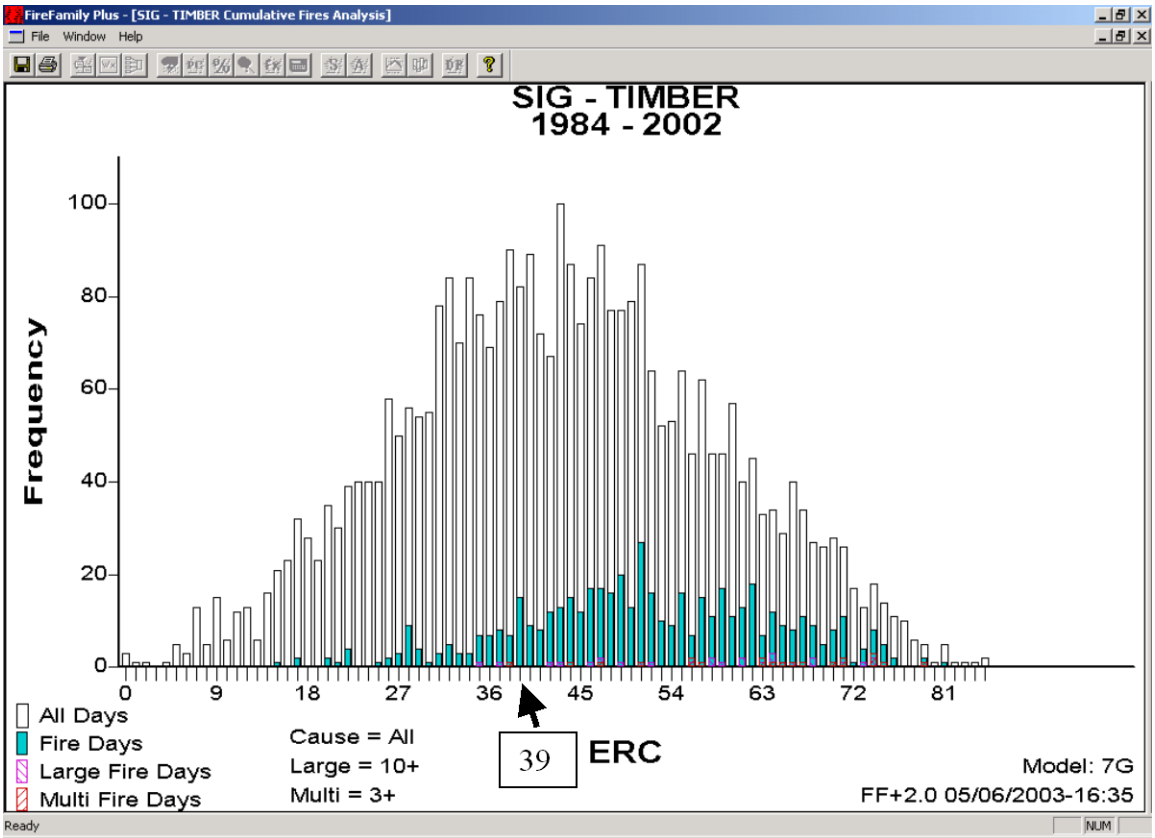
Breakpoint determinations for Staffing Class were made using the following indicators of fire business:

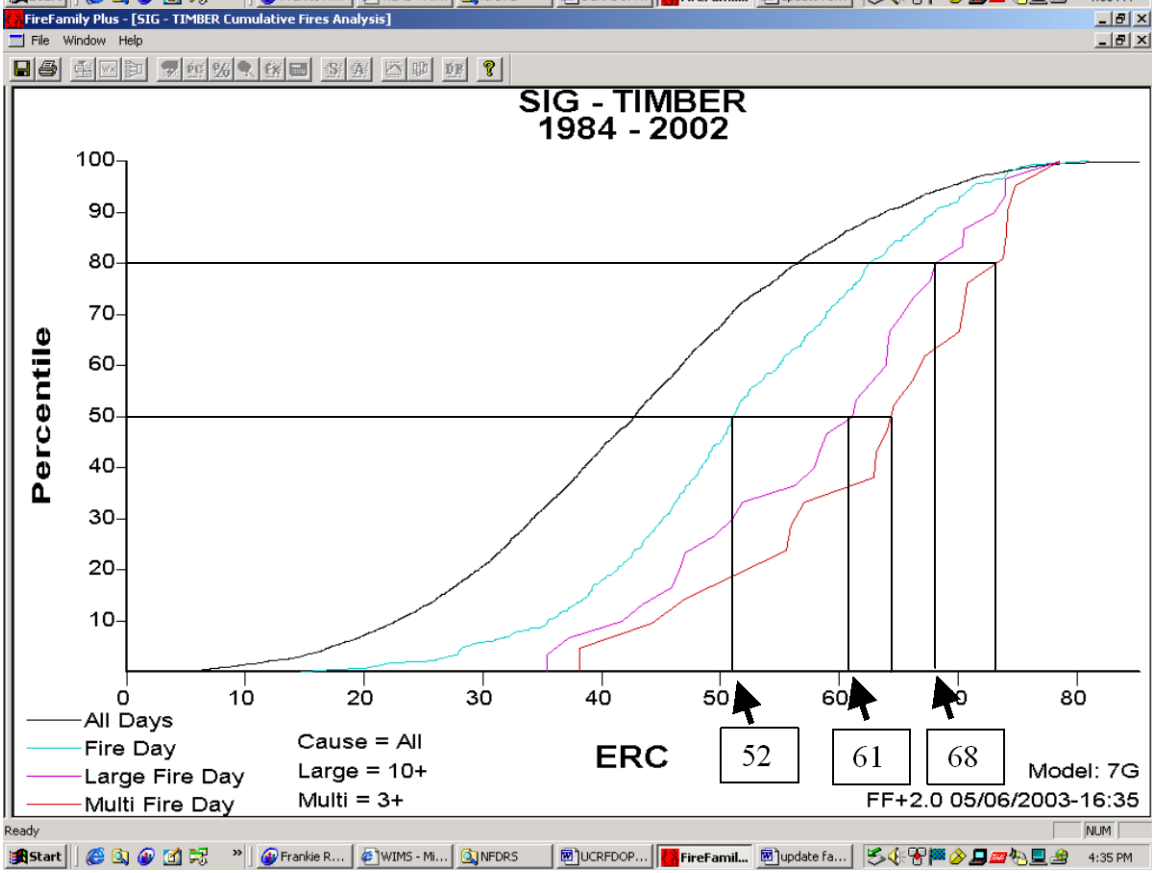
		Breakpoint for this class defined by smaller of:		
Staffing Class	**Description**	**Fire Days**	**Multiple Fire Days**	**Large Fire Days**
1	Little to no fire activity	N/A	N/A	N/A
2	Few fires, mostly small	Noticeable increase	---	---
3	Some fires, mostly small	50th percentile	50th percentile	---
4	Several fires, some large	---	80th percentile	50th percentile
5	Several fires, several large	---	---	80th percentile


FireFamily Plus - [SIG - GRASS/SAGE/PJ Cumulative Fires Analysis]
File Window Help
SIG - GRASS/SAGE/PJ
1973 - 2002
Frequency
300
250
200
150
100
50
0
0 6 12 18 24 30 36 42 48
14
ERC
All Days
Fire Days
Large Fire Days
Multi Fire Days
Cause = All
Large = 100+
Multi = 3+
Model: 7H
FF+2.0 02/26/2003-13:11
Ready
Start
FireFamily Plus - [SIG ...
FAMruns_ucrfdop.doc - M...
1:13 PM
FireFamily Plus - [SIG - GRASS/SAGE/PJ Cumulative Fires Analysis]
File Window Help
SIG - GRASS/SAGE/PJ
1973 - 2002
Percentile
100
90
80
70
60
50
40
30
20
10
0 5 10 15 20 25 30 35 40 45
23
30
35
ERC
All Days
Fire Day
Large Fire Day
Multi Fire Day
Cause = All
Large = 100+
Multi = 3+
Model: 7H
FF+2.0 02/26/2003-13:11
Ready
Start
FireFamily Plus - [SIG ...
FAMruns_ucrfdop.doc - M...
1:12 PM


FireFamily Plus - [SIG - MTBRUSH/ASPEN Cumulative Fires Analysis]
File Window Help
SIG - MTBRUSH/ASPEN
1973 - 2002
Frequency
ERC
All Days
Fire Days
Large Fire Days
Multi Fire Days
14
Cause = All
Large = 50+
Multi = 3+
Model: 7F
FF+2.0 05/06/2003-16:23


FireFamily Plus - [SIG - MTBRUSH/ASPEN Cumulative Fires Analysis]
File Window Help
SIG - MTBRUSH/ASPEN
1973 - 2002
Percentile
ERC
All Days
Fire Day
Large Fire Day
Multi Fire Day
22
31
44
Cause = All
Large = 50+
Multi = 3+
Model: 7F
FF+2.0 05/06/2003-16:23


FireFamily Plus - [SIG - TIMBER Cumulative Fires Analysis]
File Window Help
SIG - TIMBER
1984 - 2002
Frequency
100
80
60
40
20
0
0 9 18 27 36 45 54 63 72 81
All Days
Fire Days
Large Fire Days
Multi Fire Days
Cause = All
Large = 10+
Multi = 3+
39
ERC
Model: 7G
FF+2.0 05/06/2003-16:35
Ready
NUM
Start
Frankie R...
WIMS - Mi...
NFDRS
UCRFDOP...
FireFamil...
update fa...
4:36 PM


FireFamily Plus - [SIG - TIMBER Cumulative Fires Analysis]
File Window Help
SIG - TIMBER
1984 - 2002
Percentile
100
90
80
70
60
50
40
30
20
10
0 10 20 30 40 50 60 80
All Days
Fire Day
Large Fire Day
Multi Fire Day
Cause = All
Large = 10+
Multi = 3+
ERC
52
61
68
Model: 7G
FF+2.0 05/06/2003-16:35
Ready
NUM
Start
Frankie R...
WIMS - Mi...
NFDRS
UCRFDOP...
FireFamil...
update fa...
4:35 PM

Appendix C
Weather Station Catalogs

```
WLSTINV1-Weather Station Inventory for                        51404

Station: 051404   Name: DEADHORSE              NESDIS: 323603A4

Type: 4 (RAWS S NFDRS)   Create/Mod Date: 06-May-2003     Obs Time/Z: 12/MST
Assoc Man: ______     Prev Stn: ______     Fcst Zone: 201

State: 08-CO   County: 103-Rio Blanco          Lat/Lon: 40  4 42, 107 22  5
Obs Agy: 1 (USDA FS )     Unit: WRF          Mnemonic: DHORS      FS Reg:   2

Fuel Stk: 22-Apr-2003   Wdy FM Mea: _____________
Site: 3   Elev:  8960   Asp: 3   Ann Prec:  28.00   Season:
Ltng scale:   1.00   Hum code: 2   Temp code: 1   Pres code: 1
   Wind Spd code: 1   KBDI: 100   One/Ten Fl: N

User: OPS$BLM1407   Acc Lst: GJD
Comments: 7/20/02 UPDATED FUEL MOISTURES TO REFLECT DOWD WEATHER STATIONS
FUEL
MOISTURES.


   P   ** 78 NFDRS Only **   88 S G C Staffing Idx Breakpnts
   r    H            Greenup  S l r l          Low     High
   i FM S Herb Date     Date  b p s i  SI DC SI% Val SI% Val
   - -- - --------- --------- - - - -  -- -- --- --- --- ---
   1 7G P 06-MAY-03 15-APR-03 _ 2 P 3  EC 5  90  61  97  71

   NESDIS      S#   Description                                SHEF
   --------   ---   ---------------------------------------   -----
   323603A4     9   RAIN ACCUMULATION, INCHES                  PC
   323603A4    10   WINDSPEED, MILES PER HOUR                  US
   323603A4    11   WIND DIRECTION, DEGREES                    UD
   323603A4    12   AIR TEMPERATURE, DEGREES F., STANDARD PL   TA
   323603A4    13   FUEL TEMPERATURE, DEGREES F.               MT
   323603A4    14   RELATIVE HUMIDITY, PERCENT                 XR
   323603A4    15   BATTERY VOLTAGE, VOLTS                     VB
   323603A4    17   WIND DIRECTION, DEGREES, PEAK              UX
   323603A4    18   WINDSPEED, MILES PER HOUR, PEAK            UP
   323603A4    19   SOLAR RADIATION, WATTS                     RD
```

WLSTINV1-Weather Station Inventory for 51504

Station: 051504 Name: RIFLE NESDIS: 324A7104

Type: 4 (RAWS S NFDRS) Create/Mod Date: 30-Apr-2003 Obs Time/Z: 12/MST
Assoc Man: 052408 Prev Stn: _____ Fcst Zone: 203

State: 08-CO County: 045-Garfield Lat/Lon: 39 30 43, 107 44 57
Obs Agy: 2 (USDI BLM) Unit: CBLM Mnemonic: GJD FS Reg: 2

Fuel Stk: 15-Apr-2003 Wdy FM Mea: _____
Site: 3 Elev: 6120 Asp: 2 Ann Prec: 13.00 Season:
Ltng scale: 1.00 Hum code: 2 Temp code: 1 Pres code: 1
Wind Spd code: 1 KBDI: 100 One/Ten Fl: N

User: OPS$BLM1407 Acc Lst: GJD
Comments:

Pr i	FM	H S	Herb Date	** 78 NFDRS Only ** Greenup Date	88 Sb	S lp	G rs	C li	Staffing Idx Breakpnts SI	DC	Low SI%	Low Val	High SI%	High Val
1	7H	C	01-DEC-02	15-APR-03	_	2	A	2	EC 5	90	45	97	51	
2	7F	C	01-DEC-02	15-APR-03	_	2	A	2	EC 5	90	47	97	67	

NESDIS	S#	Description	SHEF
324A7104	9	RAIN ACCUMULATION, INCHES	PC
324A7104	10	WINDSPEED, MILES PER HOUR	US
324A7104	11	WIND DIRECTION, DEGREES	UD
324A7104	12	AIR TEMPERATURE, DEGREES F., STANDARD PL	TA
324A7104	13	FUEL TEMPERATURE, DEGREES F.	MT
324A7104	14	RELATIVE HUMIDITY, PERCENT	XR
324A7104	15	BATTERY VOLTAGE, VOLTS	VB
324A7104	17	FUEL MOISTURE, PERCENTAGE	MM
324A7104	18	WIND DIRECTION, DEGREES, PEAK	UX
324A7104	19	WINDSPEED, MILES PER HOUR, PEAK	UP
324A7104	20	SOLAR RADIATION, WATTS	RD

```
WLSTINV1-Weather Station Inventory for                        51506

Station: 051506   Name: CROWN                   NESDIS: 325A9568

Type: 4 (RAWS S NFDRS)   Create/Mod Date: 30-Apr-2003     Obs Time/Z: 12/MST
Assoc Man: ______     Prev Stn: ______     Fcst Zone: 203

State: 08-CO   County: 045-Garfield           Lat/Lon: 39 21 10, 107  5 44
Obs Agy: 2 (USDI BLM)     Unit: COBLM        Mnemonic: GJD      FS Reg:   2

Fuel Stk: 17-Apr-2003   Wdy FM Mea: ___________
Site: 3   Elev:  8340   Asp: 4   Ann Prec:  18.00   Season:
Ltng scale:   1.00   Hum code: 2   Temp code: 1   Pres code: 1
   Wind Spd code: 1   KBDI: 100   One/Ten Fl: N

User: OPS$BLM1407   Acc Lst: GJD
Comments:

   P   ** 78 NFDRS Only **   88 S G C Staffing Idx Breakpnts
   r    H            Greenup  S l r l          Low     High
   i FM S Herb Date     Date  b p s i  SI DC SI% Val SI% Val
   - -- - --------- --------- - - - -  -- -- --- --- --- ---
   1 7F P 20-FEB-03 20-FEB-03 _ 1 P 2  EC 5  90  37  97  51

   NESDIS      S#   Description                                SHEF
   --------   ---   ---------------------------------------   -----
   325A9568     9   RAIN ACCUMULATION, INCHES                  PC
   325A9568    10   WINDSPEED, MILES PER HOUR                  US
   325A9568    11   WIND DIRECTION, DEGREES                    UD
   325A9568    12   AIR TEMPERATURE, DEGREES F., STANDARD PL   TA
   325A9568    13   FUEL TEMPERATURE, DEGREES F.               MT
   325A9568    14   RELATIVE HUMIDITY, PERCENT                 XR
   325A9568    15   BATTERY VOLTAGE, VOLTS                     VB
   325A9568    17   WIND DIRECTION, DEGREES, PEAK              UX
   325A9568    18   WINDSPEED, MILES PER HOUR, PEAK            UP
   325A9568    19   SOLAR RADIATION, WATTS                     RD
```

```
WLSTINV1-Weather Station Inventory for                        51507

Station: 051507   Name: DEMAREE                NESDIS: 3265F06C

Type: 4 (RAWS S NFDRS)   Create/Mod Date: 06-May-2003     Obs Time/Z: 12/MST
Assoc Man: ______     Prev Stn: ______     Fcst Zone: 203

State: 08-CO   County: 045-Garfield            Lat/Lon: 39 27 36, 108 52 48
Obs Agy: 2 (USDI BLM)     Unit: CBLM         Mnemonic: GJD      FS Reg:   2

Fuel Stk: 17-Apr-2003   Wdy FM Mea: ___________
Site: 3   Elev:  7460   Asp: 5   Ann Prec:  15.00   Season:
Ltng scale:   1.00   Hum code: 2   Temp code: 1   Pres code: 1
   Wind Spd code: 1   KBDI: 100   One/Ten Fl: N

User: OPS$BLM1407   Acc Lst: GJD
Comments:

   P   ** 78 NFDRS Only **   88 S G C Staffing Idx Breakpnts
   r    H            Greenup  S l r l          Low     High
   i FM S Herb Date     Date  b p s i  SI DC SI% Val SI% Val
   - -- - --------- --------- - - - -  -- -- --- --- --- ---
   1 7G T 07-MAY-03 11-APR-03 _ 3 A 2  EC 5  90  50  97  55

   NESDIS      S#   Description                                SHEF
   --------   ---   ---------------------------------------   -----
   3265F06C     9   RAIN ACCUMULATION, INCHES                  PC
   3265F06C    10   WINDSPEED, MILES PER HOUR                  US
   3265F06C    11   WIND DIRECTION, DEGREES                    UD
   3265F06C    12   AIR TEMPERATURE, DEGREES F., STANDARD PL   TA
   3265F06C    13   FUEL TEMPERATURE, DEGREES F.               MT
   3265F06C    14   RELATIVE HUMIDITY, PERCENT                 XR
   3265F06C    15   BATTERY VOLTAGE, VOLTS                     VB
   3265F06C    17   WIND DIRECTION, DEGREES, PEAK              UX
   3265F06C    18   WINDSPEED, MILES PER HOUR, PEAK            UP
   3265F06C    19   SOLAR RADIATION, WATTS                     RD
```

WLSTINV1-Weather Station Inventory for 51508

Station: 051508 Name: STORM KING NESDIS: 324AA76C

Type: 4 (RAWS S NFDRS) Create/Mod Date: 06-May-2003 Obs Time/Z: 12/CST
Assoc Man: _____ Prev Stn: _____ Fcst Zone: 203

State: 08-CO County: 045-Garfield Lat/Lon: 39 34 23, 107 25 8
Obs Agy: 2 (USDI BLM) Unit: CBLM Mnemonic: GJD FS Reg: 2

Fuel Stk: 19-Feb-2003 Wdy FM Mea: _____
Site: 2 Elev: 8640 Asp: 4 Ann Prec: 18.00 Season:
Ltng scale: 1.00 Hum code: 2 Temp code: 1 Pres code: 1
Wind Spd code: 1 KBDI: 100 One/Ten Fl: N

User: OPS$BLM1407 Acc Lst: GJD
Comments: 51508 MOVED TO UPPER SITE 6/4/97. 51509 REMOVED.

Pr i	FM	S	Herb Date	** 78 NFDRS Only ** Greenup Date	88 b	S p	G s	C i	Staffing SI	DC	Idx Breakpnts Low SI%	Low Val	High SI%	High Val
1	7F	P	14-APR-03	23-APR-03	_	4	P	2	EC 5	90	44	97	59	
2	7G	F	20-DEC-02	_____	_	4	P	2	EC 5	90	79	97	86	

NESDIS	S#	Description	SHEF
324AA76C	9	RAIN ACCUMULATION, INCHES	PC
324AA76C	10	WINDSPEED, MILES PER HOUR	US
324AA76C	11	WIND DIRECTION, DEGREES	UD
324AA76C	12	AIR TEMPERATURE, DEGREES F., STANDARD PL	TA
324AA76C	13	FUEL TEMPERATURE, DEGREES F.	MT
324AA76C	14	RELATIVE HUMIDITY, PERCENT	XR
324AA76C	15	BATTERY VOLTAGE, VOLTS	VB
324AA76C	16	BAROMETRIC PRESSURE, INCHES OF MERCURY	PA
324AA76C	17	SOIL MOISTURE, TENSION, CENTIBARS	MS
324AA76C	18	SOIL TEMPERATURE, DEGREES F.	TG
324AA76C	19	SOIL MOISTURE, TENSION, CENTIBARS, 2ND	MS
324AA76C	20	SOIL TEMPERATURE, DEGREES F, SECOND SENS	TG
324AA76C	21	WIND DIRECTION, DEGREES, PEAK	UX
324AA76C	22	WINDSPEED, MILES PER HOUR, PEAK	UP
324AA76C	23	FUEL MOISTURE, PERCENTAGE	MM

WLSTINV1-Weather Station Inventory for 51606

Station: 051606 Name: DOWD JCT NESDIS: 3241B960

Type: 4 (RAWS S NFDRS) Create/Mod Date: 06-May-2003 Obs Time/Z: 12/MST
Assoc Man: _____ Prev Stn: _____ Fcst Zone: 203

State: 08-CO County: 037-Eagle Lat/Lon: 39 38 0, 106 27 29
Obs Agy: 1 (USDA FS) Unit: WRF Mnemonic: DOWJT FS Reg: 2

Fuel Stk: 04-May-2003 Wdy FM Mea: _____
Site: 2 Elev: 8998 Asp: 4 Ann Prec: 20.00 Season:
Ltng scale: 1.00 Hum code: 2 Temp code: 1 Pres code: 1
Wind Spd code: 1 KBDI: 100 One/Ten Fl: N

User: OPS$BLM1407 Acc Lst: WRWX
Comments:

P r i	** 78 NFDRS Only ** FM	S	H Herb	Greenup Date	88 S Date	G b	C p	l s	r i	l	SI	Staffing Idx Breakpnts DC	Low SI%	Val	High SI%	Val
1	7G	G	06-MAY-03	06-MAY-03	_	2	P	3		EC	5	90	58		97	68
2	7F	G	06-MAY-03	06-MAY-03	_	2	P	3		EC	5	90	26		97	35

NESDIS	S#	Description	SHEF
3241B960	9	RAIN ACCUMULATION, INCHES	PC
3241B960	10	WINDSPEED, MILES PER HOUR	US
3241B960	11	WIND DIRECTION, DEGREES	UD
3241B960	12	AIR TEMPERATURE, DEGREES F., STANDARD PL	TA
3241B960	13	FUEL TEMPERATURE, DEGREES F.	MT
3241B960	14	RELATIVE HUMIDITY, PERCENT	XR
3241B960	15	BATTERY VOLTAGE, VOLTS	VB
3241B960	17	WIND DIRECTION, DEGREES, PEAK	UX
3241B960	18	WINDSPEED, MILES PER HOUR, PEAK	UP
3241B960	19	SOLAR RADIATION, WATTS	RD

```
WLSTINV1-Weather Station Inventory for                        51607

Station: 051607   Name: GYPSUM                  NESDIS: 3259D16C

Type: 4 (RAWS S NFDRS)   Create/Mod Date: 06-May-2003     Obs Time/Z: 12/MST
Assoc Man: ______     Prev Stn: ______     Fcst Zone: 203

State: 08-CO   County: 037-Eagle               Lat/Lon: 39 41 40, 106 58 22
Obs Agy: 2 (USDI BLM)     Unit: CBLM         Mnemonic: GJD      FS Reg:   2

Fuel Stk: 17-Apr-2003   Wdy FM Mea: ___________
Site: 3   Elev:  7340   Asp: 4   Ann Prec:  14.00   Season:
Ltng scale:   1.00   Hum code: 2   Temp code: 1   Pres code: 1
   Wind Spd code: 1   KBDI: 100   One/Ten Fl: N

User: OPS$BLM1407   Acc Lst: GJD
Comments:

   P   ** 78 NFDRS Only **   88 S G C Staffing Idx Breakpnts
   r    H            Greenup  S l r l          Low     High
   i FM S Herb Date     Date  b p s i  SI DC SI% Val SI% Val
   - -- - --------- --------- - - - -  -- -- --- --- --- ---
   1 7H G 06-MAY-03 06-MAY-03 _ 3 P 2  EC 5  90  42  97  47

   NESDIS      S#   Description                                SHEF
   --------   ---   ---------------------------------------   -----
   3259D16C     9   RAIN ACCUMULATION, INCHES                  PC
   3259D16C    10   WINDSPEED, MILES PER HOUR                  US
   3259D16C    11   WIND DIRECTION, DEGREES                    UD
   3259D16C    12   AIR TEMPERATURE, DEGREES F., STANDARD PL   TA
   3259D16C    13   FUEL TEMPERATURE, DEGREES F.               MT
   3259D16C    14   RELATIVE HUMIDITY, PERCENT                 XR
   3259D16C    15   BATTERY VOLTAGE, VOLTS                     VB
   3259D16C    17   WIND DIRECTION, DEGREES, PEAK              UX
   3259D16C    18   WINDSPEED, MILES PER HOUR, PEAK            UP
   3259D16C    19   SOLAR RADIATION, WATTS                     RD
```

```
WLSTINV1-Weather Station Inventory for                        51703

Station: 051703   Name: SODA CREEK             NESDIS: 323591C8

Type: 4 (RAWS S NFDRS)   Create/Mod Date: 30-Apr-2003     Obs Time/Z: 12/MST
Assoc Man: ______     Prev Stn: ______     Fcst Zone: 212

State: 08-CO   County: 117-Summit              Lat/Lon: 39 34  0, 105 59  0
Obs Agy: 1 (USDA FS )     Unit: WRF          Mnemonic: SODCR      FS Reg:   2

Fuel Stk: 15-Oct-2002   Wdy FM Mea: ___________
Site: 2   Elev:  9600   Asp: 6   Ann Prec:  29.00   Season:
Ltng scale:   1.00   Hum code: 2   Temp code: 1   Pres code: 1
   Wind Spd code: 1   KBDI: 100   One/Ten Fl: N

User: OPS$BLM1407   Acc Lst: WRWX
Comments:

   P   ** 78 NFDRS Only **   88 S G C Staffing Idx Breakpnts
   r    H            Greenup  S l r l          Low     High
   i FM S Herb Date     Date  b p s i  SI DC SI% Val SI% Val
   - -- - --------- --------- - - - -  -- -- --- --- --- ---
   1 7G F 15-DEC-02 __________ _ 2 P 3  EC 5  90  58  97  65

   NESDIS      S#   Description                                SHEF
   --------   ---   ---------------------------------------   -----
   323591C8     9   RAIN ACCUMULATION, INCHES                  PC
   323591C8    10   WINDSPEED, MILES PER HOUR                  US
   323591C8    11   WIND DIRECTION, DEGREES                    UD
   323591C8    12   AIR TEMPERATURE, DEGREES F., STANDARD PL   TA
   323591C8    13   FUEL TEMPERATURE, DEGREES F.               MT
   323591C8    14   RELATIVE HUMIDITY, PERCENT                 XR
   323591C8    15   BATTERY VOLTAGE, VOLTS                     VB
   323591C8    17   WIND DIRECTION, DEGREES, PEAK              UX
   323591C8    18   WINDSPEED, MILES PER HOUR, PEAK            UP
   323591C8    19   SOLAR RADIATION, WATTS                     RD
```

WLSTINV1-Weather Station Inventory for 52407

Station: 052407 Name: PINE RIDGE NESDIS: 32778496

Type: 4 (RAWS S NFDRS) Create/Mod Date: 06-May-2003 Obs Time/Z: 12/MST
Assoc Man: _____ Prev Stn: _____ Fcst Zone: 203

State: 08-CO County: 077-Mesa Lat/Lon: 39 14 21, 108 22 57
Obs Agy: 2 (USDI BLM) Unit: CBLM Mnemonic: GJD FS Reg: 2

Fuel Stk: 21-Apr-2003 Wdy FM Mea: _____
Site: 3 Elev: 6600 Asp: 7 Ann Prec: 14.00 Season:
Ltng scale: 1.00 Hum code: 2 Temp code: 1 Pres code: 1
Wind Spd code: 1 KBDI: 100 One/Ten Fl: N

User: OPS$BLM1407 Acc Lst: GJD
Comments: LOCATED IN THE SOUTHWEST CORNER OF AN OLD BURN.

