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UT040	Beaver Escalante Desert Hamblin Valley Mineral-Black Mountain Mountain Home Parowan Front-Antelope Range Pine Valley Wah Wah-Needles Wah Wah Valley
UT100	Colorado Plateau Great Basin Kolob Mohave Desert
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Color Country Fire Prevention Plan

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ACRONYMS

ACEC Area of Critical Environmental Concern  
AMR Appropriate Management Response  
AOP Annual Operating Plan  
BA Biological Assessment  
BI Burning Index  
BIA Bureau of Indian Affairs  
BLM Bureau of Land Management  
BO Biological Opinion  
CAR Communities At Risk  
CC Condition Class  
CUCC Central Utah Interagency Coordination Center  
EIS Environmental Impact Statement  
ESA Endangered Species Act  
ESR Emergency Stabilization and Rehabilitation  
FIL Fire Intensity Level  
FMP Fire Management Plan  
FMU Fire Management Unit  
FPA Fire Program Analysis  
FPD Fire Protection District  
FRCC Fire Regime Condition Class  
FWFMP Federal Wildland Fire Management Policy  
HFR Historic Fire Regime  
Interior Columbia Basin Ecosystem Management Project  
ICS Incident Command System  
UDWR Utah Department of Fish and Game  
IDL Utah Department of Lands  
IM Internal Memorandum  
ISO Utah State BLM Office  
LUP Land Use Plan  
MIST Minimum Impact Suppression Tactics  
MOU Memorandum of Understanding  
Fire Management Plan USDI, BLM, Field Office  
NEPA National Environmental Policy Act  
NFP National Fire Plan  
NFRP Normal Year Fire Rehabilitation Plan  
NOAA National Oceanic Atmospheric Administration  
NPS National Park Service  
NWCG National Wildfire Coordination Group

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RAWS Remote Automated Weather Stations  
RFA Rural Fire Assistance  
RFD Rural Fire Department  
SUSA LUPS Resource Management Plan  
RMRS Rocky Mountain Research Station  
DNF Dixie National Forest  
SUSA Field Offices  
SHPO State Historic Preservation Office  
SSS Special Status Species  
UCSC Upper Columbia- Clearwater  
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  
WFSA Wildland Fire Situation Analysis  
WFU Wildland Fire Use  
WSA Wilderness Study Area  
WUI Wildland-Urban Interface

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## I. INTRODUCTION

On December 3, 2003, President George W. Bush signed into law the Healthy Forests Restoration Act of 2003 (<http://www.whitehouse.gov/infocus/healthyforests/>) to reduce the threat of destructive wildfires while upholding environmental standards and encouraging early public input during review and planning processes. The legislation is based on sound science, helps further the President's Healthy Forests Initiative pledge to care for America's forests and rangelands, reduce the risk of catastrophic fire to communities, help save the lives of firefighters and citizens, and protect threatened and endangered species.

The Healthy Forests Restoration Act:

- Strengthens public participation in developing high priority forest health projects;
- Reduces the complexity of environmental analysis allowing federal land agencies to use the best science available to actively manage land under their protection;
- Provides a more effective appeals process encouraging early public participation in project planning; and
- Issues clear guidance for court action against forest health projects.

The Administration and a bipartisan majority in Congress supported the legislation and are joined by a variety of environmental conservation groups.

The Southwest Utah Support Area (SUSA) is committed to follow the Healthy Forest Initiative while following the National Fire Plan (<http://www.fireplan.gov/content/home/>), which is a long-term investment to help protect communities and natural resources, and most importantly, the lives of firefighters and the public. It is a long-term commitment based on cooperation and communication among federal agencies, states, local governments, tribes, and interested publics.

### A. Purpose

The purpose of this plan is to establish firefighter and public safety as the priority in fire management activities. All activities will reflect this priority in planning, activity development and execution. The full range of fire management activities will be used to achieve ecosystem sustainability including its interrelated ecological, economic, and social components. Fire management plans and programs will be based on a foundation of sound science. The use of previous research and future needs will be identified for this planning effort. These efforts will increase our scientific knowledge of biological, physical, and sociological information. This will be needed to support fire management through an integrated interagency science program. The scientific results will be utilized to develop land use and fire management implementation plans.

The fire management plans are required to be in compliance with the Federal Wildland Fire Management Policy and program Review – 1995 and the 2001 update. Also the Interagency Fire Management Plan Template; A Collaborative Approach for Reducing Wilding Fire Risks to Communities and the Environment; and the 10-Year Comprehensive Strategy Implementation Plan. This Fire Management Plan (FMP) identifies resource values and conditions pertaining to fire management in the Bureau of Land Management (BLM), Southwest Utah Support Area (SUSA), this

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includes the Cedar City, Kanab and St. George Field Offices and the Grand Staircase Escalante National Monument. (Map 1) The FMP recommends strategies for:

Wildland Fire Suppression,  
Wildland Fire Use (WFU),  
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 eight land use plans as amended in 2004. (Hereafter referred to as the SUSA LUPs.)

The strategies would also implement pertinent Land Use Plan (LUP) Biological Opinions (BOs) and conservation plans or agreements as required by and in conformance with the Endangered Species Act (ESA).

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 completed on this plan. These strategies 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.

This FMP provides quantified information for the Fire Program Analysis (FPA) model, based on anticipated fire management activities. FPA is the new interagency software that will be used to project the budget and personnel needs for the SUSA and all other fire management organizations administered by the U.S. Departments of the Interior (USDI) and Agriculture (USDA). The FPA model is being implemented in phases. This FMP will provide information for Phase I of the FPA, which includes modules for WFU and wildland fire preparedness. Additional information regarding FPA is available at <http://fpa.nifc.gov>.

The fire suppression information presented in this FMP will be updated annually to ensure that the most current information is available for use in the FPA 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.

National Direction for Fire Management Planning This FMP has been prepared in accordance with the 1995 Federal Wildland Fire Management Policy (FWFMP), and the 2001 FWFMP Update (USDA and USDI 2001a), directing all federal agencies managing burnable vegetation to develop and implement an FMP. This FMP also follows an interagency template that ensures that FMPs prepared by the USDI and USDA have consistent content and format.

## **B. Relationship to Environmental Compliance**

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The strategies described in this FMP would be in conformance with the SUSA LUPs as amended. The SUSA LUPs/Environmental Impact Statements (EIS) completed from 1981 to 1999 are being amended in 2004 in conjunction with local fire management planning efforts such as this FMP. This state-wide planning amendment will estimate the effects of the integrated decisions on all affected resources at the planning area level and satisfies NEPA requirements. The recommended strategies in this document are designed to be consistent with the decisions and direction in the amended land use plans and do not make any additional decisions. NEPA analysis and tribal consultation may be conducted as appropriate before actions are implemented.

The recommended strategies will be consistent with conservation measures outlined in future planning amendment biological opinions, as well as conservation measures and agreements resulting from formal consultation pursuant to the Endangered Species Act (ESA). During the LUPs amendments state consultation on T&E species will be completed. In addition to formal and informal consultation, the Counterpart Regulations, issued in 2003, allow BLM to proceed with proposed actions that support the National Fire Plan, and which are “not likely to adversely affect” listed species or designated critical habitat, without consulting with or obtaining written concurrence from the Services, U.S. Fish and Wildlife Service and/or NOAA Fisheries. The process must follow the interagency agreement, which details requirements for BLM staff training and certification, and project documentation and reporting (for details, refer to: Alternative Consultation Agreement to Implement Section 7 Counterpart Marine Fisheries Service, and U.S. Fish and Wildlife Service).

### **C. Collaboration**

#### Cooperative Management Efforts

This FMP encompasses 5,141,154 acres of BLM administered public lands within the SUSA. Because the boundaries of the SUSA include federal, state, and private lands, an effective fire management program requires close coordination among local and regional jurisdictions. Information in this FMP will refine and strengthen the ongoing fire management coordination efforts of the BLM, Arizona Strip Field Office, the United States Forest Service (USFS), Bureau of Indian Affairs (BIA), National Park Service, (NPS), and Utah Department of Forestry, Fire and State Lands.

A variety of agreements are currently utilized to coordinate the fire management program of the SUSA with the Dixie National Forest (DNF). For example, the statewide Annual Operating Plan (AOP) outlines agreements and commitments for wildland fire protection, joint management, and support among the agencies. Additional cooperative management documents include the Cooperative Fire Protection Agreement, Interagency Agreement for Fire Management and the Memorandum of Understanding (MOU) for Coordination and Cooperation of Fire Department Wildland Fire Assistance Programs. Section IV of this FMP contains a complete description of the existing fire program coordination agreements. The SUSA, Utah Department of Lands (IDL) and DNF will coordinate on FPA analysis beginning in the fall of 2004.

The agencies jointly conduct mutual interest projects, within their authority, to maintain or improve fire management capability. For instance, the SUSA, U.S. Forest Service, and County officials are collaborating to complete a Community Fire Prevention Program. These efforts are part of the



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community assistance /protection planning efforts developed through public meetings and with the County Wildland Urban Interface (WUI) working group. Future projects may involve such activities as prescribed fire/fuels management, suppression, preparedness, rehabilitation, prevention education, public affairs, rural fire assistance (RFA), and fire planning.

#### Coordination in Preparing this FMP

Discussions prior to and during development of this FMP included federal, state, county, public, and tribal groups within the SUSA. At the federal level, the BLM conducted briefings and coordinated with the USFS, USFWS. Information sharing among all interested parties is of the highest importance to the SUSA and has been a priority since the preliminary and developmental stages of this FMP in 2001 and 2003.

Several laws and Executive Orders exist to ensure that the BLM consults with federally recognized tribes when planning a project or activity. The SUSA invited the Piute Tribe staff to participate in the development of the SUSA FMP. The SUSA will continue to meet this federal trust responsibility. Government to government consultation with the BIA will be initiated through the SUSA early in project planning processes.

Local sovereign tribal governments and other interested groups will also continue to be informed and consulted as the information and strategies in the FMP are updated.

A public informational meeting was held on July 7, 2004 in Cedar City to discuss the FMP and the planning process. Public comments were solicited and accepted.

#### **D. Authorities**

- 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).
- Reciprocal Fire Protection Act of May 27, 1955 (69 Stat. 66; 42 U.S.C. 1856, 1856a).
- Economy Act of June 30, 1932 (47 Stat. 417; 31 U.S.C. 686).
- The Federal Land Management and Policy Act of 1976 (FLPMA) (Public Law 94-579; 43 U.S.C. 1701).
- Disaster Relief Act, Section 417 (Public Law 93-288).
- Appropriations Act, 2001 (114 Stat. 1009) (66 Fed. Reg. 753, January 4, 2001)
- United State Department of the Interior Manual (910 DM 1.3).
- 1995 Federal Wildland Fire Management Policy.

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- 2001 Updated Federal Wildland Fire Management Policy (1995 Federal Wildland Fire Management Policy Update).
- 1998 Departmental Manual 620 Chapter 1, Wildland Fire Management General Policy and Procedures.
- Healthy Forests Restoration Act of 2003
- Red Book, BLM Hand Book 9213-1, 2004 Edition.
- Planning Hand Book 1601-1 J. Fire Planning

## II. RELATIONSHIP TO LAND MANAGEMENT PLANNING/FIRE POLICY

### A. National Policy

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

#### A. National Policy The Federal Wildland Fire Management Policy

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 FWFMP identified the need for a new approach to fire management on federal lands and led to the development of the NFP.

#### Appropriate Management Response

The FWFMP establishes the concept of Appropriate Management Response (AMR), which is further defined in The Interagency Strategy for the Implementation of the Federal Wildland Fire Management Policy (USDA and USDI, 2003). This policy states: A wildland fire that is not a prescribed fire requires an AMR. The AMR, which can range from aggressively suppressing the incident as a wildland fire, to managing the incident as a WFU 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 WFU project is to obtain resource benefits whereas a wildland fire is to be extinguished at minimum cost.

#### The National Fire Plan

The Secretaries of USDI and USDA initiated the National Fire Plan (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,

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USDA 2001), the Cohesive Strategy for Protecting People and Sustaining Natural Resources (USDA 2000), and other supporting documents. The four primary goals of the NFP are:

- .. Improve fire prevention and suppression
- .. Reduce hazardous fuels
- .. Restore fire adapted ecosystems
- .. Promote community assistance

Fire Management Plan USDI, BLM, SUSU

The 10-Year Comprehensive Strategy

The 10-Year Comprehensive Strategy was prepared in 2001 by the USDI, USDA, and the Western Governors Association to provide a more detailed framework for accomplishing the goals of the NFP. This strategy emphasizes a collaborative, community based approach to address wildland fire issues and identifies guiding principles and management actions for agencies to follow in implementing the NFP. The guiding principles of the Comprehensive Strategy include:

- .. Public and firefighter safety is the first priority in all fire management.
- .. Prioritize hazardous fuels reduction where the negative impacts of wildland fire are greatest.
- .. Prevent invasive species and restore watershed function and biological communities through short-term stabilization and long term rehabilitation.
- .. Restore healthy, diverse, and resilient ecological systems to minimize uncharacteristically severe fires on a priority watershed basis through long-term restoration.
- .. Promote better fire prevention planning and actions in local communities through technical assistance and cost sharing incentives.

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

Fire Regime and Condition Class is outlined in the Forest Service Rocky Mountain Research Station technical report entitled "Development of Coarse Scale Spatial Data for Wild land Fire and Fuel Management (RMRS-87) dated April 2000. The HFRA adopts this classification system, known as the Fire Regime Condition Class (FRCC), which describes the amount of departure of an area or

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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 HFRA, 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 nonnative weeds, is required to prevent these lands from becoming degraded. Less than .008% (436 acres) of the SUSA managed lands is 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 13.5% (692,844 acres) of the SUSA managed 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 reseeded. Approximately 86% (4,423,521 acres) of the SUSA managed lands are classified as CC3.

As noted above, approximately 99.5% of the SUSA managed acres are classified as CC1, CC2, or CC3, with the remaining 0.5% 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. Each FMU description (Ch. 3) describes the Fire Regime and Condition Class in a table.

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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 3 % of an agency's administered lands annually.

#### 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 SUSA.
2. Terms and conditions of consultation with the USFWS, and UDWR to promote species recovery in the SUSA.
3. Where and how fire management activities can conserve SSS, especially ESA listed proposed and candidate species. Pursuant to national policy, Utah BLM and the Utah Department of Fish and Game (UDWR) have jointly identified and published a list of all Utah SSS. The term SSS includes all ESA listed, proposed, and candidate species as well as BLM sensitive species that were identified in coordination with UDWR. **Special Status Species lists are discussed by Fire Management Unit.**

#### **B. Regional Guidance**

Great Basin Restoration Initiative In 1999, BLM began the Great Basin Restoration Initiative to establish a proactive approach to restoring vegetation communities across the 75 million acres of public land in the Eastern Great Basin (USDI, 1999a). The goals of this initiative are:

- .. Maintain existing healthy landscapes,
- .. Restore degraded landscapes to improve land health and reduce invasive species, especially those responsible for altered fire regimes, and

.. Sustain long-term multiple use and economic opportunities on public lands.

### **C. Utah State BLM Policy**

#### Utah Priorities for Implementing Vegetation Treatments

RAMS --- In 2002, the Utah BLM developed a Strategy for Prioritizing Fuels Management, Restoration, and Vegetation Treatment Projects. RAMS was used to outline an approach to prioritizing and implementing projects on a long term strategies on a long term basis.

#### Interagency State Risk Assessment

In 2002 Utah became the first state to develop a state wide risk assessment on interagency basis. The Utah State Fire Plan Working Group operates under the Statewide Strategy. The Working Group prepared a Statewide Risk Assessment and used it in determining priorities for community assistance/protection.

Special Status Species Considerations Utah BLM Guidance for Addressing Greater Sage grouse Conservation The Greater Sage grouse (*Centrocercus urophasianus*) is a BLM and State of Utah Type 2 sensitive species. The species is declining throughout its range and has been petitioned for listing under the ESA. The loss and fragmentation of sage grouse habitat, due in part to changes in fire frequency, is a fundamental factor in the decline of habitat and populations. The maintenance of existing stands of sagebrush, particularly large contiguous areas, is especially important. To enable informed management decisions that can benefit sage grouse, **Utah BLM** and **UDWR** have prepared a Utah Sage grouse Habitat Planning Map (**Map 2**). This map identifies and classifies the existing key habitat and potential restoration areas in Utah. For this FMP, sage grouse habitat in the SUSA is on Map 4. Key habitats contain sagebrush and are utilized by sage grouse.

Portions of key habitat are further classified as either 1) source habitat, which identifies population strongholds; or 2) isolated habitat, which identifies where relatively small sage grouse populations appear to be isolated from source populations. Source habitats are the highest priority for sage grouse conservation. Potential restoration areas are historical sage grouse habitats that have converted from sagebrush to other vegetation communities, such as perennial grasslands. These areas have potential to provide sage grouse habitat in the future

#### Sage Grouse Habitat Management.

This guidance applies directly to the preparation of resource management plans. However, the concepts in this IM are appropriate for consideration in all management strategies and actions that can affect and benefit sagebrush and sage grouse habitat. This Interim Guidance identifies the following priorities for wildland fire suppression in sage grouse habitat:

Priority 1: Source sage grouse habitat (Key habitat that supports population strongholds)

Priority 2: Other key sage grouse habitat, and

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Priority 3: Potential restoration habitat.

This Interim Guidance also identifies the following priorities for restoration actions in sage grouse habitat:

- .. Reconnect source habitat
- .. Enlarge source habitat
- .. Reconnect stronghold populations with isolated populations
- .. Reconnect isolated populations

Efforts are currently underway by the State of Utah to prepare a collaborative, interagency statewide sage grouse conservation strategy. BLM is a key partner in this effort and the resulting strategy will be used, as appropriate, in updating the FMPs and other documents.

#### **D. Land Use Plan Guidance**

The fire and resource program goals contained in the 2004 State-wide Land Use Plan Amendment provide the basis for the fire management strategies recommended in this FMP. Dependant on available funding and staff resources, specific projects will be pursued annually with the appropriate ESA and NEPA compliance and tribal consultation prior to actual on the ground implementation.

RMP Fire Program Direction. The 2004 State-wide Land Use Plan Amendment provides specific fire program direction, summarized below, which describes management objectives and constraints; identifies areas where fire would not be desirable; identifies areas or circumstances where fire would be appropriate; and provides guidance for conducting additional site-specific planning in order to apply WFU within the planning area. Overall, the guidance of the 2004 State-wide Land Use Plan Amendment is to protect human life, property, and valuable resources from wildland fire, while reducing the impact of suppression activities.

- .. Manage fire/fire suppression activities to minimize risks to public/firefighter safety, expenditures of public funds and harmful impacts to resource values.
- .. Manage fire to support resource management objectives identified during planning efforts and to maximize beneficial impacts to resource values.
- .. Avoid fire suppression actions which cause ground disturbance along the unless required for public or firefighter safety.
- .. Develop a FMP through an interdisciplinary team process, to direct fire management on public lands managed by the SUSA.

Suppression/Wildland Fire Use

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The 2004 State-wide Land Use Plan Amendment provides for the use of WFU only after more site-specific planning (and appropriate NEPA documentation) is completed. Until the necessary planning is completed, all wildland fires within the SUSA area will be suppressed. Minimum Impact Suppression Tactics (MIST) will be used in the Wilderness Study Areas (WSA).

Other considerations described in the 2004 State-wide Land Use Plan Amendment for determining the appropriate suppression strategies are public and firefighter safety, suppression costs, and specific resource protection issues.

#### Prescribed Fire/Non\_Fire Fuels Treatment

Prescribed fire and other vegetation treatment methods may be used for any of the following purposes:

- .. To reduce fuel hazards and the threat of catastrophic fire events, including consideration of any local communities at risk.
- .. To maintain or enhance resource values or conditions, or otherwise support resource management objectives.
- .. To protect or enhance habitat for SSS, research, or education.
- .. To support tribal treaty rights or address tribal interests.

The 2004 State-wide Land Use Plan Amendment directs resource managers to determine where resource management objectives could be met through the use of prescribed fire.

#### Emergency Stabilization and Rehabilitation and/or Actions Needed for Restoration

The 2004 State-wide Land Use Plan Amendment provides for post fire rehabilitation in much the same way as other land treatments.

Actions taken to rehabilitate burned areas are designed to address the safety and resource issues within the affected area and promote site recovery. Emergency Stabilization and Rehabilitation Plans may be prepared after a wildland fire to address the site-specific incident and further promote site recovery. These plans are prepared in conformance with the RMP.

#### Community Assistance/Protection

The 2004 State-wide Land Use Plan Amendment, the Grand Staircase Escalante National Monument Plan and the Dixie RMP provide for the use of prescribed fire and other vegetation treatments to reduce fuel hazards and the threat of catastrophic fire events, including consideration of any local communities at risk (CAR).

Land Use Plan Resource Program Direction:



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The Land Use Plans and 2004 State-wide Land Use Plan Amendment also address a wide range of resource and management programs and issues and contain a comprehensive description of resource considerations. Section III of this FMP was created from direction provided by the Land Use Plans and 2004 State-wide Land Use Plan Amendment to develop fire management priorities and strategies. The following are some representative goals and objectives that fire management strategies can help achieve.

Most of the plans call for some form of “modified” fire suppression which fits into the current “Appropriate Management Response” philosophy.

Most of the plans call for future development of a Fire Management Plan to assess more specific resource needs and fire strategies to accomplish the resource objectives.

From the Grand Staircase-Escalante Monument Management Plan:

- FIRE-1            “...The objective of the fire management program will be to allow fire to play its natural role in the ecosystem. Management ignited fires may be initiated in areas where fire suppression has disrupted natural fire regimes.
- FIRE-2            “...Specific zoned areas (FMUs) and policies have been established to indicate how suppression activities will be managed in specific areas of the Monument. Most of the Monument is included in zones that have little fire suppression activity.”
- FIRE-3            “Heavy equipment use is allowed through authorization of the Monument Manager.”
- FIRE-4            “A designated fire resource advisor familiar with WSA issues will be consulted on all fires within the Monument that involve WSAs.”

From the Dixie RMP (St. George Field Office):

“Fire suppression on public lands in Washington County will be directed by objectives and prescriptions identified in the Fire Management Plan. The highest priority of fire suppression will be to protect life, fire fighters safety, property, and critical resource values.“

The Dixie RMP for St. George Field Office (approved March 1999) directs the following:  
(ROD/RMP 1999: p. 2.21)

- 1) in the mountain shrub and sagebrush vegetation types, habitat diversity should be maximized, by reducing the amount of shrubs and sagebrush and increasing grass and forbs in selected areas.
- 2) in the pinyon-juniper woodland type, maximize habitat diversity in selected areas by reducing the number of trees and increasing desirable shrubs, grasses, and forbs.
- 3) in riparian areas within the mountain shrub type, maximize habitat diversity by maintaining woody species composition while providing for stream bank protection thorough adequate forb and grass cover.
- 4) fire management is an approved means of achieving these objectives.

### III. WILDLAND FIRE MANAGEMENT STRATEGIES

#### A. General Management Considerations

##### Overview

This section summarizes fire management conditions and presents management recommendations in the form of priorities, objectives, and strategies. Twenty-eight Fire Management Units (FMUs) have been identified in the SUSA. [Twenty-six of these are described in this FMP. The Nothern Wah Wah and White Rocks FMU's are addressed by the Fillmore Field Office (Utah) and the Ely Field Office (Nevada) respectively.] These FMUs are management areas definable by resource management objective. For each FMU, management recommendations are provided for the following fire management programs: wildland fire suppression, fuels treatment (prescribed fire and non fire fuels), ESR, and community assistance/protection.

##### Area Description

The SUSA is located in southwestern Utah encompassing approximately 7,226,728 acres (5,141,154 acres of BLM administered public lands being considered in this FMP), entirely within the 5 southwest Counties of Utah: Washington, Iron, Beaver, Kane and Garfield. National Forests adjoining SUSA include the Fishlake National Forest and the Dixie National Forest in Utah. Elevations range from 2,188 ft. in the Mohave FMU in the St. George Field Office to 10,650 ft. in Parowan Front-Antelope Range FMU in the Cedar City Field Office. The climate varies from desert to ponderosa pine/spruce mountain environments. Cold winters and warm dry summers generally characterize the local weather patterns. Surrounding mountains create a moderate rain and snow shadow effect in the valleys and foothills, moderating the intensity of storms in the lower elevations. The area is affected by summer convection storms and frontal air mass weather patterns, with annual precipitation ranging from 6-8 inches in the Mohave Desert near St. George to 32-36 in. the foothills along the Parowan Front. Generally more precipitation comes as summer thunderstorms than from snowpack. Snowmelt and stream discharge is very dependent on spring temperatures. Minimum and maximum daily temperatures range from – 15 degrees F in January in Panguitch to 110 degrees F in July and August in St. George. (Utah State Climate Service 2003).

#### B. Wildland Fire Management Goals

Goals for this FMP are to:

- Restore fire to the ecosystem using the full range of fire management activities to achieve ecosystem sustainability.
- Reduce fire suppression costs.
- Reduce hazardous fuels via various treatment methods.
- Protect communities at risk and restore ecosystems.

In achieving this, all actions, whether pertaining to goals, objectives, or implementation strategies, must provide for:

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Cedar City Field Office

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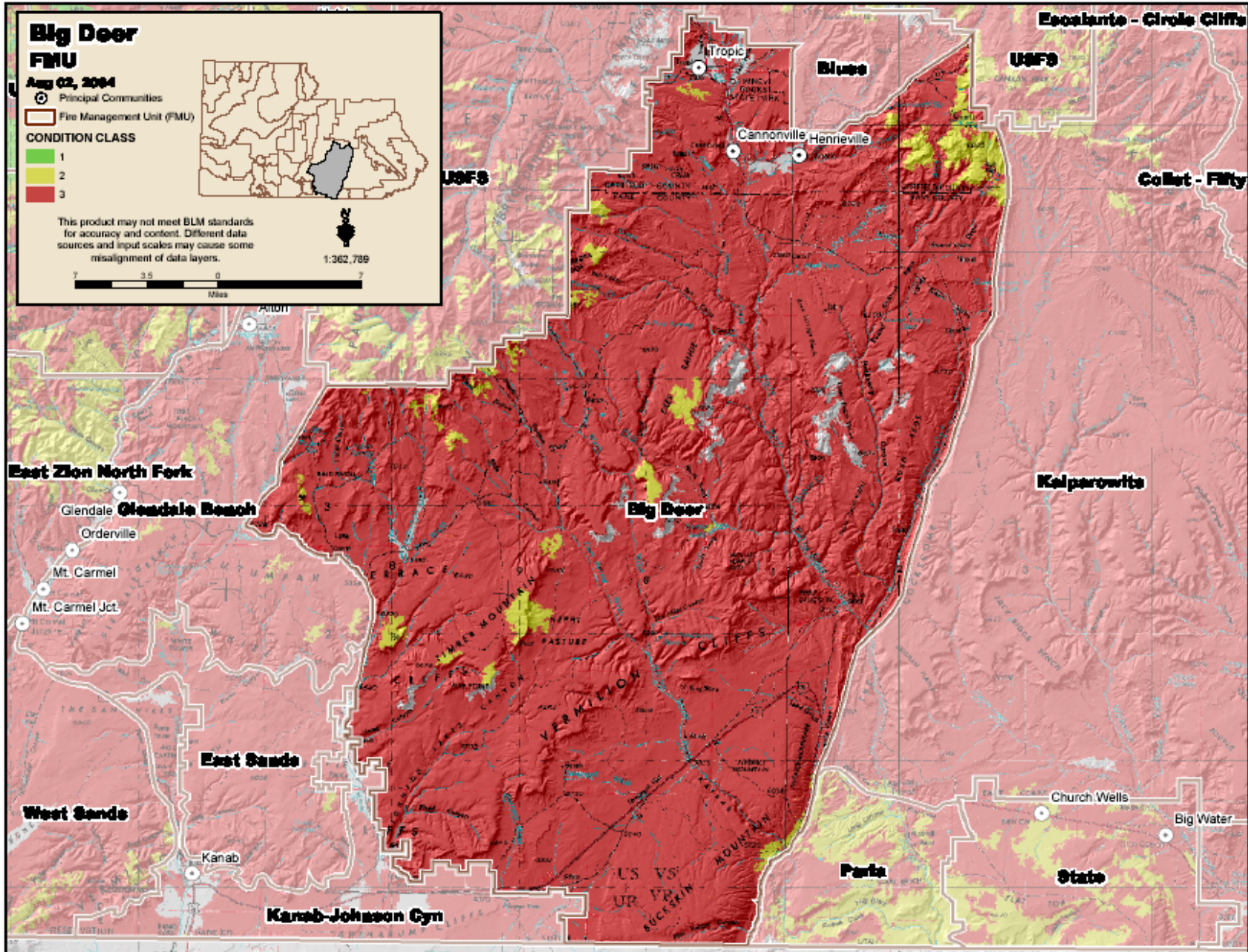
- Firefighter and public safety is the first priority in any fire management action. The protection of human life is the single, overriding suppression priority.