Pr i	FM	H S	Herb Date	** 78 NFDRS Only ** Greenup Date	S b	l p	r s	l i	88 S G C Staffing Idx Breakpnts SI	DC	Low SI%	Low Val	High SI%	High Val
1	7H	T	07-MAY-03	18-APR-03	_	2	P	2	EC	5	90	45	97	52
2	7F	T	07-MAY-03	18-APR-03	_	2	P	2	EC	5	90	48	97	71

NESDIS	S#	Description	SHEF
32778496	9	RAIN ACCUMULATION, INCHES	PC
32778496	10	WINDSPEED, MILES PER HOUR	US
32778496	11	WIND DIRECTION, DEGREES	UD
32778496	12	AIR TEMPERATURE, DEGREES F., STANDARD PL	TA
32778496	13	FUEL TEMPERATURE, DEGREES F.	MT
32778496	14	RELATIVE HUMIDITY, PERCENT	XR
32778496	15	BATTERY VOLTAGE, VOLTS	VB
32778496	17	WIND DIRECTION, DEGREES, PEAK	UX
32778496	18	WINDSPEED, MILES PER HOUR, PEAK	UP
32778496	19	SOLAR RADIATION, WATTS	RD

```
WLSTINV1-Weather Station Inventory for                        52408

Station: 052408   Name: WALKER                 NESDIS: _________

Type: 2 (Man NFDRS)   Create/Mod Date: 06-May-2003     Obs Time/Z: 12/MST
Assoc Man: ______     Prev Stn: ______     Fcst Zone: 203

State: 08-CO   County: 077-Mesa                Lat/Lon: 39  7 14, 108 31 15
Obs Agy: 2 (USDI BLM)     Unit: CBLM         Mnemonic: GJD      FS Reg:   2

Fuel Stk: 18-Apr-2003   Wdy FM Mea: ___________
Site: 1   Elev:  4840   Asp: 5   Ann Prec:   8.00   Season:
Ltng scale:   1.00   Hum code: 2   Temp code: 1   Pres code: 1
   Wind Spd code: 1   KBDI: 100   One/Ten Fl: N

User: OPS$BLM1407   Acc Lst: GJD
Comments:

   P   ** 78 NFDRS Only **   88 S G C Staffing Idx Breakpnts
   r    H            Greenup  S l r l          Low     High
   i FM S Herb Date     Date  b p s i  SI DC SI% Val SI% Val
   - -- - --------- --------- - - - -  -- -- --- --- --- ---
   1 7T G 05-MAY-03 05-MAY-03 _ 1 A 2  EC 5  90  21  97  23

   NESDIS      S#   Description                                SHEF
   --------   ---   ---------------------------------------   -----
```

```
WLSTINV1-Weather Station Inventory for                        52409

Station: 052409   Name: DOMNGZ                  NESDIS: 325A137C

Type: 4 (RAWS S NFDRS)   Create/Mod Date: 06-May-2003     Obs Time/Z: 12/MST
Assoc Man: ______     Prev Stn: ______     Fcst Zone: 203

State: 08-CO   County: 077-Mesa                Lat/Lon: 38 45 11, 108 34 12
Obs Agy: 2 (USDI BLM)     Unit: CBLM         Mnemonic: GJD      FS Reg:   2

Fuel Stk: 29-Apr-2003   Wdy FM Mea: ___________
Site: 3   Elev:  7660   Asp: 2   Ann Prec:  16.00   Season:
Ltng scale:   1.00   Hum code: 2   Temp code: 1   Pres code: 1
   Wind Spd code: 1   KBDI: 100   One/Ten Fl: N

User: OPS$BLM1407   Acc Lst: GJD
Comments: AKA = JACKS CANYON

   P   ** 78 NFDRS Only **   88 S G C Staffing Idx Breakpnts
   r    H            Greenup  S l r l          Low     High
   i FM S Herb Date     Date  b p s i  SI DC SI% Val SI% Val
   - -- - --------- --------- - - - -  -- -- --- --- --- ---
   1 7T G 05-MAY-03 05-MAY-03 _ 2 A 2  EC 5  90  21  97  24

   NESDIS      S#   Description                                SHEF
   --------   ---   ---------------------------------------   -----
   325A137C     9   RAIN ACCUMULATION, INCHES                  PC
   325A137C    10   WINDSPEED, MILES PER HOUR                  US
   325A137C    11   WIND DIRECTION, DEGREES                    UD
   325A137C    12   AIR TEMPERATURE, DEGREES F., STANDARD PL   TA
   325A137C    13   FUEL TEMPERATURE, DEGREES F.               MT
   325A137C    14   RELATIVE HUMIDITY, PERCENT                 XR
   325A137C    15   BATTERY VOLTAGE, VOLTS                     VB
   325A137C    17   WIND DIRECTION, DEGREES, PEAK              UX
   325A137C    18   WINDSPEED, MILES PER HOUR, PEAK            UP
   325A137C    19   SOLAR RADIATION, WATTS                     RD
```

```
WLSTINV1-Weather Station Inventory for                        52410

Station: 052410   Name: LITTLE DELORES         NESDIS: 326607E6

Type: 4 (RAWS S NFDRS)   Create/Mod Date: 06-May-2003     Obs Time/Z: 12/MST
Assoc Man: ______     Prev Stn: 052401     Fcst Zone: 203

State: 08-CO   County: 077-Mesa                Lat/Lon: 38 58  9, 108 56 40
Obs Agy: 2 (USDI BLM)     Unit: COBLM        Mnemonic: GJD      FS Reg:   2

Fuel Stk: 29-Apr-2003   Wdy FM Mea: ___________
Site: 1   Elev:  6800   Asp: 0   Ann Prec:  14.00   Season:
Ltng scale:   1.00   Hum code: 2   Temp code: 1   Pres code: 1
   Wind Spd code: 1   KBDI: 100   One/Ten Fl: N

User: OPS$BLM1407   Acc Lst: GJD
Comments: REPLACES MANUAL STATION AT COLO NATL MONUMENT

   P   ** 78 NFDRS Only **   88 S G C Staffing Idx Breakpnts
   r    H            Greenup  S l r l          Low     High
   i FM S Herb Date     Date  b p s i  SI DC SI% Val SI% Val
   - -- - --------- --------- - - - -  -- -- --- --- --- ---
   1 7T G 06-MAY-03 06-MAY-03 _ 1 A 2  EC 5  90  24  97  27
   2 7F G 06-MAY-03 06-MAY-03 _ 1 A 2  EC 5  90  70  97  90

   NESDIS      S#   Description                                SHEF
   --------   ---   ---------------------------------------   -----
   326607E6     9   RAIN ACCUMULATION, INCHES                  PC
   326607E6    10   WINDSPEED, MILES PER HOUR                  US
   326607E6    11   WIND DIRECTION, DEGREES                    UD
   326607E6    12   AIR TEMPERATURE, DEGREES F., STANDARD PL   TA
   326607E6    13   FUEL TEMPERATURE, DEGREES F.               MT
   326607E6    14   RELATIVE HUMIDITY, PERCENT                 XR
   326607E6    15   BATTERY VOLTAGE, VOLTS                     VB
   326607E6    17   WIND DIRECTION, DEGREES, PEAK              UX
   326607E6    18   WINDSPEED, MILES PER HOUR, PEAK            UP
   326607E6    19   SOLAR RADIATION, WATTS                     RD
```

WLSTINV1-Weather Station Inventory for 52810

Station: 052810 Name: MCCLURE PASS NESDIS: 3235B724

Type: 4 (RAWS S NFDRS) Create/Mod Date: 06-May-2003 Obs Time/Z: 12/MST
Assoc Man: _____ Prev Stn: _____ Fcst Zone: 205

State: 08-CO County: 051-Gunnison Lat/Lon: 39 7 34, 107 17 7
Obs Agy: 1 (USDA FS) Unit: WRF Mnemonic: MCPAS FS Reg: 2

Fuel Stk: 15-Oct-2002 Wdy FM Mea: _____
Site: 3 Elev: 8980 Asp: 3 Ann Prec: 25.00 Season:
Ltng scale: 1.00 Hum code: 2 Temp code: 1 Pres code: 1
Wind Spd code: 1 KBDI: 100 One/Ten Fl: N

User: OPS$BLM1407 Acc Lst: WRWX
Comments:

P r i	FM	H S	Herb Date	** 78 NFDRS Only ** Greenup Date	88 S b	G p	C s	l i	Staffing SI	Idx DC	Breakpnts Low SI%	Low Val	High SI%	High Val
1	7G	F	15-DEC-02	29-APR-02	_	2	P	3	EC 5	90	65	97	76	
2	7F	P	06-MAY-03	_____	_	2	P	3	EC 5	90	33	97	53	

NESDIS	S#	Description	SHEF
3235B724	9	RAIN ACCUMULATION, INCHES	PC
3235B724	10	WINDSPEED, MILES PER HOUR	US
3235B724	11	WIND DIRECTION, DEGREES	UD
3235B724	12	AIR TEMPERATURE, DEGREES F., STANDARD PL	TA
3235B724	13	FUEL TEMPERATURE, DEGREES F.	MT
3235B724	14	RELATIVE HUMIDITY, PERCENT	XR
3235B724	15	BATTERY VOLTAGE, VOLTS	VB
3235B724	17	WIND DIRECTION, DEGREES, PEAK	UX
3235B724	18	WINDSPEED, MILES PER HOUR, PEAK	UP
3235B724	19	SOLAR RADIATION, WATTS	RD

Appendix D
Agency Run Cards

This set of Agency Run Cards were constructed using fire management objectives found in the current Fire Management Plans for the Grand Junction Field Office (BLM), Glenwood Springs Field Office (BLM), and White River National Forest (FS) in concert with professional judgment and experience of the Upper Colorado Interagency Fire Management staff.

Agency Run Card

UCRIFMU – Zone A

Description & Objectives : Very High Risk. Wildland fire in any form is not desired. Fire has not played a significant role in the function of the ecosystem or can no longer be tolerated without significant economic loss and social impact due to human development. All forms of wildland fire are aggressively suppressed and the use of prescribed fire is limited to reducing an immediate threat to firefighter and public health and safety. These areas generally receive the highest priority for suppression in multiple wildfire situations.

DISPATCH LEVEL	LOW	MODERATE	HIGH	EXTREME
RESOURCES TO DISPATCH	• Type V IC • Closest available Resource	• Type V IC • Closest available Resource	• Type IV IC • Closest available Engine • Closest available Resource • Type III helicopter & crew	• Type III IC • 2 Closest available Engines • Closest available Resource • Type III helicopter & crew • Airtanker • Watertender
DISCRETIONARY ACTIONS	• Closest available Engine if near Interface • FINV if suspected human caused • Notify appropriate county dispatch center if near interface.	• Closest available Engine if near Interface • FINV if suspected human caused • Notify appropriate county dispatch center if near interface.	• Type III IC if Interface threat • Notify appropriate county dispatch center if near interface. • Smokejumpers if known inaccessible site or on request of IC • Airtanker • ATGS if multiple aircraft are dispatched • FINV if suspected human caused	• Smokejumpers if known inaccessible site or on request of IC • Notify appropriate county dispatch center if near interface. • IC or Zone FMO may refuse Airtanker due to area-specific knowledge • ATGS if multiple aircraft are dispatched. • FINV if suspected human caused
NOTIFICATIONS	• Zone FMO • Resource Advisor (BLM)	• Zone FMO • Resource Advisor (BLM)	• Zone FMO • Resource Advisor (BLM)	• Zone FMO • Resource Advisor (BLM)
PROCEDURES	• Dispatch closest available resource unless otherwise directed by Zone FMO, AFMO-Operations, or IC on the scene. • Do Not dispatch aviation resources to State or Private ownership fires unless requested by County Sheriff or IC on the scene or authorized by Zone FMO. • Actions not listed above should not be taken unless ordered by the Incident Commander (IC) or authorized by the Zone FMO.			

Agency Run Card

UCRIFMU – Zone B

Description & Objectives : High Risk. Fire performs an important role in the function of the ecosystem. Because of resource concerns and potentially high economic impacts from unplanned ignitions, considerable constraints and mitigation measures are required. The appropriate management response is usually aggressive in nature. Fuels reduction is a major means of mitigating the potential risks and losses. Along with Zone A, these areas generally receive the highest priority for suppression in multiple wildfire situations. Unplanned ignitions are typically not managed to meet resource management objectives due to the proximity of high value improvements.

DISPATCH LEVEL	LOW	MODERATE	HIGH	EXTREME
RESOURCES TO DISPATCH	• Type V IC • Closest available Resource	• Type V IC • Closest available Resource	• Type IV IC • Closest available Engine • Closest available Resource • Type III helicopter & crew	• Type III IC • 2 Closest available Engines • Closest available Resource • Type III helicopter & crew • Airtanker • Watertender
DISCRETIONARY ACTIONS	• Closest available Engine if near Interface • Notify appropriate county dispatch center if near interface. • FINV if suspected human caused	• Closest available Engine if near Interface • Notify appropriate county dispatch center if near interface. • FINV if suspected human caused	• Type III IC if Interface threat • Notify appropriate county dispatch center if near interface. • Smokejumpers if known inaccessible site or on request of IC • Airtanker • ATGS if multiple aircraft are dispatched • FINV if suspected human caused	• Smokejumpers if known inaccessible site or on request of IC • Notify appropriate county dispatch center if near interface. • IC or Zone FMO may refuse Airtanker due to area-specific knowledge • ATGS if multiple aircraft are dispatched. • FINV if suspected human caused
NOTIFICATIONS	• Zone FMO • Resource Advisor (BLM)	• Zone FMO • Resource Advisor (BLM)	• Zone FMO • Resource Advisor (BLM)	• Zone FMO • Resource Advisor (BLM)
PROCEDURES	• Dispatch closest available resource unless otherwise directed by Zone FMO, AFMO-Operations, or IC on the scene. • Do Not dispatch aviation resources to State or Private ownership fires unless requested by County Sheriff or IC on the scene or authorized by Zone FMO. • Actions not listed above should not be taken unless ordered by the Incident Commander (IC) or authorized by the Zone FMO.			

Agency Run Card

UCRIFMU – Zone C

Description & Objectives : Moderate Risk. Fire is a desirable component of the ecosystem with minimal mitigation requirements and constraints, however ecological, social or political constraints must be considered. These constraints could include air quality, threatened and endangered species, cultural values, etc. In multiple wildfire situations, these areas generally receive lower suppression priority than Zones A & B. The Appropriate Management Response in Zone C may include the full range of options from Full Suppression to Wildland Fire Use. The response selected will depend on the fire's location within the C Zone and the constraints that apply to that particular fire. Wildland fires may be managed to meet resource management objectives under an approved wildland fire implementation plan (WFIP).

DISPATCH LEVEL	LOW	MODERATE	HIGH	EXTREME
RESOURCES TO DISPATCH	• Type V IC • Closest available Resource	• Type V IC • Closest available Resource	• Type IV IC • Closest available Resource	• Type IV IC • Closest available Resource • Airtanker
DISCRETIONARY ACTIONS	• FINV if suspected human caused	• FINV if suspected human caused	• Type III helicopter & crew or Smokejumpers if known inaccessible site or ground travel time is more than 1 hour. • Airtanker on request of IC or if arrival of resources will be more than 2 hours. • ATGS if multiple aircraft are dispatched • FINV if suspected human caused	• Type III helicopter & crew or Smokejumpers if known inaccessible site or ground travel time is more than 1 hour. • ATGS if multiple aircraft are dispatched. • FINV if suspected human caused
NOTIFICATIONS	• Zone FMO • Resource Advisor (BLM)	• Zone FMO • Resource Advisor (BLM)	• Zone FMO • Resource Advisor (BLM)	• Zone FMO • Resource Advisor (BLM)
PROCEDURES	• Dispatch closest available resource unless otherwise directed by Zone FMO, AFMO-Operations, or IC on the scene. • Inform IC that an Appropriate Management Response is desired and that he/she should confer with Zone FMO on options that are available after giving an initial fire size-up. Note: (White River NF Lands may be considered for fire use under certain circumstances). • Do Not dispatch aviation resources to State or Private ownership fires unless requested by County Sheriff or IC on the scene or authorized by Zone FMO. • Actions not listed above should not be taken unless ordered by the Incident Commander (IC) or authorized by the Zone FMO.			

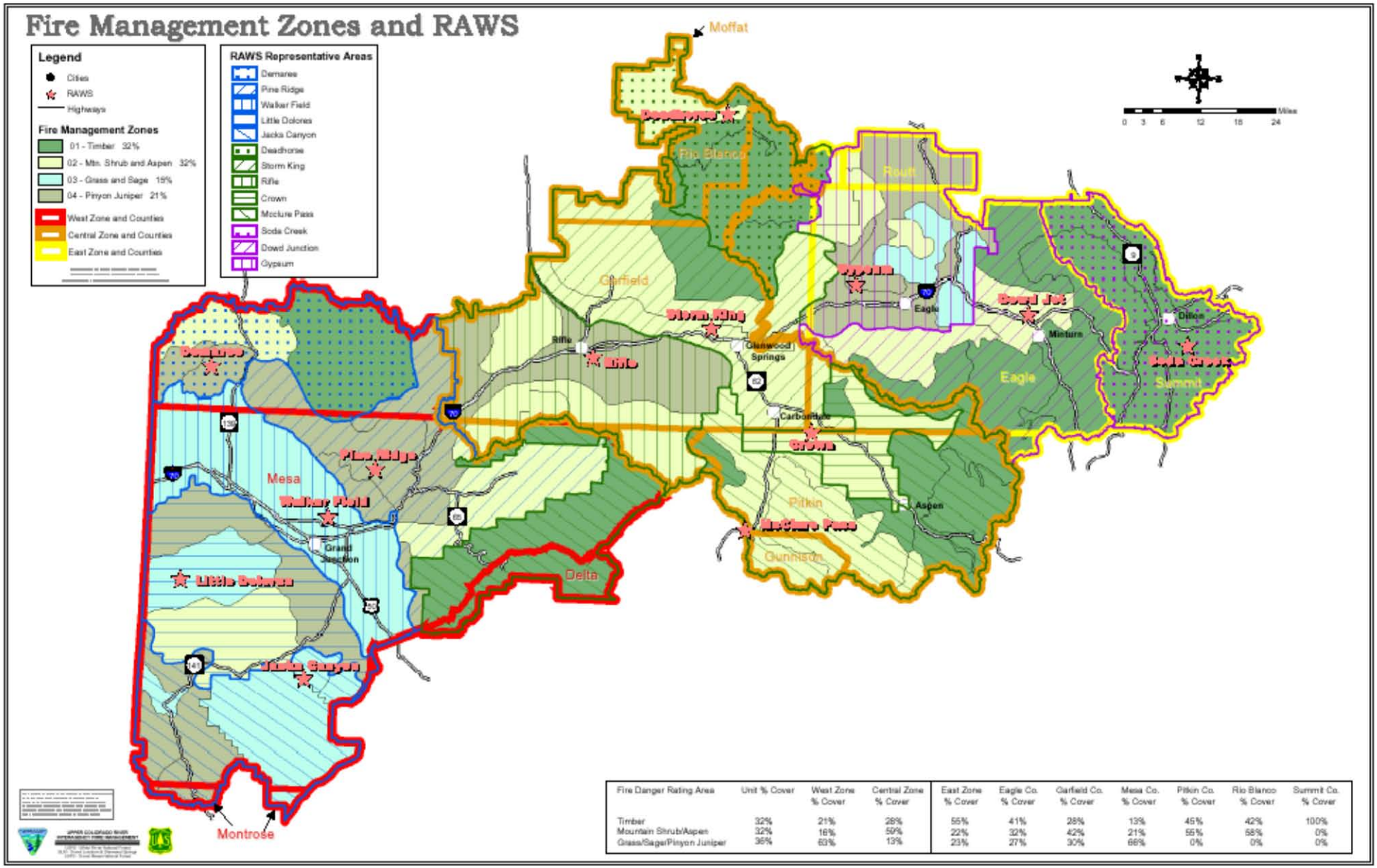
Agency Run Card

UCRIFMU – Zone D

Description & Objectives : Low Risk. Fire is an integral component in maintaining or achieving the desired future condition for affected lands with less mitigation requirements or resource constraints than categories described above. Wildland fires in Zone D are the lowest priority for suppression during multiple fire situations. Wildland fires may be managed to meet resource management objectives under an approved wildland fire implementation plan (WFIP).

DISPATCH LEVEL	LOW	MODERATE	HIGH	EXTREME
RESOURCES TO DISPATCH	• Aerial Recon • Type V IC to confirm natural ignition.	• Aerial Recon • Type V IC to confirm natural ignition.	• Aerial Recon • Type V IC to confirm natural ignition.	• Aerial Recon • Type V IC to confirm natural ignition.
DISCRETIONARY ACTIONS			• Quickest available Resource if threat to life/property exists – Type III helicopter & crew or Smokejumpers usually fastest resource. • Airtanker on request of IC and with approval from Agency Administrator • ATGS if multiple tactical aircraft are dispatched	• Quickest available Resource if threat to life/property exists – Type III helicopter & crew or Smokejumpers usually fastest resource. • Airtanker on request of IC and with approval from Agency Administrator • ATGS if multiple tactical aircraft are dispatched
NOTIFICATIONS	• Zone FMO • Resource Advisor (BLM) • FINV if suspected human caused	• Zone FMO • Resource Advisor (BLM) • FINV if suspected human caused	• Zone FMO • Resource Advisor (BLM) • FINV if suspected human caused	• Zone FMO • Resource Advisor (BLM) • FINV if suspected human caused
PROCEDURES	• Do Not dispatch suppression resources unless directed by Zone FMO or AFMO-Operations. Type V IC is to confirm whether ignition is natural or not and suppression action will only be initiate upon request by Zone FMO or AFMO-Operations. • Thorough size-up required to evaluate whether fire may be a candidate for fire-use. Typically will require Zone FMO or designee to fly aerial recon so that proper information is gathered to support initial Go/No-Go decision along with a ground recon to confirm ignition source and provide additional information. • Prior approval from Forest Supervisor or Field Office Manager is required for use of mechanized equipment in designated wilderness. • Do Not dispatch aviation resources to State or Private ownership fires unless requested by County Sheriff or IC on the scene or authorized by Zone FMO. • Actions not listed above should not be taken unless ordered by the Incident Commander (IC) or authorized by the Zone FMO or AFMO-Operations.			

Appendix E
Maps



Fire Danger Rating Area	Unit % Cover	West Zone % Cover	Central Zone % Cover	East Zone % Cover	Eagle Co. % Cover	Garfield Co. % Cover	Mesa Co. % Cover	Pitkin Co. % Cover	Rio Blanco % Cover	Summit Co. % Cover
Timber	32%	21%	28%	55%	41%	28%	13%	45%	42%	100%
Mountain Shrub/Aspen	32%	16%	59%	22%	32%	42%	21%	55%	58%	0%
Grass/Sage/Pinyon Juniper	36%	63%	13%	23%	27%	30%	66%	0%	0%	0%

Appendix F
Primary FDOP Distribution List

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Appendix G
References and Resources

References

Anderson, H.E., Aids to Determining Fuel Models for Estimating Fire Behavior, National Wildfire Coordinating Group, (PMS 435-1, GTR INT-122, NFES 1574), 1982.

Andrews, Patricia et al., Fire Danger Rating Pocket Card for Firefighter Safety, 1997.

Bradshaw, Larry et al., National Fire Danger Rating System Technical Documentation (INT-169), July 1983.

NIFC, Weather Information Management System Users Guide (PMS-390), December 1997.

NIFC, 2002 Standards for Fire and Aviation Operations, March 2002.

NIFC, The National Fire Danger Rating System, (INT 39), October 1997.

NWCG, Gaining an Understanding of the National Fire Danger Rating System, (PMS 932; NFES 2665), May 2002.

USDA Forest Service Fire Family Plus Users Guide (V 2.0), 2000.

Resources

http://www.crh.noaa.gov/gjt/ Grand Junction Weather Service
http://www.crh.noaa.gov/gjt/raws_sites.html RAWS information
http://fire.nifc.nps.gov/webterm/ WIMS Access
http://www.fs.fed.us/land/wfas/ Wildfire Assessment System
http://www.wcc.nrcs.usda.gov/wcc.html Western Regional Climate Center
http://www.dri.edu Desert Research Institute
http://famweb.nwcg.gov/pocketcards/ Fire Danger Pocket Cards
http://www.wrh.noaa.gov/Seattle/ NFDRS Information
http://www.ocs.orst.edu/prism/prism_new.html Precipitation Data
http://www.fire.org/tools Fire Family Plus Software and Users Guide.

APPENDIX I

UCR FPU Guidelines for Management of Type III Incidents

UCR FPU GUIDELINES FOR MANAGEMENT OF TYPE III INCIDENTS
May 2004

All Type III Incidents

- The Incident Commander for a Type III incident will not have any collateral duties.

Single Jurisdiction Incidents (primarily Federal jurisdiction)

- Smokejumpers, non-local resources and/or qualified cooperator personnel may act in the capacity of Type 3 Incident Commander (ICT3) based on their qualifications as the incident transitions into extended attack.

Multi-jurisdictional Incidents (Federal, State and/or local cooperator)

- On multi-jurisdictional incidents, A member of the UCR Type III Cadre (ICT3) will replace a smokejumper or other non-local resource within one operational period following the initial incident response if the incident involves private land in addition to one or more Federal jurisdictions.

- In the interim, the Zone Fire Management Officer or designee will act in the capacity as incident liaison officer (LOFR) between the Incident Commander and local partners/jurisdictions to ensure proper consideration is given to local politics, socio-economic concerns and management direction provided by Federal Line Officers and local elected officials.

- Unified command (as applied locally) will have one incident commander (ICT3) who receives direction and objectives from a group of representatives (agency administrators) from affected jurisdiction(s).

Incident Complexity

- Incident complexity will be derived from a complexity analysis. Checking 'yes' on one to three elements is normally considered to reflect a low complexity incident. A moderate to high complexity incident has four to six applicable elements identified. An incident having more than six applicable elements will normally result in ordering a Type 2 Incident Management Team.

- Depending on incident complexity and current/projected jurisdictional responsibility, Type III incident Command and General Staff positions will be **ordered** using individuals with the following minimum qualifications:

Low Complexity Single Jurisdiction - Federal		**Moderate to High Complexity Level Multiple Jurisdictions**	
Operations Section Chief (OSC3)	Strike Team Leader Crew (STCR)	Operations Section Chief (OSC3)	Division Group Supervisor (DIVS)
Planning Section Chief (PSC3)	Federal or Cooperator personnel identified by a name request	Planning Section Chief (PSC3)	Federal or Cooperator personnel identified by a name request
Logistics Section Chief (LSC3)	Base Camp Manager (BCMG)	Logistics Section Chief (LSC3)	Base Camp Manager (BCMG)
Safety Officer (SOF3)	Strike Team Leader Crew (STCR)	Safety Officer (SOF3)	Safety Officer Type 3 (SOF3) or Division Supervisor (DIVS)
Information Officer Type 3 (IOF3)	Information Officer Type 3 (IOF3) Trainee	Information Officer Type 3 (IOF3) Trainee	Information Officer Type 3 (IOF3) Trainee
Finance Section Chief (FSC3)	Personnel Time Recorder (PTRC)	Finance Section Chief (FSC3)	Personnel Time Recorder (PTRC)

Notes

- Command and General staff positions may be filled with individuals qualified at a higher level in accordance with FSH 5109.17 or PMS 310-1 standards as applicable to agency jurisdiction.

- Resource orders will be processed as soon as possible to fill existing vacancies on the Command and General staff or to replace individuals with others qualified at a higher level as appropriate to the safe and effective management of the incident.

- The Zone Fire Management Officer and Zone Assistant Fire Management Officer should not fill the Incident Commander or other Command and General Staff positions concurrently. One or both of these positions must retain oversight and supervision responsibilities at the zone level during the incident.

- If the local Unit (UCR) is unable to field the Operations or Safety position within one operational period of the incident being classified as a Type III incident, Unit Fire Managers will resource order these positions or a complete Type III Incident Management Team or equivalent to assume incident management responsibilities.

- Planning Section Chief: Many cooperator personnel in management positions within their own jurisdiction can redeem the responsibilities of the position if individuals qualified at the Unit Leader (Resource or Situation) are not available. The Zone FMO may name request these individuals based on the availability of the individual.

- Information Officer: Many cooperators (County Sheriff's) have public affair officers that can function effectively in the capacity as IOF3 while not possessing NWCG qualifications. For multi-jurisdictional incidents, the need generally exists for more than one information officer. The incident commander or representatives of affected jurisdictions will designate the 'lead' information officer as incident needs dictate.

Incident Complexity Analysis **Type 3, 4, 5**	**Yes**	**No**
Fire Behavior		
Fuels extremely dry and susceptible to long-range spotting or you are currently experiencing extreme fire behavior		
Weather forecast indicated no significant relief or worsening situation		
Current or predicted fire behavior dictates indirect control strategy with large amounts of fuel within planned perimeter		
Firefighter Safety		
Performance of firefighting resources affected by cumulative fatigue		
Overhead over extended mentally and/or physically		
Communication ineffective with tactical resources or dispatch		
Lack of a cohesive management structure		
Organization		
Operations are at the limit of span of control		
Incident action plans, briefings, etc., missing or poorly prepared		
Variety of specialized operations, support personnel or equipment		
Unable to properly staff air operations		
Limited local resources available for initial attack		
Heavy commitment of local resources to logistical support		
Existing forces worked 24 hours without success		
Resources unfamiliar with local conditions and tactics		
Values to be Protected		
Urban interface, structures, developments, recreational facilities, or potential for evacuation		
Fire burning or threatening more than one jurisdiction and potential for unified command with different or conflicting management objectives		
Unique natural resources, special-designation areas, critical municipal watershed, T&E species habitat, cultural value sites		
Sensitive political concerns, media involvement, or controversial fire policy		
Total Number of Elements Checked		

Complexity Rating (number of elements checked):

1 – 3 Current management is sufficient, a Type 3 organization should be considered.
4 – 6 Complexity level suggests a need for a Type 3 incident management team.
7 – 10 Consider ordering a Type 2 incident management team.

Prepared by: _____ Date: _____ Time: _____

Reviewed by: _____ Date: _____ Time: _____

APPENDIX J

FIELD FATALITY & SERIOUS INJURY PLAN

Field Fatality / Serious Injury Plan

Purpose - The intent of this plan is to list the steps that must be taken in response to fatalities or serious injury; to list the people/agencies with whom coordination must be maintained; where pertinent information is found.

Responsibility - Until delegated, the Line Officer has the responsibility for implementing the appropriate response(s) to address the situation when a fatality or serious injury occurs.

1. DO NOT MOVE THE DECEASED/INJURED INDIVIDUAL(S)

2. In the event of a fatality, notify the County Sheriff, who will in turn notify the County Coroner's Office.

3. Contact the Unit Public Affairs Officer to coordinate information flow and media contacts.

4. In the event of a serious injury, notify the Grand Junction Interagency Dispatch Center who will assist in arranging medivac and notification of appropriate personnel/agencies.

Notification - Timely delivery of accurate information on fatalities and/or serious injuries to home units and the families of victims is essential BEFORE the media spreads this information.

Organization - Addressing this type of situation constitutes 'an incident within an incident'. A separate Incident Management Team should be organized with a formal delegation of authority from the responsible Line Officer to the Incident Commander.

The following positions should be filled within the Incident Management Team at a minimum:

Incident Commander	Procurement Unit Leader
Finance Section Chief	Compensation/Claims Unit Leader
Logistics Section Chief	Incident Information Officer

Documentation - Documentation is critical. The Incident Information Officer is responsible to coordinate/facilitate communication with the home unit and family liaison. Consider organizing a unified command structure with the County Sheriff, jurisdictional agency and possibly the County Coroner's Office.

Notification

1. Notify the Rocky Mountain Area Coordination center (RMACC) who will coordinate the distribution of information within agency channels.

2. Establish a process to ensure coordination and information management activities are managed.

3. DO NOT USE THE NAMES OF THE VICTIMS INVOLVED over the radio.

Information Sources

1. Interagency Fire Business Management Handbook, Chapter 60
2. National Mobilization Guide, Section 25.5
3. Unit Aviation Plan, Appendix A

General Procedures – Fatality/Serious Injury -

1. Complete accurate identification in cooperation with local authorities (County Sheriff, Coroner). Ensure accuracy in identifying dead, missing and injured individuals or survivors as applicable.

2. Coordinate notification procedures with local jurisdictions and affected home units. The home unit may identify liaison personnel to coordinate communications with affected family members.

3. Coordinate with incident mortuary and/or hospital for required transportation. The Government is responsible (through OWCP) for costs incurred in preparation, transportation and delivery to the receiving mortuary and/or hospital.

4. Check with the OWCP specialist regarding coverage of funeral/medical expenses.

5. Coordinate with home unit for delivery of remains in the event of a fatality.

6. Mobilize the following technical specialists:

    Finance Section Chief
    Procurement Unit Leader
    Regional Incident Business Management Coordinator
    Compensation for Injury Specialist
    Regional OWCP Specialist
    Regional Procurement Staff

Information Sources -

Employee Benefits Handbook
Investigation and Reports Handbook
Interagency Fire Business Management Handbook

General Procedures for Incident/Accident Survivors -

1. Arrange for medical care as appropriate.

2. Consider the need to remove personnel from incident operations.

3. Facilitate a Critical Incident Stress De-briefing.

4. Utilize the following positions:

    Finance Section Chief
    Regional OWCP Specialist
    Regional Trauma Specialist
    Comp/Claims Unit Leader

General Procedures for Family Notification -

1. Ensure speedy, accurate information flow through a liaison arranged by the home unit.

2. Identify the agency contact (family liaison) to family members. This is the individual who acts as the focal point for all communication with the family in addition to

providing explanations regarding benefits. This position determines family wishes and provides help/assistance as needed and appropriate.

Miscellaneous Travel Issues - Questions which arise regarding travel for family members or escorts for injured personnel or escorts for remains should be referred to the Regional fiscal/OWCP Specialist.

Benefits - In the event of a fatality, the Incident Commander or designee is responsible to coordinate with the incident mortuary to initiate requests for Death Certificates. Benefits information and related paperwork requirements should be coordinated through the OWCP Specialist for the Administrative Agency or Regional Office. The home unit OWCP Staff will initiate all actions related to payments of benefits due the victim(s).

APPENDIX K

UCR FPU ACCIDENT/INCIDENT REPORTING GUIDE

UPPER COLORADO RIVER INTERAGENCY FIRE MANAGEMENT UNIT ACCIDENT/INCIDENT REPORTING GUIDE

Guidelines for Reporting:

Personal Injuries

Occupational Illnesses

Motor Vehicle Accidents

Property Damage

USDA FS/USDI BLM
2002

This reporting guide describes how to prepare reporting documents following accidents or property damage. This guide is for Forest Service and Bureau of Land Management employees while on official duty that have an accident while operating government vehicles, or equipment.

All incidents, accidents and subsequent reports must be brought to the attention of the district ranger/field office manager and safety officer as soon as possible. Reporting protects the employee as well as the government. Assuring there is proof of the injury or "compliance of duty" in case of an accident or injury protects the employee. The government is protected by documentation of the actual events.

Report serious accidents, Injuries and property damage immediately to the Safety Officer. If the accident/injury occurs in:

- WRF Vacant 970-945-3236 (office)
- GMF Blake Patton 970-240-5407
- GJBLM Bill Putre 970-641-2337 ext. 242 (office)
- GSBLM Bill Putre 970-641-2337 ext. 242 (office)

HOW TO USE THIS GUIDE

First: Turn to page four, follow the flow chart, and answer the questions until you reach the end of the column; at that point you will be directed as to which actions and forms are required.

Next: Turn to the attachment covering the specific type of incident occurred, i.e., Employee Injuries. This section gives specific directions on completing the paperwork.

Page 9 gives the accident notification list and general guidelines on reporting and investigations.

COVERAGE AND ELIGIBILITY FOR PERSONAL INJURY

The Federal Employees' Compensation Act (FECA) provides for all reasonable and necessary medical expenses, loss of income and wage-earning capacity, transportation expenses, rehabilitation costs, and death and burial expenses incurred as a result of an on-the-job injury or disease/illness. Benefits will not be paid if the injury or death was caused by the employee's willful misconduct, intoxication, intent to cause injury to self or others, or deviation from course of travel to conduct personal business.

All FS/BLM employees, regardless of type or duration of appointment, are covered. This coverage is available during work hours and during travel status if performing duties within the scope of employment. Coverage is not limited to FS/BLM or other Government locations, but extends to any point where the employee may be engaged in official duties. Coverage is generally available at any geographical location, except at points where the employee has deviated from a normal route for personal reasons or personal convenience.

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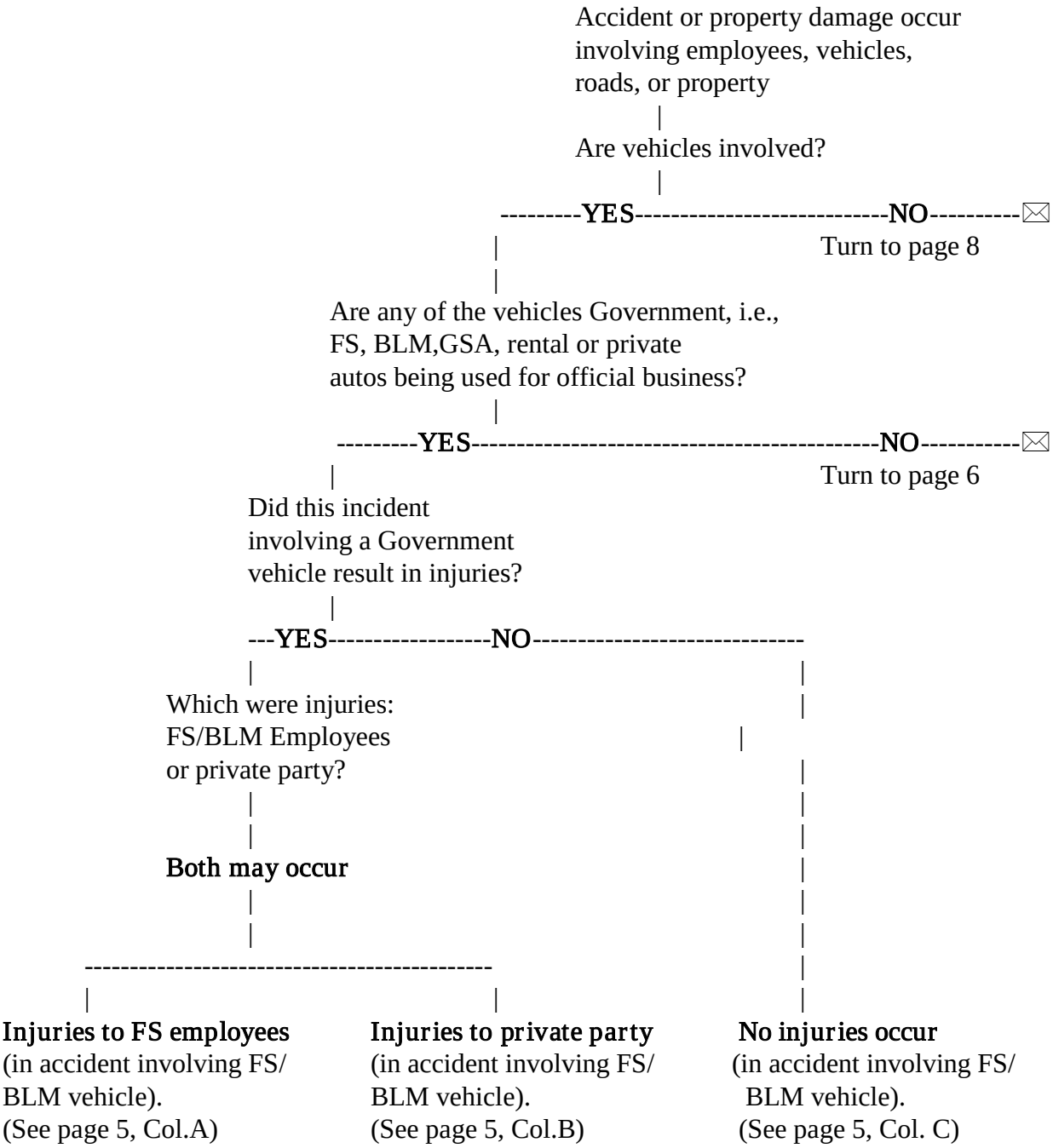
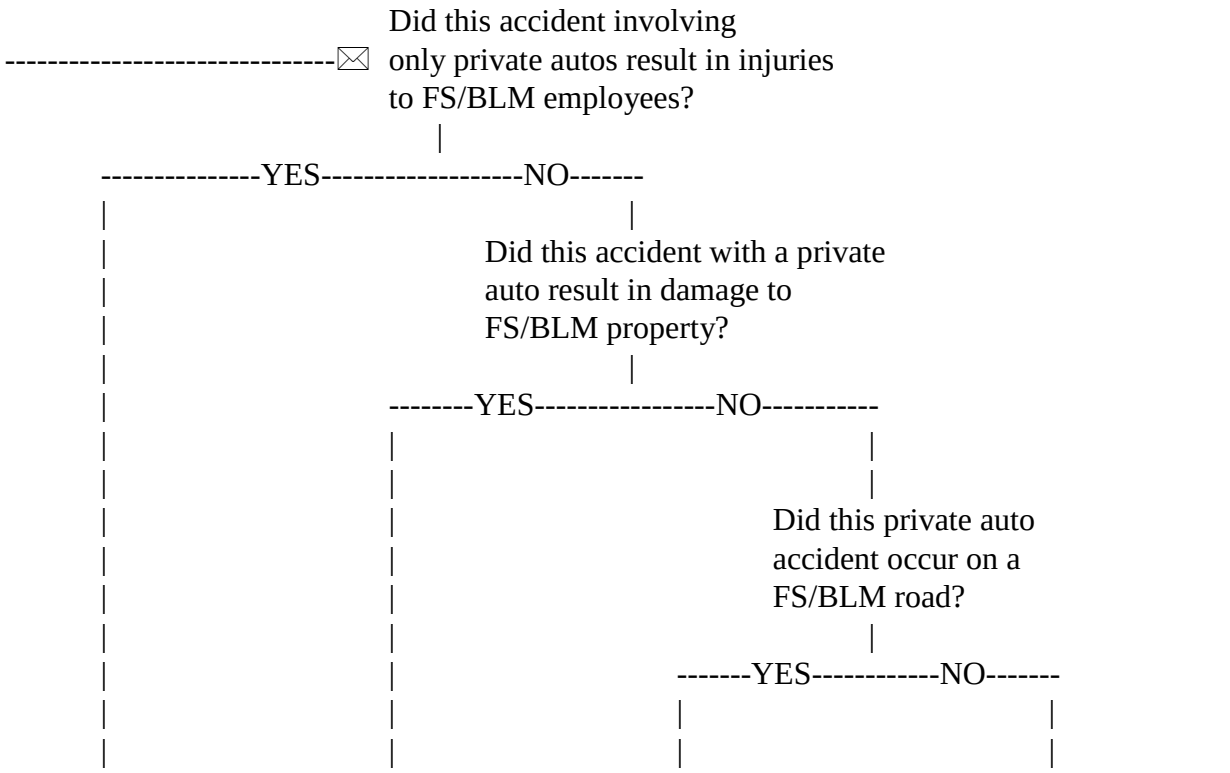

Accident or property damage occur involving employees, vehicles, roads, or property
Are vehicles involved?
YES
NO
Turn to page 8
Are any of the vehicles Government, i.e., FS, BLM,GSA, rental or private autos being used for official business?
YES
NO
Turn to page 6
Did this incident involving a Government vehicle result in injuries?
YES
NO
Which were injuries: FS/BLM Employees or private party?
Both may occur
Injuries to FS employees (in accident involving FS/ BLM vehicle). (See page 5, Col.A)
Injuries to private party (in accident involving FS/ BLM vehicle). (See page 5, Col.B)
No injuries occur (in accident involving FS/ BLM vehicle). (See page 5, Col. C)

COLUMN A	COLUMN B	COLUMN C
1. Apply appropriate first aid: get medical assistance if needed.	1. Apply appropriate first aid: get medical assistance if needed.	1. Exchange names, address, and license #'s, including witnesses.
2. Exchange name, address, and license plate numbers with participants and witnesses	2. Exchange name, address, and license plate numbers with participants and witnesses.	2. Contact immediate Supervisor, District Ranger /Field Office Manager / and Safety Officer.
3. Contact immediate Supervisor, District Ranger / Field Office Manager / and Safety Officer.	3. Contact immediate Supervisor, District Ranger /Field Office Manager / and Safety Officer.	3. Contact Police if damage or injury.
4. Contact Police if injuries, vehicle damage, or if private vehicle, individual, or property is involved.	4. Contact Police if injuries, vehicle damage, or if private vehicle, individual or property is involved.	4. Follow procedure for reporting listed in Attachments A and B.
5. Follow procedure for reporting listed in Attachment A and B.	5. Follow procedure for reporting listed in Attachment A and B.	
Complete before leaving scene	**Complete before leaving scene**	**Complete before leaving scene**
SF-91 Vehicle Report **SF-94** Witness Report	**SF-91** Vehicle Report **SF-94** Witness Report	**SF-91** Vehicle Accident **SF-94** Witness Report
Complete promptly after accident	**Complete promptly after accident**	**Complete promptly after accident**
AD-112 Property Damage **CA-1** Injury Report **CA-16** Medical Treatment **FS-6100-16** Agency Provided Medical Care (APMC) **DI-134** (BLM)	**AD-112** Property Damage **6700-8** Non-Employee Incident (if fatalities) **DI-134** (BLM)	**AD-112** Property Damage **DI-134** (BLM)

----------(Go to page 8)----------



Employee injured in accident with private auto.

1. Apply first aid; get medical assistance if needed.
2. Exchange name, address, and numbers with other participants and witnesses.

FS/BLM damage, private autos, no FS/BLM employee injured.

1. Exchange names, address, and license plate number of participants and witnesses.
2. Contact District Ranger /Field Office Manager /Supervisor.

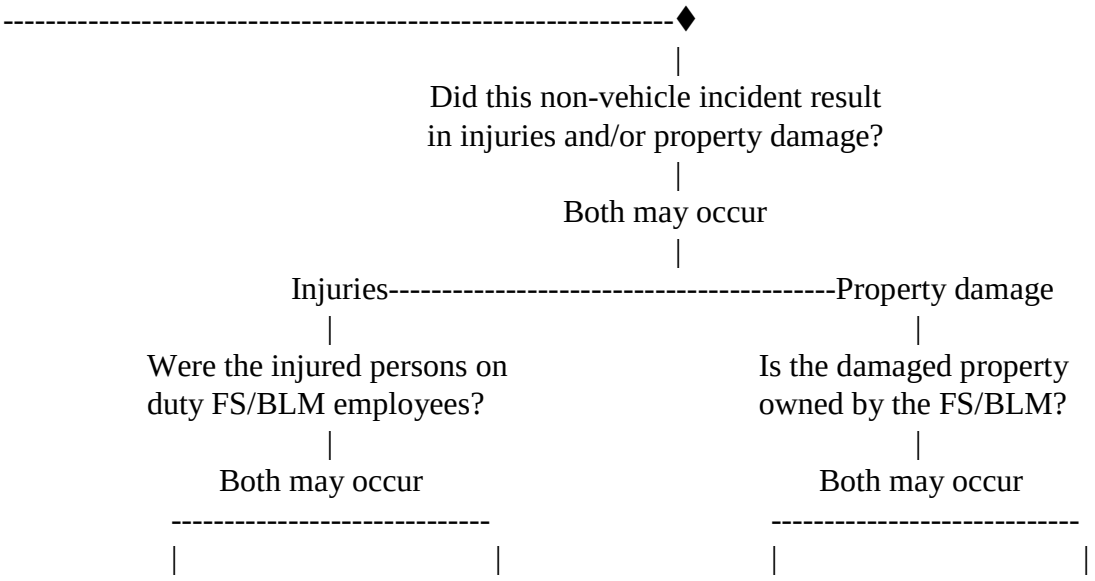
Auto accident on FS/ BLM road, no damage /FS/BLM

1. Exchange names, address, phone, and license plate.
2. Follow direction for reporting accident listed in Attachment C.

Private auto in accident on a public road

1. No FS involvement but may serve as witness upon request.
2. Contact employee supervisor and District Ranger /Field Office Manager / Notify the Safety Officer.

Employee injured in accident with private auto.	FS/BLM damage, private autos, no FS employee injured.	Auto accident on FS/BLM road, no damage /injury to FS/BLM.
3. Contact employee supervisor and District Ranger /Field Office Manager / Notify the Safety Officer.	3. Contact Police Notify the Safety Officer.	
4. Contact Police if injury requires treatment or any vehicle damage.	4. Follow procedure for reporting listed in Attachment D and attach copy of SF-94 to AD-112. Attachment C applies if accident occurred on FS/BLM road.	
5. Follow procedure for reporting listed in Attachments A and B.		
Complete after accident	**Complete after accident**	**Complete before leaving scene**
CA-1 Injury Report	**AD-112** Report of Property Damage	**6700-8** Non-Employee Incident
CA-16 Medical Treatment	**DI-134** (BLM)	
FS-6100-16 APMC		
AD-112 (If FS/BLM property also damaged.)		
DI-134 (BLM)		



FS/BLM Employees injured in non-vehicle accident

1. Apply appropriate first aid, get medical assistance if needed.
2. Record names of witnesses.
3. Contact supervisor, Safety Officer.
4. Follow procedure for reporting listed in Attachment B.

Complete:
Before leaving scene
Witness Report
CA-1 Injury Report

After accident
CA-1 Injury Report
CA-16 Medical
FS-6100-16 APMC
DI-134 (BLM)

Private party injured in accident involving FS/BLM property

1. Apply appropriate first aid, get medical assistance if needed.
2. Record names of witnesses.
3. Contact District Ranger /Field Office Manager/Supervisor , and Safety Officer.
4. If injury may result in a claim against the FS/BLM, follow procedure in Attachment "E".
5. If a fatality occurs, follow procedure listed in Attachment C.

FS/BLM property damaged (Non-vehicle)

1. Contact supervisor, District Ranger /Field Office Manager /Supervisor. They will contact the Property Officer.
2. Follow procedure listed in Attachment D

Complete:

After accident
AD-112 Report of property damage

Private Property damaged by FS/BLM (Non-vehicle)

1. Follow procedure listed in Attachment E.

ACCIDENT NOTIFICATION LIST

Notify the following individuals of major accidents, in order shown:

When Forest Supervisor or Center Manager notification is required

	Office	Home	Cellular
Martha Ketelle, Forest Supervisor(WRF)	970-945-3200		
Robert Storch, Forest Supervisor(GMF)	970-874-6685		
Mark Stiles, Center Manager(BLM)	970-240-5375		

INVESTIGATION

All accidents, regardless of severity, require some degree of investigation. Investigations for minor injuries do not require the same effort as an accident involving hospitalization of several employees. Investigate every accident to the extent necessary to determine the facts, conditions, and background factors present to determine appropriate preventive measures. The unit on which the accident occurs begins the investigation immediately, regardless of what organizational level ultimately is charged with the investigation responsibility (FSH 6709.12 Sec. 34).

Contact local FS/BLM Law Enforcement Officers and Safety Officer.

REPORTING MOTOR VEHICLE ACCIDENTS

All motor vehicle accidents are reportable. Determine damage by obtaining repair estimates. The amount is a combination of all damage involved in the incident, including private vehicles or property. Review all Motor Vehicle Accidents reports by the responsible Ranger, Field Office Manager and have a page attached listing the Statement of: Cause of Accident/Injury, Corrective action to be taken, Signature of Unit Leader.

Submit complete reports of investigation to the Supervisor's Office/ Center Managers office within five days following an accident. Send the Injury / Illness reports to your OWCP manager and Motor Vehicle Accident reports to the Safety Officer.

Reporting injuries

Immediately after any injury occurs, the employee should give written notice of the injury while on official duty to the supervisor, using the CA-1 form. The supervisor must complete the CA-1. Forward the CA-1 forms to the OWCP manager so it can be sent to the OWCP District Office within 10 working days following date of accident. This copy is the employee's official claim for workers' compensation benefits.

Reporting illnesses

An occupational disease or illness is a condition that occurs over time and results from: A systemic infection, or continued or repeated stress or strain, or continued exposure to toxic substances, poisons, or fumes.

An employee must report an occupational illness or disease on a CA-2 form if the disease or illness was caused while on official duty and / or: The illness/disease causes disability for work beyond the day or shift during which it was reported; It appears that the condition will result in prolonged treatment, permanent disability, or serious disfigurement of the head, face, or neck; The condition has resulted (or will likely result) in a charge for medical or other related expenses.

Forward the CA-2 forms to the OWCP manager so it can be sent to the OWCP District Office within 10 working days following employee submittal. This is the employee's official claim for workers' compensation benefits. The supervisor must fill out the copy and give it to the OWCP manager so that the information can be properly recorded.

Reporting treatment through contract medical care

Under restricted circumstances, employees, including those who become ill or injured while engaged in any activity on our unit may be provided initial emergency medical assistance under APMC (Agency Provided Medical Care). See Appendix B, Injury Definitions for use of APMC. {These must be job-related occurrences of minor traumatic injury or illness/disease, that do not involve lost time, and medical treatment beyond first aid is not anticipated}. Authorization and treatment are limited to one visit, and with special circumstances, will permit one or more follow-up visits. USE FS-6100-16/BLM use CA-16

REPORT ALL ACCIDENTS ON THE PROPER FORMS WITHIN 48 HOURS!

Remember - never admit guilt, do not talk to insurance representatives, lawyers or other investigators after an incident and refer them to the claims section or law enforcement at your supervising office.

Employees in the field or travel status need to be aware of the location of the nearest USFS / BLM office and not hesitate to contact them for Law Enforcement investigators, regardless of your home unit affiliation.

Attachments:

A Vehicle Accident
B Employees Injury
C Private Party Accidents
D Damage to Property
E Potential Claims Against the Government
F Hazardous Materials
G Accident / Incident Evaluation Guide
H Forms and Directives

ATTACHMENT A

FS/BLM MOTOR VEHICLE ACCIDENTS

When accidents occur involving vehicles, whether owned, leased, or rented (includes private vehicle on official use), these forms apply:

SF-91	Operator's Report of Motor Vehicle Accident
SF-94	Statement of Witness
AD-112	Report of Unserviceable, Lost or Damaged Property
DI-134	(BLM)

The flow chart on page 13 traces the path that the motor vehicle accident forms should follow. Further information on the handling of these forms is provided.

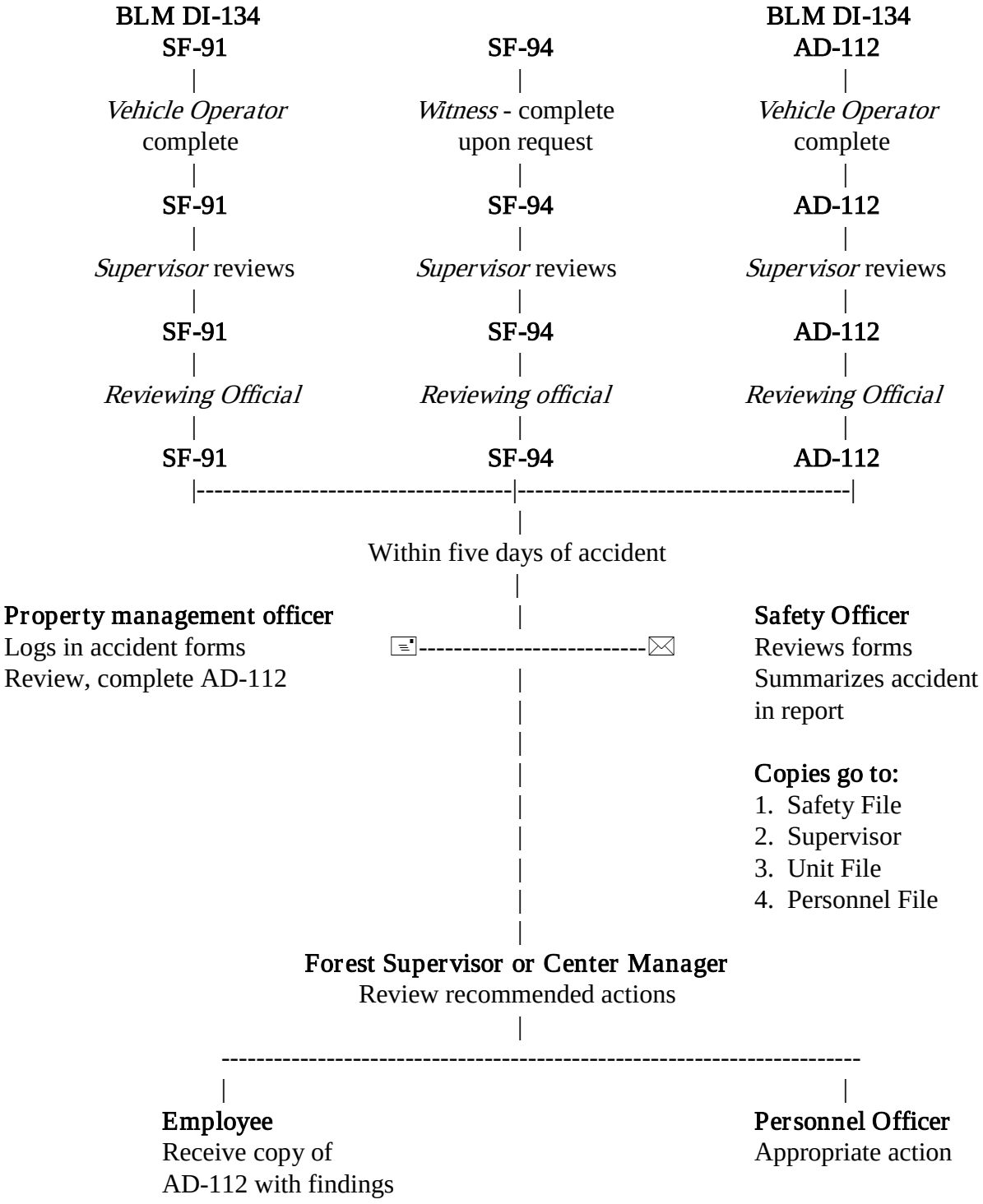
If there are injuries to any personnel, use additional forms: CA-1, CA-16,(BLM DI-134) See Attachment B.

If a private vehicle is also damaged, and the owner wishes to make a claim against the Government, SF-95 applies. See FSM 6573 and Attachment E.

MOTOR VEHICLE ACCIDENT

Event	Initial notification and action required
Total damages up to $1,000 as a result of a motor vehicle accident involving a Government-owned, -leased, or -rented motor vehicle (includes private vehicle on official use).	Immediately notify the District Ranger / Field Office Manager/Supervisor/Safety Officer who will designate and send investigation team.
Total damage in excess of $1,000 as a result of a motor vehicle accident involving a Government -owned, -leased, or -rented motor vehicle (includes private vehicle on official use).	Immediate notification of the Regional Office or Center Manager Office, the Center Manager or Forest Supervisor will designate and send investigation team.

VEHICLE ACCIDENT REPORTING



SF-91 Operator's Report of Motor Vehicle Accident

1. The **vehicle operator** completes the SF-91 immediately after an accident. Gather the information while at the scene of the accident. Forward the SF-91 promptly to the driver's supervisor.

2. The **supervisor** must review the SF-91 to ensure that it is accurate, and complete before it is forwarded to the District Ranger/Field Office Manager responsible for the employee.

3. The **District Ranger / Field Office Manager** will serve as Reviewing Official. The SF-91 must reach the **Safety Officer** within seven days of the accident.

4. The **Safety Officer** will log in all reports. The **Fleet Manager** will receive a copy. Incomplete forms will be returned to the subunit with notice indicating what additional information is required.

5. Further information on the flow of SF-91 is included in the instructions for Review of the Accident File, page 15

SF-94 Statement of Witness

1. The witness statement will be requested by the **vehicle operator** or other FS/BLM personnel on the scene. It should be requested immediately and completed before leaving the accident scene, particularly when witnesses are non-employees. Submit the SF-94 promptly to the driver's Supervisor.

2. The **supervisor** will ensure that the SF-94 is as complete as possible. Forward the SF-94 with the SF-91 to the **District Ranger / Field Office Manager** responsible for the employee.

3. The **District Ranger/ Field Office Manager** will serve as the Reviewing Official. The SF-94 must reach the Safety Officer within seven days of the accident.

4. Further information on processing of the SF-94 is in the instructions for Review on the Accident File, page 15.

AD-112 Report of Unserviceable, Lost, or Damaged Property

1. The AD-112 is initiated by the **vehicle operator** when any vehicle is damaged. The operator must complete Section F. The description of the property damage in section F must include a valid project number to which the damages may be charged. Forward the form promptly to the employee's Supervisor.

2. The **supervisor** will review the AD-112 and ensure that it is accurate and complete, and forward it to the District Ranger/Field Office Manager.

3. **District Ranger / Field Office Manager** will complete Section A and sign as Accountable Officer. Submit the AD-112 to the Fleet Manager within seven days of the vehicle damage, with a copy sent to the Safety Officer.

4. Included is further information on the processing of AD-112's for vehicle accidents in the instructions for Review of the Accident File, page 15.

Review of the Accident File

1. **The Safety Officer** will enter the receipt of all forms in a control log indicating date received, type of report, and status. Use a separate section of the control log for each program area. Send a copy of the log sheet quarterly to the District Ranger / Field Office Manager.

The **Safety Officer** will examine all reports to ensure they are complete. Further information may be requested: witness statements, photographs, etc. Incomplete forms will be returned to the subunit with a notice indicating what information is needed. When the reports are complete, copies of the accident file will be sent to the Fleet Manager, the Criminal Investigator and to Claims, if appropriate.

2. The **Claims Officer** will review the original AD-112. If appropriate, a claim will be initiated at this point. The AD-112 will then be forwarded to the Fleet Manager.

5. The **Fleet Manager** will complete the log on the AD-112 and ensure the accident file is complete.

ATTACHMENT B

Region 2 Accident/Injury/Fatality Notification Flow Chart

Contact the first person in line. If the first person is not available, go to the next in line.
All fatalities are immediately reported to Regional Safety & Occupational Health Manager.

All accidents/injuries/fatality are reported to the immediate line officer/Forest Supervisor and the Forest Safety Manager.

The Forest Safety Manager determines whom to notify next if the incident warrants.

If unsure whether an accident or injury should be reported, contact your Regional Safety & Occupational Health Manager.