**C. Wildland Fire Management Options**

The Cedar City Fire Division will provide an AMR on all wildland fires, with emphasis on fire fighter and public safety, minimizing suppression costs, benefits and values to be protected consistent with resource objectives, standards and guidelines. Every attempt will be made to respond to each wildland fire in a timely manner with a force mix, based upon established fire management direction as documented in approved management plans. The use of appropriate management response will allow land managers to tailor preplanned wildland fire dispatch strategies to meet objectives established in resource management plans and their associated implementation plans. The Cedar City Fire Division will implement fuels treatments, community assistance, education/mitigation programs and rehabilitation/restoration actions to implement management plan direction.

**D. Description of Wildland Fire Management Strategies by Fire Management Unit (FMU)**

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**FMU DESCRIPTION**

Big Deer

**Location:**

This FMU is shared between the Kanab Field Office and the Grand Staircase-Escalante National Monument. It is generally located west of the Cottonwood Wash and the Cockscomb, east of Johnson Canyon and south and southeast of Bryce Canyon National Park. It can generally be described as the “Grand Staircase” in terms of physiography and location. Thus it contains the terraces beginning at the south: Vermillion Cliffs and White Cliffs to just below the Pink Cliffs within Bryce Canyon National Park.

Ownership Acres:

BLM –	569520
Private –	46704
State –	7031
Other –	0.24
TOTAL	623255

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 4,800 feet to 8,200 feet above sea level.

Precipitation

Precipitation averages about 12 to 14 inches per year based on geospatial data from the Oregon Climate Service and the Spatial Climate Analysis Service using the PRISM mapping system.

Vegetation

Vegetation consists of pinyon-juniper, juniper, sagebrush, grassland, mountain brush and large areas of seeded pasture and PJ chainings.

STATSGO Soil Type

Soil Type	Acres
673	17555.24
676	23.16
680	122563.25
681	111760.17
682	93571.99
683	62372.08
684	48895.60
685	43872.62
715	47503.38

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719	9163.34
727	17622.16
728	7866.04
729	89.37
730	40396.80
TOTAL	623255.20

Special Status Species

(Kanab list) From the Utah Natural heritage Program Data base for Kane County, not all species and Habitats occur in this FMU

ALLEN'S BIG-EARED BAT	IDIONYCTERIS PHYLLOTIS	SPC
AMERICAN WHITE PELICAN	PELECANUS ERYTHORHYNCHOS	SPC
ARIZONA TOAD	BUFO MICROSCAPHUS	SPC
BALD EAGLE	HALIAEETUS LEUCOCEPHALUS	S-ESA
BIG FREE-TAILED BAT	NYCTINOMOPS MACROTIS	SPC
BONNEVILLE CUTTHROAT TROUT	ONCORHYNCHUS CLARKI UTAH	CS
BURROWING OWL	ATHENE CUNICULARIA	SPC
S-ESA		
COMMON CHUCKWALLA	SAUROMALUS ATER	SPC
DESERT NIGHT LIZARD	XANTUSIA VIGILIS	SPC
FERRUGINOUS HAWK	BUTEO REGALIS	SPC
FRINGED MYOTIS	MYOTIS THYSANODES	SPC

**Kane County**

<b>Common Name</b>	<b>Scientific Name</b>	<b>State Status</b>
GREATER SAGE-GROUSE	CENTROCERCUS UROPHASIANUS	SPC
KANAB AMBERSNAIL	OXYLOMA KANABENSE	S-ESA
KIT FOX	VULPES MACROTIS	SPC
LEWIS'S WOODPECKER	MELANERPES LEWIS	SPC
LONG-BILLED CURLEW	NUMENIUS AMERICANUS	SPC
NORTHERN GOSHAWK	ACCIPITER GENTILIS	CS
SOUTHWESTERN WILLOW FLYCATCHER	EMPIDONAX TRAILLII EXTIMUS	S-ESA
SPOTTED BAT	EUDERMA MACULATUM	SPC
SPOTTED OWL	STRIX OCCIDENTALI	S S-ESA
THREE-TOED WOODPECKER	PICOIDES TRIDACTYLUS	SPC
TOWNSEND'S BIG-EARED BAT	CORYNORHINUS TOWNSENDII	SPC
UTAH PRAIRIE-DOG	CYNOMYS PARVIDENS	S-ESA
WESTERN TOAD	BUFO BOREAS	SPC
YELLOW-BILLED CUCKOO	COCCYZUS AMERICANUS S-	ESA

**SPECIAL STATUS PLANTS-KANAB FIELD OFFICE**

WELSH'S MILKWEED	ASCLEPIAS WELSHII	ESA
GUMBO MILK-VETCH	ASTRAGALUS AMPULLARIUS	C-2
ATWOOD'S CAMISSONIA	CAMISSONIA ATWOODII	C-2
SLENDER CAMISSONIA	CAMISSONIA EXILIS	C-2
REVEAL INDIAN PAINTBRUSH	CASTILLEJA REVEALII	C-2
SAND-DWELLING CRYPTANTH	CRYPTANTHA CINEREA ARENICOLA	C-2
YELLOW-WHITE CATSEYE	CRYPTANTHA OCHROLEUCA	C-2
JONES CYCLADENIA	CYCLADENIA HUMILIS VAR. JONESII	ESA
HIGGINS BISCUITROOT	CYMOPTERUS ACAULIS VAR. HIGGINSII	C-2
CEDAR BREAKS BISCUITROOT	CYMOPTERUS MINIMUS	C-2
ZION DAISY	ERIGERON SIONIS	C-2
ALCOVE DAISY	ERIGERON ZOTHECINUS	C-2
CEDAR BREAKS GOLDENBUSH	HAPLOPAPPUS ZIONIS	C-2
PARIA IRIS	IRIS PARIENSIS	C-2
KODACHROME BLADDERPOD	LESQUERELLA TUMULOSA	ESA
SILER PINCUSHION CACTUS	PEDIOCACTUS SILERI	ESA
KANE BREADROOT	PEDIOMELUM EPIPSILUM	C-2
PARIA BREADROOT	PEDIOMELUM PARIENSE	C-2
SANDLOVING PENSTEMON	PENSTEMON AMMOPHILUS	C-2
AUTUMN BUTTERCUP	RANUNCULUS ACRIFORMIS AESTIVALIS	ESA
ZION TANSY	SPHAEROMERIA RUTHIAE	C-2

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*Lesquerella tumulosa* (*Endangered*) – Management ignited fires should not be planned within Kodachrome bladderpod habitat without prior consultation with the U.S. Fish and Wildlife Service. No mechanized equipment and use of hand tools is recommended in these areas and fire size should be limited to 5 acres.

All other special status plant species (BLM Sensitive) – No mechanized equipment and hand tools are recommended for these populations. Fire size should be limited to 5 acres.

There are habitats for special status wildlife species including threatened Mexican spotted owls and endangered southwest willow flycatchers. The California Condor is an occasional visitor to this FMU.

Other Sensitive Resources

Sage Grouse habitat

This FMU has important sage grouse habitat in the northwest part of the unit that is shared with the Kanab Glendale Bench unit. This area contains one of the last active leks in the area.

Wildlife – Paunsaugunt Deer Herd

This FMU contains a majority of the critical winter range and migratory corridor for the Paunsaugunt Deer Herd one of the largest in Utah.

Riparian areas/Seeps and Springs

Noxious Weeds

Cheatgrass invasion following a fire is a concern.

Cultural resources

The southern portion of the FMU, particularly the area south of the White Cliffs to Highway 89, contains numerous known and unknown cultural sites. Surface disturbance could destroy these resources. Restrictions on use of heavy equipment without Monument Manager approval should be implemented. Inventory after wildfires should be part of rehabilitation.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

- FIL 1 = 0-2 feet
- FIL 2 = 2-4 feet
- FIL 3 = 4-6 feet
- FIL 4 = 6-8 feet
- FIL 5 = 8-12 feet
- FIL 6 = 12 + feet

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Acres by FIL

FIL 1 –	23.51
FIL 2 –	448.07
FIL 3 –	175.00
FIL 4 –	31.34
FIL 5 –	8.07
FIL 6	0.31
Unclassified-	3178.73
TOTAL-	3865.03

Fire Starts by Year

<u>Year</u>	<u>Number</u>
1993 –	5
1994 –	7
1995 –	6
1996 –	28
1997 –	17
1998 –	26
1999 –	12
2000 –	23
2001 –	15
2002 –	14
2003 -	22
TOTAL	175



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**Fire Regime and Condition Class (FRCC):**

**Kanab/GSENM Field Office  
FRCC TABLE**

Date: 7/30/04

FMU Name: Big Deer

569520

Full suppression on sage grouse, special status plants and riparian habitat. Convert 50,000 acres of pinyon-juniper, 25,000 acres of juniper and 20,000 acres of sagebrush to sagebrush/perennial grass using wildfire, prescribed fire, and non-fire fuels treatments.

**EXISTING**

**DESIRED**

Veg type	Acres	% Area	Fire Regime	Existing CC	DESIRED			
					Desired CC	Veg type	% Change	Acres
Pinyon	12,212	2	2	2				
Pinyon-juniper	203,552	36	2	3	1 & 2	sagebrush/perennial grass	25	50,000
Juniper	124,070	22	2	3	1 & 2	sagebrush/perennial grass	20	25,000
Sagebrush	61,167	11	2	3	1 & 2	diversify age class	33	20,000
Sagebrush/perennial Grass	31,005	5	2	3	1 & 2	combine with above	0	
Grassland	31,401	6	1	3				

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Desert Grassland	12,396	2	1	3				
PIPO/Mtn Shrub	1,133	0	1	3				
Mountain Shrub	2,879	1	2	2				
Salt Desert Shrub	76,721	13	5	3				
Lowland Riparian		0	4	3				
Ponderosa/Mtn. Shrub		0	1	3				
Dry Meadow	1,790	0	1	3				
Oak	1,074	0	1	2				
Blackbrush	1,171	0	5	2				
Barren	8,637	2						
Agriculture	194	0						

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Other	120	0						
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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Communication Sites
- Private lands including private residences.
- Henrieville water system pump site
- Range Improvements
- Habitats for special status species
- Sage grouse habitat
- Critical deer winter range and migration route
- Cultural resources
- Transmission Lines (smoke)
- Dispersed Recreation such as hunting
- Rights of Way
- Paria Movie Set and recreation site
- Kodachrome Basin State Park

**Communities at Risk:**

There are WUI areas at Tropic, Cannonville and Henrieville, Utah, and private residences at the Deer Springs Ranch subdivision, lower Johnson Canyon, Skutumpah Ranch and Kodachrome State Park. There may be smoke issues with Capitol Reef National Park and the towns of Escalante and boulder, Utah. The town of Henrieville's domestic wells are located adjacent to Henrieville Creek in the north end of the FMU.

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Monument Management Plan

- FIRE-1            "...The objective of the fire management program will be to allow fire to play its natural role in the ecosystem. Management ignited fires may be initiated in areas where fire suppression has disrupted natural fire regimes.
- FIRE-2            "...Specific zoned areas (FMUs) and policies have been established to indicate how suppression activities will be managed in specific areas of the Monument. Most of the Monument is included in zones that have little fire suppression activity."
- FIRE-3            "Heavy equipment use is allowed through authorization of the Monument Manager."

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FIRE-4 "A designated fire resource advisor familiar with WSA issues will be consulted on all fires within the Monument that involve WSAs."

Fire Management Objectives

Allow fire to resume its role in the ecosystem.

The majority of the FMU is important deer winter and migratory habitat that would benefit from the mosaic effects of fire. In the areas not important for sage grouse, convert 50,000 acres of pinyon-juniper and 25,000 acres of juniper to sagebrush/perennial grass over the next 10 years. Also improve age class diversity on 20,000 acres of sagebrush and sagebrush/perennial grass over the next 10 years. On these acres use natural wildfire, prescribed burning and mechanical treatment to make these changes.

Limit wildfires within identified special status plant species habitat to 5 acres and within riparian areas to 100 acres.

Where possible with consideration to Values at Risk, use fire to achieve management objectives.

Utilize Light-on-the-Land minimum suppression strategies and Wildland Fire Use to achieve management objectives, limit surface disturbance and reduce costs.

Fire Management Strategies:

**Suppression:**

Use appropriate management response on fires unless life, private property or Values at Risk are threatened. Allow fire to play a natural role and create a mosaic through conversion of areas of Pinyon-juniper and juniper to sagebrush/perennial grassland. In this FMU, individual wildfires up to 1,000 acres would contribute to creating the desired mosaic (exception see sage grouse discussion). Wildfires exceeding 1,000 acres that continue to meet management objectives should be managed under Wildland Fire Use or appropriate suppression strategies as determined in the Wildland Fire Situation Analysis (WFSAs). Determination of appropriate suppression strategy should be made in consultation with a resource advisor.

This FMU has important sage grouse habitat in the northwest part of the unit that is contiguous with sage grouse habitat in the Glendale Bench unit. Limit fires to a maximum of 5 ac/fire to preserve the sagebrush habitat component on the Skutumpah Terrace above the White Cliffs.

A resource advisor needs to be ordered on every fire and is to be consulted on fire suppression strategies and resources/values at risk. All fires within Kodachrome bladderpod habitat should be immediately suppressed using low impact/non-surface disturbing methods. All fires within and adjacent to the sage grouse areas (and the lands between the mapped sage grouse habitat) should be immediately suppressed at less than 5

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acres. Heavy equipment use for suppression/prescribed fire and mechanical treatments is allowed only through authorization by either the Monument Manager or Field Office Manager.

**Wildland Fire Use:**

Wildfires not threatening Communities or Values at Risk will be managed under confine and contain strategy if they continue to meet management objectives, particularly allowing fire to play its natural role in the ecosystem, and the current status is within National Preparedness Levels 1-4. Confine/contain or wildland fire use at planning level 5 must have the approval of the GSENM Manager and State Director.

**Prescribed Fire:**

Use as part of the strategy to convert pinyon-juniper and juniper to sagebrush/perennial grasslands (75,000 acres over 10 years) and to improve age class diversity within sagebrush and sagebrush/perennial grasslands (20,000 acres over 10 years). Prescribed fire should not be allowed in *Lesquerella tumulosa* (Endangered) Kodachrome bladderpod habitat.

**Non-fire fuels Treatments:**

Use as part of the strategy to convert pinyon-juniper and juniper to sagebrush/perennial grasslands (75,000 acres over 10 years) and to improve age class diversity within sagebrush and sagebrush/perennial grasslands (20,000 acres over 10 years).

**Emergency Stabilization and Rehabilitation:**

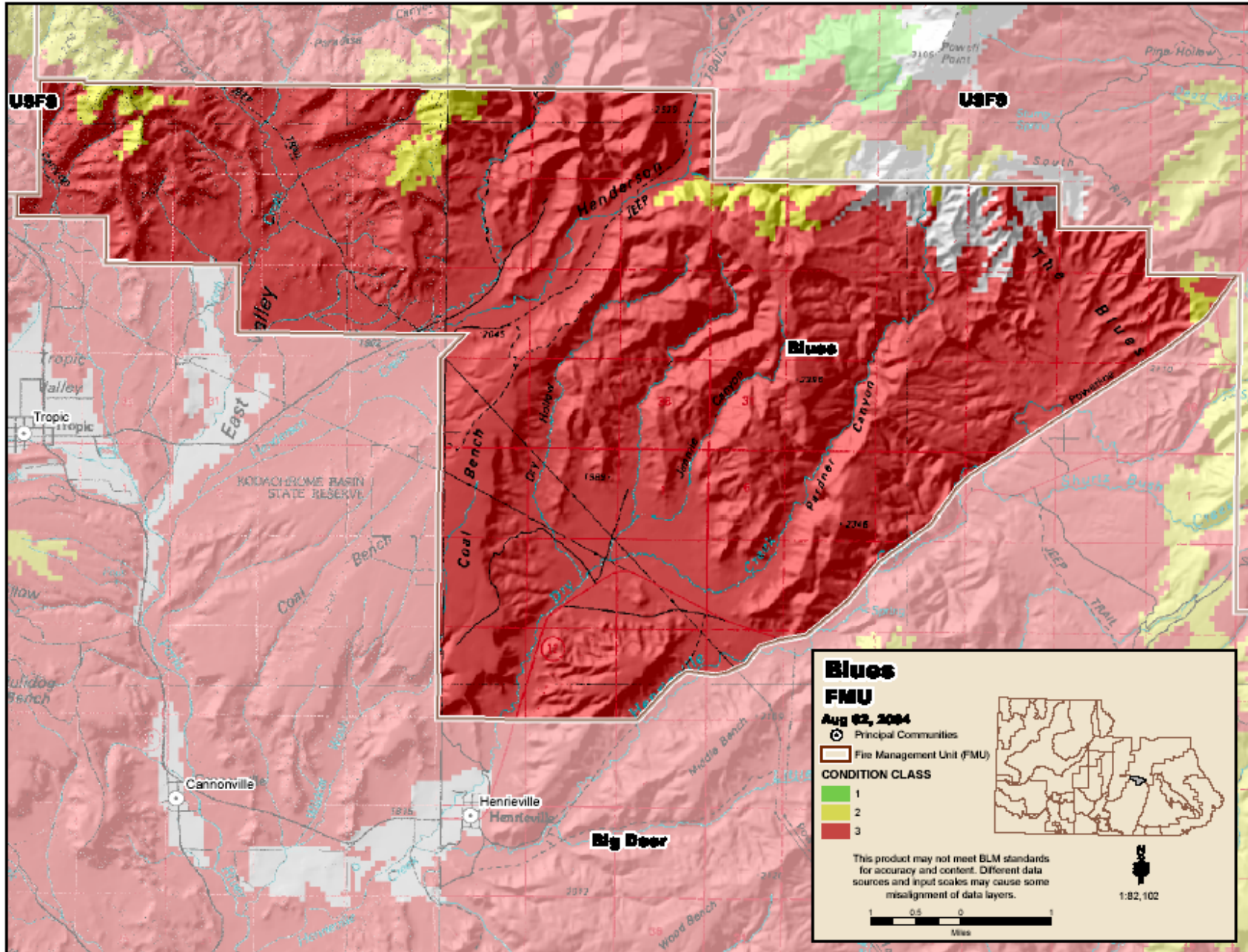
Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan.

Fire rehabilitation and stabilization should begin immediately during suppression. Seeding, where appropriate, should take place as soon as conditions favor successful seed germination but no later than the following spring. Prevention of cheat grass dominance and noxious weed invasion should be high priorities in developing rehabilitation and seeding plans.

Areas with high species diversity may not need to be reseeded if conditions are beneficial to natural re-establishment. Conditions which may preclude natural re-seeding include high fire intensity, large fire size, lack of a residual plant community, seed bank, or adjacent seed source. Post fire weed management will include all invasive plant species not just noxious weeds. Fire rehabilitation areas will be monitored annually for three years and in five year increments thereafter for invasive and noxious weeds.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).

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**FMU DESCRIPTION**

The Blues

**Location:**

This FMU is located on the northern boundary of the Fire Planning Unit and is adjacent to the Dixie National Forest on the north. The southern boundary is Highway 12 and the Big Deer FMU. The unit is characterized by blue clay soils and steep terrain.

Ownership Acres:

BLM –	30,714
Private –	739
State –	0
Other –	0.18
TOTAL	31,453

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 6,000 feet to 8,000 feet above sea level. The FMU is known for its soil characteristics and color patterns. Steep bare slopes make this area subject to erosion and surface disturbance is evident and long lasting.

Precipitation

Precipitation averages about 12 to 14 inches as modeled by the Parameter-elevation Regressions on Independent Slopes Model (PRISM) 1961-1990 from the Oregon Climate Service and the Spatial Climate Analysis Service.

Vegetation

Vegetation consists of pinyon-juniper, juniper, sagebrush, grassland, and mountain brush.

**STATSGO SOIL TYPES**

Soil Type	Acres
715	4106.29
719	1735.57
728	10894.26
729	91.58
730	14625.20
TOTAL	31452.89



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Special Status Species

(Kanab list) From the Utah Natural heritage Program Data base for Kane County, not all species and Habitats occur in this FMU

ALLEN'S BIG-EARED BAT	IDIONYCTERIS PHYLLOTIS	SPC
ARIZONA TOAD	BUFO MICROSCAPHUS	SPC
BALD EAGLE	HALIAEETUS LEUCOCEPHALUS	S-ESA
BIG FREE-TAILED BAT	NYCTINOMOPS MACROTIS	SPC
BONNEVILLE CUTTHROAT TROUT	ONCORHYNCHUS CLARKI UTAH	CS
BURROWING OWL	ATHENE CUNICULARIA	SPC
S-ESA		
COMMON CHUCKWALLA	SAUROMALUS ATER	SPC
DESERT NIGHT LIZARD	XANTUSIA VIGILIS	SPC
FERRUGINOUS HAWK	BUTEO REGALIS	SPC
FRINGED MYOTIS	MYOTIS THYSANODES	SPC

**Kane County**

<b>Common Name</b>	<b>Scientific Name</b>	<b>State Status</b>
GREATER SAGE-GROUSE	CENTROCERCUS UROPHASIANUS	SPC
KANAB AMBERSNAIL	OXYLOMA KANABENSE	S-ESA
KIT FOX	VULPES MACROTIS	SPC
LEWIS'S WOODPECKER	MELANERPES LEWIS	SPC
LONG-BILLED CURLEW	NUMENIUS AMERICANUS	SPC
NORTHERN GOSHAWK	ACCIPITER GENTILIS	CS
SOUTHWESTERN WILLOW FLYCATCHER	EMPIDONAX TRAILLII EXTIMUS	S-ESA
SPOTTED BAT	EUDERMA MACULATUM	SPC
SPOTTED OWL	STRIX OCCIDENTALI	S S-ESA
THREE-TOED WOODPECKER	PICOIDES TRIDACTYLUS	SPC
TOWNSEND'S BIG-EARED BAT	CORYNORHINUS TOWNSENDII	SPC
WESTERN TOAD	BUFO BOREAS	SPC
YELLOW-BILLED CUCKOO	COCCYZUS AMERICANUS S-	ESA

**SPECIAL STATUS PLANTS-KANAB FIELD OFFICE**

WELSH'S MILKWEED	ASCLEPIAS WELSHII	ESA
GUMBO MILK-VETCH	ASTRAGALUS AMPULLARIUS	C-2
ATWOOD'S CAMISSONIA	CAMISSONIA ATWOODII	C-2
SLENDER CAMISSONIA	CAMISSONIA EXILIS	C-2
REVEAL INDIAN PAINTBRUSH	CASTILLEJA REVEALII	C-2
SAND-DWELLING CRYPTANTH	CRYPTANTHA CINEREA ARENICOLA	C-2
YELLOW-WHITE CATSEYE	CRYPTANTHA OCHROLEUCA	C-2
JONES CYCLADENIA	CYCLADENIA HUMILIS VAR. JONESII	ESA
HIGGINS BISCUITROOT	CYMOPTERUS ACAULIS VAR. HIGGINSII	C-2
CEDAR BREAKS BISCUITROOT	CYMOPTERUS MINIMUS	C-2
ZION DAISY	ERIGERON SIONIS	C-2
ALCOVE DAISY	ERIGERON ZOTHECINUS	C-2
CEDAR BREAKS GOLDENBUSH	HAPLOPAPPUS ZIONIS	C-2
PARIA IRIS	IRIS PARIENSIS	C-2
KODACHROME BLADDERPOD	LESQUERELLA TUMULOSA	ESA
SILER PINCUSHION CACTUS	PEDIOACTUS SILERI	ESA
KANE BREADROOT	PEDIOMELUM EPIPSILUM	C-2
PARIA BREADROOT	PEDIOMELUM PARIENSE	C-2
SANDLOVING PENSTEMON	PENTEMON AMMOPHILUS	C-2
AUTUMN BUTTERCUP	RANUNCULUS ACRIFORMIS AESTIVALIS	ESA
ZION TANSY	SPHAEROMERIA RUTHIAE	C-2

All special status plant species (BLM Sensitive) – Hand tools are recommended for suppression. No mechanized equipment. Fire size should be limited to 5 acres when ever possible.

Other Sensitive Resources

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Riparian areas/springs and seeps

The southern boundary of the FMU is Henrieville Creek. This town of Henrieville draws its water from this watershed. No mechanized equipment and use of hand tools is recommended. Fire size should be limited to 100 acres when possible.

Paleontology

There are important and sensitive paleontological resources in this FMU. The geologic formation is one where fossils are frequently found. They are sensitive to mechanical disturbance. A resource advisor and paleontologist should be ordered for all fires where on-ground actions occur.

Noxious Weeds

Cheatgrass invasion following a fire is a concern.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

- FIL 1 = 0-2 feet
- FIL 2 = 2-4 feet
- FIL 3 = 4-6 feet
- FIL 4 = 6-8 feet
- FIL 5 = 8-12 feet
- FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	0.0
FIL 2 –	0.0
FIL 3	0.0
FIL 4 –	0.0
FIL 5 –	0.0
FIL 6	0.0
Unclassified-	23.44
TOTAL-	23.44

Fire Starts by Year

Year	Number
1993 –	0
1994 –	0
1995 –	0
1996 –	1
1997 –	1
1998 –	0
1999 –	0
2000 –	2

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2001 –	0
2002 –	1
2003 -	0
TOTAL	5

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**Fire Regime and Condition Class (FRCC):**

**GSENM Field Office  
 FRCC TABLE**

Date: 9/2/04

FMU Name: The Blues  
 30714

FMU Number:  
 030BLS

Allow fire to become part of the ecosystem. Use appropriate management response following the counsel of the resource advisor. No fire use, prescribed fire or non-fire fuels projects in this FMU.

<b>EXISTING</b>					<b>DESIRED</b>			
Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon	1,058	3	2	2				
Pinyon-juniper	19,334	63	2	3				
Juniper		0	2	3				
Sagebrush	6,533	21	2	3				

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Sagebrush/perennial Grass	2,272	7	2	3				
Grassland		0	1	3				
Desert Grassland		0	1	3				
PIPO/Mtn Shrub	681	2	1	3				
Mountain Shrub		0	2	2				
Salt Desert Shrub	144	0	5	3				
Ponderosa Pine		0	4	3				
Ponderosa/Mtn.Shrub		0	1	3				
Dry Meadow		0	1	3				
Oak		0	1	2				

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Blackbrush		0	5	2				
Greasewood		0	5	3				
Barren	684	2						
Agriculture	8	0						

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**Values at Risk:**

There are powerlines (one major transmission line) and oil production facilities in this FMU. The oil production facilities include a pipeline, oil transfer station (tanks and truck transfer facilities) and wells on BLM and on adjacent Forest Service lands. A developed overlook and toilet is found on The Blues.

**Communities at Risk:**

There are no communities in this FMU.

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Monument Management Plan

- FIRE-1        "...The objective of the fire management program will be to allow fire to play its natural role in the ecosystem. Management ignited fires may be initiated in areas where fire suppression has disrupted natural fire regimes.
- FIRE-2        "...Specific zoned areas (FMUs) and policies have been established to indicate how suppression activities will be managed in specific areas of the Monument. Most of the Monument is included in zones that have little fire suppression activity."
- FIRE-3        "Heavy equipment use is allowed through authorization of the Monument Manager."
- FIRE-4        "A designated fire resource advisor familiar with WSA issues will be consulted on all fires within the Monument that involve WSAs."

Fire Management Objectives

Allow fire to resume its role in the ecosystem. Most fires in this FMU are expected to have low spread potential and can be monitored by aircraft. When suppression is determined necessary, suppress fires using minimum impact suppression tactics within the acreages specified whenever possible.