If the incident is Fire Operations related…

If the incident is aircraft related…

If the incident is non-Fire Ops and non-aircraft related…

Fire Operations

Al Martinez
Fire Safety Manager
(O) 303-275-5336
(C) 303-478-3358
(H) 303-933-0399

Carlos Pinto
Regional Safety & Occupational Health Manager
(O) 303-275-5312
(C) 303-619-5617

Greg Griffith
Deputy Director, Operations, DASHO
(O) 303-275-5449
(C) 720-272-8857

Ed Hollenshead
WO Fire Ops Safety
(O) 208-387-5102
(C) 208-850-2003

Non-Fire Ground Operations

Carlos Pinto
Regional Safety & Occupational Health Manager
(O) 303-275-5312
(C) 303-619-5617

Al Martinez
Fire Safety Manager
(O) 303-275-5336
(C) 303-478-3358
(H) 303-933-0399

Greg Griffith
Deputy Director, Operations, DASHO
(O) 303-275-5449
(C) 720-272-8857

Dick King
WO Ground Safety
(O) 202-401-4470
(C) 202-253-2782

Aircraft Operations

Ivan Pupulidy
Aviation Safety Manager
(O) 303-275-5711
(C) 720-480-0495

Al Martinez
Fire Safety Manager
(O) 303-275-5336
(C) 303-478-3358
(H) 303-933-0399

Carlos Pinto
Regional Safety & Occupational Health Manager
(O) 303-275-5312
(C) 303-619-5617

Greg Griffith
Deputy Director, Operations, DASHO
(O) 303-275-5449
(C) 720-272-8857

Ron Hanks
WO Aviation Safety
(O) 208-387-5607
(C) 208-850-5357

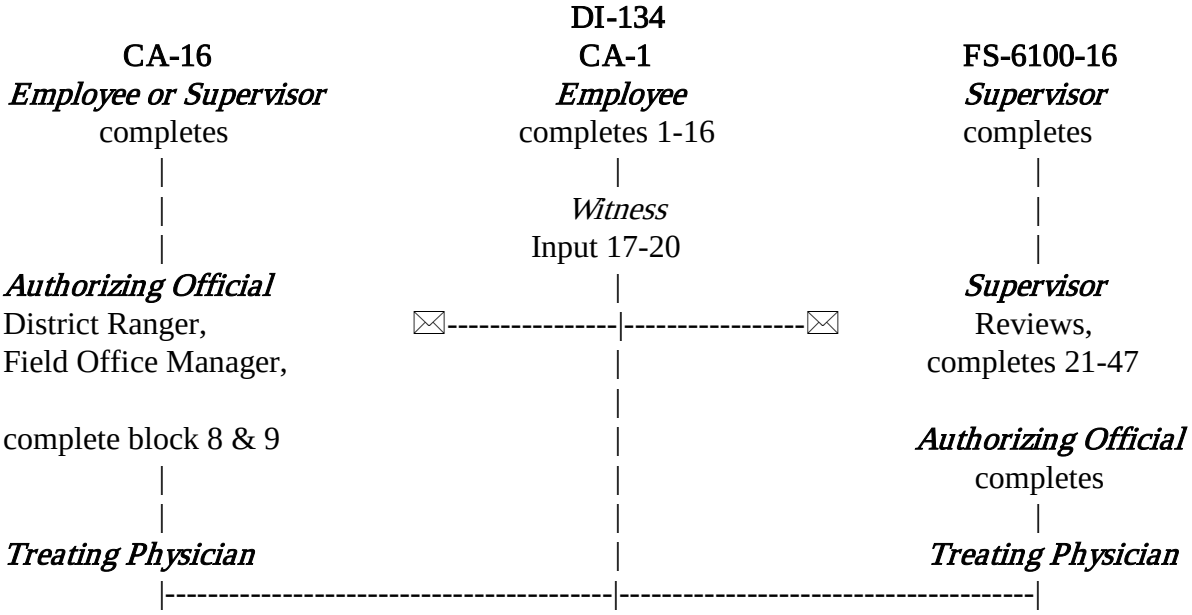
Revised 4/20/2004

REPORTING EMPLOYEE INJURIES, ILLNESS'S OR FATALITIES

When accidents occur in which employees are injured or killed, the following forms may apply:

DI-134	Report of Accident/Incident
CA-1	Federal Employee's Notice of Traumatic Injury.
CA-16	Request for Examination and Treatment.
FS-6100-16	Agency Provided Medical Care Authorization (APMC)
CA-6	Report of Fatality

See the summary of injury-related forms in the diagram below and in the directions provided in the following pages.



Treatment		No Treatment
Minor Treatment	*Injury*	*Personal File*
Mark "APMC" (see below for definition)	Forward to OWCP within 48 hours of receipt	

The CA-2 may apply to cases where an employee had not suffered an immediate or traumatic injury, but is suffering from an occupational disease, illness, or gradually developing injury. If the CA-2 applies, it will replace the CA-1. **DO NOT issue a CA -16 for an occupational illness. See below for definitions.**

NOTIFICATION OF AN OCCUPATIONAL INJURY / ILLNESS

Event	Initial Notification and Action Required
Minor injury or illness.	District Ranger / Field Office Manager notification, through the work supervisor when CA-1 or CA-2 is filled out.
Serious injury or illness; including broken bones, eye injuries, poisoning, burns, or chemical contamination.	Immediately notify the Safety Officer, and Center Manager / Forest Supervisor. The District Ranger/Field Office Manager will send investigation Team.
Severe injury or illness, requiring hospitalization.	Immediate notification of the Safety Officer, and the State or Regional Office, the Field Office Manager or Forest Supervisor will designate and send investigation team.
For Any of the Following:	**Initial Notification Action Required**
Occupation fatality (or likely death) to Forest Service employee or enrollees.	Immediate notification thru the Safety Officer of the Director's / Chief's Office, through the State or Regional Office.
OR	
One or more private citizens die (or death likely) as result of Forest Service activity.	Notify the Safety Officer. The Chief's/Director's Office shall notify the USDA/USDI Safety and Health Management Division, who shall in turn notify Department of Labor (DOL) OSHA.
OR	
Five or more employees, enrollees, and / or private citizens are hospitalized.	Immediately notify the Safety Officer. The Center Manager or Forest Supervisor will designate and send initial investigation team before arrival of Director's/Chief's team.

INJURY/ILLNESS DEFINITIONS

A traumatic injury is defined as a wound or other condition of the body caused by external force, including stress or strain, and which occurs during one shift of work or during one calendar day. The injury must be identifiable by time and place of occurrence and member or function of the body affected. It is this last criterion that sets apart a traumatic injury from an occupational disease. A Report of Traumatic Injury and Claim for Compensation, Form CA-1, (Rev. 9/93), is used to file a notice of Injury.

Examples: (1) If someone falls and is cut or breaks a bone, it is an injury. (2) In the course of duties, an individual is exposed to poison oak on one day and contracts a rash. Since the exposure is only once, happening during one working shift, this condition would be classified as an injury.

Compensation may be claimed for damage to prosthetic devices, medical braces, eyeglasses and hearing aids. This is strictly limited to damage caused at the time of the injury and the injury must require medical attention. In other words, if the person does not seek medical treatment, no claim for damaged property can be filed.

TYPES OF INJURIES:

First Aid Cases

Injuries/illnesses involving treatment where no expense is incurred and no lost time beyond the date of injury is expected. These do not need to be reported to OWCP. The employee's home unit will file the documented first aid cases in the OPF.

Agency Provided Medical Care (APMC) Cases.

Injury/illness cases involving only one APMC visit with no lost time charged to sick or annual leave, or COP; and similar cases that require only one follow-up APMC visit during non-duty hours. Such cases are not reportable to OWCP and are not chargeable. The employee's home unit will file these claims in the OPF.

Cases involving only one APMC visit with no lost time charged to sick or annual leave, or COP; and similar cases that require only one follow-up APMC visit during non-duty hours, are not reportable to OWCP and are not chargeable. THEY ARE REPORTED TO THE OWCP Manager. Clearly mark all first aid type cases in the upper right-hand portion of the CA-1 - CA-2 "First aid injury/Medical care paid by APMC", forward to the OWCP manager.

OWCP Reportable Cases.

Injury/Illness cases involving medical expense to the individual or OWCP, lost time beyond the date of injury (time charged to sick, annual leave, LWOP, or COP), and/or anticipated disability. This includes cases where a Request for Examination and Treatment, CA-16 is issued, where APMC follow-up treatment is required, and where treatment necessitates time loss during work hours. This OWCP requirement is to ensure that the individual's rights are met.

Occupational Illness/Disease.

A disease that is produced by systemic infections; continued or repeated stress or strain; exposure to toxins, poisons, or fumes; or other continued and repeated exposure to conditions of the work environment over a longer period of time. In order to qualify as a disease, the condition must be caused by exposure or activities on at least two days. The form used with occupational disease claims is the CA-2 (Rev, 9/93). DO NOT issue a CA-16 without prior approval of OWCP.

Examples: (1) An employee whose job consists of digging every day who develops tendonitis in the arm after two or more days from the continued digging has suffered a disease; as opposed to the employee who develops the tendonitis on the first day or who develops it as a result of severe striking of a rock or other item, in which case the tendonitis is considered an injury. (2) Colds, sore throats, flu, heart attacks, nervous conditions, emphysema, and dermatitis are illnesses.

Recurrence

A disability is considered to be a recurrence when, after recovering from an injury or illness and returning to work, the individual is again disabled and there has been no event, action or apparent cause or reason for the disability except for the previous injury. A CA 2a (Rev 9/93) is used to report a recurrence.

Reporting Fatalities

When an employee dies because of an on-the-job injury or illness, the supervisor should immediately report the fatality to their District Ranger / Field Office Manager, who will in turn notify the Forest Supervisor or Center Manager. The Safety Officer will contact the appropriate OWCP District Office by telegraph or telephone. Forward the top copies of the CA-6 form to the OWCP District Office. Send the carbon copy to the Safety Officer. Send the forms to the USDA/USDI Washington Office Safety and Health Management Division within seven working days after submission of the initial report.

CA-1 Federal Employee's Notice of Traumatic Injury, etc.

Complete the CA-1 for any injury, no matter how minor. This form documents the time and extent of the injury and compliance of duty should information ever be needed later.

1. The injured employee (or his / her supervisor) will complete the CA-1 in blocks' 1-15, summarizing the injury.

2. Any witnesses to the injury will complete blocks 16. If more than one witness report is needed, attach additional sheets of paper.

3. The immediate supervisor of the employee must complete blocks' 17-38 to document the employee's report. The supervisor will ensure that all information is complete and accurate.

Complete the *OWCP Agency Code*. For Job Corps, use 1142; YCC use 8629; and all other FS/BLM employees, use 8625; Older American Program, use 8638; FS/BLM Volunteers, use 8640, FS/BLM Hosted Programs, use 8642. **For injuries and illnesses incurred on the Fireline; while in fire camp; during transportation (air or ground) for suppression or surveillance purposes, use the code 8641.** The OSHA Site Code for the Rocky Mountain Research Station is FT. Refer to OSHA 2014 for completing OWCP Agency Code; OSHA Site Code, and Codes in block 13 a, b, c. Forward completed CA-1 to the OWCP Manager within three days.

Occupational Code: Begin with the two letters of the employee's pay plan, GS, GM, WG (?? is used for nonstandard occupations such as FS/BLM Volunteers) followed by the four numbers of the occupational series (i.e., GS-0462). The most common nonstandard codes for the FS/BLM are: FS/BLM Volunteer-462, SCSEP Enrollee AD-0000.

The supervisor will forward the completed CA-1 to the Authorizing Official (District Ranger / Field Office Manager).

4. OWCP Manager will begin a file for each employee injury that requires medical treatment. Retain the CA-1 in that file along with any other pertinent information, such as doctor's reports, AD-112 and correspondence regarding the injury.

An employee is required to give her/his supervisor written notice of injury on Form CA-1 within 30 days after a work related injury. Compensation may be denied if notice of injury is not given within 30 days, or if the supervisor does not have actual knowledge of the injury.

CA-2 Federal Employee's Notice of Occupational Disease

Complete the CA-2 for any illness or disease. This form documents the place and extent of the illness or disease, should information ever be needed later.

1. The injured employee will complete the CA-2 in blocks' 1-18.

2. The immediate supervisor of the employee must complete blocks' 19-34 to document the employee's report. The supervisor will ensure all information is complete and accurate.

Complete the *OWCP Agency Code.* For Job Corps, use 1142; YCC use 8629; all other FS/BLM, use 8625; Older American Program, use 8638; FS/BLM Volunteers, use 8640, FS/BLM Hosted Programs, use 8642. **For injuries and illnesses incurred on the fireline; while in fire camp; during transportation (air or ground) for suppression or surveillance purposes, use the code 8641.** The OSHA Site Code for the Rocky Mountain Research Station is FT. Refer to OSHA 2014 for completing OWCP Agency Code; OSHA Site Code, and Codes in block 19c. Forward completed CA-2 to the OWCP Manager within three days.

Occupational Code: Begin with the two letters of the employee's pay plan, GS, GM, WG (?? is used for nonstandard occupations such as FS/BLM Volunteers) followed by the four numbers of the occupational series (i.e., GS-0462). The most common nonstandard codes for the FS/BLM are: FS/BLM Volunteer -462, SCSEP Enrollee AD-0000.

The supervisor will forward the completed CA-2 to the Authorizing Official (District Ranger / Field Office Manager).

4. Retain the CA-2 in a file along with any other pertinent information, such as doctor's reports, AD-112 and correspondence regarding the case. Place a copy in the employee's OWCP file.

An employee is required to give his / her supervisor written notice of illness or disease on Form CA-2 within three years of the date when the employee first became aware of a causal relationship between the disease / illness and employment, or the date of last exposure (whichever is later.) Compensation may be denied if notice of injury is not given within three years, or if the supervisor does not have actual knowledge of the illness / disease.

CA-16 Request for Examination and/or Treatment

Complete the CA-2 for any illness or disease. This form documents the place and extent of the illness or disease, should information ever be needed later.

1. The injured employee will complete the CA-2 in blocks' 1-18.

2. The immediate supervisor of the employee must complete blocks' 19-34 to document the employee's report. The supervisor will ensure all information is complete and accurate.

Complete the *OWCP Agency Code.* For Job Corps, use 1142; YCC use 8629; all other FS/BLM, use 8625; Older American Program, use 8638; FS/BLM Volunteers, use 8640, FS/BLM Hosted Programs, use 8642**. For injuries and illnesses incurred on the fireline; while in fire camp; during transportation (air or ground) for suppression or surveillance purposes, use the code 8641.** The OSHA Site Code for the Rocky Mountain Research Station is FT. Refer to OSHA 2014 for completing OWCP Agency Code; OSHA Site Code, and Codes in block 19c. Forward completed CA-2 to the OWCP Manager within three days.

Occupational Code: Begin with the two letters of the employee's pay plan, GS, GM, WG (?? is used for nonstandard occupations such as FS/BLM Volunteers) followed by the four numbers of the occupational series (i.e., GS-0462). The most common nonstandard codes for the FS/BLM are: FS/BLM Volunteer -462, SCSEP Enrollee AD-0000.

The supervisor will forward the completed CA-2 to the Authorizing Official (District Ranger / Field Office Manager).

4. Retain the CA-2 in a file along with any other pertinent information, such as doctor's reports, AD-112 and correspondence regarding the case. Place a copy in the employee's OWCP file.

An employee is required to give his / her supervisor written notice of illness or disease on Form CA-2 within three years of the date when the employee first became aware of a causal relationship between the disease / illness and employment, or the date of last exposure (whichever is later.) Compensation may be denied if notice of injury is not given within three years, or if the supervisor does not have actual knowledge of the illness / disease.

FS-6100-16 AGENCY PROVIDED MEDICAL CARE
AUTHORIZATION AND MEDICAL REPORT

If handling the injury as Agency Provided Medical Care (APMC), a CA-1 must still be prepared for every employee, however, a CA-16 MUST NOT BE ISSUED FOR FS. **BLM MAY USE CA-16**

FS-6100-16 (3/88)/BLM CA-16 must be completed by the Authorizing Official (District Ranger / Field Office Manager) PRIOR to the employee going to the doctor. This is the authorization for treatment.

Clearly mark the CA-1 in RED across the top that the treatment was by Agency Provided Medical Care (APMC). "Treatment was by Agency Provided Medical Care - Do not forward to OWCP for payment".

Send the original CA-1 along with the original FS-6100-16 FS/CA-16 BLM form (with the authorizing official's, the doctor's, and the employee's portions completed) to the OWCP Manager within five calendar days from the date of treatment. File the original CA-1 along with the original FS-6100-16 FS/CA-16 BLM in the employee's medical folder.

Payment for (APMC) may be made under a blanket purchase arrangement, imprest fund or government credit card.

Should a case become more than just a "Minor Medical" after payment has been made and needs to be transmitted to OWCP, be sure to:

- Notify the OWCP Manager of initial payment under APMC provisions. The OWCP Manager will notify OWCP to eliminate duplicate payments.
- In addition, send along a copy of our FS-6100-16 FS/CA-16 BLM form when you submit the CA-1.
- Follow standard OWCP procedures for obtaining necessary follow-up medical treatment when filing a claim for compensation for loss of wages, etc. This includes issuing CA-16 as appropriate to the physician of the employee's choice.

ADDITIONAL FORMS

Along with the above forms for Occupational Injury and Illness, the following forms may be required. Contact the Compensation Specialist in Personnel if any of these are needed.

Along with the above forms for Occupational Injury and Illness, the following forms may be required. Contact the Compensation Specialist in Personnel if any of these are needed.

CA-2a *Notice of Employee's Recurrence of Disability of Claim for Pay/Compensation*. Use this when there is a recurrence of the original illness, when more medical expenses are incurred or employee is again disabled.

CA-5 *Claim for Compensation by Widow, Widower, and/or Children*. This form is to claim compensation on behalf of these dependents when injury/illness results in death.

CA-6 *Report of Fatality (Official Superior's Report of Employee's Death).*

CA-7 *Claim for Compensation on Account of Traumatic Injury or Occupational Disease*. Use this form to claim compensation for time lost (wages lost). This form cannot be filed unless a CA-1 has been previously filed.

CA-8 *Claim for Continuing Compensation on Account of Disability*. Use this form for continuing compensation for injury. Form CA-7 must have been previously filed.

CA-17 *Duty Status Report*. Use this to request information from a physician, particularly concerning employees' ability to return to work and with what restrictions.

CA-20 *Attending Physician's Report*. Used with the CA-7 to provide medical support of claim.

CA-20a *Attending Physician's Supplemental Report*. To provide OWCP with additional information about the supplemental claim on CA-8.

CA-35A-H *Evidence Required in Support of a Claim for Occupational Disease.* Each checklist is specific to the type of illness or disease.

1500a *Health Insurance Claim Form.* Use this form for all non-hospital and non-pharmacy billings for medical services and supplies.

ATTACHMENT C

ACCIDENTS INVOLVING PERSONS OTHER THAN FS/BLM EMPLOYEES

Form 6700-8 Report of Incident to Other than Employee**(FS)**
Form DI-134 Report of Incident Other than Employee**(BLM)**

In case of accidents to non-employees, Form 6700-8 may apply. (FSH 6709.12(33.3)

This form applies to every fatality on the Forest Service property with a few exceptions listed on the form, and every private motor vehicle accident occurring on Forest Service roads that result in injury or damage more than $350.

Instructions for completion of Form 6700-8 are located on the back of the form.

- Information required for the form should be gathered by the FS/BLM employee in charge at the scene of the accident.
- The District Ranger / Field Office Manager will ensure the information is correct and that blocks' 1-7 are properly coded. Send a copy to the Safety Officer, the Criminal Investigator, and in the case of a motor vehicle accident, the Fleet Manager.
- The Safety Officer will review the report with the Center Manager or Forest Supervisor, and send a copy to the USDIBLM/USDAFS Washington Office as required.

ATTACHMENT D

REPORTING LOSS OR DAMAGE OF FS/BLM PROPERTY

Property Damage Accidents / Incidents are those that occur during work, and that result in damage to any property, including motor vehicles. For incidents involving damaged, lost, or stolen FS/BLM property, use the AD-112.

AD-112 Report of Unserviceable, Lost or Damaged Property (12/88).

1. The AD-112 is completed by the employee accountable for the lost or damaged property. Section I must be accurately completed before forwarding the form to an immediate supervisor. In Section I-B, answer What, How and Why for damages other than a vehicle accident.

2. The Supervisor will ensure the accuracy and completeness of Section I, then promptly forward the AD-112 to the District's or Field Office's Unit Accountable Property Officer (UAPO).

3. The Unit Accountable Property Officer must sign Section I of the AD-112 and notify the District Ranger / Field Office Manager. They will review the AD-112 and forward it to the Property Management Officer within seven days of the incident. For valuable items (more than $1000), District Rangers / Field Office Manager will notify the Forest Supervisor / Center Manager. Discretion may be used by Line / Staff Officers in notifying the Forest Supervisor / Center Manager of property violations with minor dollar values.

4. The Property Management Officer will examine the AD-112 to ensure it is complete, and that appropriate documentation (pictures, witness report, police report, etc.) is attached. If not complete, the forms will be returned to the originating unit for prompt action.

When the reports are complete, copies of the accident file will be sent to the following:

- Criminal Investigator, if appropriate.
- Safety Officer
- Fleet Manager, if appropriate
- Budget and Finance

5. The Personnel Officer will review the AD-112 and complete Section F of the original (FSM 6404). A determination will be made and the finding shown in Section D of the AD-112. Employee liability will be included in the findings.

6. The Property Management Officer will sign Section E, block 10 of the AD-112, and will distribute as follows:

- The original AD-112 to the Claims Officer
- A copy of the AD-112 with findings will be sent to the employee through their supervisor

7. The Claims Officer will complete Section IV; block three, of the original AD-112. If appropriate, a claim will be initiated at this point. The AD-112 will then be forwarded to the Property Management Officer.

8. The Property Management Office will complete the log on the AD-112 and ensure the property file is complete and closed.

Special Reporting Requirements for Serious Incidents. Serious incidents are those that result in:

- Any job-related fatality.
- The hospitalization of three or more individuals.
- Loss of body function.
- Incapacitation expected to last over 30 days.
- Damage to government property exceeding $5,000, excluding resource damage.
- Actual or potential serious injury to private person and substantial damage or destruction of private property.

Report a serious incident to the Safety Officer even when there may be some doubt whether it is job-related. The agency head or designee must make a telephone or telegraph report of any serious incident within 48 hours to the USDIBLM/USDAFS Washington Office (WO) Safety and Health Management Division. This initial report must give the following information:

- Date and time and location of the incident.
- Names of persons involved.
- A description of any property involved.
- A description of the nature and extent of injury, illness, or damage.
- A summary of known or suspected causes.
- Corrective actions taken or planned to prevent reoccurrence.

Send the appropriate forms to the USDIBLM/USDAFS WO Safety and Health Management Division within seven working days after submission of the initial report. The Safety and Health Management Division may require additional investigative information and reports.

ATTACHMENT E

REPORTING POTENTIAL CLAIMS AGAINST THE GOVERNMENT

When an incident occurs in which a claim will be filed for damages against the US Government, the following forms will apply (DR-2510-1)

SF-95 Claims for Damage, Injury, or Death:

1. The claimant must complete and sign the forms and verify that personal insurance policies will not cover the damages. In addition an, OF-26, Scope of Employment form must be completed. Submit the SF-95 and OF - 26 to the District Ranger / Field Office Manager with responsibility for the unit involved.

2. Any District Ranger, Field Office Manager receiving a claim for damage, death, or injury will contact the Claims Officer. Prepare a written description of the accident (including a recommendation on the claim) then forward with the SF-95 to the Claim Officer. The first FS/BLM employee to receive a claim MUST sign and date the margin of the claim form as having received it. This starts the `clock' on the claims process, and can be critical if a lawsuit develops.

3. The Claims Officer will log in each claim, begin a file, and make a formal recommendation to the State /Region / National Claims Officer.

4. The Region /State / National Office will review the claim and forward the packet to OGC Attorney for review and decision, and inform the Claims Officer of the outcome.

5. Office of the General Council will notify the claimant of the outcome and process a request for payment through NFC, if appropriate.

ATTACHMENT F

HAZARDOUS MATERIALS SPILLED OR ABANDONED

A hazardous material is any hazardous substance, waste, chemical, pollutant, or contaminant that could cause injury or death to people, or causes damage to the environment. The 1996 Emergency Response Guidebook is an excellent resource for anyone during the initial phase of a Hazardous Materials/Dangerous Goods incident.

Hazardous Materials

- Recognize the presence of a hazardous material.
- Understand what hazardous materials are and their associated risks and possible outcomes.
- Secure area and warn others. Assess the situation at a safe distance. Stay upwind!
- Contact nearest spill response group (Fire Department, Sheriff, etc.).
- If possible and safe, identify the hazards, labels or placards.
- Notify Supervisor and Haz-Mat coordinator of the location and situation.
- Obtain Help!

Spills of Hazardous Materials in a Facility -

- Assess the situation for personal safety, if in doubt - LEAVE AREA.
- Secure the area, and warn others of possible hazards. Ensure that the site will not be disturbed until further assistance arrives
- If there is a potential for fire or toxic release, set off fire alarms and ensure that everyone evacuates the building.
- Use spill kits provided for the appropriate type of material, IF it does not endanger you or others.
- Dispose of cleanup materials properly.

If a reportable quantity of a hazardous material (See 49 Code of Federal Regulations (CFR), 172.101, List of Hazardous Materials and Reportable Quantities) or any quantity of a petroleum product that enters the waters of the United States is released from a FS/BLM facility or operation, immediately report the incident to the Safety Officer and the National Response Center 1-800-424-8802.

ATTACHMENT G

ACCIDENT EVALUATION GUIDE

To obtain more measurable information for establishing objectives, accident information, and a more consistent rationale for follow-up action on accidents, use the following Evaluation Guide and Point System. The guidelines for Personnel Action following an accident are recommendations for minimum action to gain more consistency in dealing with accidents.

COST	PENALTY GUIDE			
	CC 2	CC 2	CC 3	CC 4
$000.00 - 350.00	NONE	H	G	F
$350.00 - 499.99	NONE	E	D	A
$500.00 - 699.99	NONE	E	C	A
$700.00 - 899.99	NONE	D	B	A
$900.00 +	NONE	C	B	A

Circumstances Classes (CC):

1. No unsafe act--employee not at fault.
2. Error in judgment--exercised precautions, but accident still occurred. Employee personal factor may be lack of knowledge or skill.
3. Failed to drive defensively, poor judgment, attention diverted, fatigue other lack.
4. Serious failure of responsibility. Intentional misuse, abuse or negligence by employee.

(Penalty escalates to next higher level (except B to A) when injuries occur, an employee has had more than one accident in Class 2 or 3, or there was potential for loss of life.)

Action	Recommended minimum personnel action to be taken in FS/BLM requires that all drivers having an accident take the Defensive Driving Course.
E, H ----------	Work Supervisor, Ranger or Field Office Manager Counsels Employee.
D, G ----------	Letter of Caution from Ranger / Field Office Manager / to employee.
C ----------	Letter of Caution from Forest Supervisor or Center Manager.
B*, F ----------	Letter of reprimand to Employee from Forest Supervisor or Center Manager, could require payment of damage.
A ----------	Suspension for at least five days and suspension of driving privileges for a three year period, may mean termination of seasonal employee when driver's license is essential. All serious failure of responsibility accidents require the operator to pay for damages.

Rescind Driving Privileges	Suspend Driver Privileges (up to 60 days)
The employee operates a motor vehicle without a valid State Driver's License.	The employee is involved in two motor vehicle accidents during a continuous 12 month period in which it is determined by a court and / or the employing agency that the employee is at fault.
The employee is convicted (or forfeit's collateral) in connection with a serious traffic violation, such as, reckless driving, or speeding in excess of 20 miles per hour over the speed limit.	The employee disregards agency or Supervisor's instructions for operation of a motor vehicle.
It is adequately demonstrated by way of a traffic court conviction or otherwise, that the motor vehicle was operated under the influence of alcohol / narcotics.	The employee is convicted in court (or forfeits collateral) in connection with three or more traffic convictions including moving traffic violations, driving when impaired or being found guilty of being drunk in and around a vehicle, during a continuous 12-month period.
The employee has three or more preventable (at fault) motor vehicle accidents within a period of three years or less.	The employee is convicted in court, or it can be shown that the employee did leave the scene of an accident without making it known and complying with other requirements.

INJURY OR ILLNESS EVALUATION GUIDE

EXTENT OF INJURY	PENALTY GUIDE			
	CC 1	CC 2	CC 3	CC 4
Injury or illness without lost workday or treatment.	NONE	G	F	E
Lost workday and/or medical treatment required.	NONE	D	C	B
Possible fatality	NONE	C	B	A
Fatality	NONE	B	B	A

Definitions of **Circumstances Classes (CC):**

1. No unsafe act--employee not at fault.
2. Error in judgment--exercised precautions, but injury still occurred. Employee personal factor may be lack of knowledge or skill, physical capability or fitness.
3. Failed to use proper precautions or other breach of safety. Employee personal factor may be poor judgment, attention diverted or fatigue.
4. Serious failure of responsibility. Intentional misuse, abuse or negligence by employee.

Penalty escalates to next higher level (except B to A) when injuries occur, or employee has had more than one accident in Class 2 or 3, or there was potential for loss of life. In case of motor vehicle accident, use MVA Accident Evaluation Guide.

Action		Recommended minimum personnel action to be taken.
D, G	----------	Work Supervisor, Ranger or Field Office Manager counsels employee.
C, E, F	----------	Letter of Caution from District Ranger / Field Office Manager / to employee.
A, B	----------	Letter of Reprimand to employee from Forest Supervisor / Center Manager. In case of employees death, letter will go to employees supervisor.

ATTACHMENT H

FORMS FOR SUBMITTING ACCIDENT OR INJURY/ILLNESS REPORTS

FORMS FOR SUBMITTING ACCIDENT OR INJURY/ILLNESS REPORTS

Type of Accident	Forms
Occupational Injury	CA-1, APMC or CA-16 DI-134 (BLM)
Occupational Illness	CA-2, DI-134 (BLM)
Occupational Fatality	CA-6, DI-134 (BLM)
Motor Vehicle	SF-91, SF-94, AD-112 CA-1 or APMC **
Motorcycles, all terrain vehicles, snow mobiles, road graders, etc. Government Motor Vehicle or Private Vehicle Used for Government Use	SF-91, SF-94, AD-112 CA-1 or APMC **, DI-134 (BLM)
Motor Vehicle--Total damage does not exceed $350, but a private citizen is injured.	SF-91, SF-94, AD-112 CA-1 or APMC **, DI-134 (BLM)
Property Damage	AD-112, SF-94
Potential Claim Against the Government	SF-95, FS 6700-8, DI-134 (BLM)
Non-Employee Incident (If Fatality)	FS-5700-29, DI-134 (BLM)
Aircraft Accident	CA-1 or APMC **, SF-94, DI-134 (BLM)

**If personal injury involved.

Routing of Forms Will Be as Follows:

On receipt of accident forms send a copy to the Property Manager, Fleet Manager and Claims Manager. Each District/Field Office will process the OWCP forms, with a copy of the CA-1 or CA-2 sent to OWCP Manager for insertion into the employees Official Personnel Folder.

APPENDIX I

DIRECTIVES

FSM 6700 --	Safety and Health Manual
FSM 7100 --	Fleet Manual
FSH 5109.34 --	Interagency Fire Business Management Handbook
FSH 6109.12 --	Injury/Illness Compensation
FSH 6509.11 --	Service wide Claims Handbook
FSH 6709.11 --	Health and Safety Code Handbook
FSH 6709.12 --	Safety and Health Handbook
FSH 7109.19 --	Fleet Management Handbook
Federal Injury -- Compensation	Pamphlet CA-550
Resource Book --	Training for Federal Employing Agency Compensation Specialists
Federal Personnel Manual	Chapter 810 - Injury Compensation
FECA Procedure Manual	Part II
20 CFR (Code of Federal Regulation) Part 10	Federal Employee Compensation
49 CFR Part 172.101 --	Transportation of Hazardous Materials, Reportable Quantities
Driver-Operator Guide --	EM-7130-2
Emergency Response Guide	For first responders at Hazardous Materials Incident

Appendix L: Prescribed Fire Plan Template (2008)

A standardized, reproducible template form for the Prescribed Fire Plan development process is included in this appendix. A standardized format is provided for the Prescribed Fire Plan in PDF. An electronic version editable in Word is also available. Users should prepare the plan using the electronic version.

PRESCRIBED FIRE PLAN

ADMINISTRATIVE UNIT(S): _____

PRESCRIBED FIRE NAME: _____

PREPARED BY: _____ **DATE:** _____

Name & Qualification/Currency

TECHNICAL REVIEW BY: _____ **DATE:** _____

Name & Qualification/Currency

COMPLEXITY RATING: _____

MINIMUM RXB REQUIREMENT: _____

APPROVED BY: _____ **DATE:** _____

Agency Administrator

ELEMENT 2: AGENCY ADMINISTRATOR GO/NO-GO PRE-IGNITION APPROVAL CHECKLIST

Instructions: The Agency Administrator's GO/NO-GO Pre-Ignition Approval is the intermediate planning review process (i.e. between the Prescribed Fire Complexity Rating System Guide and Go/No-Go Checklist) that should be completed before a prescribed fire can be implemented. The Agency Administrator's Go/No-Go Pre-Ignition Approval evaluates whether compliance requirements, Prescribed Fire Plan elements, and internal and external notifications have been or will be completed and expresses the Agency Administrator's intent to implement the Prescribed Fire Plan. If ignition of the prescribed fire is not initiated prior to expiration date determined by the Agency Administrator, a new approval will be required.

YES	NO	KEY ELEMENT QUESTIONS
		Is the Prescribed Fire Plan up to date? *Hints: amendments, seasonality.*
		Will all compliance requirements be completed? *Hints: cultural, threatened and endangered species, smoke management, NEPA.*
		Is risk management in place and the residual risk acceptable? *Hints: Prescribed Fire Complexity Rating Guide completed with rational and mitigation measures identified and documented?*
		Will all elements of the Prescribed Fire Plan be met? *Hints: Preparation work, mitigation, weather, organization, prescription, contingency resources*
		Will all internal and external notifications and media releases be completed? *Hints: Preparedness level restrictions*
		Will key agency staff be fully briefed and understand prescribed fire implementation?
		Are there any other extenuating circumstances that would preclude the successful implementation of the plan?
		Have you determined if and when you are to be notified that contingency actions are being taken? Will this be communicated to the Burn Boss?
		Other:

Recommended by: _____ Date: _____
FMO/Prescribed Fire Burn Boss

Approved by: _____ Date: _____
Agency Administrator

Approval expires (date): _____

ELEMENT 2: PRESCRIBED FIRE GO/NO-GO CHECKLIST

	YES	NO
A. Has the burn unit experienced unusual drought conditions or does it contain above normal fuel loadings which were not considered in the prescription development? If NO proceed with checklist below, if YES go to item B.		
B. Has the prescribed fire plan been reviewed and an amendment and technical review been completed; or has it been determined that no amendment is necessary? If YES to any, proceed with checklist below, if NO, STOP.		

YES	NO	QUESTIONS
		Are ALL pre-burn prescription parameters met?
		Are ALL smoke management specifications met?
		Has ALL required current and projected fire weather forecast been obtained and are they favorable?
		Are ALL planned operations personnel and equipment on-site, available, and operational?
		Has the availability of ALL contingency resources been checked and are they available?
		Have ALL personnel been briefed on the project objectives, their assignment, safety hazards, escape routes, and safety zones?
		Have all the pre-burn considerations identified in the Prescribed Fire Plan been completed or addressed?
		Have ALL the required notifications been made?
		Are ALL permits and clearances obtained?
		In your opinion, can the burn be carried out according to the Prescribed Fire Plan and will it meet the planned objective?

If all the questions were answered "YES" proceed with a test fire. Document the current conditions, location, and results

_____ _____

Burn Boss Date

ELEMENT 3 COMPLEXITY ANALYSIS SUMMARY

PRESCRIBED FIRE NAME			
ELEMENT	**RISK**	**POTENTIAL CONSEQUENCE**	**TECHNICAL DIFFICULTY**
1. Potential for escape			
2. The number and dependence of activities			
3. Off-site Values			
4 On-Site Values			
5. Fire Behavior			
6. Management organization			
7. Public and political interest			
8. Fire Treatment objectives			
9 Constraints			
10 Safety			
11. Ignition procedures/ methods			
12. Interagency coordination			
13. Project logistics			
14 Smoke management			

COMPLEXITY RATING SUMMARY	
	OVERALL RATING
RISK	
CONSEQUENCES	
TECHNICAL DIFFICULTY	
SUMMARY COMPLEXITY DETERMINATION	
RATIONALE:	

ELEMENT 4: DESCRIPTION OF PRESCRIBED FIRE AREA

A. Physical Description

1. Location**:**
2. Size:
3. Topography:
4. Project Boundary:

B. Vegetation/Fuels Description:

1. On-site fuels data
2. Adjacent fuels data

C. Description of Unique Features:

ELEMENT 5: OBJECTIVES

A. Objectives:

1. Resource objectives:
2. Prescribed fire objectives:

ELEMENT 6: FUNDING:

A. Cost:

B. Funding source:

ELEMENT 7: PRESCRIPTION

A. Environmental Prescription:

B. Fire Behavior Prescription:

ELEMENT 8: SCHEDULING

A. Ignition Time Frames/Season(s):

B. Projected Duration:

C. Constraints:

ELEMENT 9: PRE-BURN CONSIDERATIONS AND WEATHER

A. Considerations:

1. On Site:

2. Off Site

B. Method and Frequency for Obtaining Weather and Smoke Management Forecast(s):

C. Notifications:

ELEMENT 10: BRIEFING

Briefing Checklist:

- ☐ Burn Organization
- ☐ Burn Objectives
- ☐ Description of Prescribed Fire Area
- ☐ Expected Weather & Fire Behavior
- ☐ Communications
- ☐ Ignition plan
- ☐ Holding Plan
- ☐ Contingency Plan

□ Wildfire Conversion

□ Safety and Medical Plan

□ Aerial Ignition Briefing (if Required)

ELEMENT 11: ORGANIZATION AND EQUIPMENT

A. Positions:

B. Equipment:

C. Supplies:

ELEMENT 12: COMMUNICATION

A. Radio Frequencies

1. Command Frequency(s):
2. Tactical Frequency(s):
3. Air Operations Frequency(s):

B. Telephone Numbers:

ELEMENT 13: PUBLIC AND PERSONNEL SAFETY, MEDICAL

A. Safety Hazards:

B. Measures Taken to Reduce the Hazards:

C. Emergency Medical Procedures:

D. Emergency Evacuation Methods:

E. Emergency facilities:

ELEMENT 14 TEST FIRE

A. Planned location:

B. Test Fire Documentation:

1. Weather conditions On-Site:

2. Test Fire Results:

ELEMENT 15: IGNITION PLAN

A. Firing Methods (including Techniques, Sequences and Patterns):

B. Devices:

C. Ignition Staffing:

ELEMENT 16: HOLDING PLAN

A. General Procedures for Holding:

B. Critical Holding Points and Actions:

C. Minimum Organization or Capabilities Needed:

ELEMENT 17: CONTINGENCY PLAN

A. Trigger Points:

B. Actions Needed:

C. Additional Resources and Maximum Response Time(s):

ELEMENT 18: WILDFIRE CONVERSION

A. Wildfire Declared By:

B. IC Assignment:

C. Notifications:

D. Extended Attack Actions and Opportunities to Aid in Fire Suppression:

ELEMENT 19: SMOKE MANAGEMENT AND AIR QUALITY

A. Compliance:

B. Permits to be Obtained:

C. Smoke Sensitive Receptors:

D. Potential Impacted Areas:

E. Mitigation Strategies and Techniques to Reduce Smoke Impacts:

ELEMENT 20: MONITORING

A. Fuels Information Required and Procedures:

B. Weather Monitoring (Forecasted and Observed) Required and Procedures:

C. Fire Behavior Monitoring Required and Procedures:

D. Monitoring Required To Ensure That Prescribed Fire Plan Objectives Are Met:

E. Smoke Dispersal Monitoring Required and Procedures:

ELEMENT 21: POST-BURN ACTIVITIES

Post-Burn Activities That Must Be Completed:

APPENDICES

A. Maps: Vicinity and Project

B. Technical Review Checklist

C. Complexity Analysis

D. Agency Specific Job Hazard Analysis

E. Fire Behavior Modeling Documentation or Empirical Documentation (unless it is included in the fire behavior narrative in Element 7; Prescription)

A: MAPS

1. Vicinity Map:

2. Project Map:

B: TECHNICAL REVIEWER CHECKLIST

PRESCRIBED FIRE PLAN ELEMENTS:	S /U	COMMENTS
1. Signature page		
2. GO/NO-GO Checklists		
3. Complexity Analysis Summary		
4. Description of the Prescribed Fire Area		
5. Objectives		
6. Funding		
7. Prescription		
8. Scheduling		
9. Pre-burn Considerations and Weather		
10. Briefing		
11. Organization and Equipment		
12. Communication		
13. Public and Personnel Safety, Medical		
14. Test Fire		
15. Ignition Plan		
16. Holding Plan		
17. Contingency Plan		
18. Wildfire Conversion		
19. Smoke Management and Air Quality		
20. Monitoring		
21. Post-burn Activities		
Appendix A: Maps		
Appendix C: Complexity Analysis		
Appendix D: Agency specific job hazard analysis		
Appendix E: Fire Prediction Modeling Runs or Empirical Evidence		
Other		

S = Satisfactory **U = Unsatisfactory**

Recommended for Approval: _____ Not Recommended for Approval: _____

_____ _____ _____

Technical Reviewer Qualification and currency (Y/N) Date

□ **Approval is recommended subject to the completion of all requirements listed in the comments section, or on the Prescribed Fire Plan.**

C: COMPLEXITY ANALYSIS

D: AGENCY SPECIFIC JOB HAZARD ANALYSIS

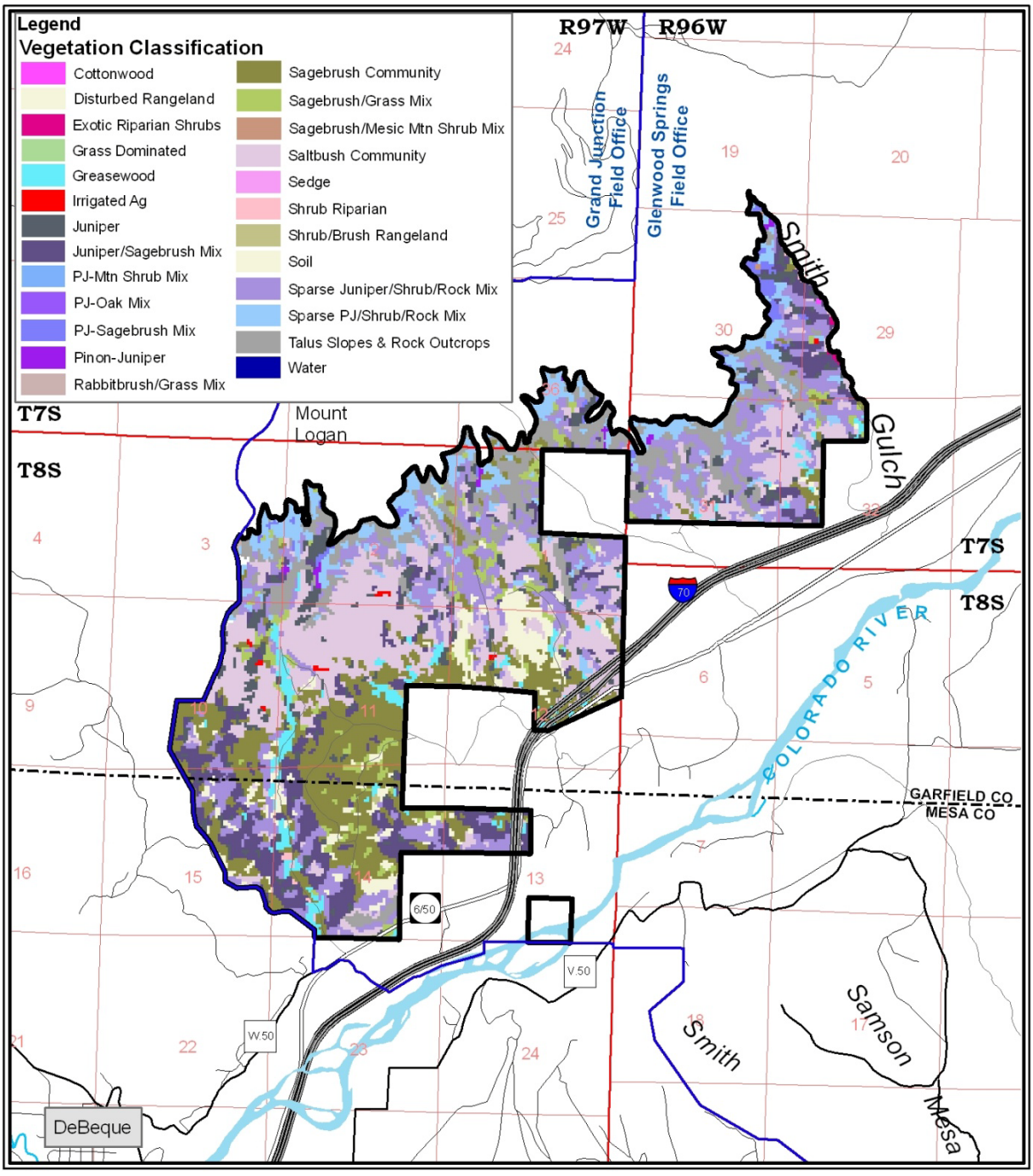
E: FIRE BEHAVIOR MODELING DOCUMENTATION OR EMPIRICAL DOCUMENTATION

APPENDIX M

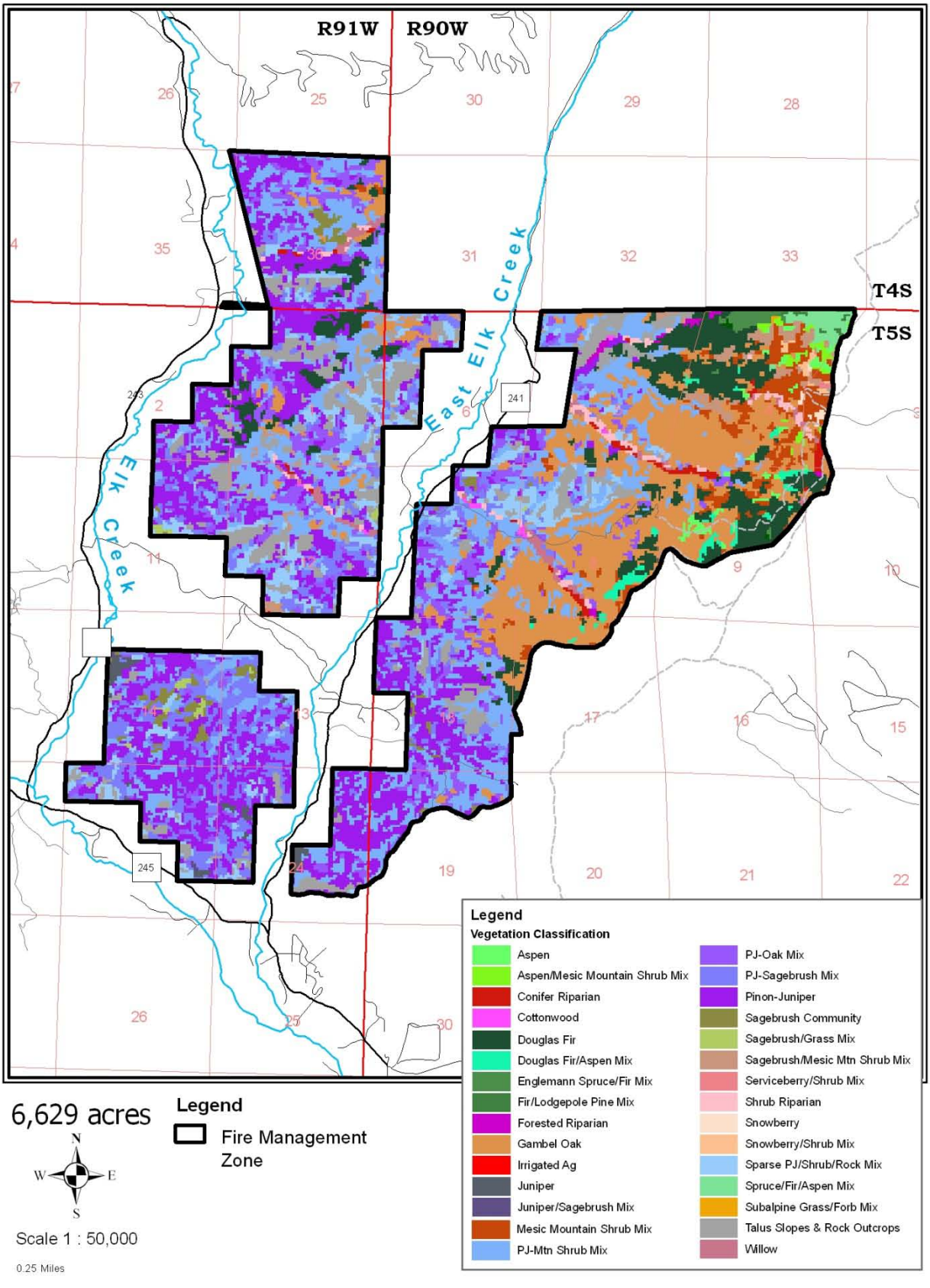
Cover Type & Vegetation Treatment Maps

Table of Contents

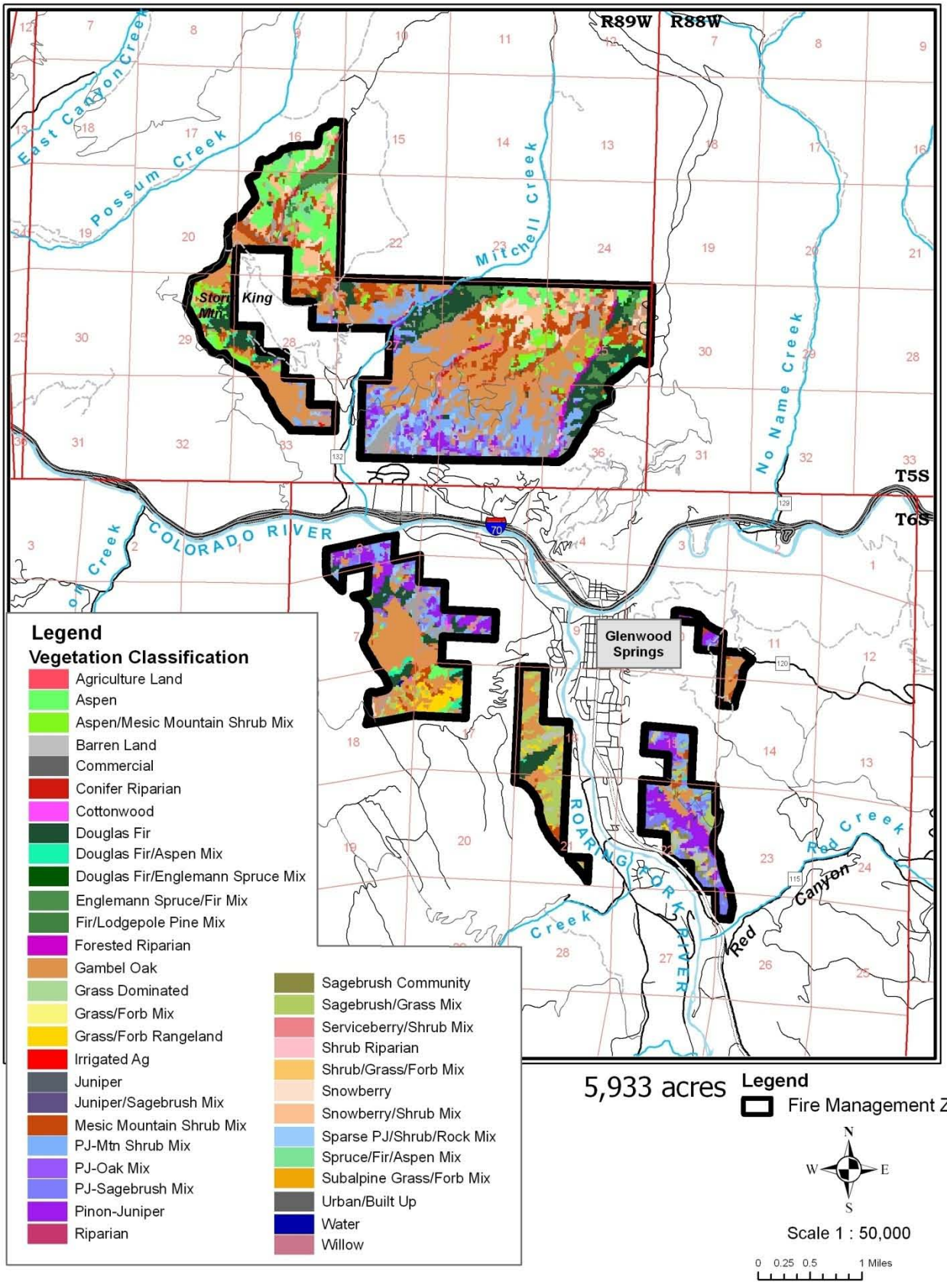
A-140-01 - Mount Logan Foothills



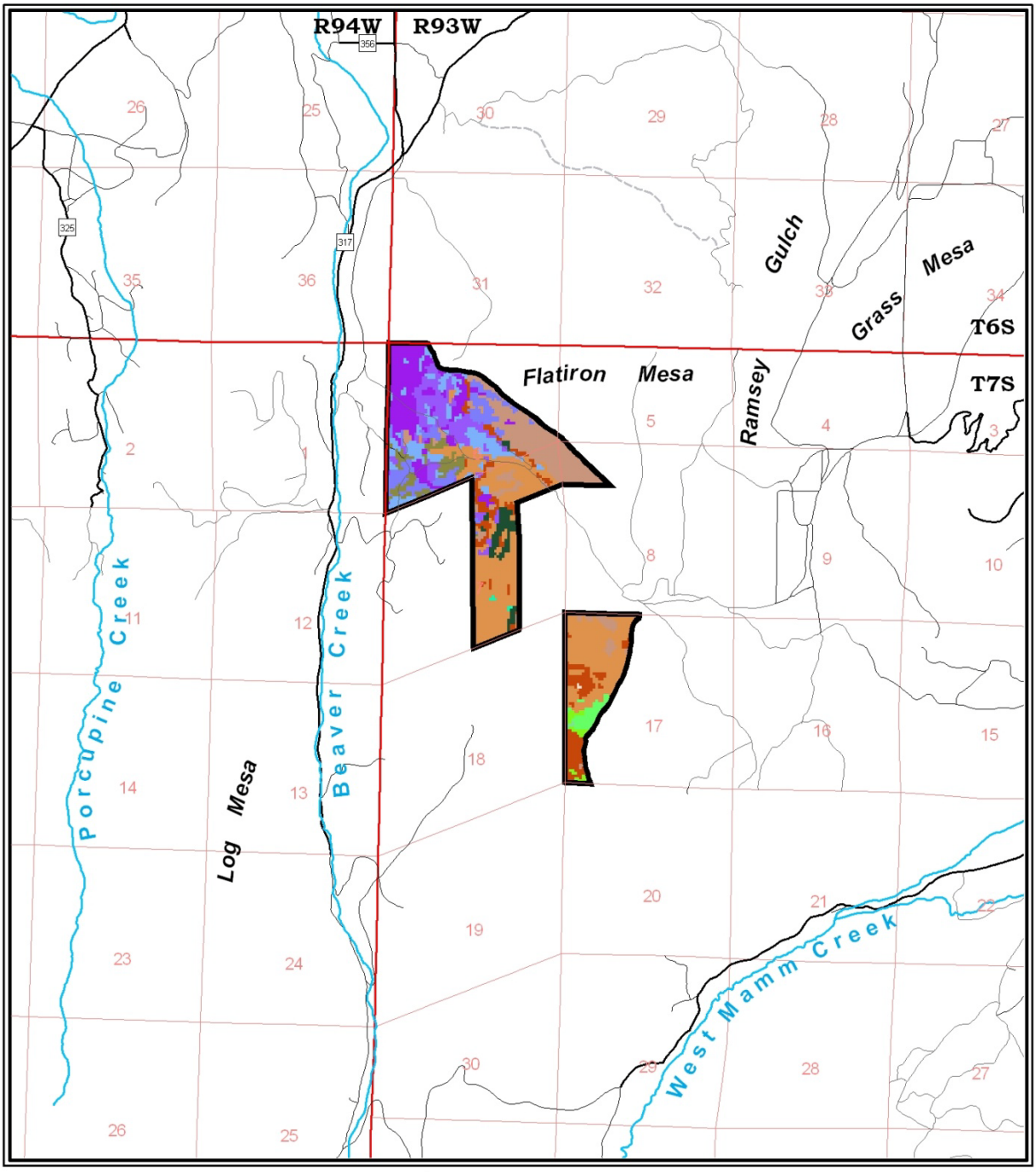
A-140- 02 - New Castle Watershed



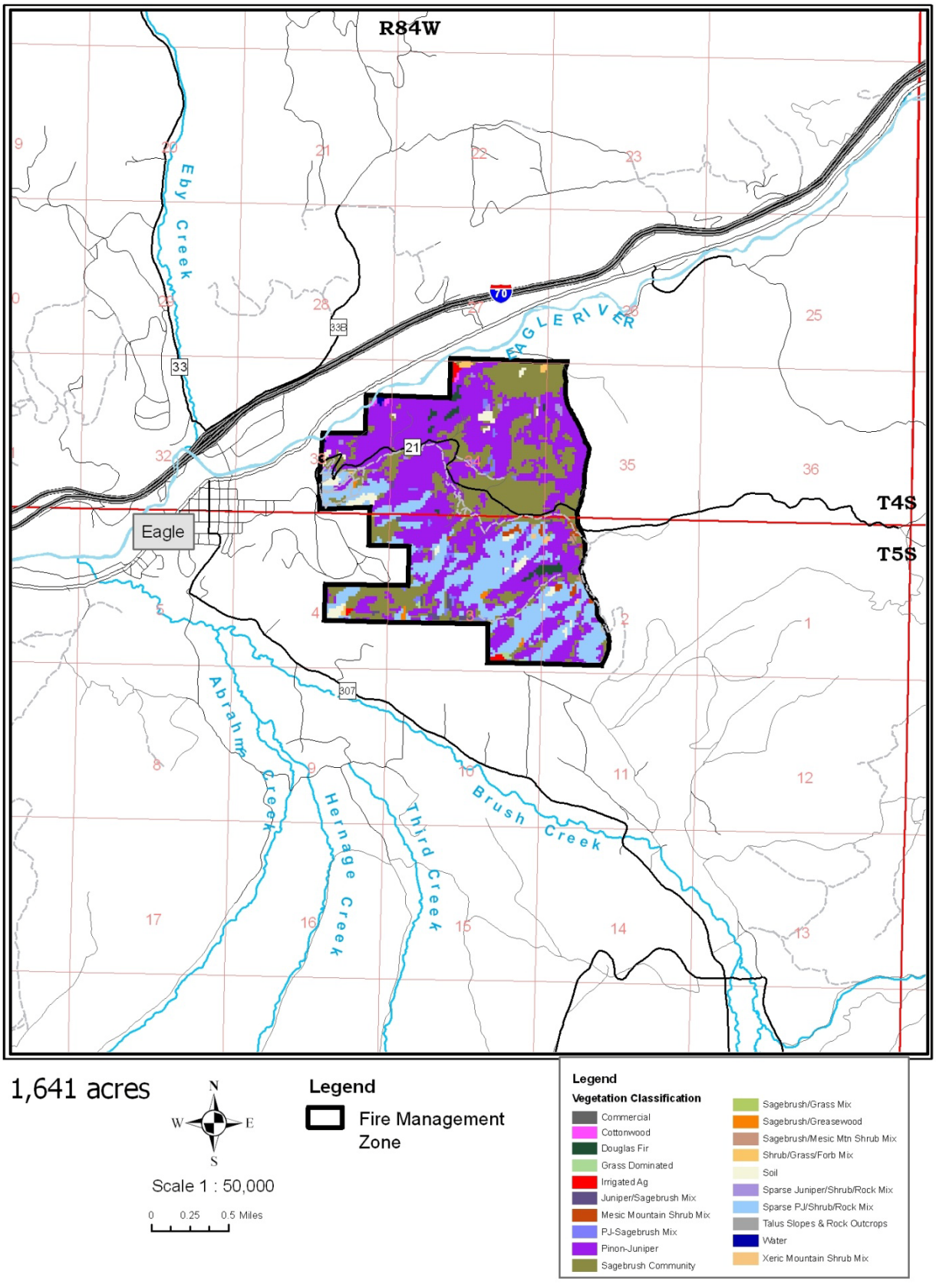
A-140- 03 - Glenwood Springs Debris Flow