Fire Management Strategies:

**Suppression:**

Use appropriate management response based on the following conditions: A resource advisor needs to be ordered on fires requiring suppression and is to be consulted on fire suppression strategies and resources/values at risk. Consultation with the Monument paleontologist should occur for every wildfire report. Heavy equipment use for

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suppression/prescribed fire and mechanical treatments is allowed only through authorization by the Monument Manager.

**Wildland Fire Use:**

No fire use. Potential for fire use is low due to the acreage limitations, topography and fuel types.

**Prescribed Fire:**

No opportunities for prescribed fire.

**Non-fire fuels Treatments:**

No opportunities for mechanical treatment.

**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan.

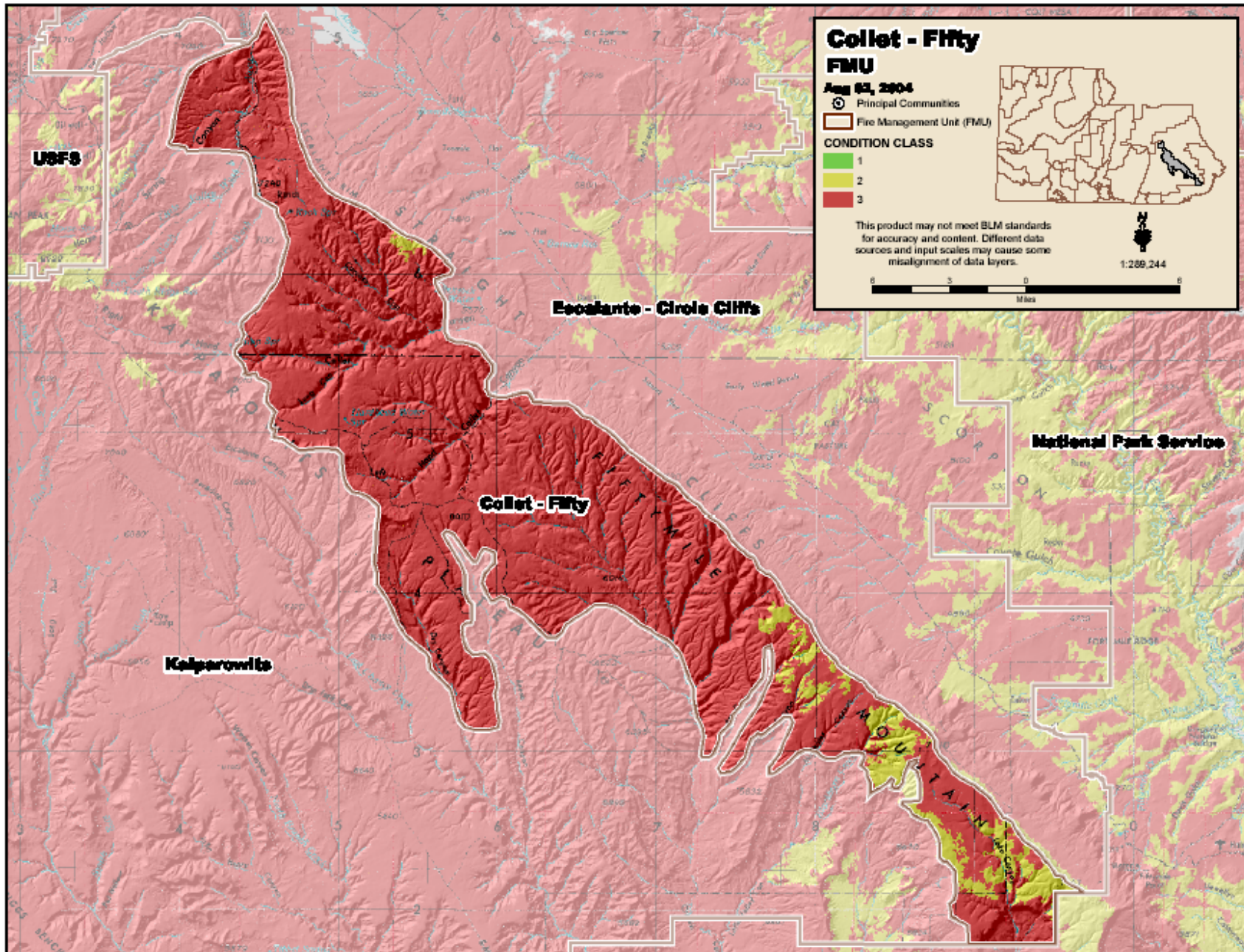
Fire rehabilitation and stabilization should begin immediately during suppression. Seeding, where appropriate, should take place as soon as conditions favor successful seed germination but no later than the following spring. Prevention of cheat grass dominance and noxious weed invasion should be high priorities in developing rehabilitation and seeding plans.

Areas with high species diversity may not need to be reseeded if conditions are beneficial to natural re-establishment. Conditions which may preclude natural re-seeding include high fire intensity, large fire size, lack of a residual plant community, seed bank, or adjacent seed source. Post fire weed management will include all invasive plant species not just noxious weeds. Fire rehabilitation areas will be monitored annually for three years and in five year increments thereafter for invasive and noxious weeds.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).



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**FMU DESCRIPTION**

Collett/Fiftymile Mountain

**Location:**

This FMU includes the Fiftymile Mountain and Collet Top area of the Grand Staircase-Escalante National Monument which are at the top of the Kaiparowits Plateau formation. (The lower elevation Kaiparowits Plateau country is in the Kaiparowits FMU which is on the south and west.) On the north and east is the Escalante-Circle Cliffs FMU.

Ownership Acres:

BLM –	167702
Private –	0
State –	0
Other –	0.04
TOTAL	167702

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 5,800 feet to 7,600 feet above sea level. The FMU is primarily a high mountain top sloping from east to west. Access is extremely difficult with only one road crossing the northern end of the FMU and the east and west sides of the ridge defined by steep walled cliffs.

Precipitation

Precipitation averages about 12 to 14 inches, as modeled by the Parameter-elevation Regressions on Independent Slopes Model (PRISM). 1961-1990. [Precipitation averages about 12 to 14 inches per year based on geospatial data from the Oregon Climate Service and the Spatial Climate Analysis Service using the PRISM mapping system.]

Vegetation

Vegetation consists of pinyon-juniper, juniper, sagebrush, grassland, grass meadows, mountain brush and scattered aspen stands.

STATSGO Soil Type

Soil Type	Acres
654	41247.24
673	32346.06
675	94109.16
TOTAL	167702.46

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Special Status Species

(Kanab list) From the Utah Natural heritage Program Data base for Kane County, not all species and Habitats occur in this FMU

ALLEN'S BIG-EARED BAT	IDIONYCTERIS PHYLLOTIS	SPC
ARIZONA TOAD	BUFO MICROSCAPHUS	SPC
BALD EAGLE	HALIAEETUS LEUCOCEPHALUS	S-ESA
BIG FREE-TAILED BAT	NYCTINOMOPS MACROTIS	SPC
BONNEVILLE CUTTHROAT TROUT	ONCORHYNCHUS CLARKI UTAH	CS
BURROWING OWL	ATHENE CUNICULARIA	SPC
COMMON CHUCKWALLA	SAUROMALUS ATER	SPC
DESERT NIGHT LIZARD	XANTUSIA VIGILIS	SPC
FERRUGINOUS HAWK	BUTEO REGALIS	SPC
FRINGED MYOTIS	MYOTIS THYSANODES	SPC

**Kane County**

<b>Common Name</b>	<b>Scientific Name</b>	<b>State Status</b>
GREATER SAGE-GROUSE	CENTROCERCUS UROPHASIANUS	SPC
KANAB AMBERSNAIL	OXYLOMA KANABENSE	S-ESA
KIT FOX	VULPES MACROTIS	SPC
LEWIS'S WOODPECKER	MELANERPES LEWIS	SPC
LONG-BILLED CURLEW	NUMENIUS AMERICANUS	SPC
NORTHERN GOSHAWK	ACCIPITER GENTILIS	CS
SOUTHWESTERN WILLOW FLYCATCHER	EMPIDONAX TRAILLII EXTIMUS	S-ESA
SPOTTED BAT	EUDERMA MACULATUM	SPC
SPOTTED OWL	STRIX OCCIDENTALI	S S-ESA
THREE-TOED WOODPECKER	PICOIDES TRIDACTYLUS	SPC
TOWNSEND'S BIG-EARED BAT	CORYNORHINUS TOWNSENDII	SPC
WESTERN TOAD	BUFO BOREAS	SPC
YELLOW-BILLED CUCKOO	COCCYZUS AMERICANUS S-	ESA

**SPECIAL STATUS PLANTS-KANAB FIELD OFFICE**

WELSH'S MILKWEED	ASCLEPIAS WELSHII	ESA
GUMBO MILK-VETCH	ASTRAGALUS AMPULLARIUS	C-2
ATWOOD'S CAMISSONIA	CAMISSONIA ATWOODII	C-2
SLENDER CAMISSONIA	CAMISSONIA EXILIS	C-2
REVEAL INDIAN PAINTBRUSH	CASTILLEJA REVEALII	C-2
SAND-DWELLING CRYPTANTH	CRYPTANTHA CINEREA ARENICOLA	C-2
YELLOW-WHITE CATSEYE	CRYPTANTHA OCHROLEUCA	C-2
JONES CYCLADENIA	CYCLADENIA HUMILIS VAR. JONESII	ESA
HIGGINS BISCUITROOT	CYMOPTERUS ACAULIS VAR. HIGGINSII	C-2
CEDAR BREAKS BISCUITROOT	CYMOPTERUS MINIMUS	C-2
ZION DAISY	ERIGERON SIONIS	C-2
ALCOVE DAISY	ERIGERON ZOTHECINUS	C-2
CEDAR BREAKS GOLDENBUSH	HAPLOPAPPUS ZIONIS	C-2
PARIA IRIS	IRIS PARIENSIS	C-2
KODACHROME BLADDERPOD	LESQUERELLA TUMULOSA	ESA
SILER PINCUSHION CACTUS	PEDIOCACTUS SILERI	ESA
KANE BREADROOT	PEDIOMELUM EPIPSILUM	C-2
PARIA BREADROOT	PEDIOMELUM PARIENSE	C-2
SANDLOVING PENSTEMON	PENTEMON AMMOPHILUS	C-2
AUTUMN BUTTERCUP	RANUNCULUS ACRIFORMIS AESTIVALIS	ESA
ZION TANSY	SPHAEROMERIA RUTHIAE	C-2

All special status plant species (BLM Sensitive) – No mechanized equipment and hand tools are recommended for these populations.

Other Sensitive Resources

Cultural Resources

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The FMU has a high incidence of cultural sites including structures in the cliffs on both sides of the FMU. It can be anticipated that wildfires will expose unknown cultural sites.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

FIL 1 = 0-2 feet

FIL 2 = 2-4 feet

FIL 3 = 4-6 feet

FIL 4 = 6-8 feet

FIL 5 = 8-12 feet

FIL 6 = 12 + feet

Acres by FIL

FIL 1 – 0.08

FIL 2 – 7.87

FIL 3 – 462.73

FIL 4 – 0.0

FIL 5 – 32.30

FIL 6 0.0

Unclassified- 771.49

TOTAL- 1274.46

Fire Starts by Year

Year Number

1993 – 0

1994 – 3

1995 – 0

1996 – 5

1997 – 0

1998 – 1

1999 – 2

2000 – 3

2001 – 1

2002 – 2

2003 - 2

TOTAL 19

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**Fire Regime and Condition Class (FRCC):**

**GSENM Field Office  
FRCC TABLE**

Date: 9/2/04

FMU Name: Collett/Fifty Mile Mtn.

FMU Number:  
030CTF

167702

Use appropriate management on fires 500 acres or greater. Promote regeneration on aspen patches. Consult a resource advisor and suppress fires above FIL 3. Consider handcutting and prescribed fire on aspen patches to promote regeneration not to exceed 100 acres over ten years. Protect structures such as historic line cabins. Fire use up to 1,000 acres over ten years.

**EXISTING**

Veg type	Acres	% Area	Fire Regime	Existing CC	<b>DESIRED</b>			
					Desired CC	Veg type	% Change	Acres
Pinyon	10,498	6	2	2		regenerate aspen		100
Pinyon-juniper	101,951	61	2	3				
Juniper	31,072	19	2	3				
Sagebrush	6,045	4	2	3				

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Sagebrush/perennial Grass	9,094	5	2	3				
Grassland	628	0	1	3				
Desert Grassland		0	1	3				
PIPO/Mtn Shrub		0	1	3				
Mountain Shrub	38	0	2	2				
Salt Desert Shrub	6,083	4	5	3				
Ponderosa Pine		0	4	3				
Ponderosa/Mtn.Shrub		0	1	3				
Dry Meadow	2,294	1	1	3				
Oak	1	0	1	2				

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Blackbrush		0	5	2				
urban		0	5	3				
Barren		0						
Agriculture		0						

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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Range Improvements and historic line shacks
- Cultural resources
- Dispersed Recreation such as hunting

**Communities at Risk:**

There are no communities in this FMU. There may be smoke issues with Glen Canyon National Recreation Area, Capitol Reef National Park and the towns of Escalante and Boulder, Utah and Page, AZ.

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Monument Management Plan

- FIRE-1        "...The objective of the fire management program will be to allow fire to play its natural role in the ecosystem. Management ignited fires may be initiated in areas where fire suppression has disrupted natural fire regimes.
- FIRE-2        "...Specific zoned areas (FMUs) and policies have been established to indicate how suppression activities will be managed in specific areas of the Monument. Most of the Monument is included in zones that have little fire suppression activity."
- FIRE-3        "Heavy equipment use is allowed through authorization of the Monument Manager."
- FIRE-4        "A designated fire resource advisor familiar with WSA issues will be consulted on all fires within the Monument that involve WSAs."

Fire Management Objectives

Where possible with consideration to Values at Risk, use fire to achieve management objectives.

Utilize Light-on-the-Land minimum suppression strategies and Wildland Fire Use to achieve management objectives, limit surface disturbance and reduce costs.

Allow fire to play a natural role, promote the regeneration of aspen patches by burning at low temperatures or using low impact mechanical means and create a mosaic through conversion of areas of Pinyon-juniper and juniper to sagebrush/perennial grassland. In



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this FMU, individual wildfires up to 500 acres would contribute to creating the desired mosaic. Wildfires exceeding 500 acres that continue to meet management objectives should be managed under Wildland Fire Use and appropriate suppression strategies. Determination of appropriate suppression strategy should be made in consultation with a resource advisor.

Fire Management Strategies:

**Suppression:**

A resource advisor needs to be ordered on every fire and is to be consulted on fire suppression strategies and resources/values at risk. Protect historic structures such as line cabins. While the opportunity for the use of heavy equipment for suppression/prescribed fire and mechanical treatments is extremely limited, it is allowed when authorized by the Monument Manager. Promote the regeneration of aspen patches by allowing wildfire on FIL above 3.

Wildfires will be monitored unless life, private property or Values at Risk are threatened. Protect historic structures.

Limit wildfires within identified special status plant species habitat to 5 acres and within riparian areas to 100 acres.

**Wildland Fire Use:**

Wildfires not threatening Communities or Values at Risk will be managed under Wildland Fire Use if they continue to meet management objectives, particularly allowing fire to play its natural role in the ecosystem, and the current status is within National Preparedness Levels 1-3. (Estimate about 1000 acres over ten years for analysis purposes.)

**Prescribed Fire:**

Use as part of the strategy to enhance regeneration of aspen patches if appropriate.

**Non-fire fuels Treatments:**

Hand cutting within aspen patches will be planned up to 100 acres over ten years.

**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan.

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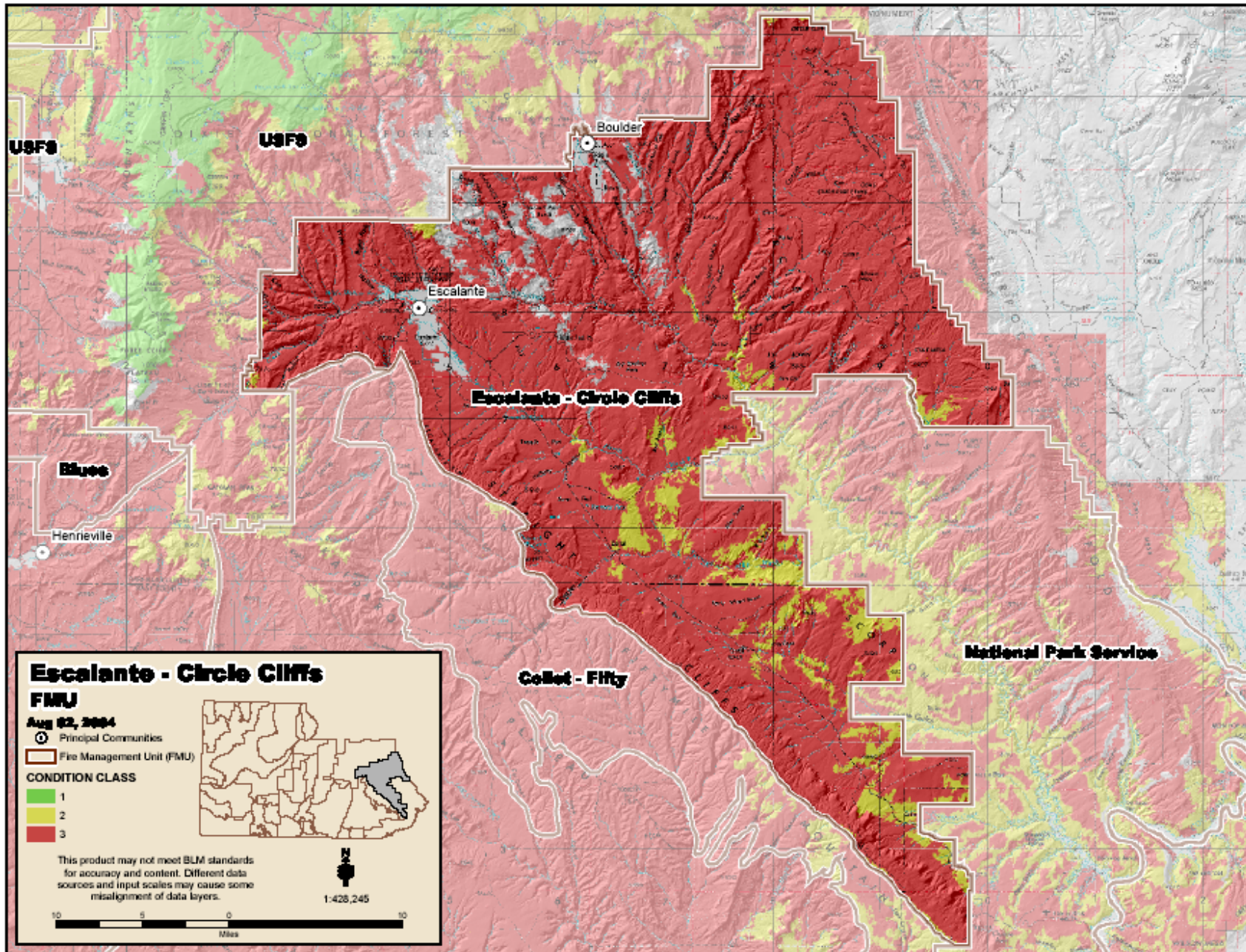
A cultural survey of the fire area should be conducted immediately to avoid damaging cultural sites during restoration and rehabilitation.

Fire rehabilitation and stabilization should begin immediately during suppression. Seeding, where appropriate, should take place as soon as conditions favor successful seed germination but no later than the following spring. Prevention of cheat grass dominance and noxious weed invasion should be high priorities in developing rehabilitation and seeding plans.

Areas with high species diversity may not need to be reseeded if conditions are beneficial to natural re-establishment. Conditions which may preclude natural re-seeding include high fire intensity, large fire size, lack of a residual plant community, seed bank, or adjacent seed source. Post fire weed management will include all invasive plant species not just noxious weeds. Fire rehabilitation areas will be monitored annually for three years and in five year increments thereafter for invasive and noxious weeds.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).

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**FMU DESCRIPTION**

Escalante-Circle Cliffs

**Location:**

This FMU is in the northeast corner of the Monument. It includes the area around the towns of Escalante and Boulder, the Hole in the Rock road, the Canyons of the Escalante and the Circle Cliffs area. Its boundaries are the Dixie National Forest on the north, Capitol Reef and Glen Canyon National Recreation area on the east and the Kaiparowits Plateau escarpment (Fifty-Mile Mt.) on the south and east. Fiftymile Bench is in this FMU. The FMU is bordered on the west by the Collet-Fiftymile Mountain FMU.

Ownership Acres:

BLM –	572889
Private –	23268
State –	6116
Other –	568
TOTAL	602842

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 3,700 feet to 6,800 feet above sea level. (A-4)  
There are large areas of slickrock sandstone.

Precipitation

Precipitation averages about 9 to 11 inches of water per year, as modeled by the Parameter-elevation Regressions on Independent Slopes Model (PRISM). 1961-1990.

Vegetation

Vegetation consists of pinyon-juniper, juniper, sagebrush, grassland, blackbrush and riparian river bottoms.

STATSGO Soil Type

Soil Type	Acres
456	51.78
654	37195.39
673	40997.78
675	1185.53
715	8586.64
734	199545.69
735	109505.01
736	13507.06

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740	43540.5
741	148726.69
TOTAL	602842.08

Special Status Species

(Kanab list) From the Utah Natural heritage Program Data base for Kane County, not all species and Habitats occur in this FMU

ALLEN'S BIG-EARED BAT	IDIONYCTERIS PHYLLOTIS	SPC
ARIZONA TOAD	BUFO MICROSCAPHUS	SPC
BALD EAGLE	HALIAEETUS LEUCOCEPHALUS	S-ESA
BIG FREE-TAILED BAT	NYCTINOMOPS MACROTIS	SPC
BONNEVILLE CUTTHROAT TROUT	ONCORHYNCHUS CLARKI UTAH	CS
BURROWING OWL	ATHENE CUNICULARIA	SPC
COMMON CHUCKWALLA	SAUROMALUS ATER	SPC
DESERT NIGHT LIZARD	XANTUSIA VIGILIS	SPC
FERRUGINOUS HAWK	BUTEO REGALIS	SPC
FRINGED MYOTIS	MYOTIS THYSANODES	SPC

**Kane County**

Common Name	Scientific Name	State Status
GREATER SAGE-GROUSE	CENTROCERCUS UROPHASIANUS	SPC
KANAB AMBERSNAIL	OXYLOMA KANABENSE	S-ESA
KIT FOX	VULPES MACROTIS	SPC
LEWIS'S WOODPECKER	MELANERPES LEWIS	SPC
LONG-BILLED CURLEW	NUMENIUS AMERICANUS	SPC
NORTHERN GOSHAWK	ACCIPITER GENTILIS	CS
SOUTHWESTERN WILLOW FLYCATCHER	EMPIDONAX TRAILLII EXTIMUS	S-ESA
SPOTTED BAT	EUDERMA MACULATUM	SPC
SPOTTED OWL	STRIX OCCIDENTALI	S S-ESA
THREE-TOED WOODPECKER	PICOIDES TRIDACTYLUS	SPC
TOWNSEND'S BIG-EARED BAT	CORYNORHINUS TOWNSENDII	SPC
WESTERN TOAD	BUFO BOREAS	SPC
YELLOW-BILLED CUCKOO	COCCYZUS AMERICANUS S-	ESA

**SPECIAL STATUS PLANTS-KANAB FIELD OFFICE**

WELSH'S MILKWEED	ASCLEPIAS WELSHII	ESA
GUMBO MILK-VETCH	ASTRAGALUS AMPULLARIUS	C-2
ATWOOD'S CAMISSONIA	CAMISSONIA ATWOODII	C-2
SLENDER CAMISSONIA	CAMISSONIA EXILIS	C-2
REVEAL INDIAN PAINTBRUSH	CASTILLEJA REVEALII	C-2
SAND-DWELLING CRYPTANTH	CRYPTANTHA CINEREA ARENICOLA	C-2
YELLOW-WHITE CATSEYE	CRYPTANTHA OCHROLEUCA	C-2
JONES CYCLADENIA	CYCLADENIA HUMILIS VAR. JONESII	ESA
HIGGINS BISCUITROOT	CYMOPTERUS ACAULIS VAR. HIGGINSII	C-2
CEDAR BREAKS BISCUITROOT	CYMOPTERUS MINIMUS	C-2
ZION DAISY	ERIGERON SIONIS	C-2
ALCOVE DAISY	ERIGERON ZOTHECINUS	C-2
CEDAR BREAKS GOLDENBUSH	HAPLOPAPPUS ZIONIS	C-2
PARIA IRIS	IRIS PARIENSIS	C-2
KODACHROME BLADDERPOD	LESQUERELLA TUMULOSA	ESA
SILER PINCUSHION CACTUS	PEDIOCACTUS SILERI	ESA
KANE BREADROOT	PEDIOMELUM EPIPSILUM	C-2
PARIA BREADROOT	PEDIOMELUM PARIENSE	C-2
SANDLOVING PENSTEMON	PENTEMON AMMOPHILUS	C-2
AUTUMN BUTTERCUP	RANUNCULUS ACRIFORMIS AESTIVALIS	ESA
ZION TANSY	SPHAEROMERIA RUTHIAE	C-2

*Spiranthes diluvialis* (Threatened) – Plateau ladies-tresses is a federally listed threatened species that occurs downstream of the Deer Creek Campground in the wet meadows adjacent to the creek. To avoid disturbance to this species, minimum impact suppression with hand tools is preferred with no mechanized equipment used in this area. Fire size

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should be limited to 5 acres where this population occurs. Management ignited fires should not be planned without consultation with the U.S. Fish and Wildlife Service.

*Cycladenia humilis* var. *jonesii* (Threatened) – To avoid disturbance to this species, minimum impact suppression with hand tools is preferred with no mechanized equipment used in this area. Fire size should be limited to 5 acres where this population occurs. Management ignited fires should not be planned in Jones' cycladenia habitat without consultation with the U.S. Fish and Wildlife Service.

All other special status plant species (BLM Sensitive) – No mechanized equipment and hand tools are recommended for these populations. Fire size should be limited to 5 acres.

There are habitats for special status animal species including endangered Mexican spotted owls and southwest willow flycatchers.

Other Sensitive Resources

Critical deer winter range

The area north of the Escalante River and east of Horse Canyon is important deer winter range.

Riparian

The FMU contains extensive areas of riparian vegetation along the Escalante River and its tributaries. No mechanized equipment and use of hand tools is recommended. Fire size should be limited to 100 acres.

Noxious Weeds

All machinery and equipment should be high pressure washed to remove loose soil and vegetative matter before entering project/incident areas where appropriate.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

- FIL 1 = 0-2 feet
- FIL 2 = 2-4 feet
- FIL 3 = 4-6 feet
- FIL 4 = 6-8 feet
- FIL 5 = 8-12 feet
- FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	0.0
FIL 2 –	0.81
FIL 3 –	90.42

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FIL 4 –	0.23
FIL 5 –	0.16
FIL 6	0.16
Unclassified-	119.46
TOTAL-	211.23

Fire Starts by Year

Year	Number
1993 –	1
1994 –	12
1995 –	4
1996 –	11
1997 –	2
1998 –	0
1999 –	4
2000 –	9
2001 –	9
2002 –	6
2003 -	19
TOTAL	77

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**Fire Regime and Condition Class (FRCC):**

**GSENM Field Office  
 FRCC TABLE**

Date: 9/2/04

FMU Name: Escalante Circle Cliffs

FMU Number: 030ECC

572889

Use appropriate management response to wildfire. Use full suppression in identified sensitive resource areas. Convert 20,000 acres of pinyon juniper to sagebrush/perennial grass/forbs and 20,000 acres of juniper to grasslands using wildfire, prescribed fire and non-fire fuels methods.