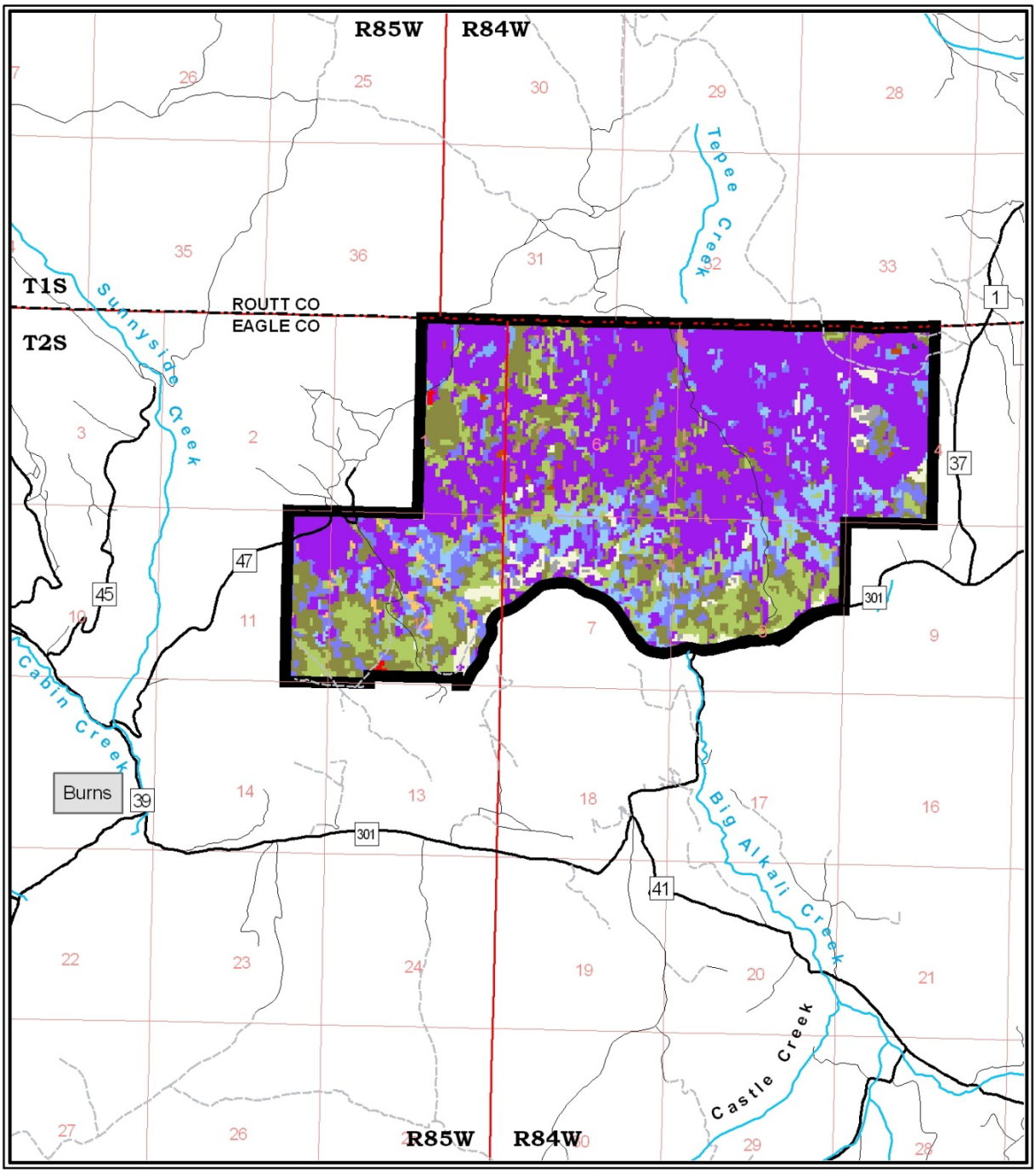
A-140- 04 - Rifle Municipal Watershed



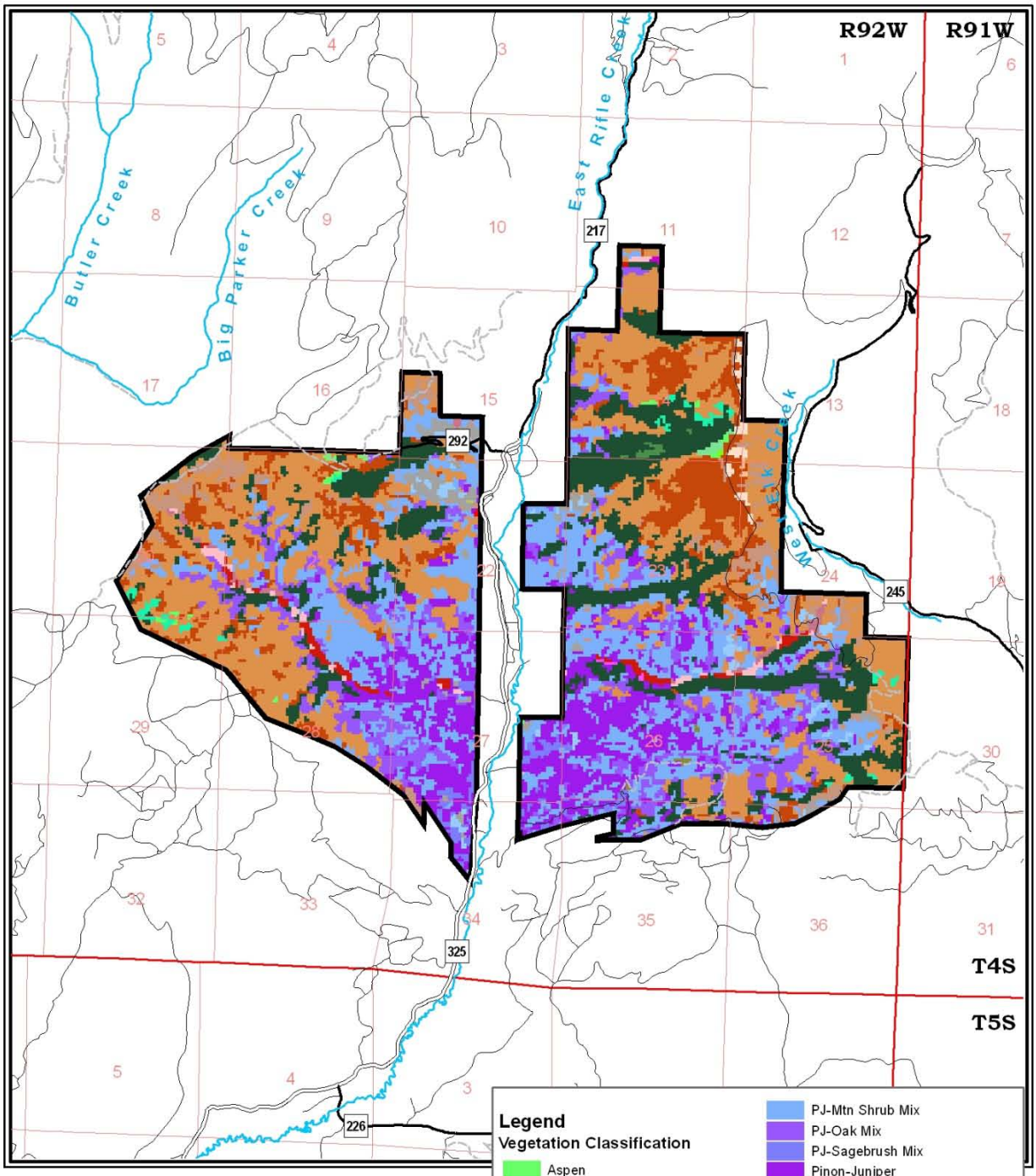
A-140- 05 - East Eagle



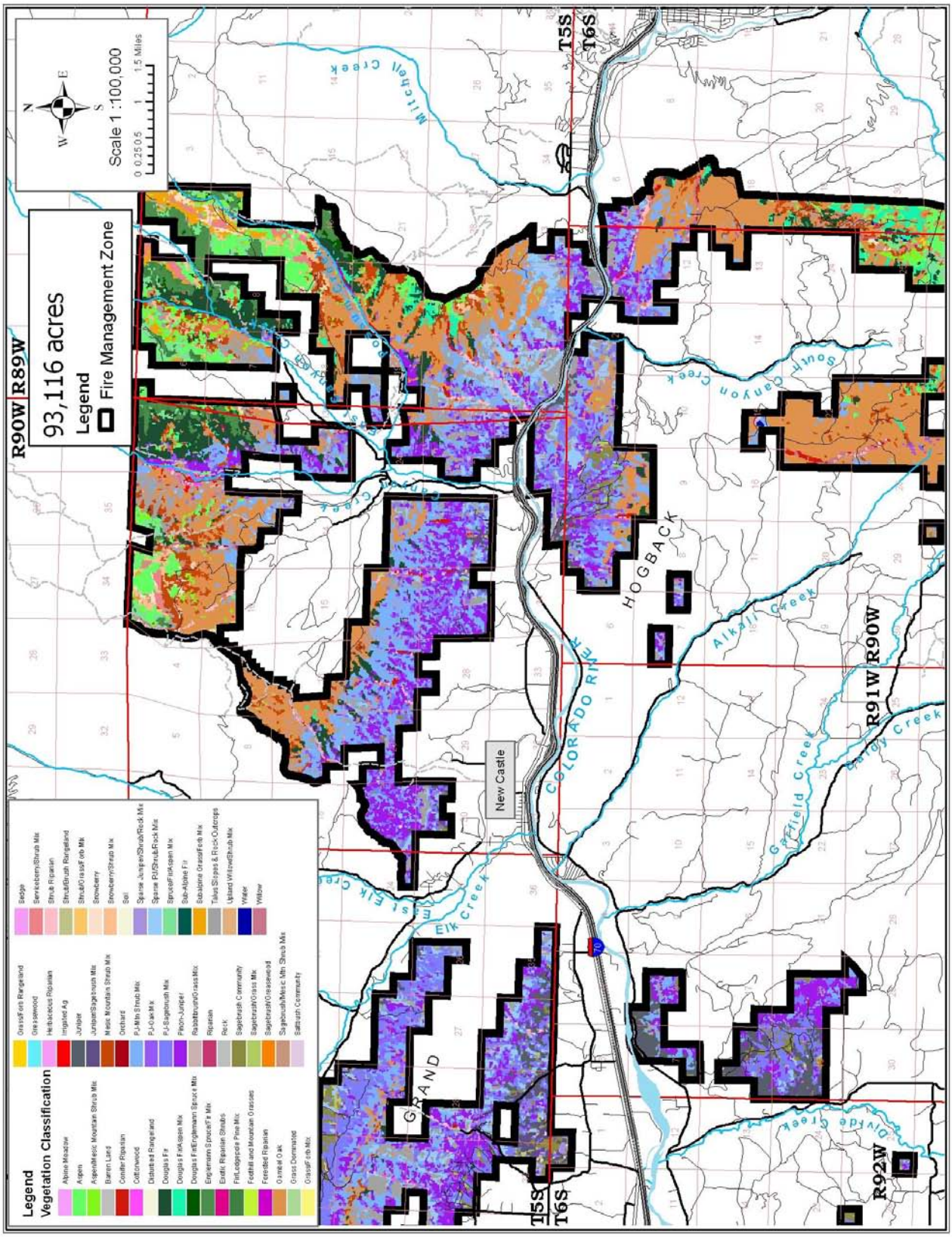
A-140- 06 - Blue Hill Area of Critical Environmental Concern



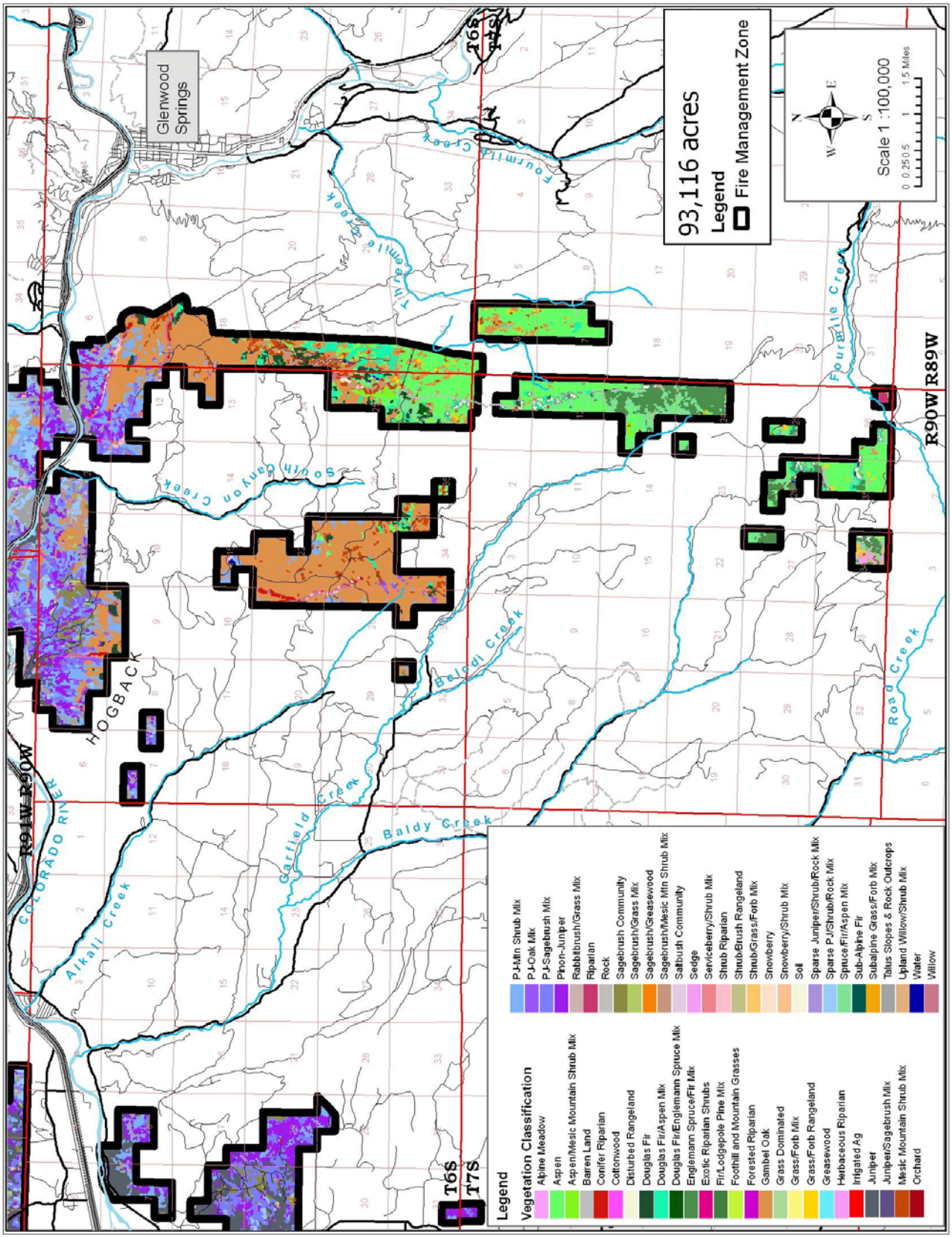
B-140- 01 - East Rifle Creek



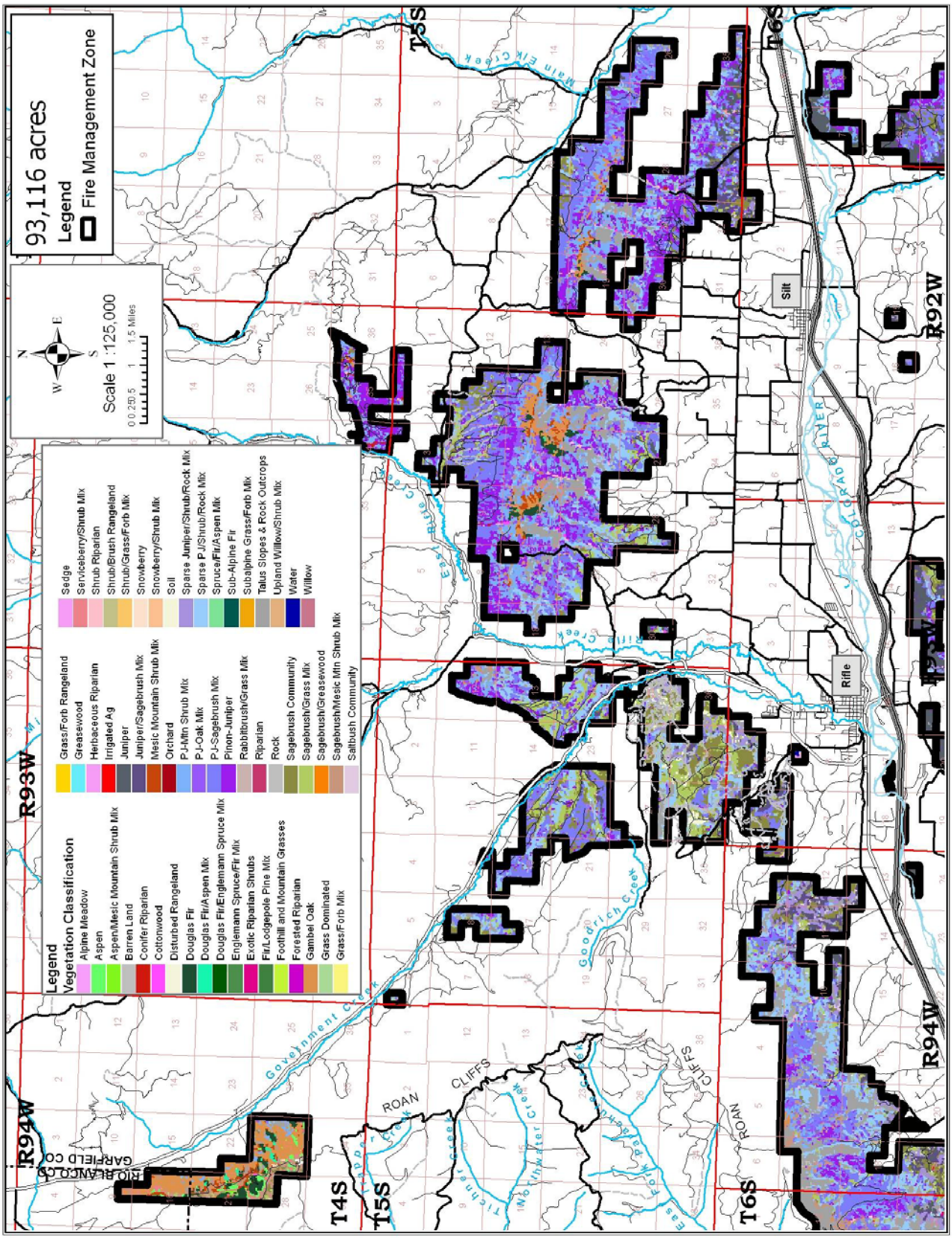
B-140- 02 - 1-70 Corridor West of Glenwood Springs – *New Castle Area*



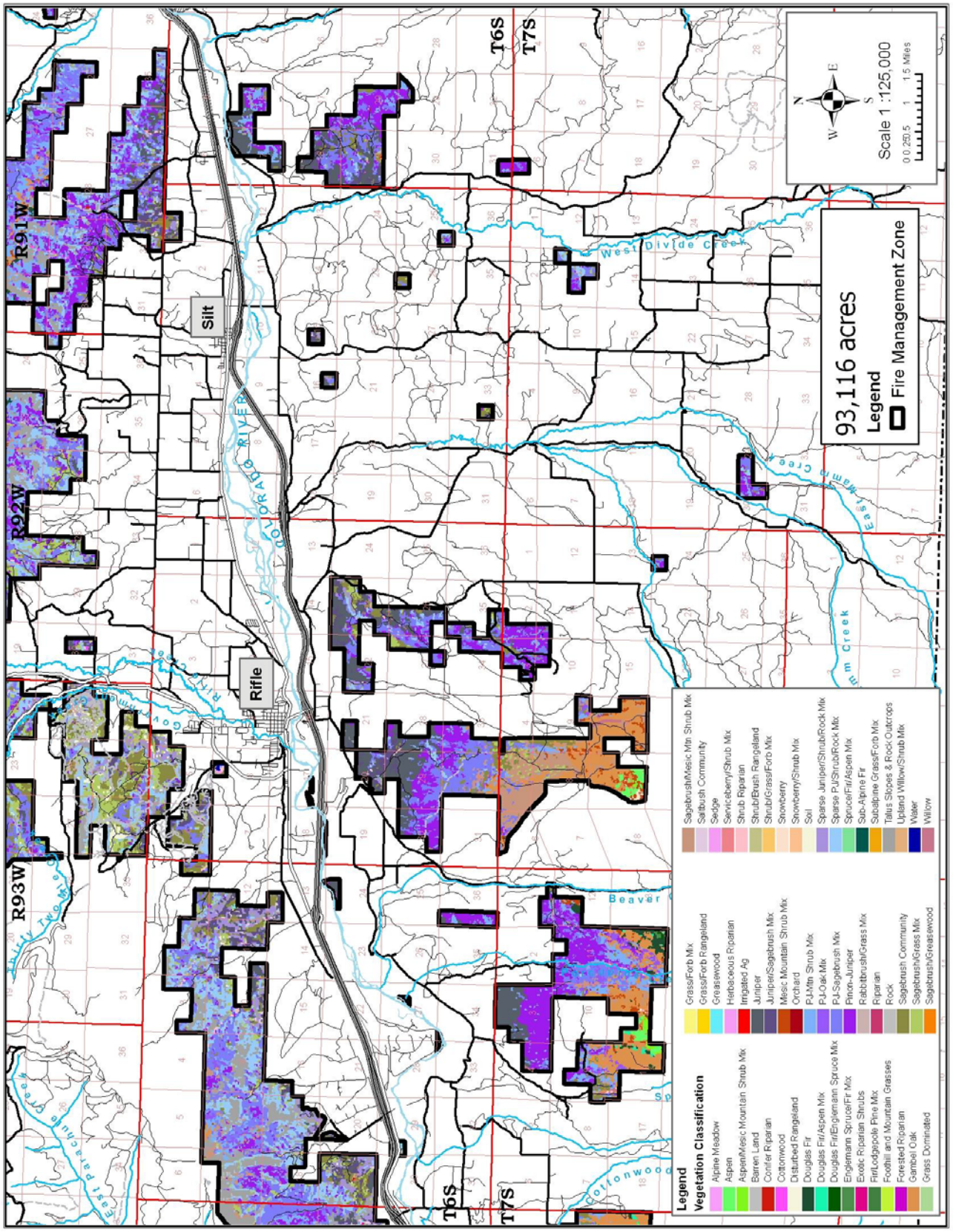
B-140- 02 - 1-70 Corridor West of Glenwood Springs – *South Canyon*



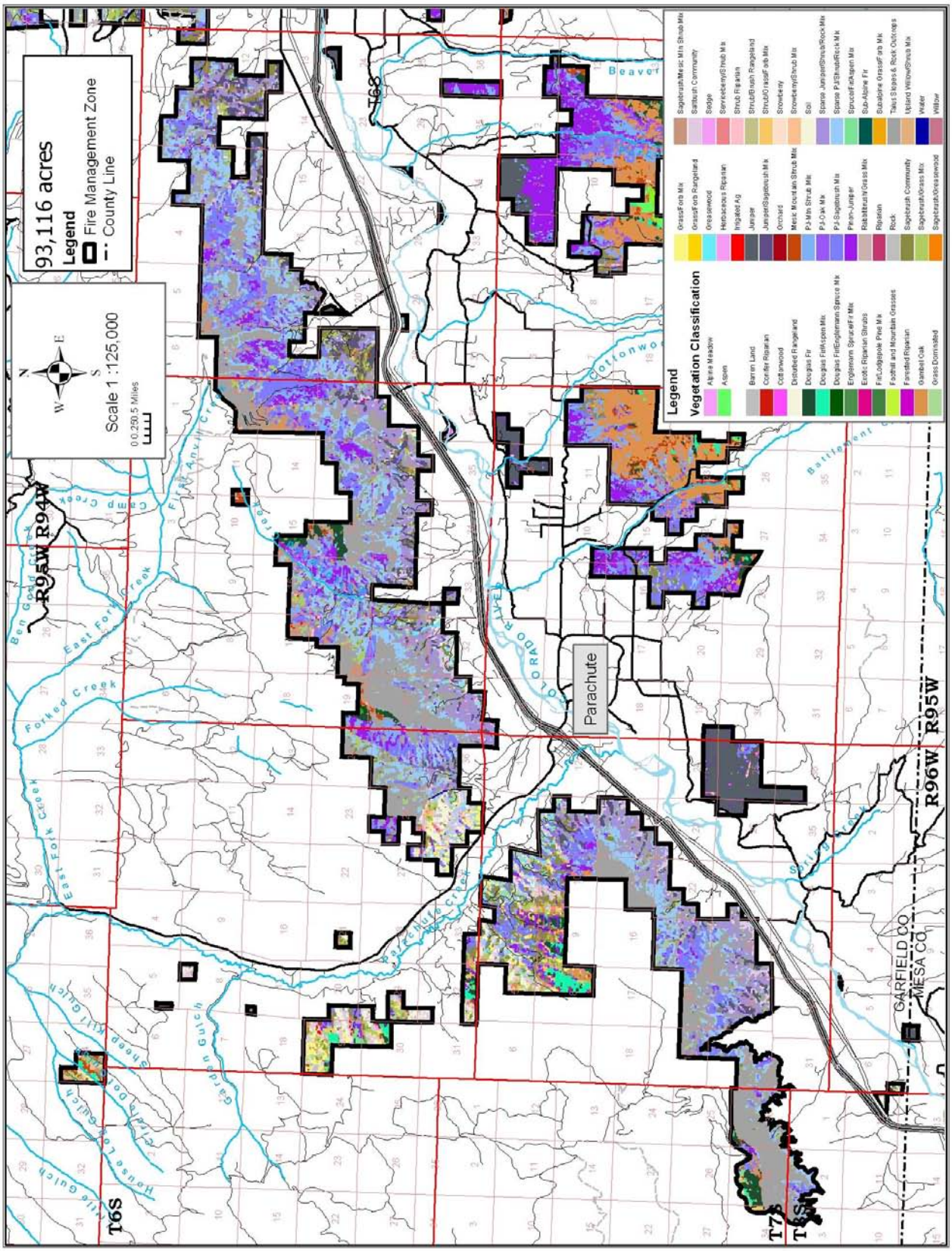
B-140- 02 - 1-70 Corridor West of Glenwood Springs – *Rifle North*



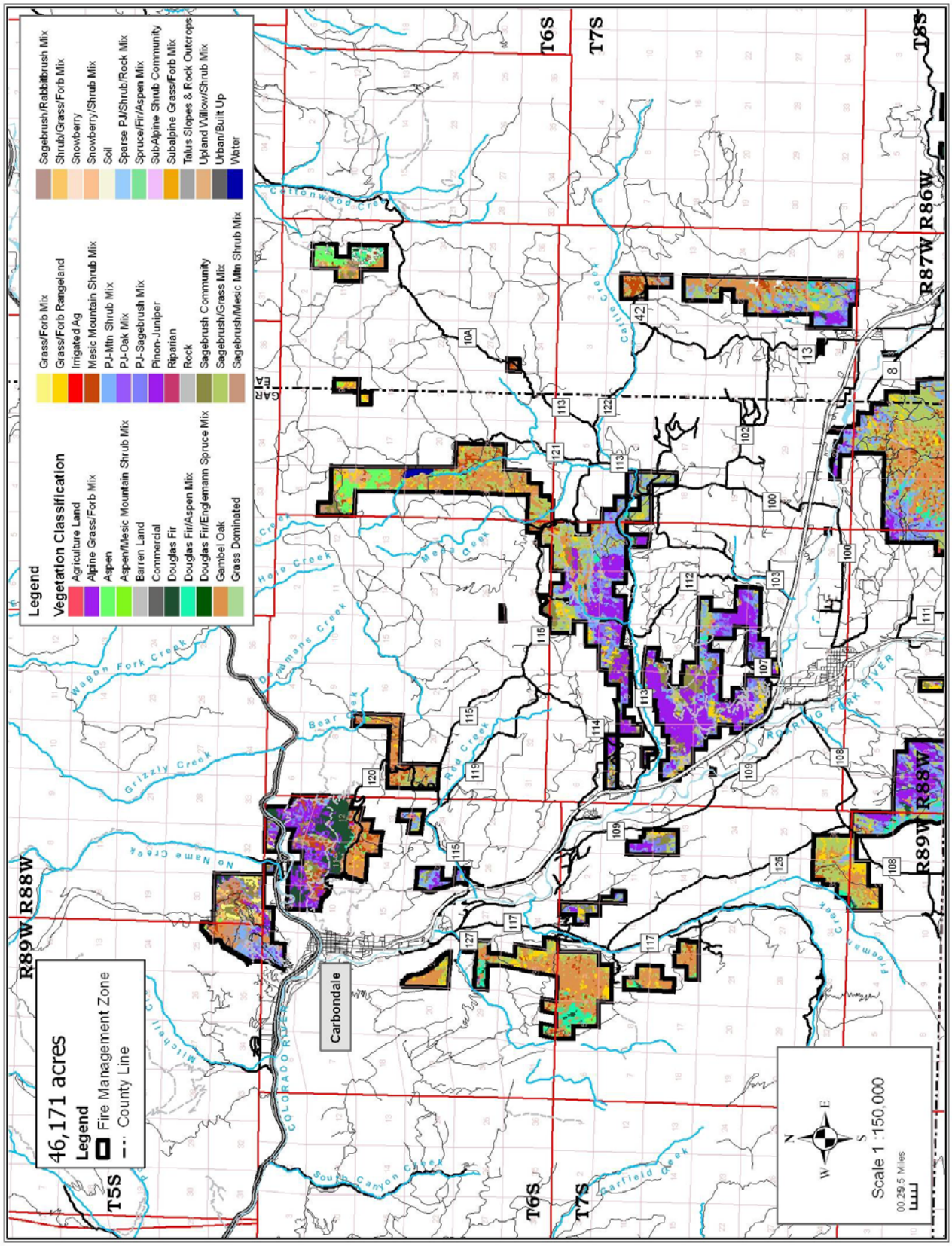
B-140- 02 - 1-70 Corridor West of Glenwood Springs – *Rifle South*