**EXISTING**

**DESIRED**

Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon	1,925	0	2	2				
Pinyon-juniper	110,175	19	2	3	1 & 2	sage/grass/forb	18	20,000
Juniper	84,300	15	2	3	1 & 2	grassland	24	20,000
Sagebrush	18,612	3	2	3				
Sagebrush/perennial Grass	21,964	4	2	3				



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Grassland	49,905	9	1	3				
Desert Grassland	113,994	20	1	3				
PIPO/Mtn Shrub		0	1	3				
Mountain Shrub	480	0	2	2				
Salt Desert Shrub	114,932	20	5	3				
Ponderosa Pine		0	4	3				
Ponderosa/Mtn. Shrub		0	1	3				
Dry Meadow	34	0	1	3				
Oak	258	0	1	2				
Blackbrush	38,122	7	5	2				

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Urban	8	0	5	3				
Barren	18,058	3						
Agriculture	124	0						

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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Communication Sites
- Private lands including private residences.
- Range Improvements
- Habitats for special status species
- Critical deer winter range
- Cultural resources
- Transmission Lines (smoke)
- Dispersed Recreation
- Rights of Way
- Calf Creek and Deer Creek Campgrounds
- Escalante Petrified Forest State Park

**Communities at Risk:**

There are WUI areas at Escalante and Boulder, Utah, and private residences in Main Canyon west of Escalante.

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Monument Management Plan

- FIRE-1        "...The objective of the fire management program will be to allow fire to play its natural role in the ecosystem. Management ignited fires may be initiated in areas where fire suppression has disrupted natural fire regimes.
- FIRE-2        "...Specific zoned areas (FMUs) and policies have been established to indicate how suppression activities will be managed in specific areas of the Monument. Most of the Monument is included in zones that have little fire suppression activity."
- FIRE-3        "Heavy equipment use is allowed through authorization of the Monument Manager."
- FIRE-4        "A designated fire resource advisor familiar with WSA issues will be consulted on all fires within the Monument that involve WSAs."

Fire Management Objectives

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Allow fire to play a natural role and create a mosaic through conversion of areas of pinyon-juniper and juniper to sagebrush/perennial grassland. The northwest corner of the FMU is important deer winter and migratory habitat that would benefit from the mosaic effects of fire. Convert up to 20,000 acres to sagebrush/perennial grass/ forbs over ten years. In juniper encroachment areas along the Hole in the Rock Road, convert from pinyon-juniper to perennial grassland. In both these areas use of natural fire, prescribed fire and mechanical treatments is desired for enhancement of resource values. In this FMU, individual wildfires up to 1,000 acres would contribute to creating the desired mosaic. Wildfires exceeding 1,000 acres that continue to meet management objectives should be managed under Wildland Fire Use and appropriate suppression strategies. Determination of appropriate suppression strategy should be made in consultation with a resource advisor.

Where possible with consideration to Values at Risk, use fire to achieve management objectives.

Utilize Light-on-the-Land minimum suppression strategies and Wildland Fire Use to achieve management objectives, limit surface disturbance and reduce costs.

Fire Management Strategies:

**Suppression:**

Unless life, private property or Values at Risk are threatened use appropriate management response to fire. A resource advisor needs to be ordered on every fire and is to be consulted on fire suppression strategies and resources/values at risk.

In this FMU, individual wildfires up to 1,000 acres would contribute to creating the desired mosaic. Wildfires exceeding 1,000 acres that continue to meet management objectives should be managed under Wildland Fire Use and appropriate suppression strategies. Determination of appropriate suppression strategy should be made in consultation with a resource advisor.

All fires within Jones' Cycladenia and Plateau Ladies Tresses habitats should be immediately suppressed using low impact/non-surface disturbing methods. Heavy equipment use for suppression/prescribed fire and mechanical treatments is allowed only through authorization by the Monument Manager.

The FMU contains extensive areas of riparian vegetation along the Escalante River and its tributaries. No mechanized equipment and use of hand tools is recommended. Fire size should be limited to 100 acres.

Limit wildfires within identified special status plant species habitat to 5 acres and within riparian areas to 100 acres.

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Fires in blackbrush dominated areas will be suppressed based on the advice of the resource advisor.

**Wildland Fire Use:**

Wildfires not threatening Communities or Values at Risk will be managed under Wildland Fire Use if they continue to meet management objectives, particularly allowing fire to play its natural role in the ecosystem, and the current status is within National Preparedness Levels 1-3.

**Prescribed Fire:**

Use as part of the strategy to convert encroaching pinyon-juniper and juniper to more diverse plant communities and perennial grasslands (40,000 acres over 10 years) and to improve age class diversity. Prescribed fire should not be allowed in Jones' Cycladenia or Plateau Ladies Tresses habitat.

**Non-fire fuels Treatments:**

Use as part of wildfire and prescribed fire to improve habitat on 40,000 acres.

**Restoration & Rehabilitation:**

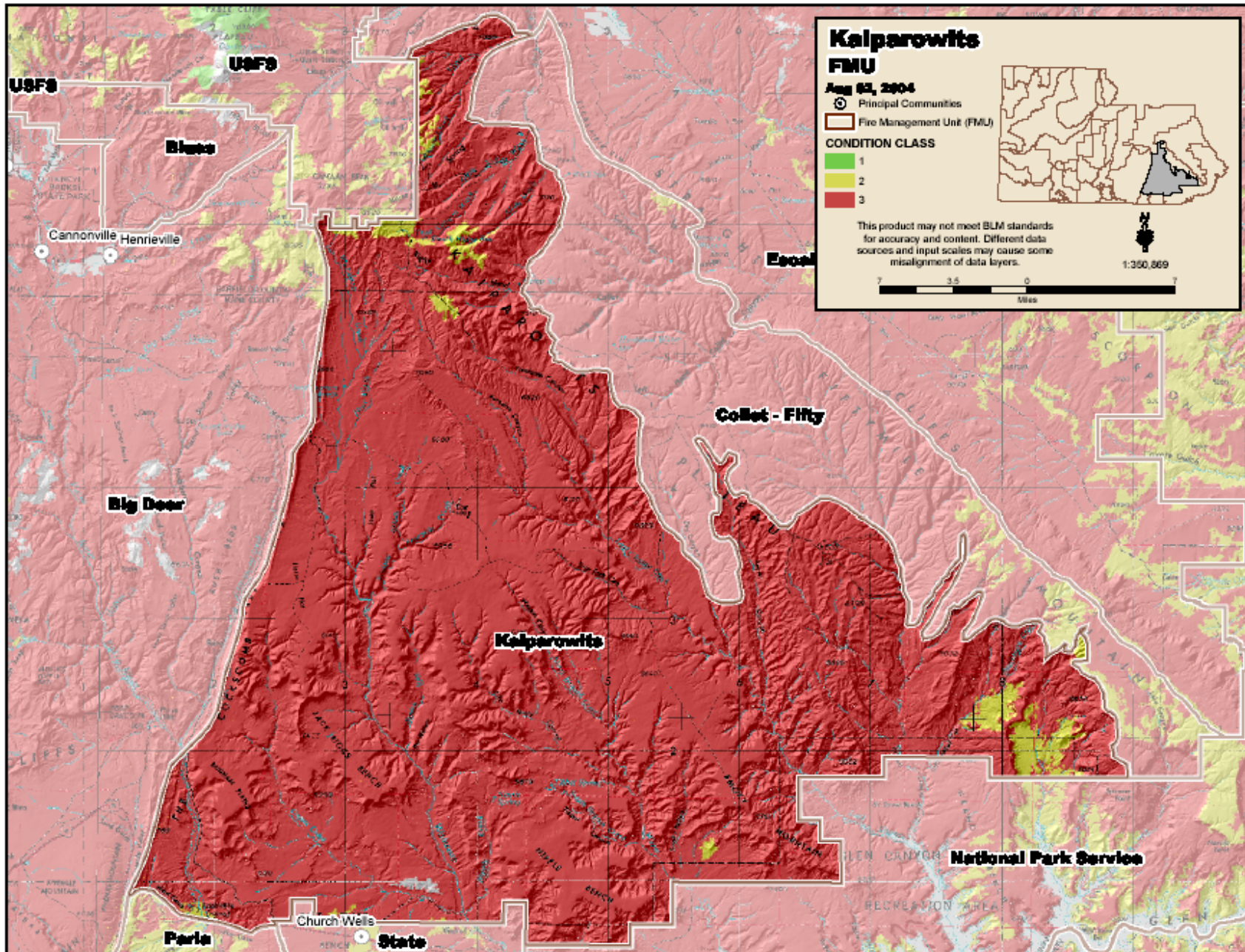
Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan.

Fire rehabilitation and stabilization should begin immediately during suppression. Seeding, where appropriate, should take place as soon as conditions favor successful seed germination but no later than the following spring. Prevention of cheat grass dominance and noxious weed invasion should be high priorities in developing rehabilitation and seeding plans.

Areas with high species diversity may not need to be reseeded if conditions are beneficial to natural re-establishment. Conditions which may preclude natural re-seeding include high fire intensity, large fire size, lack of a residual plant community, seed bank, or adjacent seed source. Post fire weed management will include all invasive plant species not just noxious weeds. Fire rehabilitation areas will be monitored annually for three years and in five year increments thereafter for invasive and noxious weeds.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).

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**FMU DESCRIPTION**

Kaiparowits

**Location:**

This FMU is the lower elevation area of the Kaiparowits Plateau from Cottonwood Wash on the west to Fiftymile Mountain and Collett area on the east. The northern extremity is south of Escalante Town and the southern boundary extends to Glen Canyon National Recreation Area, a large block of state land and the Paria FMU.

Ownership Acres:

BLM –	568413
Private –	536
State –	0.12
Other –	0.05
TOTAL	568949

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 5,500 feet to 8,600 feet above sea level. The FMU is extremely rugged, largely inaccessible other than by foot or helicopter and highly dissected by numerous steep walled canyons.

Precipitation

Precipitation averages about 9 to 11 inches per year, as modeled by the Parameter-elevation Regressions on Independent Slopes Model (PRISM). 1961-1990.

Vegetation

Vegetation consists of pinyon-juniper, juniper, sagebrush, grassland, mountain brush and scattered open ponderosa pine stands. The FMU spans the range of vegetation from the hot desert on the shores of Lake Powell up to the conifers on Canaan Peak. The majority of the area is scattered pinyon-juniper with limited understory vegetation. Riparian areas are small and widely scattered. Stream reaches are usually short with limited flows and vegetation. Tamarisk is common in washes.

STATSGO Soil Type

Soil Type	Acres
654	54059.73
671	.022
672	6810.42
673	198655.35
674	39906.5

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675	84322.40
676	15274.89
677	49535.07
678	103556.96
683	30.64
715	214.83
728	12360.51
729	959.41
730	3262.05
TOTAL	568949.00

Special Status Species

(Kanab list) From the Utah Natural heritage Program Data base for Kane County, not all species and Habitats occur in this FMU

ALLEN'S BIG-EARED BAT	IDIONYCTERIS PHYLLOTIS	SPC
ARIZONA TOAD	BUFO MICROSCAPHUS	SPC
BALD EAGLE	HALIAEETUS LEUCOCEPHALUS	S-ESA
BIG FREE-TAILED BAT	NYCTINOMOPS MACROTIS	SPC
BONNEVILLE CUTTHROAT TROUT	ONCORHYNCHUS CLARKI UTAH	CS
BURROWING OWL	ATHENE CUNICULARIA	SPC
COMMON CHUCKWALLA	SAUROMALUS ATER	SPC
DESERT NIGHT LIZARD	XANTUSIA VIGILIS	SPC
FERRUGINOUS HAWK	BUTEO REGALIS	SPC
FRINGED MYOTIS	MYOTIS THYSANODES	SPC

**Kane County**

Common Name	Scientific Name	State Status
GREATER SAGE-GROUSE	CENTROCERCUS UROPHASIANUS	SPC
KANAB AMBERSNAIL	OXYLOMA KANABENSE	S-ESA
KIT FOX	VULPES MACROTIS	SPC
LEWIS'S WOODPECKER	MELANERPES LEWIS	SPC
LONG-BILLED CURLEW	NUMENIUS AMERICANUS	SPC
NORTHERN GOSHAWK	ACCIPITER GENTILIS	CS
SOUTHWESTERN WILLOW FLYCATCHER	EMPIDONAX TRAILLII EXTIMUS	S-ESA
SPOTTED BAT	EUDERMA MACULATUM	SPC
SPOTTED OWL	STRIX OCCIDENTALI	S S-ESA
THREE-TOED WOODPECKER	PICOIDES TRIDACTYLUS	SPC
TOWNSEND'S BIG-EARED BAT	CORYNORHINUS TOWNSENDII	SPC
WESTERN TOAD	BUFO BOREAS	SPC
YELLOW-BILLED CUCKOO	COCCYZUS AMERICANUS S-	ESA

**SPECIAL STATUS PLANTS-KANAB FIELD OFFICE**

WELSH'S MILKWEED	ASCLEPIAS WELSHII	ESA
GUMBO MILK-VETCH	ASTRAGALUS AMPULLARIUS	C-2
ATWOOD'S CAMISSONIA	CAMISSONIA ATWOODII	C-2
SLENDER CAMISSONIA	CAMISSONIA EXILIS	C-2
REVEAL INDIAN PAINTBRUSH	CASTILLEJA REVEALII	C-2
SAND-DWELLING CRYPTANTH	CRYPTANTHA CINEREA ARENICOLA	C-2
YELLOW-WHITE CATSEYE	CRYPTANTHA OCHROLEUCA	C-2
JONES CYCLADENIA	CYCLADENIA HUMILIS VAR. JONESII	ESA
HIGGINS BISCUITROOT	CYMOPTERUS ACAULIS VAR. HIGGINSII	C-2
CEDAR BREAKS BISCUITROOT	CYMOPTERUS MINIMUS	C-2
ZION DAISY	ERIGERON SIONIS	C-2
ALCOVE DAISY	ERIGERON ZOTHECINUS	C-2
CEDAR BREAKS GOLDENBUSH	HAPLOPAPPUS ZIONIS	C-2
PARIA IRIS	IRIS PARIENSIS	C-2
KODACHROME BLADDERPOD	LESQUERELLA TUMULOSA	ESA
SILER PINCUSHION CACTUS	PEDIOCACTUS SILERI	ESA
KANE BREADROOT	PEDIOMELUM EPIPSILUM	C-2
PARIA BREADROOT	PEDIOMELUM PARIENSE	C-2
SANDLOVING PENSTEMON	PENTEMON AMMOPHILUS	C-2



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AUTUMN BUTTERCUP  
ZION TANSY

RANUNCULUS ACRIFORMIS AESTIVALIS  
SPHAEROMERIA RUTHIAE

ESA  
C-2

All special status plant species (BLM Sensitive) – No mechanized equipment and hand tools are recommended for these populations. Fire size should be restricted to 5 acres.

There are habitats for special status species including endangered Mexican spotted owls and southwest willow flycatchers. The FMU is visited by the California Condor.

Other Sensitive Resources

Noxious Weeds

All machinery and equipment should be high pressure washed to remove loose soil and vegetative matter before entering project/incident areas where appropriate.

Riparian areas/Seeps and Springs

No mechanized equipment and use of hand tools is recommended. Fire size should be limited to 100 acres.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

FIL 1 = 0-2 feet  
FIL 2 = 2-4 feet  
FIL 3 = 4-6 feet  
FIL 4 = 6-8 feet  
FIL 5 = 8-12 feet  
FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	0.0
FIL 2 –	8.49
FIL 3 –	153.93
FIL 4 –	0.0
FIL 5 –	7.92
FIL 6	0.0
Unclassified-	23.83
TOTAL-	194.16

Fire Starts by Year

Year	Number
1993 –	1
1994 –	3
1995 –	1
1996 –	2

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1997 –	0
1998 –	0
1999 –	0
2000 –	6
2001 –	2
2002 –	3
2003 -	2
TOTAL	20

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**Fire Regime and Condition Class (FRCC):**

**GSENM Field Office  
 FRCC TABLE**

Date: 7/8/04

FMU Name: Kaiparowits

FMU Number: 030KPW

568413

Except in sensitive resource areas identified, use appropriate management response to wildfire, prescribed fire and non-fire fuels techniques to convert 20,000 acres of PJ and 15,000 acres of juniper to sagebrush/grasslands. Fire use as approved by resource advisor.

**EXISTING**

**DESIRED**

Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon	4,937	1	2	2				
Pinyon-juniper	86,221	15	2	3	1 & 2	sagebrush/perennial grass		20,000
Juniper	71,020	12	2	3	1 & 2	sagebrush/perennial grass		15,000
Sagebrush	65,033	11	2	3				
Sagebrush/perennial Grass	7,396	1	2	3				

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Grassland	691	0	1	3				
Desert Grassland	13,176	2	1	3				
PIPO/Mtn Shrub	316	0	1	3				
Mountain Shrub	285	0	2	2				
Salt Desert Shrub	311,545	55	5	3				
Ponderosa Pine	52	0	4	3				
Ponderosa/Mtn. Shrub		0	1	3				
Dry Meadow		0	1	3				
Oak	6	0	1	2				
Blackbrush	6,859	1	5	2				

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Greasewood	338	0	5	3				
Barren	538	0						
Agriculture		0						

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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Private lands including private residences.
- Range Improvements
- Habitats for special status species
- Transmission Lines (smoke)
- Dispersed Recreation such as hunting
- Rights of Way

**Communities at Risk:**

There are WUI areas at Big Water and Church Wells, Utah. There may be smoke issues with Glen Canyon National Recreation Area, Capitol Reef National Park and the towns of Page, AZ, and Escalante and Boulder, Utah.

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives:

Monument Management Plan

- FIRE-1            "...The objective of the fire management program will be to allow fire to play its natural role in the ecosystem. Management ignited fires may be initiated in areas where fire suppression has disrupted natural fire regimes.
- FIRE-2            "...Specific zoned areas (FMUs) and policies have been established to indicate how suppression activities will be managed in specific areas of the Monument. Most of the Monument is included in zones that have little fire suppression activity."
- FIRE-3            "Heavy equipment use is allowed through authorization of the Monument Manager."
- FIRE-4            "A designated fire resource advisor familiar with WSA issues will be consulted on all fires within the Monument that involve WSAs."

Fire Management Objectives

Allow fire to play a natural role and create a mosaic through conversion of areas of Pinyon-juniper and juniper to sagebrush/perennial grassland. In this FMU, individual wildfires up to 5,000 acres would contribute to creating the desired mosaic. Wildfires exceeding 5,000 acres that continue to meet management objectives should be managed under Wildland Fire Use and appropriate suppression strategies. Use wildfire, prescribed fire, and mechanical treatment to convert 20,000 acres of pinyon-juniper and 15,000

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acres of juniper to sagebrush/perennial grass. Determination of appropriate suppression strategy should be made in consultation with a resource advisor.

Where possible with consideration to Values at Risk, use fire to achieve management objectives.

Utilize minimum impact suppression tactics (MIST) and Wildland Fire Use to achieve management objectives, limit surface disturbance and reduce costs.

Fire Management Strategies:

**Suppression:**

Unless life, private property or Values at Risk are threatened, use appropriate management response to wildfire. A resource advisor needs to be ordered on every fire and is to be consulted on fire suppression strategies/tactics and resources/values at risk. Heavy equipment use for suppression/prescribed fire and mechanical treatments is allowed only when authorized by the Monument Manager. Monitor fires by aircraft to ensure objectives are being met and fire management goals achieved.

Limit wildfires within identified special status plant species habitat to 5 acres and within riparian areas to 100 acres.

**Wildland Fire Use:**

Wildfires not threatening Communities or Values at Risk will be managed under Wildland Fire Use if they are meeting management objectives, particularly allowing fire to play its natural role in the ecosystem. Local and national preparedness levels, availability of resources and predicted weather will be key elements in a fire use go/no go decision. and the current status is within National Preparedness Levels 1-3.

**Prescribed Fire:**

Provide more of a mosaic of vegetation types within areas of heavy pinyon-juniper concentration by using wildfire, prescribed fire, and mechanical treatment to convert 20,000 acres of pinyon-juniper and 15,000 acres of juniper to sagebrush/perennial grass .

**Non-fire fuels Treatments:**

Use wildfire, prescribed fire, and mechanical treatment to convert 20,000 acres of pinyon-juniper and 15,000 acres of juniper to sagebrush/perennial grass.

**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan.

Fire rehabilitation and stabilization should begin immediately during suppression. Seeding, where appropriate, should take place as soon as conditions favor successful seed germination but no later than the following spring. Prevention of cheat grass dominance

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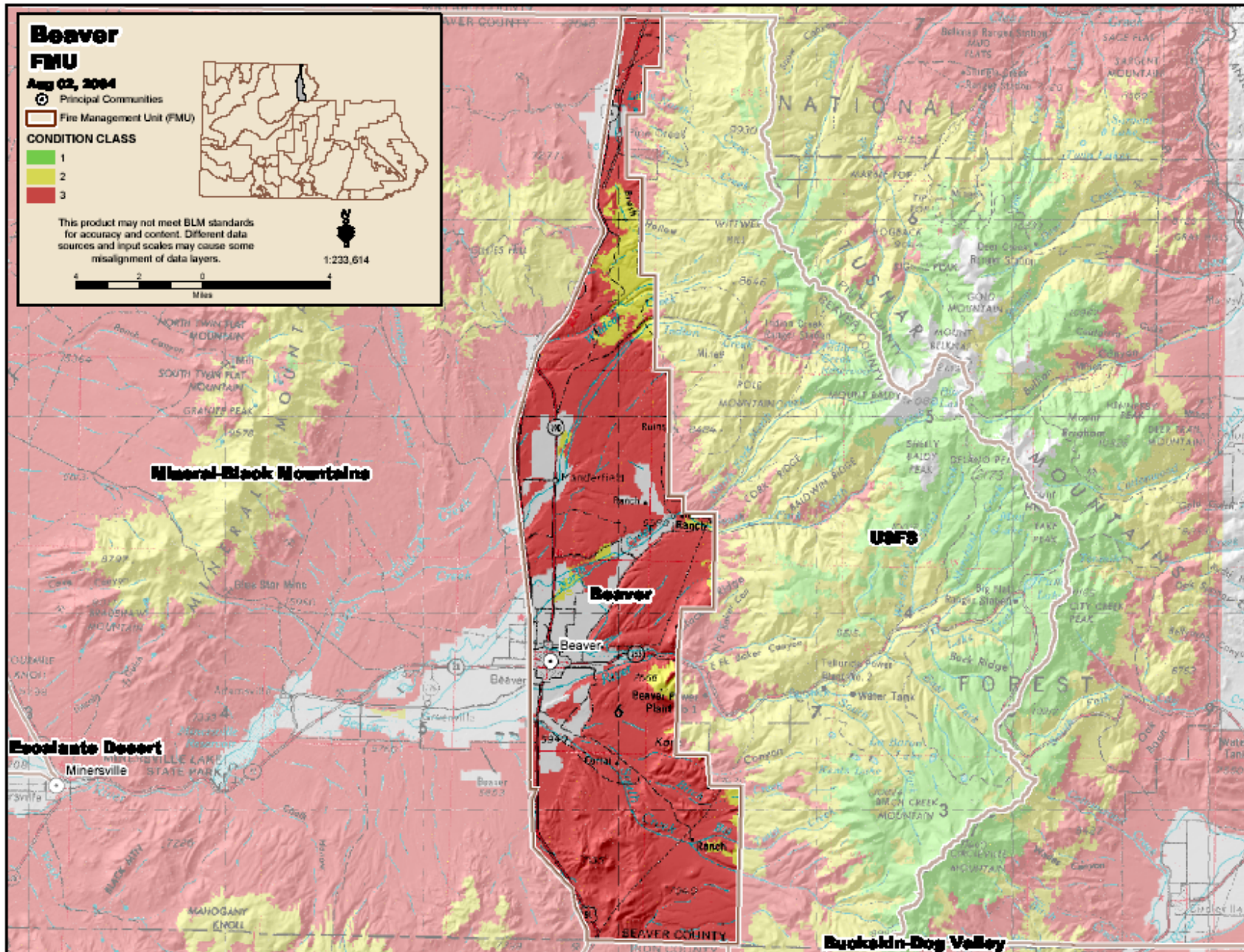
and noxious weed invasion should be high priorities in developing rehabilitation and seeding plans.

Areas with high species diversity may not need to be reseeded if conditions are beneficial to natural re-establishment. Conditions which may preclude natural re-seeding include high fire intensity, large fire size, lack of a residual plant community, seed bank, or adjacent seed source. Post fire weed management will include all invasive plant species not just noxious weeds. Fire rehabilitation areas will be monitored annually for three years and in five year increments thereafter for invasive and noxious weeds.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).



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**FMU DESCRIPTION**

Beaver

**Location:**

The Beaver FMU is located in the northeast corner of the Field Office with the Fishlake National Forest on the eastern boundary and the Mineral-Black Mountains FMU on the west. On the south is the Buckskin FMU.

Ownership Acres:

BLM –	43953
Private –	24362
State –	4050
Other Gov't	1625
Other –	140
TOTAL	74130

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 5800 feet to 7500 feet above sea level. Topography is gently rolling benches east of Interstate 15.

Precipitation

Precipitation averages about 14 inches of water per year, as recorded at the Manderfield rain gauge. However, average annual precipitation calculated using the PRISM method is 11 to 13 inches (from data prepared by the Spatial Climate Analysis Service of the Oregon Climate Service).

Vegetation

Vegetation types are primarily pinyon-juniper and sagebrush. The sagebrush type is valuable as important and crucial deer winter range. Much of the pinyon-juniper type is encroachment downslope into the sagebrush type from years of historic overgrazing and intensive fire control measures. Understory species are lacking in both major vegetation types.

Soils

Soils on this FMU are generally fairly stable. Only about 52 acres of public land were determined to be in critical soil erosion condition during the early 1980's modified soil and vegetation inventory. A large portion of this area is within the Minersville Reservoir CRMP area. It has been demonstrated on the Table Grounds fire rehabilitation that restoration efforts following a fire are a challenge due to OHV use from the Beaver area causing damage to the soil resource.

STATSGO Soil Types

Soil Type	Acres
521	4255

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581	56815
583	564
584	2240
588	6322
591	1532
697	196
701	2208
TOTAL	74130

Special Status Species

Special status animal species found in this area include bald eagle, northern goshawk, ferruginous hawk, Swainson's hawk, sage grouse, peregrine falcon, long-billed curlew, burrowing owl, Lewis' woodpecker, common yellowthroat, Townsend's big-eared bat, fringed myotis, and Bonneville cutthroat trout. There are no sensitive plant species in this unit.

Other Sensitive Resources

Riparian areas are found on streams that come off of the Forest Service. Beaver River has a trout fisheries.

Wildlife

This FMU contains important and crucial deer winter ranges (CDWR). CDWR is defined as that portion of the deer habitat, that if lost, would affect future survivability of the deer herd. Much of the more valuable CDWR habitat is in the sagebrush type. It is critical that uncontrolled wildfires not be allowed to burn in CDWR as these habitats are impractical, if not impossible, to restore to a desirable condition class following wildfire. There is elk winter use in the FMU. Historical sage grouse leks are found here. Wild turkey uses the riparian areas and the canyon areas.

Noxious Weeds

Natural rehabilitation potential is dependent upon existing perennial grasses and forbs on site and virtually all vegetation types at all elevations are subject to invasion by undesirable invader species, such as cheatgrass and Scotch thistle, following a wildfire. Because of its close proximity to Millard County, where knapweed is a problem, the FMU is vulnerable to the spread of knapweed.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

- FIL 1 = 0-2 feet
- FIL 2 = 2-4 feet
- FIL 3 = 4-6 feet
- FIL 4 = 6-8 feet
- FIL 5 = 8-12 feet
- FIL 6 = 12 + feet

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Acres by FIL

FIL 1 –	0.05
FIL 2 –	0.0
FIL 3 –	0.08
FIL 4 –	401.61
FIL 5 –	15.60
FIL 6	0.0
Unclassified-	349.52
TOTAL-	766.85

Fire Starts by Year

1993 –	2
1994 –	0
1995 –	1
1996 –	6
1997 –	2
1998 –	3
1999 –	5
2000 –	3
2001 –	2
2002 –	5
2003 -	1
TOTAL	30

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**Fire Regime and Condition Class (FRCC):**

**Cedar City Field Office  
FRCC TABLE**

Date: 7/30/04

FMU Name: Beaver

43953

Apply full suppression in sagebrush areas to protect communities and critical deer winter range. In PJ convert 9,000 acres to sagebrush/perennial grass. In juniper convert 2,000 acres to sagebrush/perennial grass. For PJ and juniper use wildfire, prescribed fire and mechanical treatments. Use prescribed fire and mechanical treatment on about 1000 acres of sagebrush is to be treated to improve age class diversity.