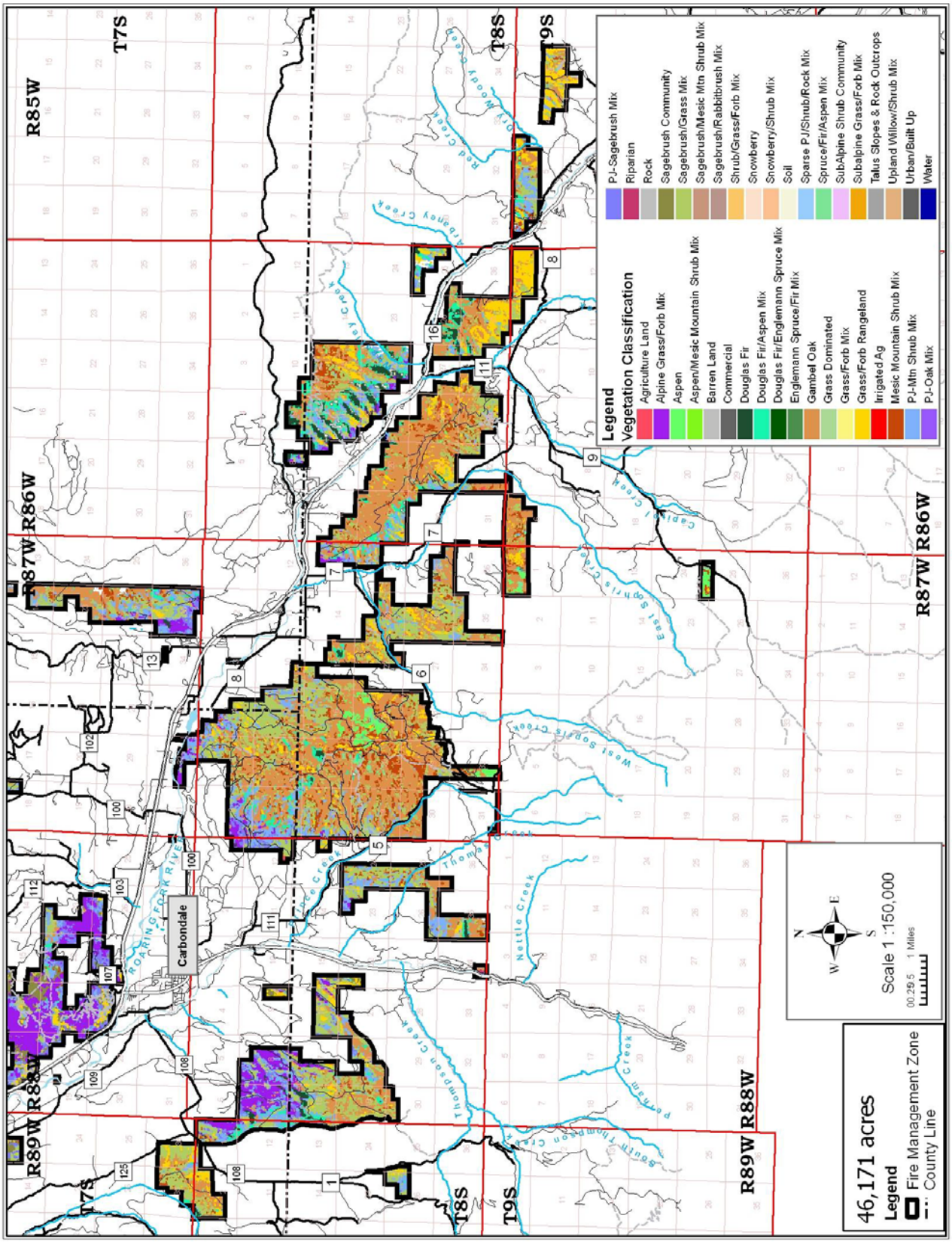
B-140- 02 - 1-70 Corridor West of Glenwood Springs – *Parachute Area*



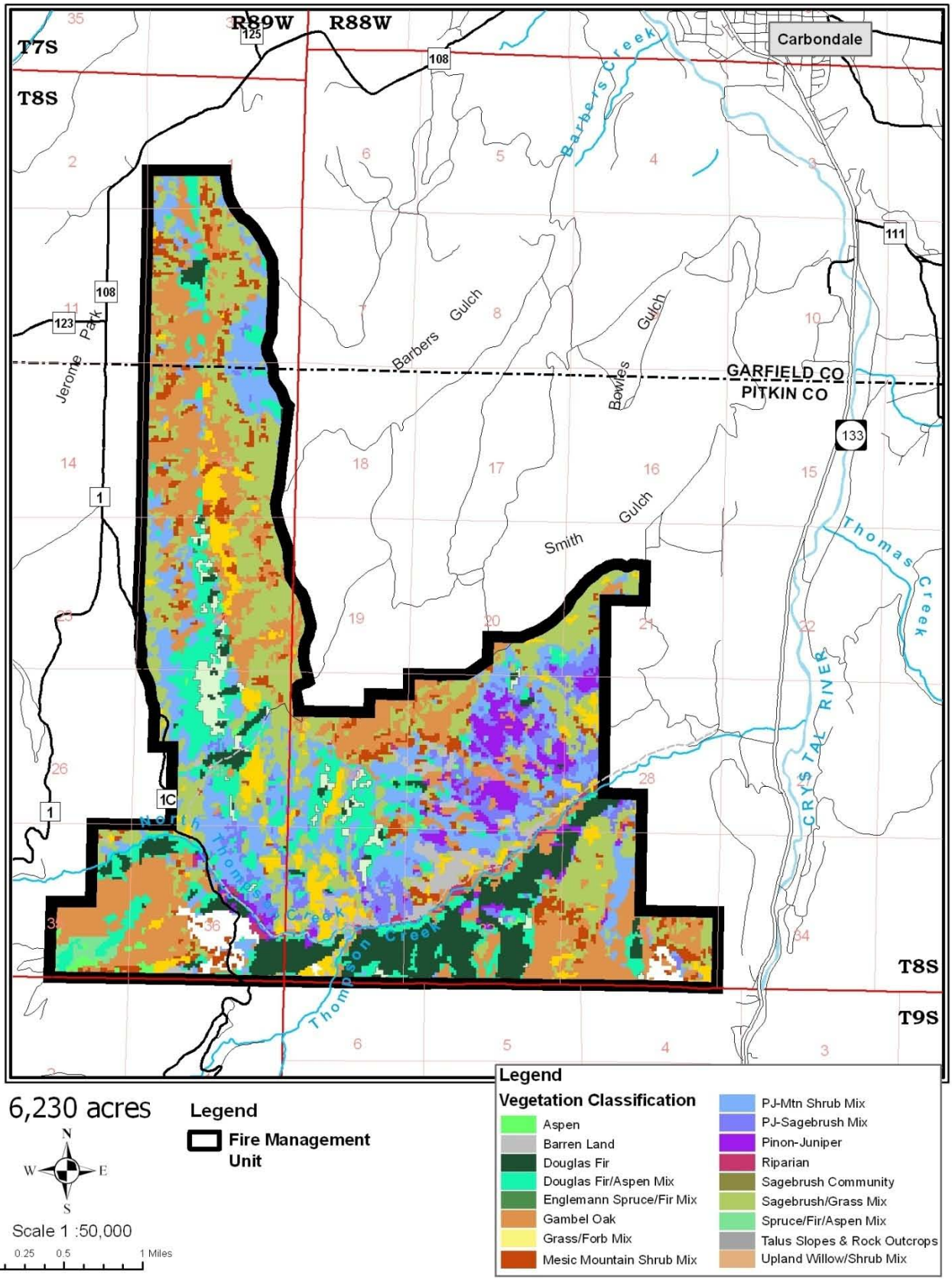
B-140- 03 - Roaring Fork Valley – *Carbondale North*



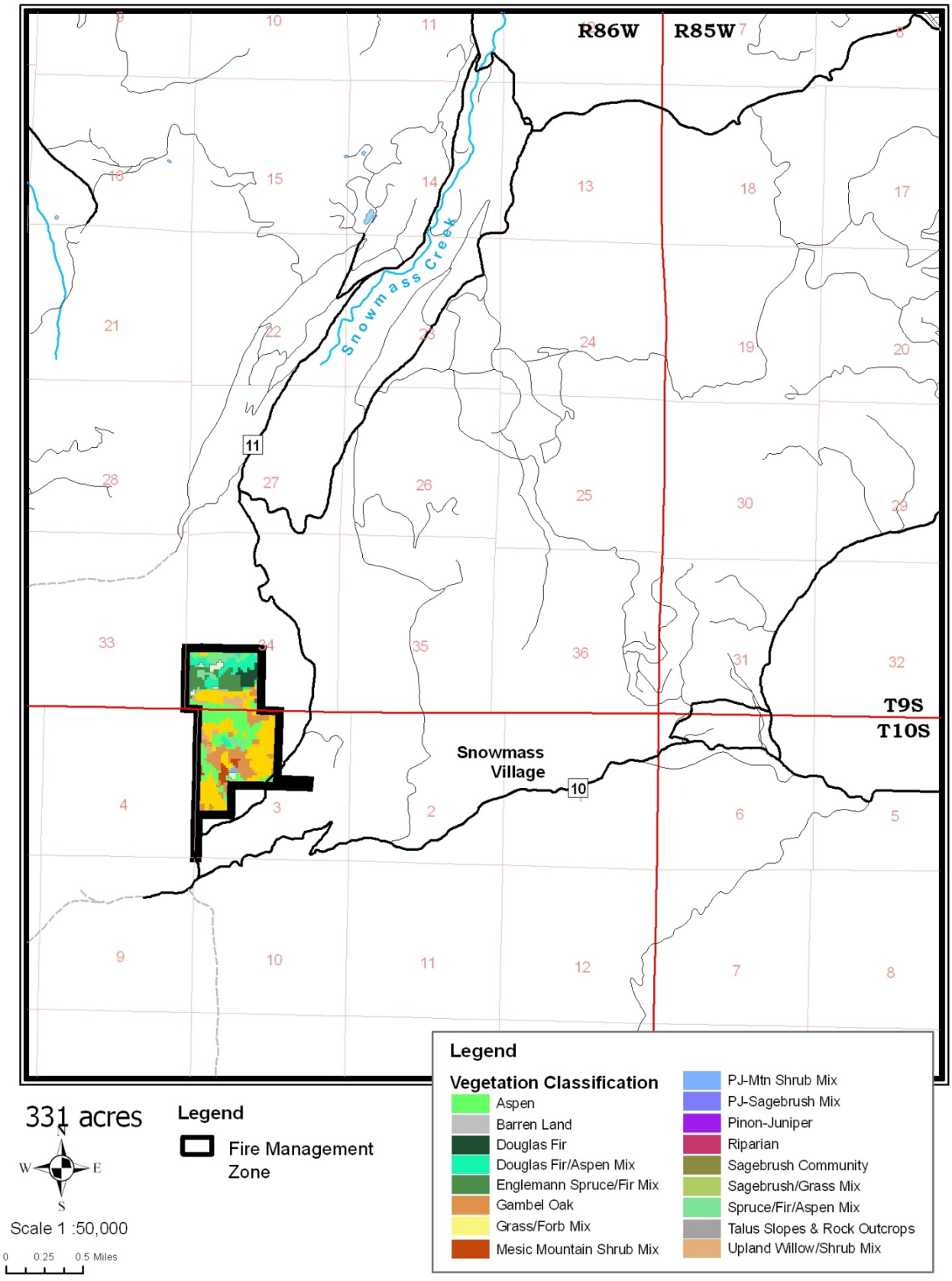
B-140- 03 - Roaring Fork Valley – *Carbondale South*



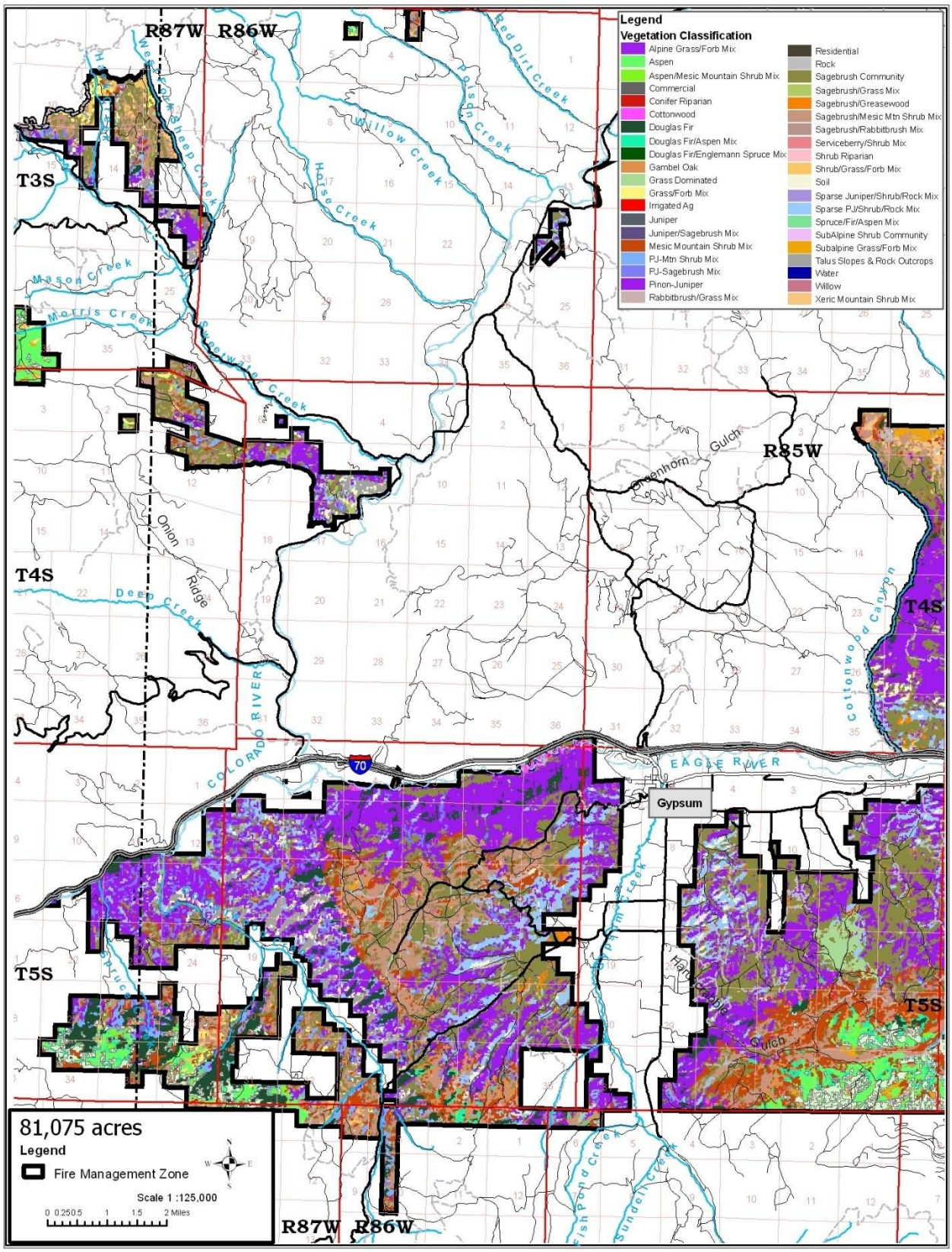
B-140- 04 - Thompson Creek / Eagle Mountain – *Thompson Creek Area*



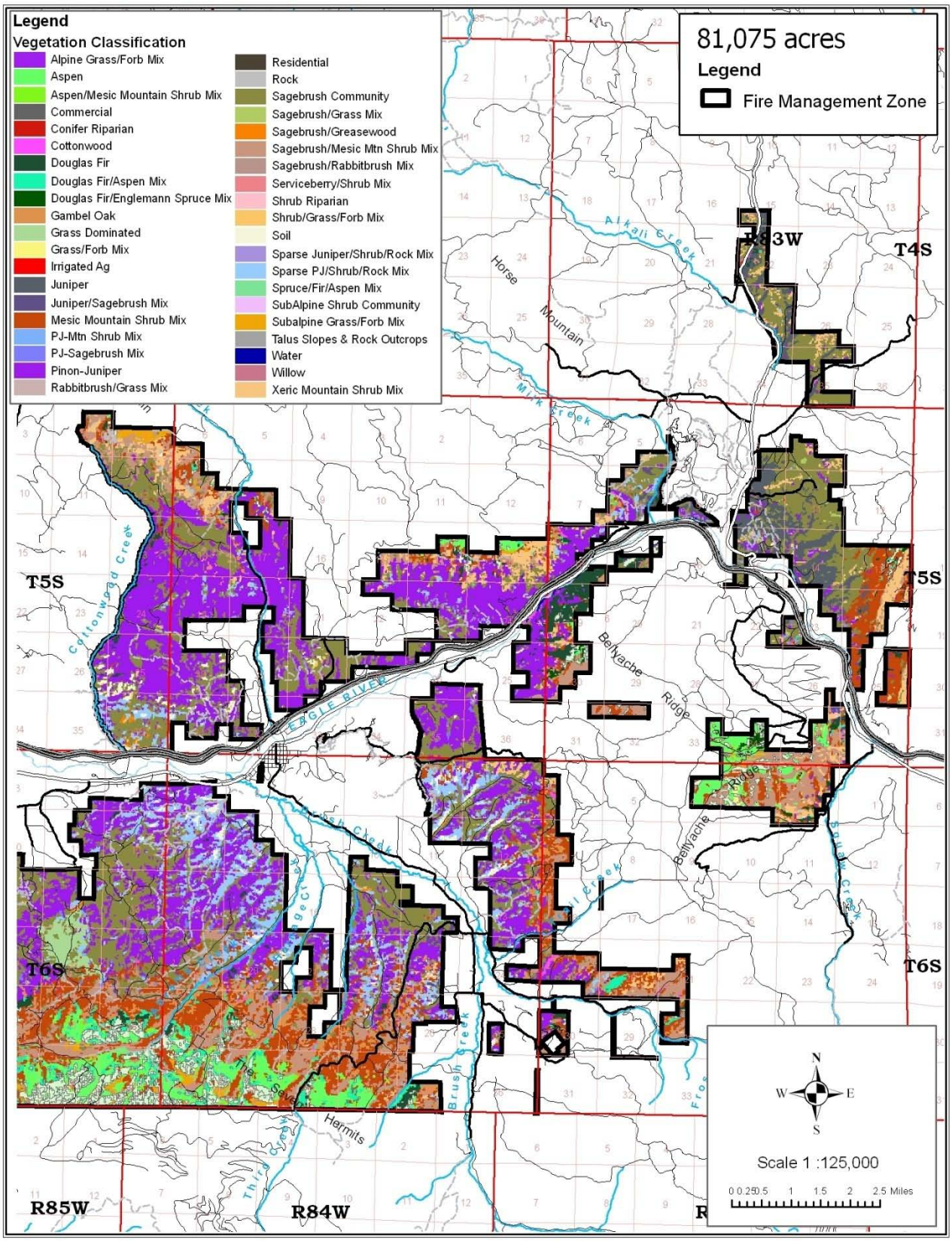
B-140- 04 - Thompson Creek / Eagle Mountain – *Eagle Mountain*



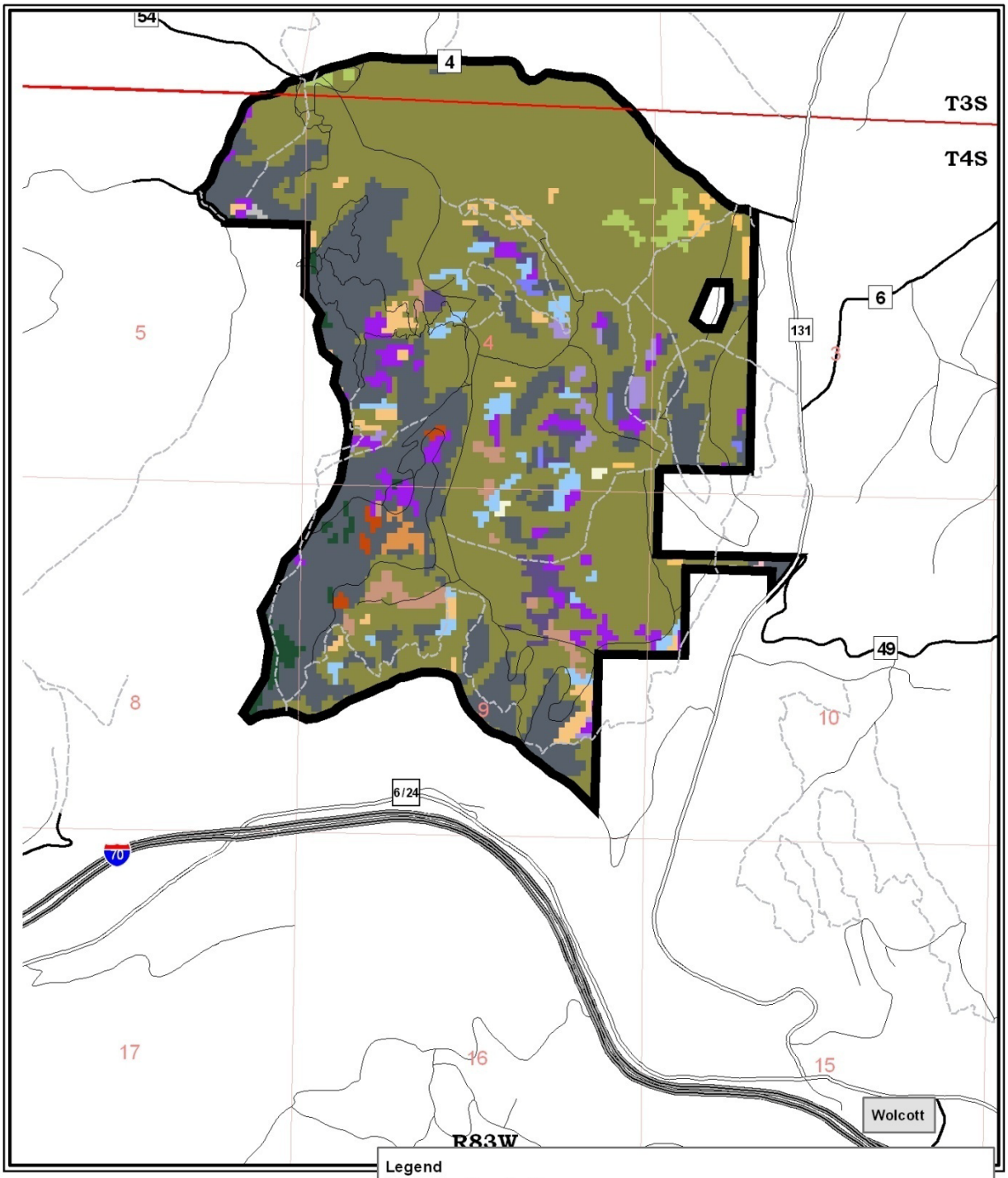
B-140- 05 - Eagle Valley – *Gypsum Area*



B-140- 05 - Eagle Valley – *Eagle Area*



B-140- 06 - Bocco Mountain / Siloam Springs – *Bocco Mountain Area*



1,411 acres

Legend
Fire Management Zone

N
W E
S

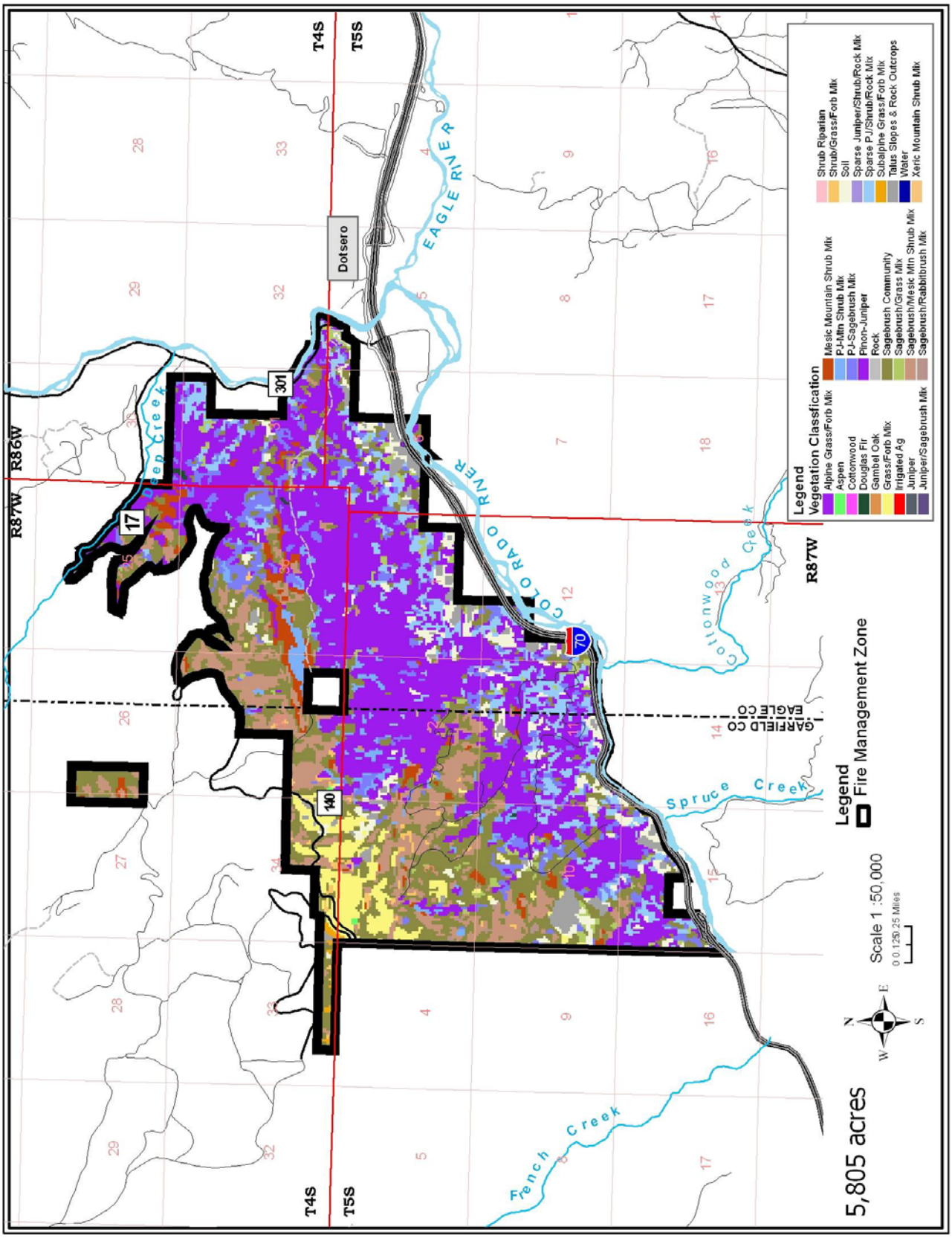
Scale 1 :24,000

0 0.125 0.25 Miles

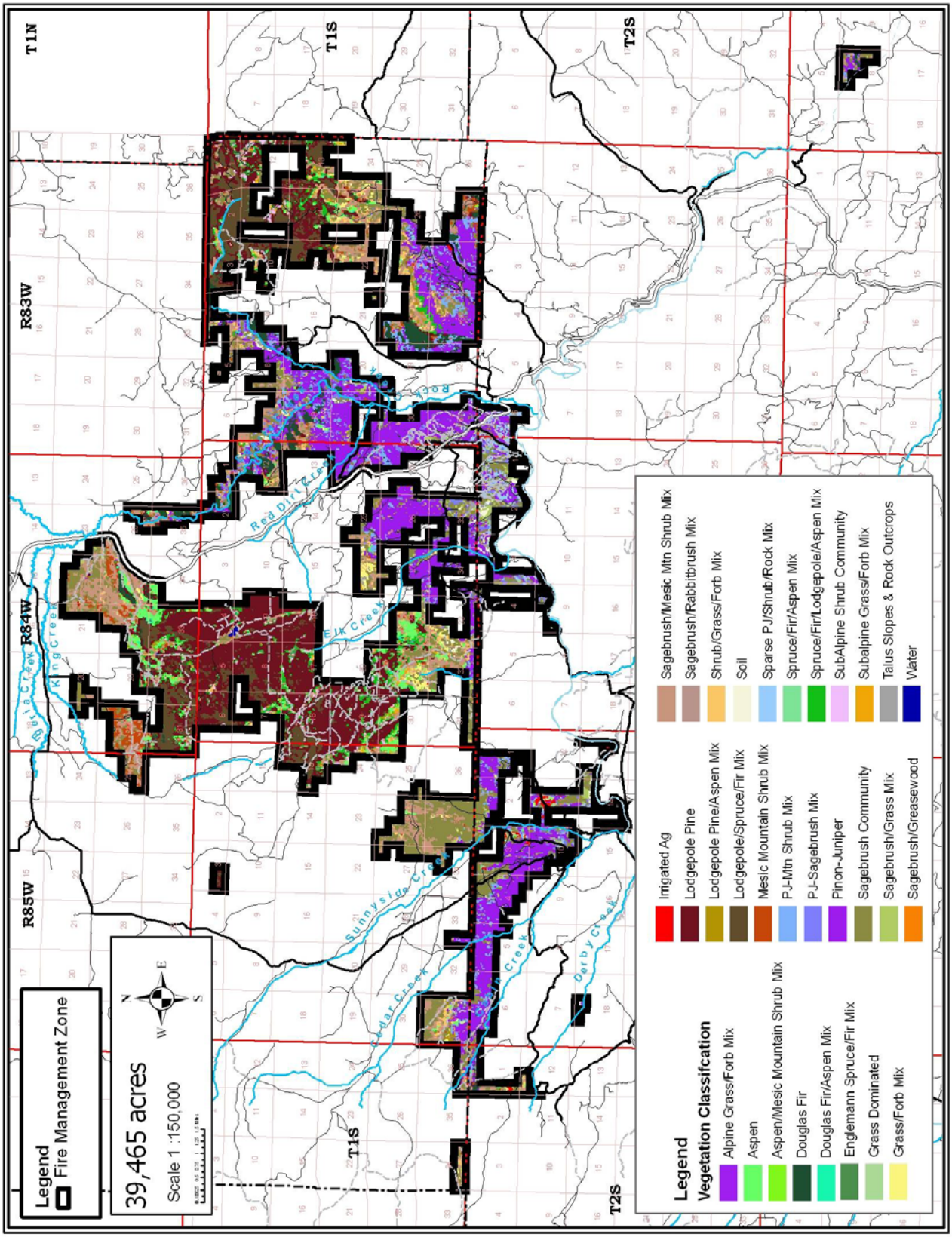
Legend
Vegetation Classfication

- Alpine Grass/Forb Mix
- Aspen
- Cottonwood
- Douglas Fir
- Gambel Oak
- Grass/Forb Mix
- Irrigated Ag
- Juniper
- Juniper/Sagebrush Mix
- Mesic Mountain Shrub Mix
- PJ-Mtn Shrub Mix
- PJ-Sagebrush Mix
- Pinon-Juniper
- Rock
- Sagebrush Community
- Sagebrush/Grass Mix
- Sagebrush/Mesic Mtn Shrub Mix
- Sagebrush/Rabbitbrush Mix
- Shrub Riparian
- Shrub/Grass/Forb Mix
- Soil
- Sparse Juniper/Shrub/Rock Mix
- Sparse PJ/Shrub/Rock Mix
- Subalpine Grass/Forb Mix
- Talus Slopes & Rock Outcrops
- Water
- Xeric Mountain Shrub Mix