**EXISTING**

Veg type	Acres	% Area	Fire Regime	Existing CC	<b>DESIRED</b>			
					Desired CC	Veg type	% Change	Acres
Pinyon	359	1	2	2				
Pinyon-juniper	22,769	52	2	3	1 or 2	sage/grass	22	9000
Juniper	8,099	18	2	3	1 or 2	sage/grass	12	2000
Sagebrush	3,886	9	2	3	1 or 2	sage/grass mosaic	2	1000
Sagebrush/perennial Grass	3,605	8						
Grassland	1,181	3	1	3	3	grass/forbs	1	0
Mtn Fir	508	1	4	2				
Ponderosa Pine	137	0	1	3				
Oak	3,150	7						

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Riparian	99	0		3				
Urban	11	0						
Agriculture	148	0						

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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Communication Sites
- Private lands and structures
- I-15 (smoke)
- Range Improvements
- DWR and BLM guzzlers
- Crucial deer winter range
- Habitats for special status species
- Trout habitat
- Transmission Lines (smoke)
- Dispersed Recreation such as hunting
- South Creek Reservoir
- Rights of Way: powerlines, telephone lines, water pipelines, material sites, public water reserves, comm.. sites, irrigation facilities, water facilities, hydroelectric project for Beaver City

**Communities at Risk:**

Beaver, North Creek, Sulphurdale, Manderfield, Pine Creek

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Open up the pinyon-juniper and juniper plant communities to increase the sagebrush and grass in the plant composition. In the sagebrush create a mosaic of different age classes using prescribed fire or mechanical treatment.

Fire Management Objectives

Sagebrush vegetation type: Apply full suppression due to WUI and critical deer winter range. Limit fires in sagebrush to as small as possible.

Pinyon-juniper vegetation type: Allow fires to burn to 100 acres. As fires approach 100 acres, use appropriate response such as utilizing natural and man-made fuel breaks to allow for fire fighter safety and benefits anticipated from fire

Insofar as large areas of sagebrush habitat are not threatened, convert about 9000 acres over the next 10 years from pinyon-juniper to sagebrush/grass. Convert about abut 2000 acres from juniper to sagebrush/grass. In the sagebrush community treat about 1000 acres to create a mosaic of different age classes.

Allow mechanical treatments and brush pile burning.

Fire Management Strategies:

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**Suppression:**

Apply full suppression due to WUI and critical deer winter range. Limit fires in sagebrush to as small as possible. Pinyon-juniper vegetation type: Allow fires to burn to 100 acres. As fires approach 100 acres, use appropriate response such as utilizing natural and man-made fuel breaks to allow for fire fighter safety and benefits anticipated from fire as stated in the objectives section above.

**Wildland Fire Use:**

No fire use.

**Prescribed Fire:**

Small sage brush prescribed fires to create a diversity of age classes. Allow prescribed fire in pinyon-juniper type to meet management objectives. See non-fire fuels treatments below.

**Non-fire fuels Treatments:**

Allow the use of non-fire fuels treatments with priority on WUI areas and improving habitat conditions for mule deer. Treat up to 12,000 acres with prescribed fire and mechanical treatments over the life of this plan.

**Restoration & Rehabilitation:**

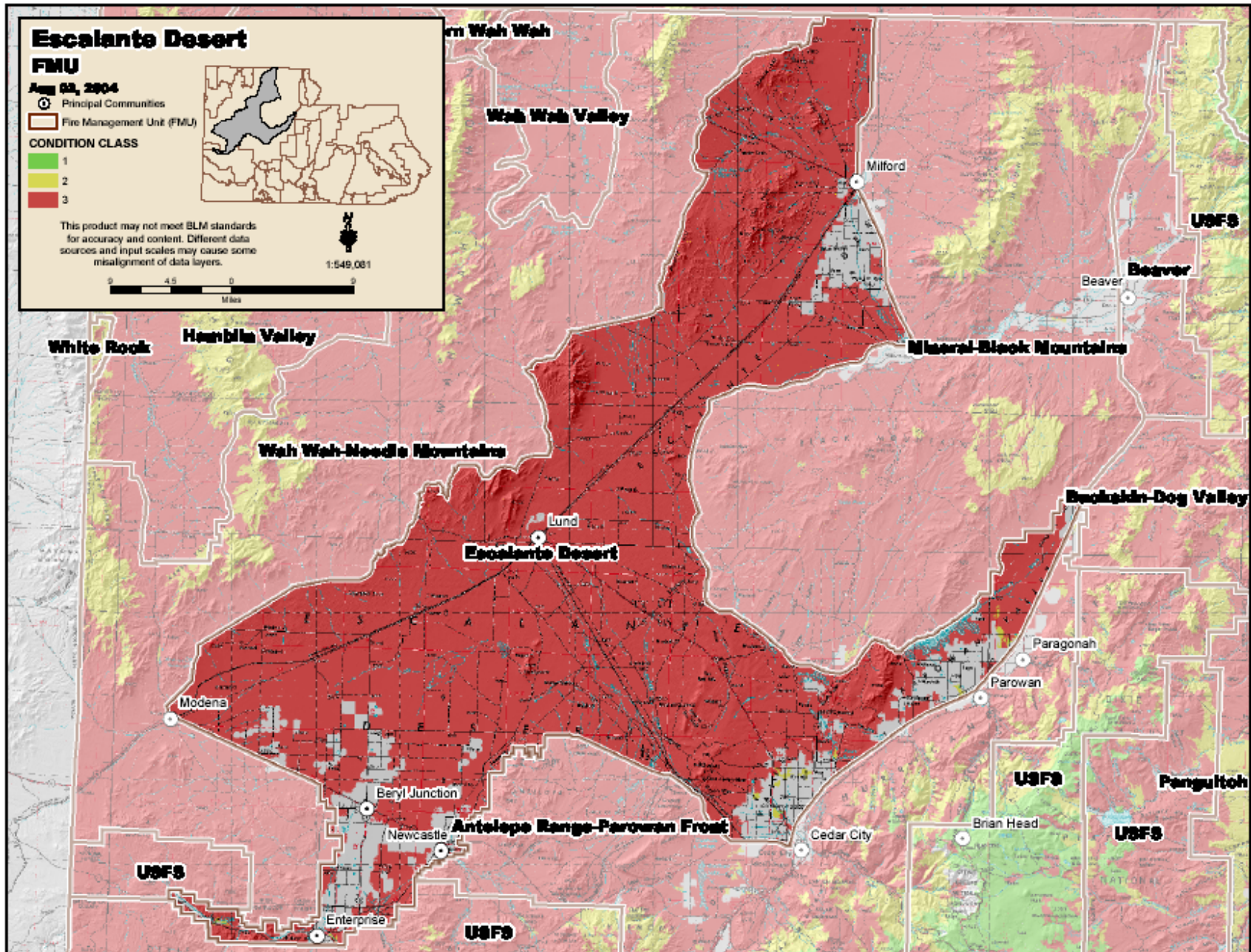
Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan.

**Community Protection/Community Assistance Objectives:**

Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).



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**FMU DESCRIPTION**

Escalante Desert

**Location:**

Escalante Desert is a large unit in the center of the Field Office. It is an interior FMU which angles from the northeast at the northern FO boundary (Millard Co.) to the southwest boundary with the Dixie National Forest. As shown below, land ownership is primarily private.

Ownership Acres:

BLM –	340,807
Private –	553,856
State –	70,141
Other Gov't	353
Other –	430
TOTAL	965587

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 4900 feet to 7400 feet above sea level. Topography is mostly flat to gently rolling with a few rock outcrops and steep inclusions, such as Table Butte, Blue Mountain, etc.

Precipitation

BLM maintains no less than five rain gauges within this FMU. The average precipitation for the year is very consistent across these gauges, with lows of 7.5 inches per year at three of the gauges and a high of 8.8 inches of rain at the Perry Well rain gauge. Relatively low precipitation implies artificial re-vegetation / restoration would likely be unsuccessful. However, average annual precipitation calculated using the PRISM method is 9 to 11 inches (from data prepared by the Spatial Climate Analysis Service of the Oregon Climate Service).

Vegetation

There are two primary vegetation types within this management category:

The salt desert shrub vegetation type is by far the most predominant, typically occupying the valley bottoms stretching from Enterprise in the south to Milford and beyond in the north. A large percentage of this area is under private ownership. Potential for burns of substantial size in the salt desert shrub is low, as evidenced by fire history for the FMU. However, annual forage production is capable of greatly increasing its biomass in years of abundant spring precipitation, so occasionally the potential for large burns exists. Natural rehabilitation potential is low for this vegetation type.

The sagebrush vegetation type is located on the west benches of the Escalante Desert and north of Cedar City. As with the salt desert shrub community, the majority of this

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vegetation type would have a low natural rehabilitation potential due to the lack of perennial forbs and grasses on site.

Human induced rehabilitation following a wildfire in this FMU is not likely to be very successful due to low precipitation, low fertility, and fragile soils prone to blowing. This area is likely to be very susceptible to invasion of noxious weeds.

Soils

STATSGO Soil Types

Soil Type	Acres
557	9466
579	435
658	4619
659	1384
660	906
661	3686
692	12153
693	272486
694	57972
695	83484
696	44778
697	26935
698	494
699	61783
700	1553
701	4267
702	338867
742	6874
743	15464
744	11369
745	6613
TOTAL	965587

Special Status Species

Special status animal species found in this unit are Utah prairie dog, bald eagle, ferruginous hawk, Swainson's hawk, peregrine falcon, long-billed curlew, burrowing owl, blue grosbeak, spotted bat, Townsend's big-eared bat, fringed myotis, and ringtail.

Sensitive plant species found in this unit are *Penstemon franklinii* and *Penstemon pinorum*.

Other Sensitive Resources

This FMU has pronghorn habitat.

There are small isolated springs and seeps that provide riparian habitat.

Noxious Weeds:

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This FMU is likely to be very susceptible to a variety of noxious weeds, including cheatgrass, halogeton, mustards, knapweeds and Russian and Scotch Thistles

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

FIL 1 = 0-2 feet  
FIL 2 = 2-4 feet  
FIL 3 = 4-6 feet  
FIL 4 = 6-8 feet  
FIL 5 = 8-12 feet  
FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	15.53
FIL 2 –	22.65
FIL 3 –	678.59
FIL 4 –	86.25
FIL 5 –	446.98
FIL 6	8.00
Uncl-	891.53
TOTAL-	2149.54

Fire Starts by Year

1993 –	5
1994 –	5
1995 –	1
1996 –	13
1997 –	3
1998 –	11
1999 –	7
2000 –	22
2001 –	28
2002 –	8
2003 -	12
TOTAL	115

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**Fire Regime and Condition Class (FRCC):**

**Cedar City Field Office  
FRCC TABLE**

Date: 9/2/04

FMU Name: Escalante Desert

340807

Full suppression area due to wildland urban interface and noxious weed potential. Use mechanical methods to treat 1000 acres and prescribed fire to treat 1000 acres. No fire use.

**EXISTING**

<b>EXISTING</b>					<b>DESIRED</b>			
Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon		0						
Pinyon-juniper	10,758	3	2	3				
Juniper	45,509	13	2	3	1 or 2	sage/grass	1	500
Sagebrush	144,261	42	2	3	1 or 2	grass/forb	1	1500
Sagebrush/perennial Grass	4,388	1	2	3				
Grassland	15,397	5	1	3				
Salt desert shrub	103,965	31	5	3				
Desert grassland	14,519	4						
L. riparian	210	0						
M. riparian	14	0						

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Greasewood	1,291	0						
agriculture	174	0						
barren	275	0						
urban	45	0						

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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Communication Sites
- Private lands including at least one primary residence and one cabin.
- I-15 (smoke)
- Range Improvements
- DWR and BLM guzzlers
- Wind towers
- Habitats for special status species
- Transmission Lines (smoke)
- Dispersed Recreation such as hunting
- Rights of Way (list from Elaine): telephone lines, railroad, powerlines, public water reserves, material sites, natural gas pipelines, communication sites.

**Communities at Risk:**

Lots of WUI areas in Cedar Valley (Enoch) and south of Zane.

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Protect private property, wildland urban interface, and prevent the spread of noxious weeds.

Fire Management Objectives

Management objectives are to keep fire to a minimum. Prescribed burning is recommended in this area. By reducing the existing fuel load in specific areas within this category, life and property may be protected and/or the possibility of large catastrophic fires would be reduced (i.e. wildland-urban interface, dense fuel concentrations).

Protect private property.

Keep fire out of low rehab potential areas; cheatgrass invasion likely.

Improve sagebrush with small prescribed and mechanical treatments.

Improve about 500 acres of juniper and convert to sage/grass over next 10 years (FRCC table).

Improve about 1500 acres of sagebrush community to grass/forb over the next 10 years (FRCC table).

Fire Management Strategies:

**Suppression:**

Apply full suppression within the majority of the FMU. Priority is on salt desert shrub and grassland communities. Fires in pinyon/juniper may require indirect attack to

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provide for firefighter safety while meeting resource objectives for conversion of vegetation types. Protect private lands and areas with low rehabilitation potential. Not a fire use area.

A Resource Advisor is recommended if it is likely that a fire may exceed the objectives described above. Suppression action within sensitive plant or T/E/sensitive animal areas will be as outlined in the multiple use restrictions for the species.

**Wildland Fire Use:**

Not a fire-use area.

**Prescribed Fire:**

Prescribed fires and mechanical treatments primarily in sagebrush, would be planned on an individual project basis and be designed to meet resource management objectives. Projects in aggregate will be limited to treat no more than 1,000 acres.

**Non-fire fuels Treatments:** Allow the use of fuels treatments to meet community and land use needs. Allow mechanical treatments primarily for sagebrush restoration limited to 1,000 acres.

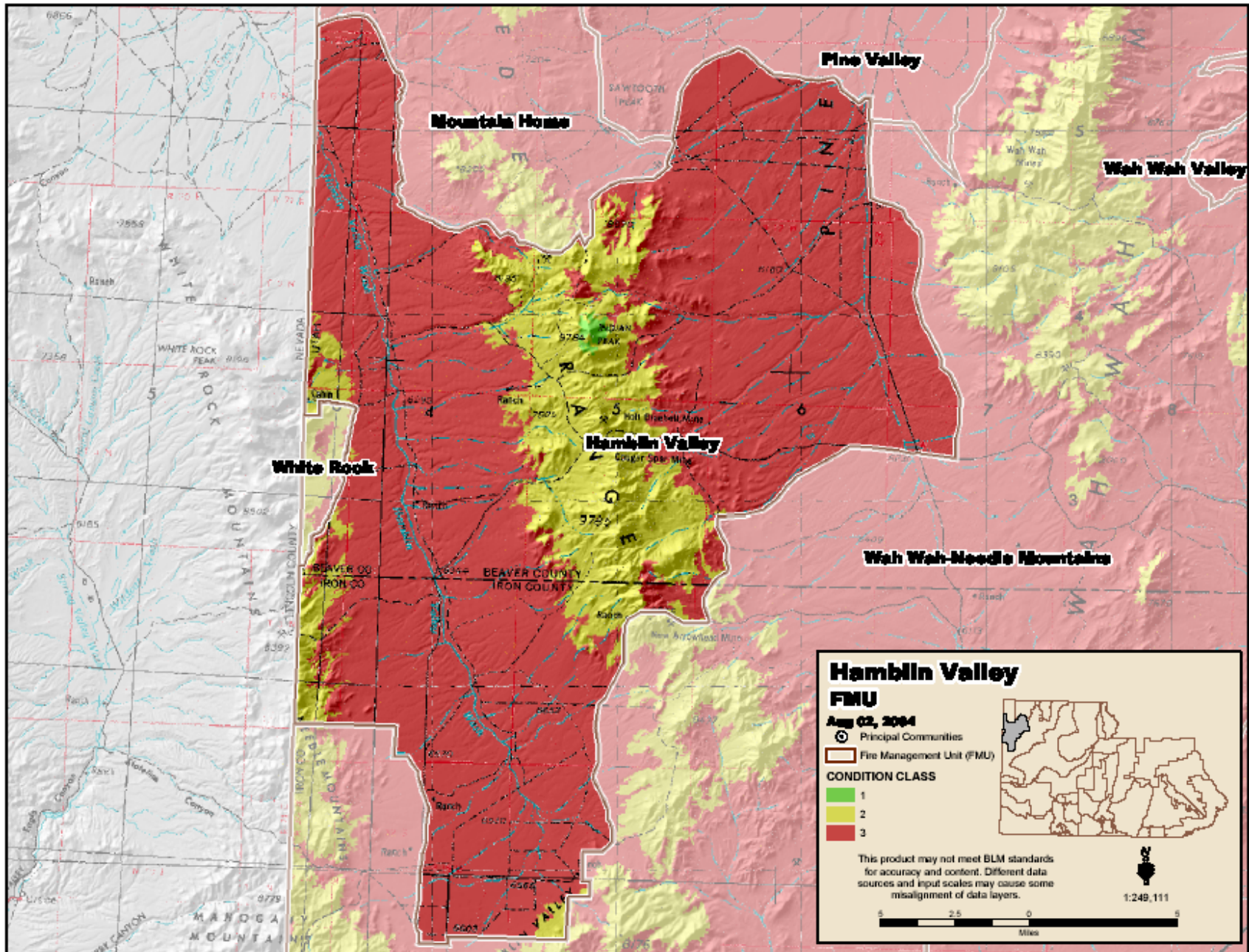
**Restoration & Rehabilitation:** Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan.

**Community Protection/Community Assistance Objectives:**

Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans.



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**FMU DESCRIPTION**

Hamblin Valley

**Location:**

The Hamblin Valley FMU is on the western side of the Field Office and adjoins Nevada. On the north is the Mountain Home FMU. Surrounding FMU is the Wah Wah Needle Mountains FMU.

Ownership Acres:

BLM –	184,290
Private –	23,452
State –	22,747
Indian Reservation –	10,260
Other	22
TOTAL	240,771

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 5600 feet to 9700 feet above sea level. Unit includes Hamblin and Pine Valleys, but also includes much of the Indian Peak mountain range. As a result, topography ranges from flat to very steep.

Precipitation

Precipitation is relatively high compared to elsewhere in the Field Office area, thus chances for natural and artificial rehabilitation of burned areas is relatively high. On the low side, annual precipitation averages about 8.2 inches at the North Hamblin Valley rain gauge and on the high side, 15.4 inches at the Indian Peak rain gauge. However, average annual precipitation calculated using the PRISM method is 15 to 17 inches (from data prepared by the Spatial Climate Analysis Service of the Oregon Climate Service).

Vegetation

Vegetation types within this FMU are extremely diverse, ranging from salt desert shrub (winterfat) at the low elevations to white fir and aspen at the higher elevations. The south end of Hamblin Valley is typified by grasslands (old land treatment projects). Most of the unit is dominated by pinyon-juniper (p-j) and sagebrush. Invasion of juniper into sagebrush areas is common due to lack of wildfire and historic overgrazing. Woodland values on woodland sites are high. Long term drought has had an effect on vegetation on the unit. Areas of sagebrush and pinyon die-off are prevalent in the FMU and would likely affect fire behavior.

Soils

Soil erosion is generally within acceptable limits. Steeper slopes would be susceptible to increased erosion following a wildfire. There are 10, 304 acres of public land where Soil Surface Factor ratings completed in the early 1980's place the soils in critical erosion condition.

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STATSGO Soil Types

Soil Type	Acres
155	7814
691	167334
699	65595
unclassified	28
TOTAL	240771

Noxious Weeds

Natural rehabilitation potential is dependent upon existing perennial grasses and forbs on site and virtually all vegetation types at all elevations are subject to invasion by undesirable invader species, such as cheatgrass, following a wildfire.

Special Status Species

Special status animal species found in this area include Utah prairie dog, bald eagle, northern goshawk, ferruginous hawk, Swainson's hawk, peregrine falcon, greater sage grouse, burrowing owl, Townsend's big-eared bat, and fringed myotis.

Sensitive plant species found in this category is *Astragalus oophorus lonchocalyx*.

Other Sensitive Resources

The Hamblin Valley unit is important for sage grouse. It also contains important habitat for elk, pronghorn antelope, and mule deer, though deer populations continue to be well below management objectives. The Indian Peak Wildlife Management Area is an inholding within this FMU. Wild horses are common in the FMU. Woodland values are high, especially for pine nut production, cedar posts, and Christmas trees.

There are numerous small springs and seeps in this FMU in various condition classes. Riparian resources consist of small isolated springs and perennial streams. Fire management is important in achieving riparian management objectives.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

- FIL 1 = 0-2 feet
- FIL 2 = 2-4 feet
- FIL 3 = 4-6 feet
- FIL 4 = 6-8 feet
- FIL 5 = 8-12 feet
- FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	0.0
FIL 2 –	9.04
FIL 3 –	1100.68
FIL 4 –	192.34

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FIL 5 –	412.44
FIL 6 –	72.85
Unclassified-	706.99
TOTAL-	2494.34

Fire Starts by Year

1993 –	1
1994 –	4
1995 –	1
1996 –	1
1997 –	0
1998 –	1
1999 –	5
2000 –	13
2001 –	8
2002 –	2
2003 -	8
TOTAL	44

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**Fire Regime and Condition Class (FRCC):**

**Cedar City Field Office  
FRCC TABLE**

Date: 9/2/04

FMU Name: Hamblin Valley

184290

Full suppression on sagebrush areas and where there are private lands and structures. On other areas use appropriate management response. Convert 5,000 acres of pinyon, 12,300 acres of pinyon-juniper, 5,000 acres of juniper to sagebrush/perennial grass using wildfire, prescribed fire and non-fire fuels treatments. Treat 5,000 acres of sagebrush to improve age-class diversity using prescribed fire and mechanical treatments. Maximum acres for prescribed fire is 10,000 acres over ten years. Maximum acres for mechanical treatment is 5,000 acres.

<b>EXISTING</b>					<b>DESIRED</b>			
Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon	32,456	18	2	3	1 & 2	mtn. bursh, sage/grass		5000
Pinyon-juniper	81,841	44	2	3	1 & 2	sage/grass		12,300
Juniper	32,581	18	2	3	1 & 2	sage/grass		5000
Sagebrush	6,814	4	2	3	1 & 2	sage/grass mosaic		5000
Sagebrush/perennial Grass	20,698	11	2	3		combined above		
Grassland	8,806	5	2	3	3	grass		
Des. Grass	9	0						

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Mtn. shrub	164	0	2	2				
Salt desert shrub	46	0	5	3				
Mtn. fir	407	0	3	2				
Aspen	191	0	4	2				
Other	54	0						
Spruce-Fir	222	0						
		0						
		0						

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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Private lands and cabins
- Range Improvements
- DWR and BLM guzzlers
- Riparian zones
- Mature pinyon forests
- Habitats for special status species
- Transmission Lines (smoke)
- Dispersed Recreation such as hunting
- Rights of Way – Ryan spring underground pipeline & related facilities easement; recreational cabin site (authorized); Also, there's an unauthorized, trespass corner of a cabin and outhouse on BLM in T. 30 S., R. 19 W., sec. 1; withdrawals for public water reserves; water pipeline. (Elaine 6/2/04)
- Youth Correction Groups authorized under SRPs

**Communities at Risk:**

Sheep Creek cabins  
Commissary Creek cabins  
Old mining structures  
South Hamblin Valley subdivisions  
O'Grain Ranch  
UDWR cabin at Indian Peak WMA  
Cabin south of Indian Peak WMA  
Homes west of Arrowhead Pass  
Cabins at Little Pinto Spring

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Important sage grouse, elk, and wild horse area. Enhance value for pronghorn antelope and deer where possible. Retain existing stands of sagebrush. In sagebrush areas which are being invaded by juniper, improve the habitat by use of wild fire, prescribed burns, and mechanical treatments.

Consider Sage Grouse Habitat Guidelines and Utah Prairie Don Interim Conservation Strategy to determine if resource goals will be met when taking appropriate management response.

Fire Management Objectives

Use wildfire, prescribed fire and non-fire fuels projects to convert about 5,000 acres over 10 years from juniper to sagebrush-grass vegetation where juniper is invading and

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convert about 12,300 acres from pinyon-juniper to sagebrush-grass vegetation. Use prescribed fire and mechanical treatments on approximately 5,000 acres of sagebrush over 10 years to create a mosaic of different age classes to improve sage grouse habitat. In the event a specific sagebrush management plan is developed within the next 10 years, defer to its management objectives. Convert about 5,000 acres of pinyon to mountain brush or sagebrush/grass over 10 years using prescribed fire and non-fire fuels treatments.

Fire Management Strategies:

**Suppression:** Apply full suppression action in sagebrush dominated areas and when private lands and structures are threatened. Apply appropriate suppression actions to contain fires to 1,000 acres in pinyon-juniper dominated areas. Where fires in the p-j type are at or approaching 1,000 acres in size, where advantageous and resource objectives are being met, utilize natural or existing man-made fire breaks, such as roads and trails, to support suppression activities.

Follow Utah prairie dog (UPD) guidelines when fighting fire in UPD habitat.

**Wildland Fire Use:** No fire use.

**Prescribed Fire:**

Small (10-15acre) sage brush prescribed fires to create a diversity of age classes. Larger scale (up to 3,000 acre) prescribed projects can be planned on an individual basis for an aggregate not to exceed 10,000 acres.

**Non-fire fuels Treatments:** Use mechanical treatments to accomplish specific fuels and resource objectives. Sage brush treatments up to 5,000 acres in aggregate could be completed in this FMU.

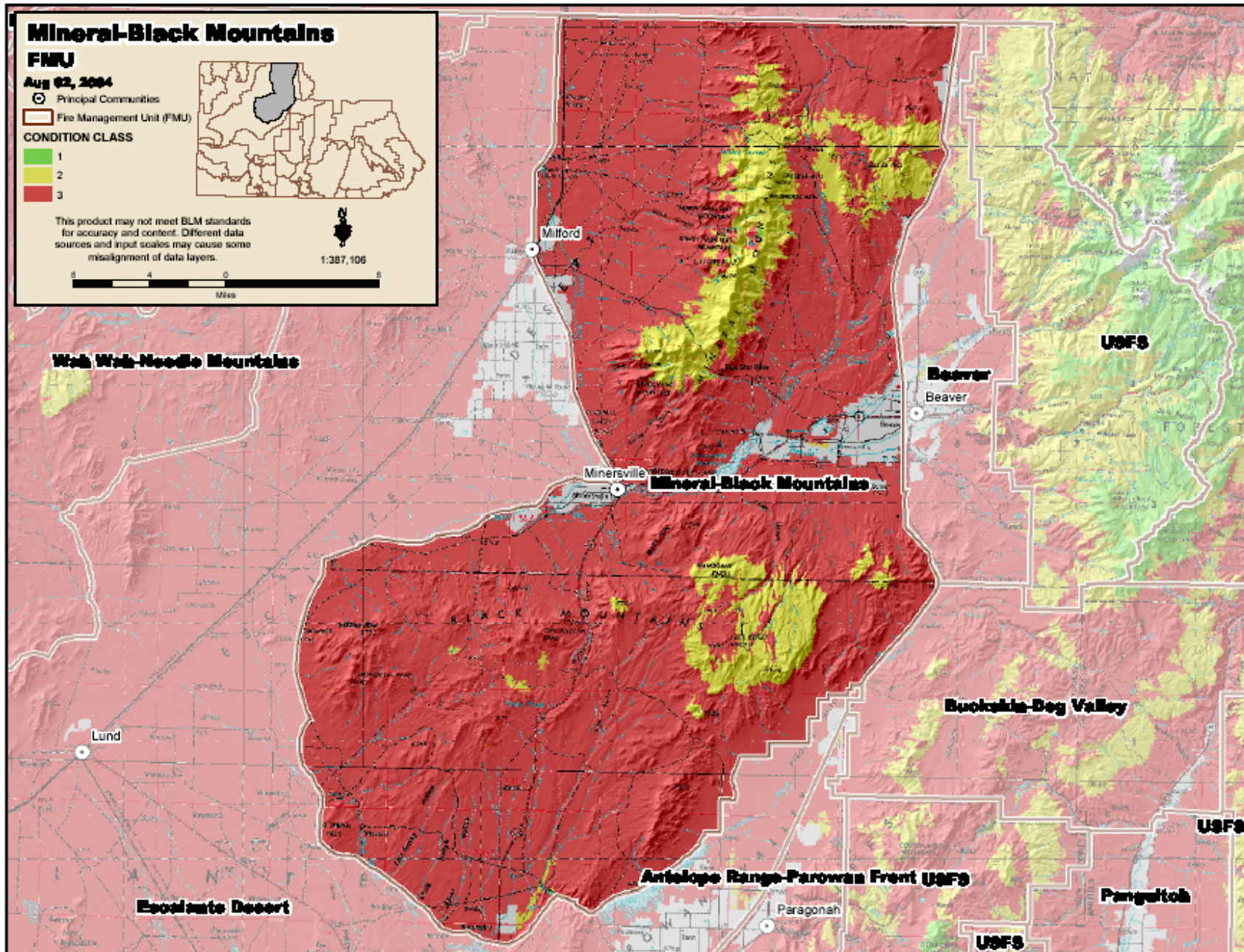
**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).



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**FMU DESCRIPTION**

Mineral-Black Mountain

**Location:**

The Mineral-Black Mountain FMU is on the eastern side of the Field Office. On the north is the Millard County line. Surrounding FMU'S are Beaver on the east and Escalante Desert on the south and west.

Ownership Acres:

BLM –	500,231
Private –	91,775
State –	53,375
Other –	771
TOTAL	646,152

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 4900 feet to 9400 feet above sea level. Topography ranges from flat in the Beaver and Milford Bottoms to near-vertical in the Granite Peaks of the Mineral Range.

Precipitation

Precipitation ranges from a low of 7.5 inches annually at the Adams Well rain gauge to a high of 15.2 inches annually as recorded at BLM's Ryan rain gauge. However, average annual precipitation calculated using the PRISM method is 12 to 14 inches (from data prepared by the Spatial Climate Analysis Service of the Oregon Climate Service).

Vegetation

This is a large and diverse unit. The primary vegetation type is pinyon-juniper (p-j) and sagebrush, though inclusions of salt desert shrub, grasslands, mountain brush, conifers and aspen exist. Large areas of sagebrush, which provide important habitat to sage grouse and mule deer, are common throughout this area. Antelope bitterbrush is an important component of both the p-j and sagebrush types and generally intolerant of hot fires during the warm summer months.

Soils

Soil erosion is generally within acceptable limits with steeper slopes which would be susceptible to increased erosion following a wildfire. A portion of this unit is within the Minersville Reservoir CRMP area and contains small acreages in critical erosion condition, as rated by NRCS (citation). Approximately 3,573 public land acres were determined to be in critical soil erosion condition during the early 1980's modified soil and vegetation inventory.

STATSGO Soil Type

Soil Type	Acres
557	7846.07

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564	7153.11
579	88071.24
580	3379.06
581	64538.34
582	51720.4
583	8760.27
584	1559.21
585	24005.92
587	8877.79
588	7168.37
589	7249.97
590	47792.35
591	6777.97
692	57586.03
693	1065.17
694	36488.93
695	23388.89
697	13179.95
700	75826.77
701	52515.65
702	11707.44
705	19646.22
743	7867.82
744	10976.64
W	1002.16
TOTAL	646151.73

Special Status Species

Special status animal species found in this area include Utah prairie dog, bald eagle, osprey, northern goshawk, ferruginous hawk, Swainson's hawk, peregrine falcon, greater sage grouse, long-billed curlew, burrowing owl, Lewis' woodpecker, common yellowthroat, Townsend's big-eared bat, fringed myotis, ringtail, and pygmy rabbit.

Sensitive plant species found in this unit is *Penstemon franklinii*.

Other Sensitive Resources

These areas are important sage grouse and/or deer areas.

Noxious Weeds

Natural rehabilitation potential is dependent upon existing perennial grasses and forbs on site and virtually all vegetation types at all elevations are subject to invasion by undesirable invader species, such as cheatgrass, following a wildfire. Areas of Scotch thistle exist within this unit. The unit is susceptible to invasion of knapweed from the north.

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**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

FIL 1 = 0-2 feet  
FIL 2 = 2-4 feet  
FIL 3 = 4-6 feet  
FIL 4 = 6-8 feet  
FIL 5 = 8-12 feet  
FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	10179
FIL 2 –	79
FIL 3 –	3001
FIL 4 –	16178
FIL 5 –	14213
FIL 6 –	31
Unclassified-	27069
TOTAL-	70749

Fire Starts by Year

Year	Number
1993 –	35
1994 –	39
1995 –	27
1996 –	36
1997 –	9
1998 –	43
1999 –	10
2000 –	32
2001 –	21
2002 –	29
2003 -	15
TOTAL	296

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**Fire Regime and Condition Class (FRCC):**

**Cedar City Field Office  
FRCC TABLE**

Date: 9/2/04

FMU Name: Mineral Range-Black Mountain

500231

Use full suppression in sagebrush areas. In pinyon-juniper, pinyon or juniper use appropriate management response after 1,000 acres. Convert 54,000 acres of pinyon-juniper to sagebrush/perennial grass using wildfire, prescribed fire (10,000 acres) and non-fire fuels projects (30,000 acres). Use wildfire, prescribed fire and mechanical treatment to convert 5,000 acres of pinyon to mountain shrub or sagebrush and perennial grass. Treat 20,000 acres of sagebrush to improve age class diversity using small prescribed fires and non-fire fuels treatments (10,000 acres). All of these acreages over the next 10 years.

**EXISTING**

**DESIRED**

Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon	17,655	4	2	2	1 & 2	mtn. shrub/sage/grass		5000
Pinyon-juniper	136,151	27	2	3	1 or 2	sage/grass		54000
Juniper	116,792	23	2	3	1 or 2	sage/grass		5000
Sagebrush	127,955	26	2	3	1 or 2	mosaic sage/grass		20000

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Sagebrush/perennial Grass	31,645	6						
Grassland	8,511	2	1	3	3?	grass		
Desert grassland	6143	1						
Salt desert shrub	8,999	2	4	3				
Dry Meadow	3,372	1						
Greasewood	51	0						
Aspen	1,131	0						
Lowland Riparian	153	0						
Mountain Riparian	719	0						
Ponerosa Pine	918	0						

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PIPO/Mtn Shrub	704	0						
Wet Meadow	100	0						
Water	107	0						
Mtn. Shrub	1,427	0						
Oak	34,791	7	1	2				
Agriculture	373	0						
Mountain fir	2,532	1	4	2	1	Mountain Fir	1	

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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Communication Sites
- Cultural values including Parowan Gap
- Private lands including cabins and other structures
- I-15 (smoke)
- Range Improvements
- DWR and BLM guzzlers
- Wind towers
- Habitats for special status species
- Transmission Lines (smoke)
- Dispersed Recreation such as hunting
- Rock Corral Recreation Area (BLM)
- Big Rock Picnic Area (private)
- Recreation Fishery on Minersville Reservoir (UDWR) and on the Beaver R. (BLM & private?)
- Rights of Way: material sites, water pipelines, powerlines, water facilities, telephone lines, public water reserves, communications sites, natural gas pipelines, railroad

Cultural resources (separate report?) are located in the north Mineral Mountains, Cunningham Wash, Twin Peaks and consist of high density cultural sites related to a large obsidian resource.

**Communities at Risk:**

Beaver, Milford, Minersville, Adamsville, Greenville, Ranch Canyon and Corral Canyon cabins, Blundell Geothermal plant.

**Land Use Plan Objectives**

This FMU provides important mule deer, sage grouse and Utah prairie dog habitat. These objectives are to improve these habitats. Improve mountain fir and grassland habitat as opportunities arise. The objective over a ten year period is to utilize fire and other management techniques to create a desired future condition mosaic consisting of 70 percent of the area dominated by grasses, forbs, and shrubs, and maintain 30 percent of the area as pinyon-juniper.

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

In pinyon-juniper areas, utilize appropriate suppression methods to try to limit individual fires to 1,000 acres per year. Especially in areas where pinyon-juniper encroachment has occurred, it is entirely appropriate to utilize natural and man-made (ie roads) fuel breaks to control fire even if the 1,000 acre limit would be exceeded. Use wildfire, prescribed



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fire, and non-fire fuels treatments to convert about 54,000 acres over 10 years from pinyon/juniper to sagebrush-grass vegetation.

Allow use of fire to maintain or expand Utah Prairie Dog habitat. Convert about 5,000 acres over 10 years from juniper to sagebrush-grass vegetation (refers to GAP data as baseline data). Use prescribed fire and non-fire fuels projects to treat approximately 20,000 acres of sagebrush over 10 years to create a mosaic of different age classes to improve sage grouse habitat. In the event a specific sagebrush management plan is developed within the next 10 years, defer to its management objectives.

Convert about 5,000 acres of pinyon to mountain. brush or sagebrush/grass over 10 years.

Previously treated / seeded sagebrush

Allow fire to occur on east and west benches of Mineral Range in old seedings containing non-native grasses to allow for seeding maintenance. Where appropriate, utilize natural or man-made fuel breaks to control wildfires.

Fire Management Strategies:

**Suppression:** Apply full suppression action in native sagebrush dominated areas. In areas not identified for treatment, apply full suppression action in pinyon-juniper areas if 5,000 acres have burned as a result of wildfire over a five year period. Where advantageous, utilize natural or existing man-made fire breaks, such as roads and trails, to support suppression activities.

Follow Utah prairie dog (UPD) guidelines when fighting fire in UPD habitat.

**Wildland Fire Use:** No fire use.

**Prescribed Fire:**

In native sage brush, utilize 10 to 15 acre prescribed fires to create a diversity of age classes. Allow the use of prescribed fire on a larger scale to meet specific management and maintenance needs on old seedings. Large scale (10,000 acre) prescribed fires in pinyon/juniper types are desired and identified in existing plans.

**Non-fire fuels Treatments:**

Allow non-fire treatments on a case by case basis to meet management and resource needs, including, but not limited to fuels treatments with watershed benefits within the Beaver River CRMP area. Also UPD, sagebrush die-off, deer restoration and sage grouse could benefit from treatment. Treat up to 10,000 acres in sage brush type and up to 30,000 acres in the pinyon/juniper type with non-fire fuels treatment over a 10 year period.

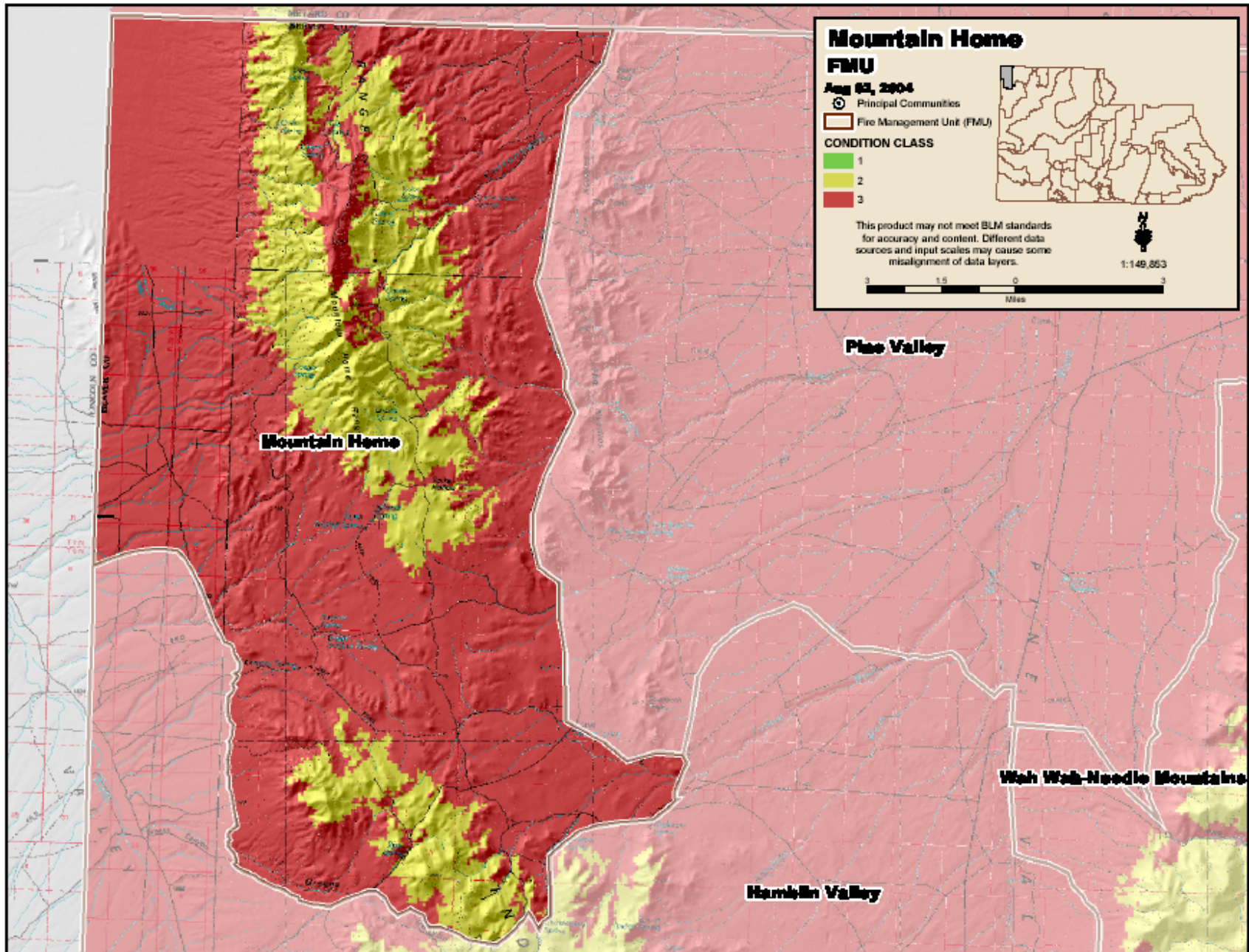
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**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan. Riparian and aspen both need special attention during fire rehabilitation in order to accomplish proper restoration.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).

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**FMU DESCRIPTION**

Mountain Home

**Location:**

The Mountain Home FMU is on the extreme northwest corner of the planning area and is bounded by the Fillmore Field Office to the north and the Ely Field Office to the west.

Ownership Acres:

BLM –	86,733
Private –	764
State –	9,680
Other –	9
TOTAL	97,185

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 6100 feet to 9500 feet above sea level. Topography is extremely variable, ranging from the gradual slopes of the Hamblin Valley Bench to the steep, rugged slopes of the Needle.

Precipitation

BLM maintains no rain gauges within the FMU. However, average annual precipitation calculated using the PRISM method is 18 to 20 inches (from data prepared by the Spatial Climate Analysis Service of the Oregon Climate Service).

Vegetation

The primary vegetation type within this area is pinyon-juniper. The area is valuable for woodland products, particularly cedar posts and pine nuts. Relatively small inclusions of mixed conifer/aspen, low sagebrush, mountain brush and grassland occur within the FMU. Grasslands are primarily seedings that can serve as valuable fuel breaks. Rehabilitation potential is generally very good above 7,200 feet and variable dependent on the site below 7,200 feet.

STATSGO Soil Type

Soil Type	Acres
155	5332.58
562	7165.25
565	2.61
566	85.69
691	30824.14
699	53603.61
unclassified	171.17
TOTAL	97185.04

Special Status Species

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Special status animal species found in this unit are bald eagle, northern goshawk, ferruginous hawk, peregrine falcon, greater sage grouse, Townsend's big-eared bat, and fringed myotis.

BLM sensitive plant species found in this unit are *Ivesia shockleyi ostleri*.

Other Sensitive Resources

Bristlecone pine is found in the FMU.

Noxious Weeds: Wildfires occurring below 7,200 feet are moderately to highly susceptible to invasion by noxious weeds, particularly cheatgrass. Elevations above 7,200 feet are less susceptible because of more abundant understory, there is less noxious weed seed source, higher precipitation, etc.

Riparian: The riparian resource consists of small isolated springs with an occasional perennial stream. These riparian systems are in various condition classes and post fire management is important in achieving riparian management objectives. Riparian areas in this FMU tend to be susceptible to rubber rabbitbrush invasion.

Habitat: This FMU is the heart of the Sulphur wild horse herd, which are of national significance due to their ancestry and uniqueness. This FMU is also important habitat for elk and mule deer. Fire use in this FMU offers an opportunity to improve habitat conditions for these species and others.

Soils: No critical or severe soil conditions have been mapped in this FMU.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

- FIL 1 = 0-2 feet
- FIL 2 = 2-4 feet
- FIL 3 = 4-6 feet
- FIL 4 = 6-8 feet
- FIL 5 = 8-12 feet
- FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	0.0
FIL 2 –	0.0
FIL 3 –	0.08
FIL 4 –	0.16
FIL 5 –	1234.00
FIL 6	0.08
unclassified	50.33
TOTAL	1284.64

Fire Starts by Year

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Year	Number
1993 –	0
1994 –	0
1995 –	0
1996 –	4
1997 –	0
1998 –	1
1999 –	1
2000 –	1
2001 –	0
2002 –	0
2003 -	1
TOTAL	8

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 Cedar City Field Office  
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**Fire Regime and Condition Class (FRCC):**

**Cedar City Field Office  
 FRCC TABLE**

Date: 9/3/04

FMU Name: Mountain  
 Home

FMU Number:  
 CCMH

86,733 acres

Uses appropriate management response after fires reach 5,000 acres. Protect all structures. Convert 12,000 acres of pinyon-juniper and 250 acres of juniper to sagebrush/perennial grass using wildfire, prescribed fire and non-fire fuels treatments. Fire use will be allowed on 5,000 acres. Prescribed fire to be used on 12,250 acres and non-fire fuels treatments on 1,000 acres.

**EXISTING**

Veg type	Acres	% Area	Fire Regime	Existing CC	DESIRE D			
					Desired CC	Veg type	% Change	Acres
Pinyon	19,859	23	II	2	1	Pinyon	5	1000
Pinyon-juniper	57,111	66	II	3	1 or 2	Sage/grass	20	12000
Juniper	4,690	5	II	3	1 or 2	Sage/grass	5	250
Sagebrush		0						

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Sagebrush/perennial Grass	3,377	4	2	3				
Grassland	1,658	2	1	3				
Unclassified	38	0						



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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Private lands including structures
- Range Improvements
- DWR and BLM guzzlers
- Habitat for special status species and wild horses
- Woodland products
- Dispersed Recreation such as hunting
- Rights of Way: Ryan Spring underground pipeline & related facilities easement.
- Material sites, public water reserves

**Communities at Risk:**

Loper's Cabin  
Cabins at Cherry Spring  
Vance Spring

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Improve habitat for large grazing ungulates by improving the existing vegetation. This will be done using wildfire, prescribed fire and non-fire treatments.

Fire Management Objectives

Open up the existing closed pinyon-juniper and sagebrush plant communities. Before applying appropriate management response, allow fires to burn up to 5,000 acres to create a mosaic of age classes. Over the next ten years, convert 12,250 acres of juniper and pinyon-juniper to a sagebrush/grassland plant community. Improve the pinyon plant community to create a more open diverse plant community on 1,000 acres.

Fire Management Strategies:

**Suppression:**

Take appropriate suppression measures when fires reach 5,000 acres. Take suppression measures to protect all structures and private lands.

Take appropriate measures to protect structures on all fires. When local and/or national planning levels are below level 5, take advantage of natural breaks and roads to implement suppression tactics allowing fires to achieve resource objectives and provide for fire fighter safety. The same tactics can be employed during planning level 5 with approval of the FMO and Field Office Manager.

Suppression action within sensitive plant or T/E/sensitive animal areas will be as outlined in the multiple use restrictions for the species.

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**Wildland Fire Use:**

There is an opportunity for fire use in this FMU. Fires less than 5,000 acres will be observed and monitored unless values at risk are threatened, then appropriate suppression will be applied.

**Prescribed Fire:** Apply prescribed fire to treat up to 12,250 acres/ 10 years.

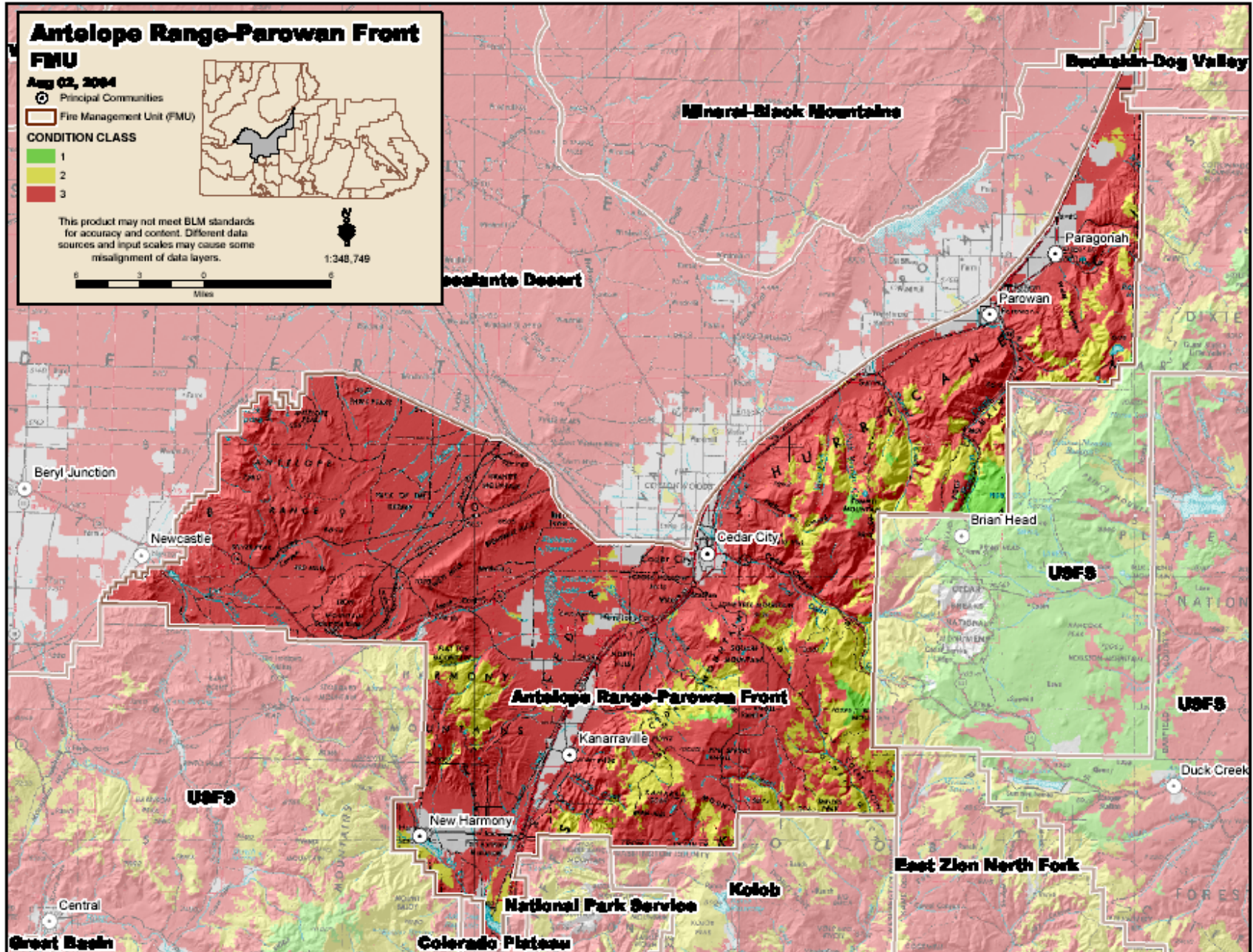
**Non-fire fuels Treatments:** Allow the use of fuels treatments to meet community and land use needs. Treat mechanically 1,000 acres / year

**Restoration & Rehabilitation:** Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan. Management of aspen for mule deer following fire is important.

Rehabilitation potential is generally very good above 7,200 feet and variable dependent on the site below 7,200 feet.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).

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**FMU DESCRIPTION**

Parowan Front/Antelope Range

**Location:**

This FMU is the furthest east in the field office and includes Iron County cities of Kanarraville, Cedar City, Summit, Parowan and Paragonah. On the east is the Dixie National Forest. On the west are the Mineral-Black Mountain and Escalante Desert FMU's. On the north is the Buckskin FMU which Cedar City Field Office shares with the Kanab Field Office.

Ownership Acres:

BLM –	151553
Private –	227807
NPS	2903
USFS	1044
State –	21113
Tribal –	2503
Other Gov't	5037
Other –	220
TOTAL	412178

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 4700 feet to 10700 feet above sea level. Topography is extremely variable, ranging from the flat dry lakebed of Quichapa to the extremely steep red ledges of the Hurricane Cliffs.

Precipitation

BLM maintains only one rain gauge on this FMU at Antelope Range. It likely represents the lower end of the precipitation zone, which is 10.4 inches per year. A more accurate average for this unit is 12 to 13 inches per year. However, average annual precipitation calculated using the PRISM method is 16 to 18 inches (from data prepared by the Spatial Climate Analysis Service of the Oregon Climate Service).

Vegetation

The primary vegetation types within this area are pinyon-juniper (p-j) and sagebrush. Large areas of sagebrush are common throughout this area. Much of the p-j and sagebrush community lacks desirable understory. The sagebrush type is valuable as important and crucial deer winter range. Much of the pinyon-juniper type is encroachment downslope into the sagebrush type from years of historic overgrazing and intensive fire control measures. Inclusions of mountain brush exist at higher elevations.

Soils

Soil erosion is generally within acceptable limits. However, approximately 11,180 acres, or about 7 percent of the FMU, were considered to be in critical erosion condition when soils were rated during the early 1980's soils and vegetation inventory.

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STATSGO Soil Types

Soil Type	Acres
660	67041.10
661	3329.86
668	13236.4
692	8468.58
695	44871.28
696	35822.01
697	13607.67
698	65829.37
700	18048.34
702	6891.25
703	892.36
704	24284.12
706	96317.64
707	6127.45
710	6440.62
725	970.40
TOTAL	412178.44

Special Status Species

Special status animal species found in this area include Utah prairie dog, bald eagle, Mexican spotted owl, northern goshawk, ferruginous hawk, Swainson's hawk, peregrine falcon, long-billed curlew, burrowing owl, Lewis' woodpecker, common yellowthroat, blue grosbeak, spotted bat, Townsend's big-eared bat, fringed myotis, and ringtail.

Spring Creek WSA has Mexican Spotted Owl critical habitat.

Sensitive plants found in this unit are *Penstemon franklinii* and *Penstemon pinorum*.

Other Sensitive Resources

Several perennial streams with associated riparian zones flow off the mountains into the valleys.

Wildlife

This FMU contains important and crucial deer winter ranges (CDWR). CDWR is defined as that portion of the deer habitat, that if lost, would affect future survivability of the deer herd. Much of the more valuable CDWR habitat is in the sagebrush type. It is critical that uncontrolled wildfires not be allowed to burn in CDWR as these habitats are impractical, if not impossible, to restore to a desirable condition class following wildfire. Wild turkeys use the riparian areas and forests east of I-15 and around Bumblebee and Harmony Mountains.

Noxious Weeds

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Natural rehabilitation potential is dependent upon existing perennial grasses and forbs on site and virtually all vegetation types at all elevations are subject to invasion by undesirable invader species, such as cheatgrass, following a wildfire.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

FIL 1 = 0-2 feet  
FIL 2 = 2-4 feet  
FIL 3 = 4-6 feet  
FIL 4 = 6-8 feet  
FIL 5 = 8-12 feet  
FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	0.16
FIL 2 –	33.25
FIL 3 –	426.18
FIL 4 –	8.23
FIL 5 –	45.55
FIL 6 –	161.55
Unclassified-	904.53
TOTAL-	1579.44

Fire Starts by Year

Year	Number
1993 –	7
1994 –	6
1995 –	7
1996 –	10
1997 –	5
1998 –	5
1999 –	4
2000 –	9
2001 –	7
2002 –	21
2003 -	24
TOTAL	105

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**Fire Regime and Condition Class (FRCC):**

**Cedar City Field Office  
FRCC TABLE**

Date: 7/30/04

FMU Name: Parowan Front Antelope Range

151553

Use full suppression to protect wildland urban interface areas, riparian areas and sagebrush areas keeping the acres as small as possible. Use prescribed fire and non-fire fuels methods to convert 6,200 acres of pinyon juniper and 4,600 acres of juniper to sagebrush/perennial grass over ten years. Treat 5,400 acres of sagebrush to improve age class diversity and create a mosaic of differing age classes. Prescribed fire will not exceed 1000 acres/year or 5000 acres in ten years. Fuels treatments will be up to 10,000 acres over ten years. Not a fire use area.