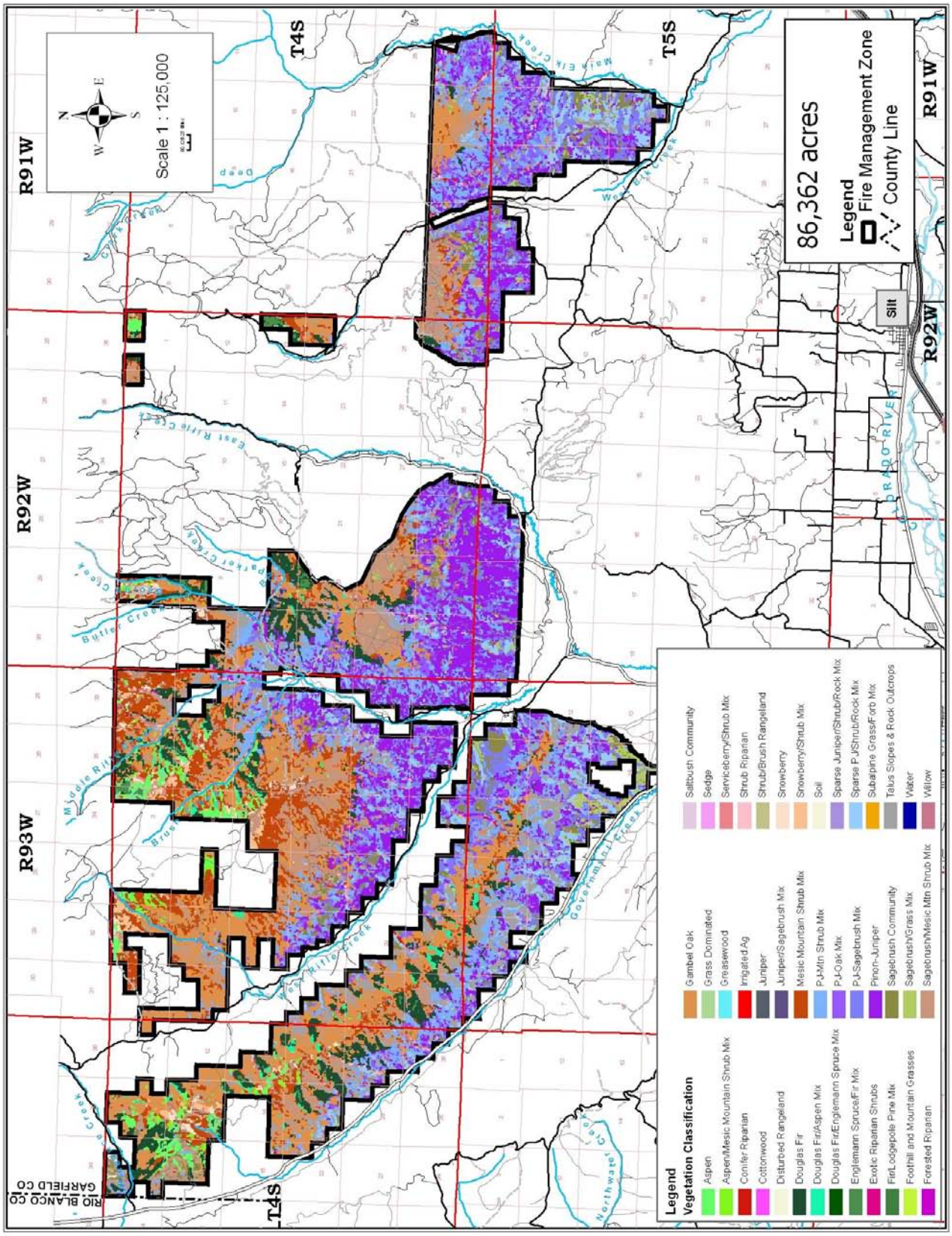
B-140- 06 - Bocco Mountain / Siloam Springs – *Siloam Springs Area*



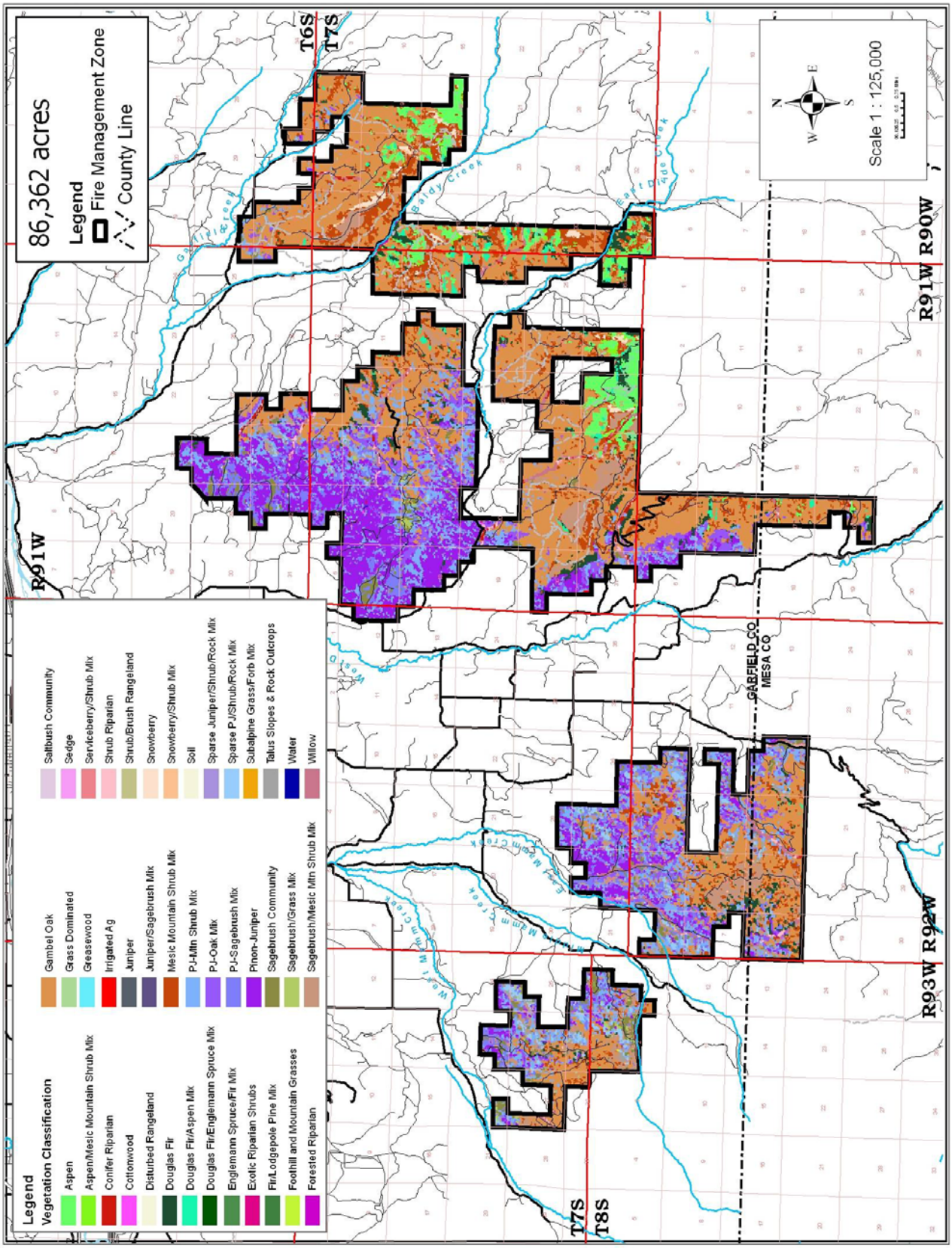
B-140- 07 - King Mountain / Black Mountain



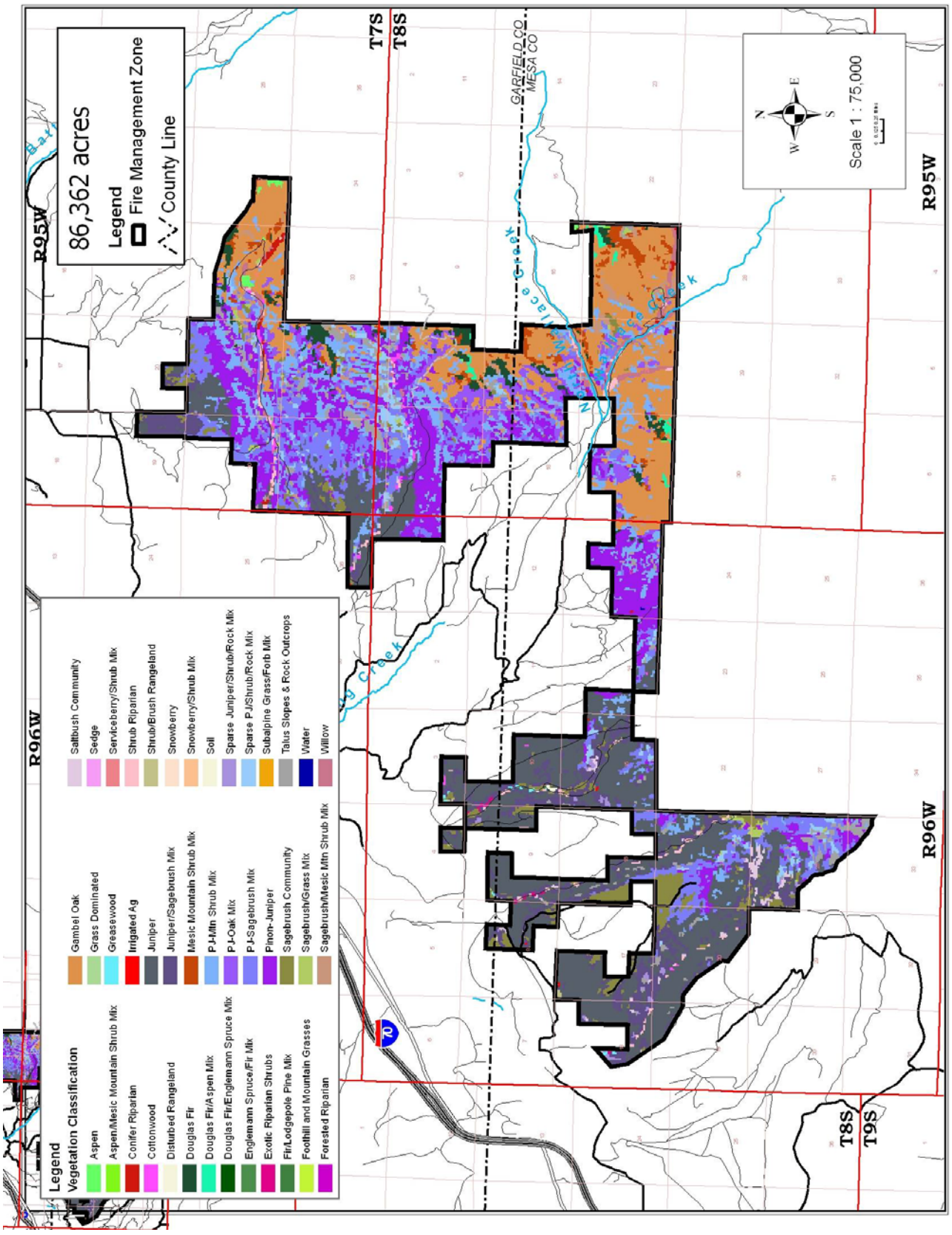
C-140- 01 - West Of Glenwood Springs – *Rifle Gap Reservoir Area*



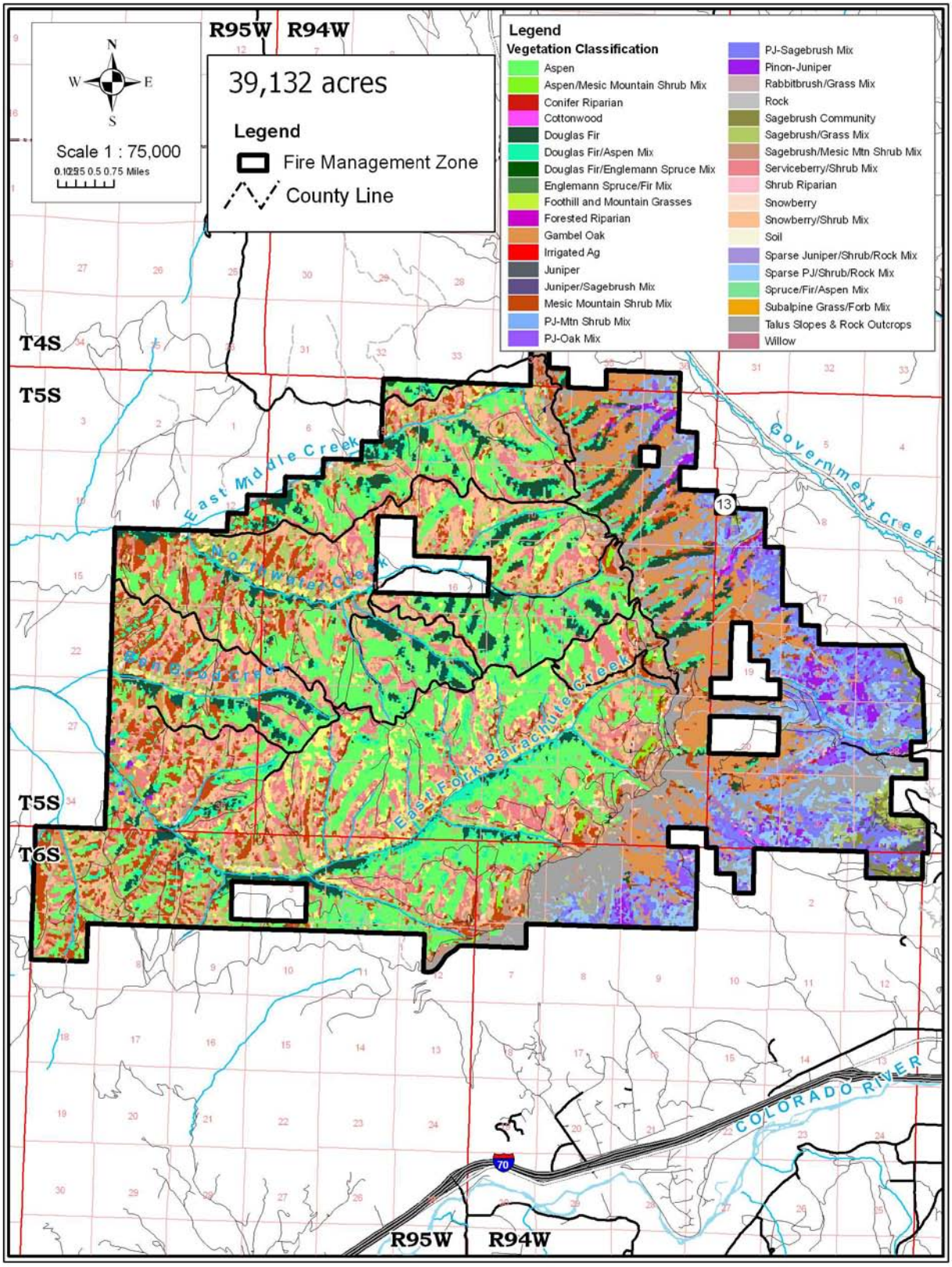
C-140- 01 - West Of Glenwood Springs – *Divide Creek Area*



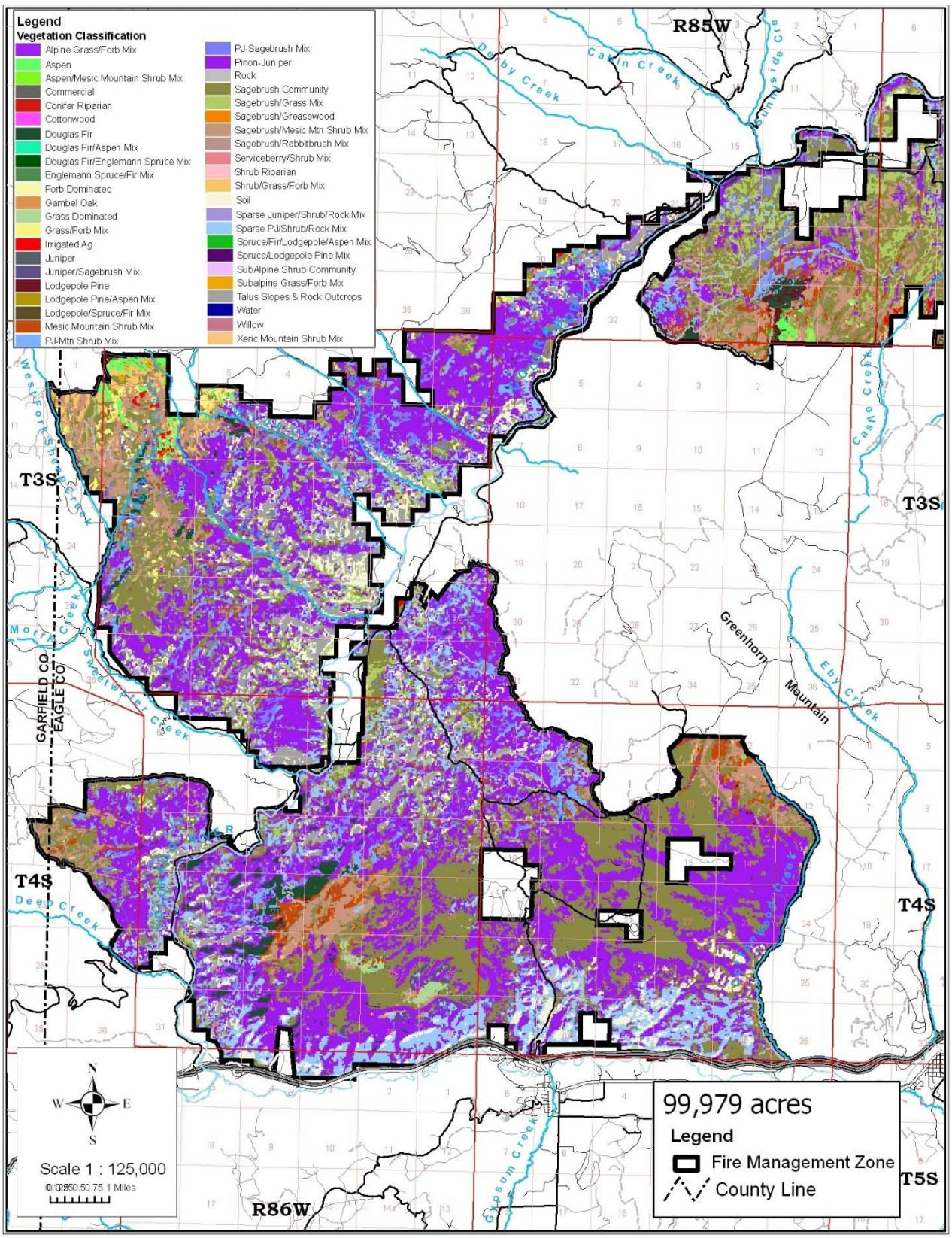
C-140- 01 - West Of Glenwood Springs – *Wallace/Alkali Creek Area*



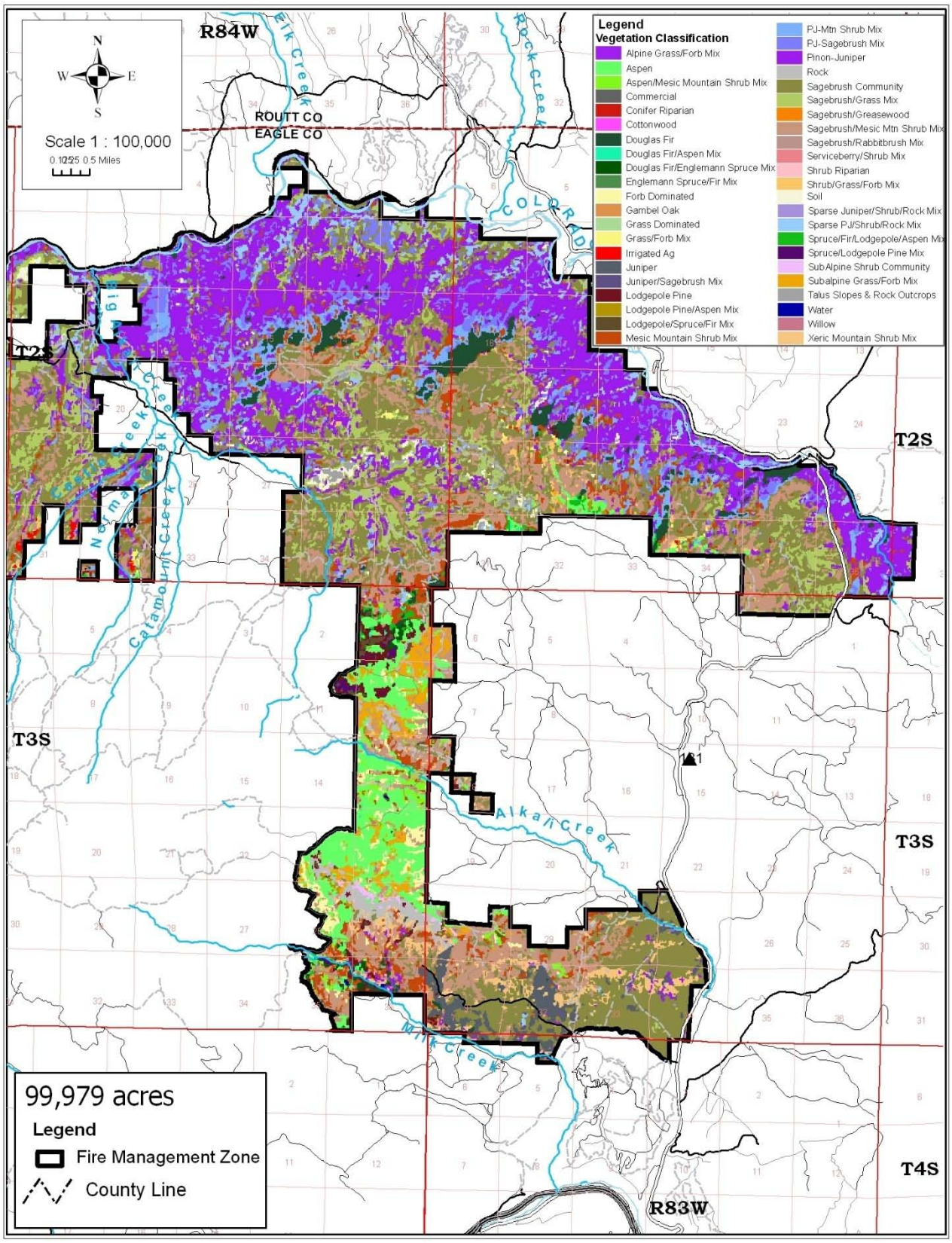
C-140- 02 - Roan Plateau and Cliffs



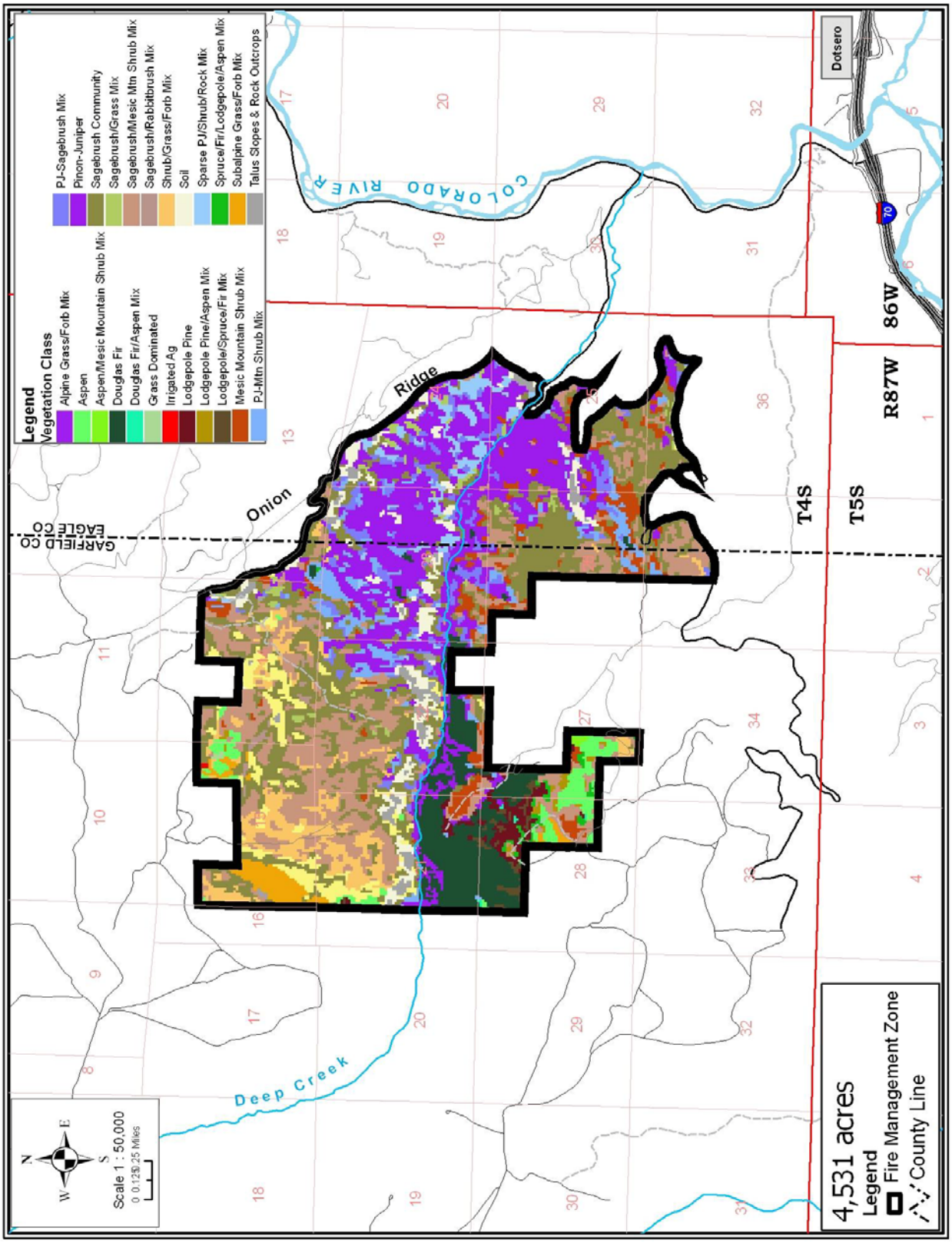
C-140- 03 - Upper Colorado - *Southwest*



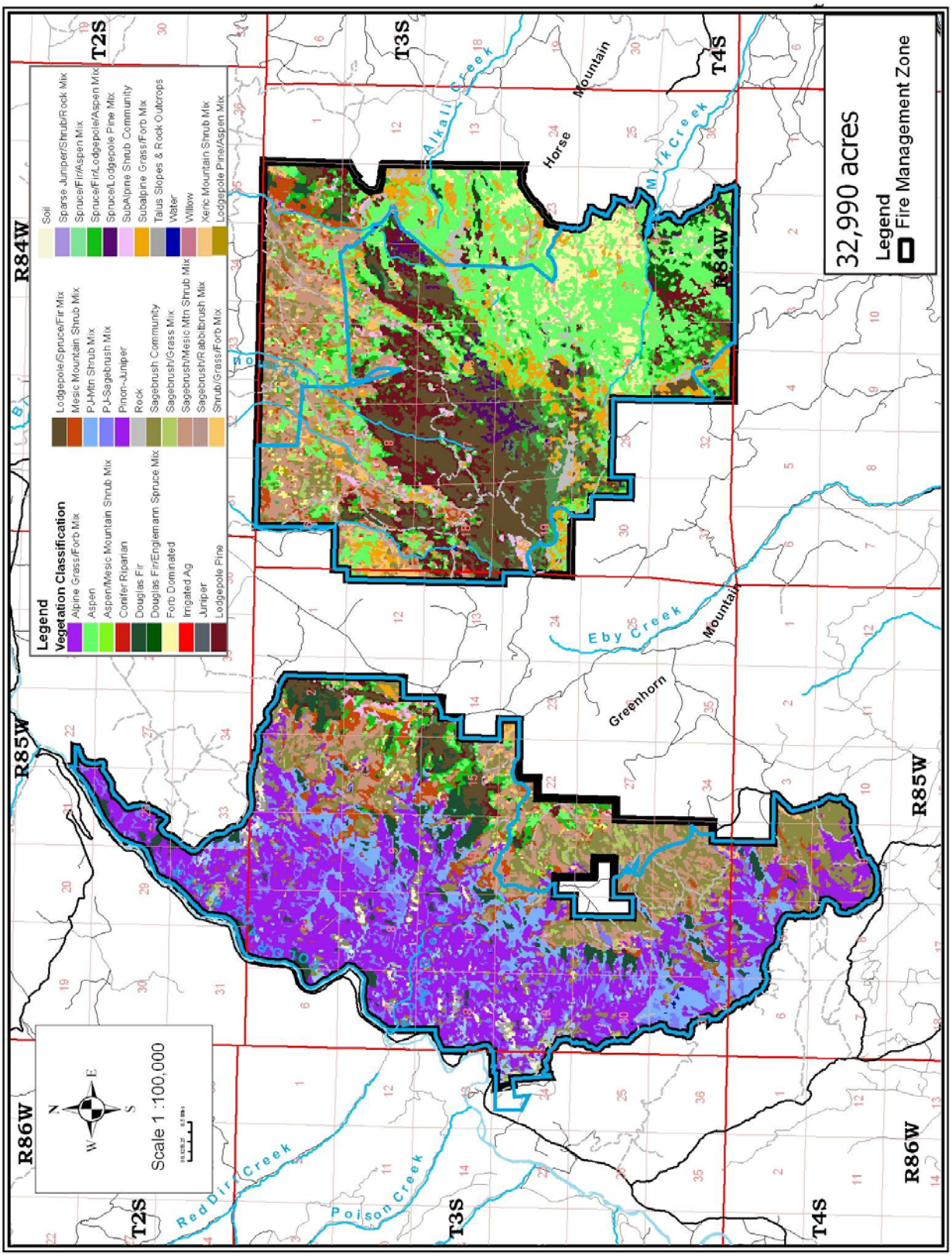
C-140- 03 - Upper Colorado - *Northeast*



C-140- 04 - Deep Creek



D-140- 01 - Bull Gulch/Castle Peak/Hack Lake – *Bull Gulch/Castle Peak*



D-140- 02 - Bull Gulch/Castle Peak/Hack Lake – *Hack Lake*