**EXISTING**

Veg type	Acres	% Area	Fire Regime	Existing CC	<b>DESIRED</b>			
					Desired CC	Veg type	% Change	Acres
Pinyon	3,837	3	2	3				
Pinyon-juniper	45,408	30	3	3	1 & 2	sage/grass	15	6,200
Juniper	33,425	22	3	3	1 & 2	sage/grass	13	4600
Sagebrush	33,926	22	3	3	2	sage/grass mosaic	14	5400
Sagebrush/perennial Grass	9,445	6						
Grassland	4,715	3	3	3				

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Des. Grass	208	0						
Ponderosa Pine	3,233	2	1	3	3	ponderosa pine	1	0
Mtn. shrub	2,658	2	2	2				
Spruce Fir	86	0	1	1				
Oak	6,567	4	1	2				
Dry Meadow	1,119	1						
Lowland Riparian	1	0						
Spruce Fir/Mtn Shrub	28	0						
Mtn. Fir	1,938	1						
Ponderosa Pine/Mtn. Shrub	4,237	3						
Aspen	177	0	4	2				
Salt desert shrub	137	0	5	3				
Mtn. Riparian	176	0	4	3				
Agriculture	234	0						



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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Private lands including structures
- I-15 (smoke)
- Range Improvements
- DWR and BLM guzzlers
- Wind towers (possibly on State lands, but none on BLM in this FMU (Elaine 7/16)
- Habitats for special status species
- Crucial deer winter range
- Trout habitat
- Transmission Lines (smoke) – see RsOW below (Elaine 7/16)
- Dispersed Recreation such as hunting
- Rights of Way (RsOW) – Red Hills/Summit, Iron Mountain, and Ash Creek Comm Sites, powerlines, Kern River natural gas pipeline, other natural gas pipelines, overhead telephone lines, and public water reserves, Cedar City municipal water facilities, railroad

**Communities at Risk:**

Paragonah

Parowan

Summit

Cedar City

Kanarraville

Woolsey Ranch area

Second Mound area – Red Canyon Subdivision

Additional communities as they develop or/are identified by local fire management.

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

**Land Use Plan Objectives**

Apply full Suppression due to WUI and critical deer winter range. Limit fires to as small as possible in the sagebrush vegetation type.

Riparian vegetation type: Fully suppress riparian wildfires, especially in the **Spring Creek WSA** to prevent damage to Mexican Spotted Owl habitat.

In the pinyon-juniper vegetation type, use appropriate response such as utilizing natural and man-made fuel breaks to allow for fire fighter safety and benefits anticipated from fire. Insofar as large areas of sagebrush habitat are not threatened, it is desirable in this FMU to use fire to convert some of the pinyon-juniper type to a grass / forb / shrub type.

Allow mechanical treatments and brushpile burning.

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Fire Management Objectives

Fully protect wildland urban interface areas, riparian and critical deer winter range. Over ten years, use prescribed fire and non-fire fuels treatments to convert about 6,200 acres from juniper to sagebrush-grass vegetation; 4,600 acres from pinyon-juniper to sagebrush-grass vegetation and treat 5,400 acres of sagebrush to create a mosaic of different age classes.

Create a mosaic pattern in the sagebrush vegetation type by utilizing fire in such a manner as to create small burns of 10 to 15 acres in canyon and valley bottoms.

Utilize fire to create a desired future condition of 10 percent grass and forb dominated communities and 90 percent sagebrush dominated communities.

Fire Management Strategies:

**Suppression:** Apply full suppression. Where advantageous, utilize natural or existing man-made fire breaks, such as roads, fuel treatments and trails, to support suppression activities and provide for firefighter and public safety. Keep fires in sagebrush areas as small as possible. Protect private property, riparian and critical deer winter range by keeping fires as small as possible.

Follow Utah prairie dog (UPD) guidelines when fighting fire in UPD habitat.

**Wildland Fire Use:** No fire use.

**Prescribed Fire:**

Prescribed fire can be used to meet resource objectives. However, mechanical treatments may provide timely, cost effective results while minimizing risk to communities and critical habitats. Prescribed fires in this FMU will be addressed on an individual project basis. Prescribed fire acres would not exceed 1,000 acres per year and be consistent with resource objectives not to exceed 5,000 acres over ten years.

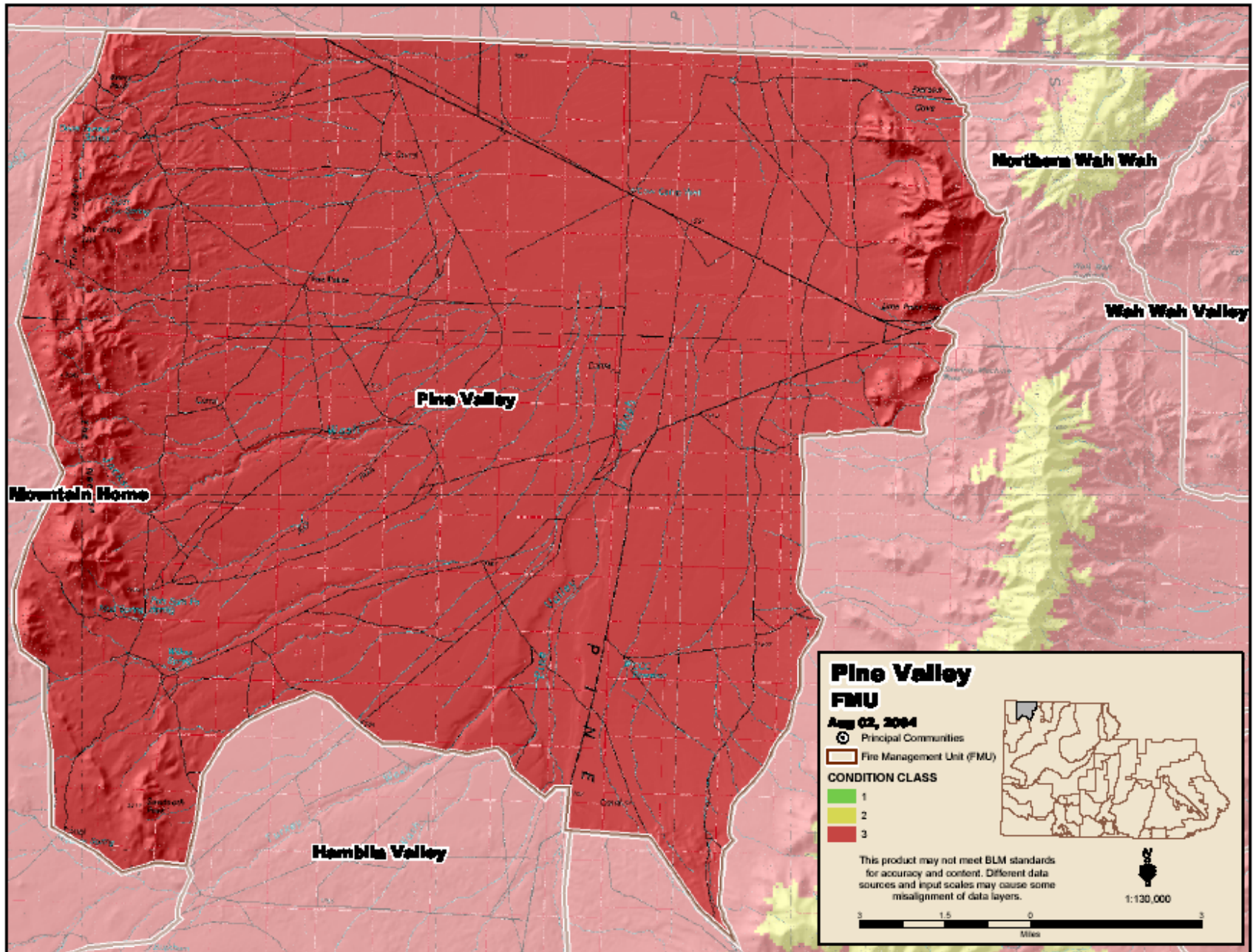
**Non-fire fuels Treatments:** Allow non-fire fuels treatments to meet WUI needs, especially where wildlife habitats would be enhanced. An additional 10,000 acres of mechanical treatment could be accomplished in this FMU over the life of this plan.

**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan. Consider riparian in restoration efforts.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).

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**FMU DESCRIPTION**

Pine Valley

**Location:**

This FMU consists of North Pine Valley to the Field Office boundary with Fillmore. The Mountain Home FMU is to the west. The Wah Wah- Needle Mountains and North Wah Wah FMU's are to the east. The Hamlin Valley FMU is to the south.

Ownership Acres:

BLM –	110,993
Private –	721
State –	12581
TOTAL	124295

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 5100 feet to 7800 feet above sea level. Topography is flat to gently rolling, though some rock outcrop and small hills are included.

Precipitation

Precipitation averages only about 7 inches of water per year, as recorded at the North Pine Valley rain gauge. The chance for restoration or rehabilitation efforts by reseeding following fires is extremely marginal, if not impossible. However, average annual precipitation calculated using the PRISM method is 9 to 11 inches (from data prepared by the Spatial Climate Analysis Service of the Oregon Climate Service).

Soils

STATSGO Soil Types

Soil Type	Acres
559	49558
562	31824
565	11009
566	2538
691	27971
699	1395
TOTAL	124295

Vegetation

The primary vegetation type within this area is salt desert shrub with some desert grasslands. Includes some sagebrush and pinyon-juniper inclusions.

Special Status Species

Special status animal species found in this category include ferruginous hawk, Swainson's hawk, peregrine falcon, burrowing owl, Townsend's big-eared bat, and fringed myotis.

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BLM sensitive plants found in this category are *Sphaeralcea caespitosa caespitosa* and *Ivesia shockleyi ostleri*.

Other Sensitive Resources

Important pronghorn area.

Noxious Weeds

Noxious weed infestation would be likely following fire. Weeds expected to invade would be cheatgrass, halogeton, and Russian thistle. What little restoration and rehabilitation is possible on this FMU would have to come from natural reestablishment due to the FMU's low precipitation. It is likely noxious weeds would thwart successful restoration.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

FIL 1 = 0-2 feet  
FIL 2 = 2-4 feet  
FIL 3 = 4-6 feet  
FIL 4 = 6-8 feet  
FIL 5 = 8-12 feet  
FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	0.0
FIL 2 –	0.0
FIL 3 –	0.08
FIL 4 –	0.0
FIL 5 –	0.33
FIL 6	0.0
Unclassified-	4.52
TOTAL-	4.93

Fire Starts by Year

Year	Number
1993 –	0
1994 –	0
1995 –	0
1996 –	0
1997 –	0
1998 –	0
1999 –	0
2000 –	2
2001 –	0
2002 –	0
2003 -	1
TOTAL	3

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**Fire Regime and Condition Class (FRCC):**

FMU Name: Pine Valley

110993

Fully suppress all fires in the salt desert scrub and grasslands. Appropriate management response in other veg. types. Use mechanical (1,000) acres and prescribed fire (1,000 acres) in the sagebrush to improve composition and age class diversity. Not a fire use area.

**EXISTING**

**DESIRED**

Veg type	Acres	% Area	Fire Regime	Existing CC	Desired	Veg type	% Change	Acres
					CC			
Pinyon		0						
Pinyon-juniper	12,356	11	II	3				
Juniper	7,855	7	II	3				
Sagebrush	18,881	17	II	3	1 or 2	grass/forb	2	1000
Sagebrush/perennial Grass	5,712	5						
Grassland	9,329	8	I	3				
Salt desert shrub	33,863	31	VI	3				

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Desert grassland	22,998	21						
Blackbrush		0						
Riparian		0						
Mountain shrub		0						
Greasewood		0						
Creosote-bursage		0						
Wetland		0						
Oak		0						
Maple		0						
Meadow		0						

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**Values at Risk:**

On the average year, there is not much risk of uncontrollable wildfire in this FMU simply because vegetation is too sparse. This is supported by fire history. On the rare year with a flush of annual vegetation, such as cheatgrass, which could carry a fire, the following values would be at risk.

- The desert ecosystem in general
- Desert Range Experiment Station (lies adjacent to the north)
- Private lands including structures
- Range Improvements
- DWR and BLM guzzlers
- Habitats for special status species
- Dispersed Recreation such as hunting
- Rights of Way (list from Elaine) Telephone lines to Desert Range Experiment Station; range improvement project, Wah Wah Summit pipeline & 2 troughs to Wintch & Co – received in W. Desert Land Exchange of 2001 – within N½ of SR 482 ROW to UDOT; Pine Spring pipeline – Richfield F.O. jurisdiction; road ROW under the Mineral Leasing Act – access road to wildcat gas well; withdrawal for a public water reserve; acquisition for a spring development & plastic pipe; water pipelines; Pine Grove stock water underground pipeline. (Egerton notes the Wah Wah Summit pipeline was never constructed)

**Communities at Risk:**

Vance Spring private  
Cabin at Pots Um Pa private

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Maintain the existing vegetation in the plant communities. Improve sagebrush age class diversity as opportunities arise with wildfire and small prescribed burns.

Fire Management Objectives

Focus on the protection of private lands and areas with low rehabilitation potential (noxious weed areas). This includes most of the FMU. Restrict wildfire to 100 acres per ignition when possible in these low rehab areas. In the pinyon-juniper and juniper plant communities, attempt to limit fire size to 500 acres. Over ten years, do not allow more than 500 acres to burn in the sagebrush plant community. Create a mosaic of age classes in the sagebrush areas by allowing small natural fires and prescribing 10-15 acre fires.

Fire Management Strategies:

**Suppression:**

Apply full suppression within the majority of the FMU. Priority is on salt desert shrub and grassland communities. Fires in pinyon/juniper may require indirect attack to provide for firefighter safety while meeting resource objectives for conversion of



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vegetation types. Protect private lands and areas with low rehabilitation potential. Not a fire use area.

A Resource Advisor is recommended if it is likely that a fire may exceed the objectives described above. Suppression action within sensitive plant or T/E/sensitive animal areas will be as outlined in the multiple use restrictions for the species.

**Wildland Fire Use:**

Not a fire-use area.

**Prescribed Fire:**

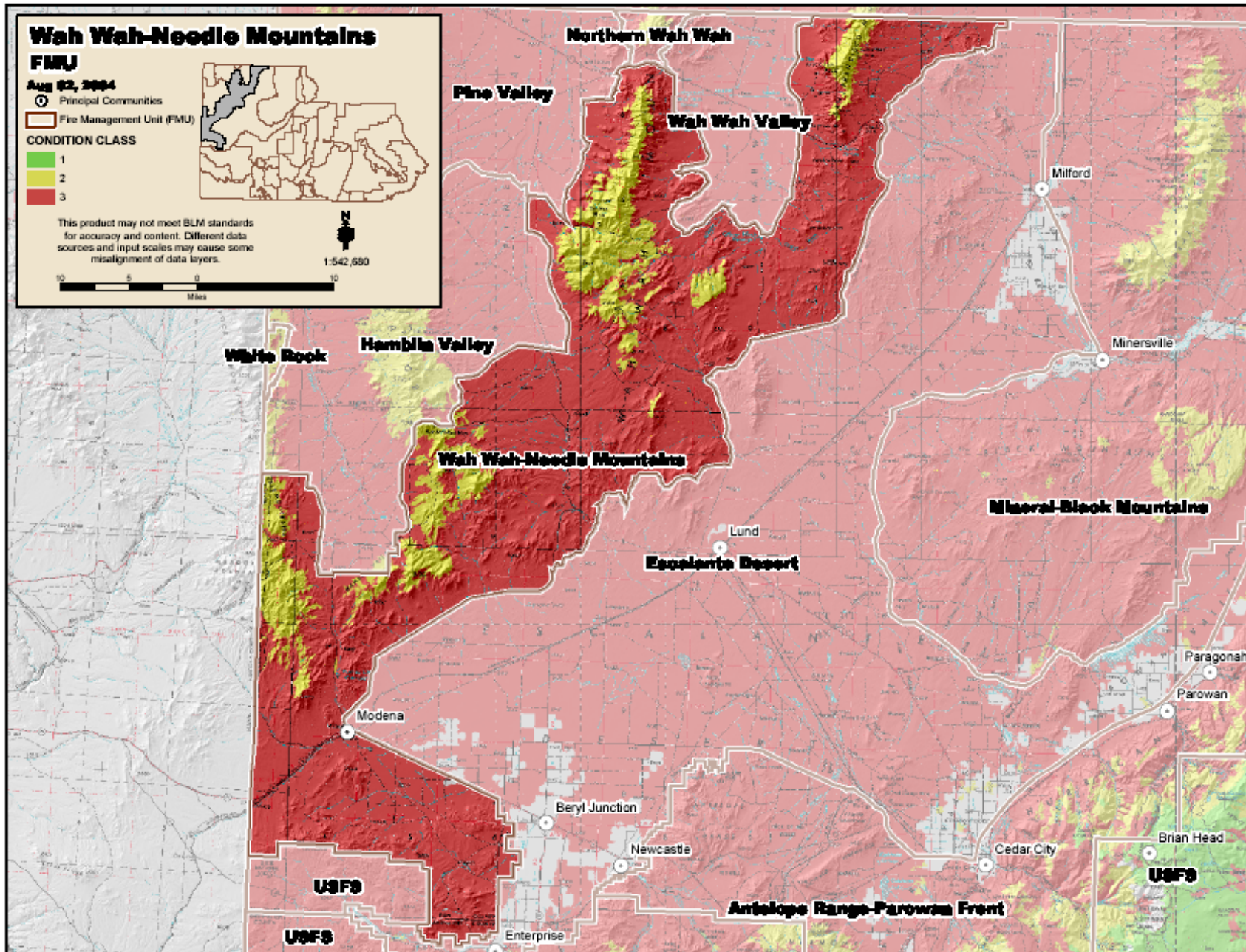
Prescribed fires and mechanical treatments primarily in sagebrush, would be planned on an individual project basis and be designed to meet resource management objectives. Projects in aggregate will be limited to treat no more than 1,000 acres.

**Non-fire fuels Treatments:** Allow the use of fuels treatments to meet community and land use needs. Allow mechanical treatments primarily for sagebrush restoration limited to 1,000 acres.

**Restoration & Rehabilitation:** Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans.

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**FMU DESCRIPTION**

Wah Wah-Needles

**Location:**

The Wah Wah—Needles FMU is an extensive and diverse FMU in western Iron, Beaver, and a small portion of Washington Counties. It borders the Fillmore Field Office on the north, the Ely Field Office on the west, and the Pine Valley Ranger District of the Dixie National Forest on the south.

Ownership Acres:

BLM –	550,689
Private –	38,663
State –	75,337
Other –	81
TOTAL	664770

**Characteristics:**

Elevation and Topography

Topography is extremely variable, ranging in elevation from 4700 and to 9600 feet above sea level. The unit includes flat desert valley floors and the extremely steep terrain of the Paradise, Central Wah Wah, and San Francisco Mountains.

Precipitation

Precipitation ranges from a low about 9 inches of water per year, as recorded at BLM's Pine Valley rain gauge to an estimated 16 inches on Frisco Peak. No high elevation precipitation gauges are read by BLM in this FMU. However, average annual precipitation calculated using the PRISM method is 13 to 15 inches (from data prepared by the Spatial Climate Analysis Service of the Oregon Climate Service).

Vegetation

The primary vegetation types within this FMU are scrub forests of a combination of juniper and pinyon as well as extensive areas of sagebrush. Small inclusions of old vegetation treatments, which were developed as non-native grasslands (seedings) exist within the FMU. These seedings can serve as important fuel breaks, but are gradually being reinvaded by sagebrush, juniper, and pinyon, which limit their effectiveness as fuel breaks. Extensive areas of juniper invasion exist throughout the FMU as evidenced by GAP data. There are also small inclusions of mature pinyon, mixed conifer/ponderosa pine and mountain brush, which are very important for providing woodland products, wildlife habitat, etc. Riparian areas are generally small, yet valuable resources. Long term drought has adversely affected vegetation on the unit and areas of sagebrush and pinyon die-off is likely to affect fire behavior. Rehabilitation potential of upland sites is generally very good above 7,200 feet and variable dependent on the site below 7,200 feet.

Soils

Soil erosion: There are approximately 13,475 public land acres where Soil Surface Factor ratings completed in the early 1980's place the soils in critical erosion condition.

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STATSGO Soil Type

Soil Type	Acres
557	467.83
559	71.78
562	38540.21
566	19618.34
658	885.08
661	28.73
691	60359.42
693	122019.82
695	5941.41
699	416734.54
unclassified	102.78
TOTAL	664769.94

Special Status Species

Special status animal species found in this category include Utah prairie dog, bald eagle, osprey, northern goshawk, ferruginous hawk, peregrine falcon, long-billed curlew, burrowing owl, blue grosbeak, Townsend's big-eared bat, ringtail, and Utah mountain kingsnake.

Sensitive plants found in this category are *Eriogonum soledium*, *Lepidium ostleri*, *Sphaeralcea caespitosa caespitosa*, *Trifolium friscanum*, and *Ivesia shockleyi ostler*.

Other Sensitive Resources

Habitat: The Wah Wah Needles FMU contains important habitat for wild horses, pronghorn antelope, elk, and mule deer. Sage grouse and their habitat also occurs within this FMU.

Riparian

There are isolated springs and perennial streams and small wetlands in this FMU.

Noxious Weeds: Virtually all vegetation types at all elevations are subject to invasion by undesirable invader species following wildfire. Invader species of note include cheatgrass, halogeton, Russian thistle, and Scotch thistle.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

- FIL 1 = 0-2 feet
- FIL 2 = 2-4 feet
- FIL 3 = 4-6 feet
- FIL 4 = 6-8 feet
- FIL 5 = 8-12 feet
- FIL 6 = 12 + feet

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Acres by FIL

FIL 1 –	76.95
FIL 2 –	51.89
FIL 3 –	987.50
FIL 4 –	158.38
FIL 5 –	849.28
FIL 6	982.09
Unclassified-	5657.64
TOTAL-	8763.72

Fire Starts by Year

Year	Number
1993 –	4
1994 –	15
1995 –	6
1996 –	19
1997 –	7
1998 –	19
1999 –	32
2000 –	49
2001 –	27
2002 –	16
2003 -	22
TOTAL	216

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**Fire Regime and Condition Class (FRCC):**

**Cedar City Field Office  
FRCC TABLE**

Date: 9/3/04

FMU Name: Wah Wah--Needles

550689

Use appropriate suppression on fires 5,000 acres or greater. Convert 25,000 acres of pinyon-juniper, 19,000 acres of juniper to sagebrush/perennial grass using wildfire, prescribed fire and fuels treatments. Convert 2,400 acres of pinyon to pinyon/mountain brush/perennial grass using all the strategies above. Also treat 700 acres of sagebrush to improve grass component and improve age class diversity using mechanical and prescribed fire. Fire use would be allowed on about 1,000 acres. In the aggregate, treatments using either prescribed fire or fuels treatments will be done up to 5,500 acres/year or 25,000 over ten years.

**EXISTING**

Veg type	Acres	% Area	Fire Regime	Existing CC	<b>DESIRED</b>			
					Desired CC	Veg type	% Change	Acres
Pinyon	79,011	14	2	2	1	pinyon/mtn brush/grass	3	2400
Pinyon-juniper	167,081	30	2	3	1 or 2	sage/grass	15	25000
Juniper	144,816	26	2	3	1 or 2	sage/grass	13	19000
Sagebrush	126,462	23	2	3	1 or 2	grass	1	700
Sagebrush/perennial Grass	14,078	3						
Grassland	7,322	1	1	3				
Des. Grass	2,740	0	1	3				
Salt desert shrub	7,517	1	5	3				

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Riparian	0	0						
Mtn.Fir	755	0			1 or 2	sage/grass	0	
Mtn. Fir/ Mtn. Shrub	773	0			1 or 2	sage/grass	0	
Agriculture	23	0						

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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Communication Sites [especially Frisco] – see RsOW below (Elaine 6/4/04)
- Private lands including structures
- Range Improvements
- DWR and BLM guzzlers
- Habitats for special status species
- Overhead electric and phone lines – see RsOW below (Elaine 6/4/04)
- Dispersed Recreation such as hunting
- U-56 and Union Pacific Railroad (smoke)
- Rights of Way (RsOW)(list from Elaine) – Frisco Comm Site, material sites, railroad, powerlines, telephone lines, water facilities & pipelines, irrigation facility, water plant, and public water reserves. (Elaine 6/4/04)
- Mining facilities
- Youth Correction Groups authorized under SRPs

**Communities at Risk:**

Frisco, Gold Springs, Pyramid Colony, Stateline, South Hamblin Valley subdivisions, Modena, Uvada, Red Cliffs Ascent facility at The Movies, Skougard Mine, Pine Grove  
Any other cabins, utilities, structures? – see RsOW above. (Elaine 6/3/04)

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Open up the pinyon-juniper and juniper plant communities to increase the sagebrush and grass in the plant composition. Restore old vegetation treatments (seedings) to a grass or grass / browse vegetation type. In the sagebrush, create a mosaic of different age classes using prescribed fire or mechanical treatment.

Fire Management Objectives

Convert about 25,000 acres over the next 10 years from pinyon-juniper to sagebrush/grass. Convert about 19,000 acres from juniper to sagebrush/grass. In the sagebrush community treat about 700 acres to grass. In the pinyon community open up the stand (about 2400 acres) and improve plant composition to include not only pinyon trees but mountain brush and grass.

Fire Management Strategies:

**Suppression:**

Apply appropriate suppression actions to contain fires to 5,000 acres. Since fires of this size will usually be wind driven, utilize natural or existing man-made fire breaks, such as road and trails, seedings, etc. in the interest of firefighter safety to support suppression activities.



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**Wildland Fire Use:**

There is an opportunity for fire use in this FMU. Fires less than 1,000 acres will be observed and monitored unless values at risk are threatened, or acreage is likely to exceed agency capability for stabilization treatment. At any time, appropriate suppression can be applied if deemed necessary due to local and/or national planning levels.

**Prescribed Fire:**

Apply as appropriate to create fuel breaks and other resource benefits. Prescribed fires up to 5,500 acres per project can be implemented to achieve fuels management and resource objectives. Project size can be altered based on ability for natural recovery and/or available money for seeding type treatment.

**Non-fire fuels Treatments:**

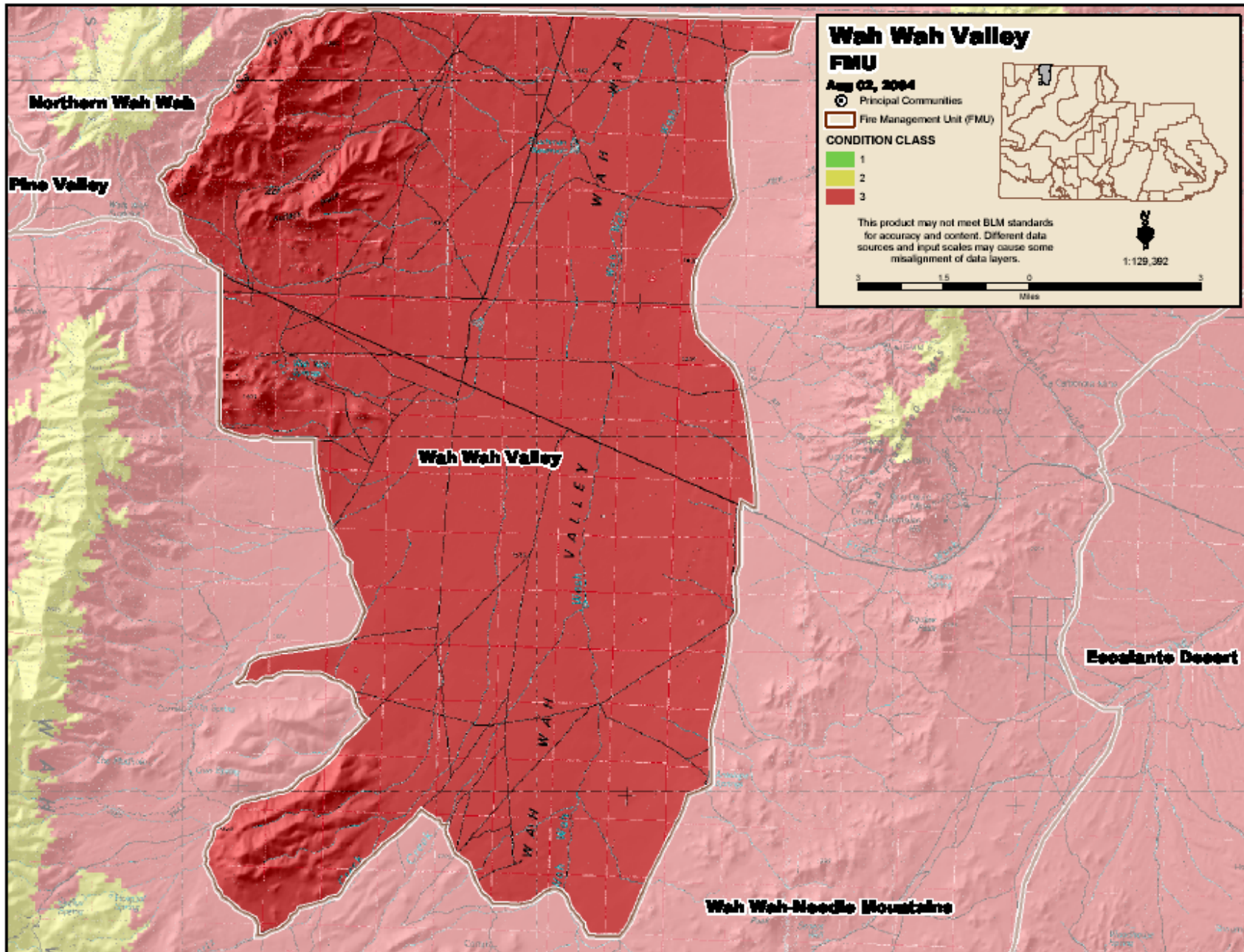
Allow the use of mechanical treatments to construct fuel breaks and to provide other resource benefits. Mechanical or non-fire treatments up to 5,500 acre per year are also desired in the FMU. Project size can be altered based on ability for natural recovery and/or available money for seeding type treatment. Prescribed fire and non-fire fuels projects in aggregate will not exceed 25,000 acres

**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan. Consider riparian and aspen restoration in rehabilitation work.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).

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**FMU DESCRIPTION**

Wah Wah Valley

**Location:**

The Wah Wah Valley FMU is located along the northern border and adjoins Millard County. It is surrounded by the Wah Wah-Needle Mountains FMU and the North Wah Wah WSA FMU.

Ownership Acres:

BLM –	62,268
Private –	8,564
State –	8,292
Other –	8
TOTAL	79132

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 4700 feet to 7300 feet above sea level. Topography is flat to gently rolling, though some rock outcrop and small hills are included.

Precipitation

Precipitation averages about 7 inches of water per year, as recorded at the Wah Wah Cove rain gauge. However, average annual precipitation calculated using the PRISM method is 7 to 9 inches (from data prepared by the Spatial Climate Analysis Service of the Oregon Climate Service).

Vegetation

The primary vegetation type within this area is salt desert shrub with some desert grasslands. The FMU also includes some sagebrush inclusions on the south end.

Soils

STATSGO Soil Types

Soil Type	Acres
559	23853
562	46209
566	3084
693	489
699	5498
TOTAL	79132

Special Status Species

Special status animal species found in this category include bald eagle, ferruginous hawk, peregrine falcon, burrowing owl and Townsend's big-eared bat.

Sensitive plant species found in this unit is *Sphaeralcea caespitosa caespitosa*.

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Other Sensitive Resources

Noxious Weeds

Noxious weed infestation would be likely following fire. Weeds expected to invade would be cheatgrass, halogeton, and Russian thistle. What little restoration and rehabilitation is possible on this FMU would have to come from natural reestablishment due to the FMU's low precipitation. It is likely noxious weeds would thwart successful restoration.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

FIL 1 = 0-2 feet  
FIL 2 = 2-4 feet  
FIL 3 = 4-6 feet  
FIL 4 = 6-8 feet  
FIL 5 = 8-12 feet  
FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	0.0
FIL 2 –	0.0
FIL 3 –	0.07
FIL 4 –	0.0
FIL 5 –	7.76
FIL 6	0.0
Unclassified-	71.00
TOTAL-	78.84

Fire Starts by Year

1993 –	0
1994 –	0
1995 –	0
1996 –	2
1997 –	0
1998 –	0
1999 –	0
2000 –	1
2001 –	0
2002 –	0
2003 -	0
TOTAL	3

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**Fire Regime and Condition Class (FRCC):**

**Cedar City Field Office  
FRCC TABLE**

Date: 9/3/04

FMU Name: Wah Wah Valley

62268

Apply full suppression due to private lands and low rehabilitation potential such as salt desert scrub and grasslands. Treat 1000 acres of sagebrush to improve age class diversity and enhance the grass component. Use mechanical and fuels treatments not to exceed 1,000 acres combined. No fire use.

**EXISTING**

**DESIRED**

Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon		0						
Pinyon-juniper	2,339	4	2	3	1 & 2	sage/grass	1	0
Juniper	4,588	7	2	3	3	juniper/sage	1	0
Sagebrush	11,678	19	2	3	1&2	grass	1	1000
Sagebrush/perennial Grass	728	1						
Grassland	687	1						
Des. Grass	12,150	20	2	3				

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Mtn. shrub		0						
Salt desert shrub	29,462	47	5	3				
Greasewood	636	1	5	3				
Riparian		0	4	3				

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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- The desert ecosystem in general
- Desert Range Experiment Station (lies adjacent to the north)
- Private lands including structures at Newhouse and Wah Wah Ranch
- Range Improvements
- DWR and BLM guzzlers
- Habitats for special status species
- Dispersed Recreation such as hunting
- Rights of Way: Frisco Comm. Site, powerlines, phone lines, other comm. sites, public water reserves, material sites, water facilities, water pipeline, Wah Wah Field Station Admin Site

**Communities at Risk:**

Old New House (historic ruins)  
Wah Wah Ranch

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Maintain the existing vegetation in the plant communities. Improve sagebrush age class diversity as opportunities arise with wildfire and small prescribed burns.

Fire Management Objectives

Focus on the protection of private lands and areas with low rehabilitation potential (noxious weed areas). Restrict wildfire to 100 acres per ignition, if possible, in the sagebrush communities. Over ten years, do not allow more than 500 acres to burn in the sagebrush plant community. Create a mosaic of age classes in the sagebrush areas by allowing small natural fires and prescribing 10-15 acre fires.

Fire Management Strategies:

**Suppression:**

Apply full suppression within the majority of the FMU. Priority is on salt desert shrub and grassland communities. Fires in pinyon/juniper may require indirect attack to provide for firefighter safety while meeting resource objectives for conversion of vegetation types. Protect private lands and areas with low rehabilitation potential. Not a fire use area.

A Resource Advisor is recommended if it is likely that a fire may exceed the objectives described above. Suppression action within sensitive plant or T/E/sensitive animal areas will be as outlined in the multiple use restrictions for the species.

**Wildland Fire Use:**

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Not a fire-use area.

**Prescribed Fire:**

Prescribed fires and mechanical treatments primarily in sagebrush, would be planned on an individual project basis and be designed to meet resource management objectives. Projects in aggregate will be limited to treat no more than 1,000 acres.

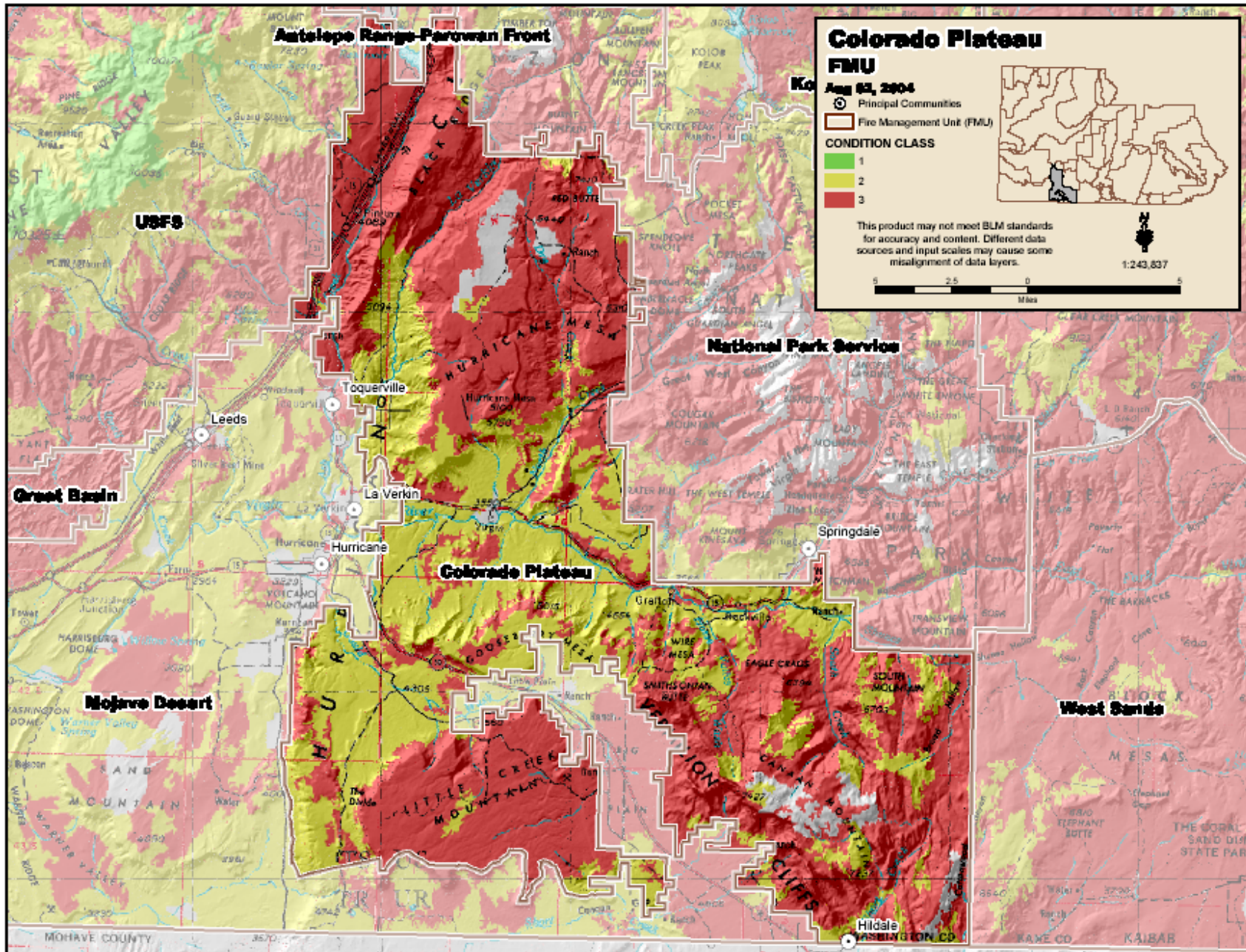
**Non-fire fuels Treatments:** Allow the use of fuels treatments to meet community and land use needs. Allow mechanical treatments primarily for sagebrush restoration limited to 1,000 acres.

**Restoration & Rehabilitation:** Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).



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**FMU DESCRIPTION**

Colorado Plateau

**Location:**

This unit is located within the physiographic province known as the Colorado Plateau. The FMU lies mostly east of Interstate Highway I-15, and north of the Utah/Arizona border in Washington County, Utah. The unit is bounded on the north by Zion National Park and on the east by the Washington/Kane County line.

**Land Ownership in the Colorado Plateau FMU**

<u>Land Status</u>	<u>Acres</u>
BLM	174,701.15
Private	29,365.92
State	12491.57
Park Service	80.90
USFS	25.83
Other	16.86
TOTAL	216682.22

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 4,000 feet to 7,000 feet above sea level. The topography varies from valleys and mountain mesas on the southern end of the unit to mesas, deep canyons, and plateaus on the northern end.

Precipitation

Precipitation averages about 9 to 15 inches per year, as recorded at Gould, Black Ridge, and Hurricane Mesa rain gauges.

Vegetation

Vegetation communities are diverse, and include pinyon pine-juniper woodlands, with dense tree stands, as well as brush communities comprised of sagebrush, bitterbrush, live oak, serviceberry and black brush. In the North Creek area, there is an important riparian demonstration area (**what does this mean for someone unfamiliar with the area? Since Bob has included genus and species in his list, should you not add these for the vegetation here?**) which contains cottonwood-willow galleries and riparian values.

Special Status Species: Below is a list of Federal Threatened and Endangered Species, and BLM State Sensitive Species found in the FMU.

Soil Types from STATSGO

Soil Type	Acres
657	180.41

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660	49.07
662	878.84
665	40165.36
667	53824.33
668	39776.61
669	49.74
670	16460.36
682	1523.74
704	6667.44
710	9344.29
712	47762.03
TOTAL	216,682.22

Federal Threatened and Endangered Species

Bald eagle (*Haliaeetus leucocephalus*)  
California condor (*Gymnogyps californianus*)  
Hermit milkvetch (*Astragalus ampullarioides*)  
Mexican spotted owl (*Strix occidentalis lucida*)  
Southwest willow flycatcher (*Empidonax traillii extimus*)

State Sensitive Species

Allen ' s big-eared bat (*Idionycteris phyllotis*)  
American white pelican (*Pelecanus erythrorhynchos*)  
Arizona toad (*Bufo microscaphus microscaphus*)  
Astragalus (*Astragalus striatiflorus*)  
Baird Camissonia (*Camissonia bairdii*)  
Bell ' s vireo (*Vireo bellii*)  
Big free-tailed bat (*Nyctinomops macrotis*)  
Black swift (*Cypseloides niger*)  
Blue grosbeak (*Guiraca caerulea*)  
Brazilian free-tailed bat (*Tadarida brasiliensis mexicana*)  
Burrowing owl (*Athene cunicularia*)  
Cactus mouse (*Peromyscus eremicus*)  
California kingsnake (*Lampropeltis getulus californiae*)  
Caspian tern (*Sterna caspia*)  
Chisel-toothed kangaroo rat (*Dipodomys microps celsus*)  
Clark ????(*Lomatium grazeolens var. clarki*)  
Common Yellowthroat (*Geothlypis trichas*)  
Cryptantha (*Cryptantha semiglabra*)  
Desert shrew (*Notiosorex crawfordi*)  
Desert spring snail (*Pyrgulopsis deserta*)  
Desert sucker (*Catostomus clarki*)  
Ferruginous hawk (*Buteo regalis*)

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Flannelmouth sucker (*Catostomus latipinnis*)  
Fringed myotis (*Myotis thysanodes*)  
Goldenweed (*Haploppapus leverichii*)  
Gumbo milkvetch (*Astragalus ampullarius*)  
Lewis' woodpecker (*Melanerpes lewis*)  
Merriam' s kangaroo rat (*Dipodomys merriami*)  
Mojave patch-nosed snake (*Salvadora hexalepis mojavensis*)  
Northern goshawk (*Accipiter gentilis*)  
Osprey (*Pandion haliaetus*)  
Pediomelum (*Pediomelum aromaticum var. barnebyi*)  
Penstemon (*Penstemon ammophilus*)  
Peregrine Falcon (*Falco peregrinus anatum*)  
Plateau striped whiptail (*Cnemidophorus velox*)  
Ringtail (*Bassariscus astutus*)  
Sonoran lyre snake (*Trimorphodon biscutatus lambda*)  
Southern grasshopper mouse (*Onychomys torridus*)  
Southwestern black-headed snake (*Tantilla hobartsmithi*)  
Spotted bat (*Euderma maculatum*)  
Swainson' s hawk (*Buteo swainsoni*)  
Townsend' s big-eared bat (*Plecotus townsendii*)  
Ut. mtn. kingsnake (*Lampropeltis pyromelana infralabialis*)  
Utah banded gecko (*Coleonyx variegatus utahensis*)  
Virgin River montane vole (*Microtus montanus rivularis*)  
Virgin spinedace (*Lepidomeda mollispinis mollispinis*)  
Western chuckwalla (*Sauromalus obesus obesus*)  
Western red bat (*Lasiurus blossevillii*)  
Yellow-billed cuckoo (*Coccyzus americanus occidentalis*)\*  
Zion Canyon snail (*Physella zionis*)  
Zion daisy (*Erigeron zionis*)  
Zion jamesia (*Jamesia Americana var. zionis*)

\* Federal Candidate Species

**SOURCE:**

U. S. Fish and Wildlife Service, 50 CFR 17.11 and 17.12 Federal Register /Vol. 61, No. 40/ February 28, 1996

Utah State Sensitive Species List, Prepared By: Utah Division of Wildlife Resources, February 1998

Bureau of Land Management Instruction Memorandum No. UT. 2003-027

Federal Register/ Vol. 64, No. 128/ July 6, 1999/ Proposed Rules

Federal Register/ Vol. 65, No. 71/ April 12, 2000/ Proposed Rules

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Federal Register/ Vol. 66, No. 6/ January 9, 2001/ Proposed Rules

Federal Register/ Vol. 66, No. 189/ September 28, 2001/ Final Rule

The bald eagle (Threatened Species) occurs in the FMU during the winter months (November to April) with use being concentrated around the several reservoirs on the Virgin River. Upland areas maybe used for hunting and feeding opportunities. No bald eagle nests or special roost areas have been identified. All riparian areas within the FMU are considered special use areas for bald eagles. California condors (Endangered Species) are not expected to occur in the area except as occasional visitors. Condors have been released from captive breeding programs into the Grand Canyon area in the recent past. Sightings of condors have been documented in the FMU, but no special use areas have been identified. Several nesting sites of the Southwestern willow flycatcher (SWIFL) have been identified along the Virgin River (outside the FMU) with nesting occurring between May 1 and September 30. Suitable SWIFL nesting habitat does occur within the FMU along the Virgin River, North Creek, and Gould Wash. These riparian areas should be protected from wildfire.

One population of Shivwits milkvetch (Endangered Species) occurs north of Springdale, just outside the FMU (located on Zion National Park). This population occurs at lower elevations, in low density vegetation, with low potential for wildfire. This population has been mapped and should be protected.

Critical Habitat for Mexican Spotted Owl (Spotted Owl, Endangered Species) is designated within the FMU. No nesting sites or special use areas have been identified, but spotted owl nesting does occur in the Kolob FMU to the north and within Zion National Park. These nests are found in steep, rough canyons at higher elevation and have low potential for wildfire. The Division of Wildlife Resources (DWR) is completing a nesting survey for spotted owl in the FMU. Any nesting or special use areas identified during this survey should be mapped and protected in the future.

There are 52 State Sensitive Species which may occur in the FMU. Many of these species are permanent residents of the area while others may use the areas for part of the year. Most of these species (over 50%) use riparian habitats in the FMU. All riparian areas are mapped, and should be protected.

Other Sensitive Resources

LaVerkin Creek and Smith Creek are classified as wild and recreational and recommended for inclusion in Wild and Scenic Rivers system

Critical deer winter range, as designated by Utah Division of Wildlife Resources

Riparian Values

Areas of Critical Environmental Concern (ACECs)

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Little Creek ACEC-19,302 acres designated to provide special management for high concentrations of prehistoric Virgin Anasazi archeological sites, including habitation sites with architectural features, artifact scatters, rock shelters, and rock art localities (petroglyphs and pictographs). Other values include critical deer winter range, and recreation uses, particularly primitive camping, mountain biking, and hiking.

Canaan Mountain ACEC- 31,355 acres designated to protect the scenic values of Vermillion Cliffs, concentrations of archeological resources, and outstanding primitive recreational opportunities

Gooseberry Mesa- high concentrations of prehistoric Virgin Anasazi archeological sites, including habitation sites with architectural features, artifact scatters, rock shelters, and rock art localities (petroglyphs and pictographs). Outstanding primitive recreational opportunities

Canaan Mountain Wilderness Study Area

Noxious Weeds

Scotch Thistle infestations occur throughout the FMU and are particularly evident on Black Ridge, Little Creek Mountain, and Smith Mesa areas. Hoary Cress is found in the Black Ridge area and small infestations of Yellow Starthistle and Silver Leaf Nightshade also occur in the FMU.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

FIL 1 = 0-2 feet  
FIL 2 = 2-4 feet  
FIL 3 = 4-6 feet  
FIL 4 = 6-8 feet  
FIL 5 = 8-12 feet  
FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	7.76
FIL 2 –	333.62
FIL 3 –	21.12
FIL 4 –	10.4
FIL 5 –	102.36
FIL 6-	138.50
Unclassified-	584.12
TOTAL-	1,197.88

Fire Starts by year

<u>Year</u>	<u>Number</u>
1993	4

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1994	0
1995	9
1996	5
1997	3
1998	6
1999	5
2000	10
2001	20
2002	9
2003	7
TOTAL	78

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**Fire Regime and Condition Class (FRCC):**

**St. George Field Office  
FRCC TABLE**

Date: 8/31/04

FMU Name: Colorado Plateau

FMU Number: 100CPL

174701

Convert pinyon-juniper, juniper, sagebrush, sagebrush/perennial: 30,000 wildfire, 10,000 prescribed fire, 2,000 non-fire fuels. Using non-fire fuels treat 1,000 acres of lowland riparian to reduce risk of fire from tamarisk and improve riparian habitat.

**EXISTING**

**DESIRED**

Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon		0	2	2				
Pinyon-juniper	9,716	6	2	3	1 or 2	herbaceous		see Juniper
Juniper	81,694	47	2	3	1 or 2	herbaceous		42,000 ac. combined
Sagebrush	517	0	2	3	1 or 2	herbaceous		see Juniper
Sagebrush/perennial Grass	2,134	1	2	3	1 or 2	herbaceous		see Juniper



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Blackbrush	50,753	29	5	2				
Grassland	7487	4	1	3				
Desert Grassland	3,199	2	1	3				
creosote-bursage	123		5	2				
Lowland Riparian	1,328		4	3	1 or 2	from tamarisk to cottonwood/willow		1000 ac. Mechanical and/or chemical
Mtn. Shrub	9,219		2	2				
Oak	588		1	2				
Salt Desert Scrub	4,767		5	3				
urban	4							
Barren	3,068	2						

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other	19	0						
Agriculture	87	0						

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**Values at Risk:**

Loss of riparian habitat through fire could locally affect bald eagle habitat within all riparian areas in the FMU by eliminating roost sites and effecting prey base. Wild fire could cause a short term affect (up to 10 years) on suitable SWIFL nesting habitat along the Virgin River, North Creek and Gould Wash. More than 50% of the State Sensitive Species (52 species) depend on riparian habitat. Loss of riparian through wild fire would locally affect these species up to 10 years.

It is not known what affect wild fire may have on Shivwits milkvetch (located on Zion Park). The Shivwits milkvetch is extremely vulnerable to any disturbances because of their limited size of populations and their low number of individuals in each population. Generally, potential for wild fire in its habitat is low due to low density of vegetation.

On Smith Mesa, large blocks of private land are intermixed with public lands, near the boundary with Zion NP. Ranch buildings, agricultural fields, and summer cabins are present on the private lands.

Interstate 15 bisects a portion of the FMU; a designated BLM utility corridor, which includes power and natural gas transmission lines, and communication facilities parallels the highway.

The North Creek Riparian Demonstration Area is located in the FMU and contains important cottonwood-willow galleries and riparian values. Virtually all of La Verkin Creek and Smith Creek has been determined eligible and classified primarily as wild for future inclusion into the Wild and Scenic River system. St. George Field Office-administered lands located north of New Harmony (public lands in T. 38 S., R. 13 W, sections 1, 3, 12, 13) would be subject to Cedar City Field Office fire management and guidance.

The Black Ridge area is crucial winter habitat for mule deer.

Archeological site concentrations, including architectural features and rock art localities within Little Creek Mountain ACEC and on Gooseberry Mesa are National Register-eligible properties and susceptible to adverse effects related to high intensity wildfires, suppression methods, and post-fire erosion.

**Communities at Risk:**

Pintura, Mountain Dell, and other small rural residential areas are located within the FMU. New Harmony, Kolob Ranches on the north, Apple Valley, Hildale, and Colorado City to the east, are all communities which are near the FMU and may require some protection measures. Fuel treatment projects have been completed and more are planned to aid in protecting these communities from fire.

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Of notable concern are rights-of-ways associated with:

Interstate I-15

Transmission Corridor paralleling I-15

Black Ridge Communication Site

T 40 S R 13 W

Little Creek Radio Tower

T 42 S R 12 W

**Fire Management Objectives:**

Land Use Plan Objectives

Vegetation Resources

The St. George RMP (approved March 1999) directs the following: (ROD/RMP 1999: 2.21)

- 1) in the mountain shrub and sagebrush vegetation types, habitat diversity should be maximized, by reducing the amount of shrubs and sagebrush and increasing grass and forbs in selected areas.
- 2) in the pinyon-juniper woodland type, maximize habitat diversity in selected areas by reducing the number of trees and increasing desirable shrubs, grasses, and forbs.
- 3) in riparian areas within the mountain shrub type, maximize habitat diversity by maintaining woody species composition while providing for stream bank protection thorough adequate forb and grass cover.
- 4) fire management is an approved means of achieving these objectives.

Within the FMU, management objectives would include appropriate management response to improve mule deer winter habitat by increasing the amount and diversity of forbs and herbaceous material. This would also improve livestock forage. This would include conversion of up to 42,000 acres of juniper, pinyon-juniper sagebrush and sagebrush/perennial grass to plant communities with more grass and forbs. Wildfire could be 3,000 acres/year over ten years to total 30,000 acres; prescribed fire would be a total of 10,000 acres over ten years and there would be 2,000 acres of non-fire fuels treatment.

Objectives to protect diverse woody age structure in cottonwood-willow riparian habitat are desired.

Reduce the susceptibility of the area to catastrophic wildfire.

General objectives for riparian areas are to protect diverse woody age structure in cottonwood-willow communities which are often irreplaceable after fire occurrences.

Fire Management Strategies:

**Suppression:**

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Suppress fires outside of blackbrush, salt desert scrub, desert grassland and creosote-bursage at 1,500 acres/ fire or 3,000 acres/year. Considerable variations could be recommended by the Resource Advisor and approved by the Field Office Manager.

In the blackbrush, salt desert scrub, desert grassland and creosote-bursage areas, use full suppression.

Fire suppression within riparian zones is a priority to prevent destruction of endangered species habitat and maintain riparian values and condition. Management constraints within the riparian buffer zone include: No blading, minimize vehicle disturbance in the stream course, minimal vehicle disturbance and no removal of unburned vegetation in the riparian area. Restrictions on use of foam and aerial retardant (requires non-toxic certification). However, if during extreme conditions where the entire riparian habitat is in jeopardy, the Resource Advisor could allow all necessary suppression tactics to avoid the total loss of habitat, especially where native communities exist.

Fire suppression on Little Creek Mountain ACEC, Canaan Mountain ACEC, Canaan Mountain, Red Butte and Watchman, Taylor Creek and Gooseberry Mesa WSA's would apply MIST techniques, under the direct supervision of the Resource Advisor, in consultation with a qualified archeologist. Retardant use in the Canaan Mountain, Red Butte, and Watchman Taylor Creek and Gooseberry Mesa WSA's will be approved only after consultation with resource advisor. The resource advisor will consult the agency administrator, as appropriate, on all retardant use within these WSAs. (ROD/RMP 1999: 2.21)

All fire suppression tactics involving the use heavy equipment will require direct involvement with and oversight by a qualified archeologist. The archeologist will review available databases, and, as needed, conduct pedestrian survey ahead of any heavy equipment use that has the potential to adversely affect National Register-eligible or listed properties. Adverse effects to historic properties will be avoided to the maximum extent possible, when such actions do not compromise human safety or other highly sensitive values.

Riparian areas within this Category which require full suppression within 1/8-mile where possible are listed below:

North Creek	T 41 S	R 11 W
Virgin River		
Gould Wash	T 43 S	R 11 W
Horse Valley Wash	T 42 S	R 11 W
Ash Creek	T 39 S	R 12 W, 13 W
Wet Sandy Wash	T 40 S	R 13 W
Dry Wash	T 40 S	R 12 W

Areas containing private lands, structures (excluding range fences), mining operations, and rights-of-ways located within the FMU would be suppressed within a 1/8-mile buffer.

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Of notable concern are rights-of-ways associated with:

Interstate I-15

Transmission Corridor paralleling I-15

Black Ridge Communication Site

T 40 S R 13 W

Little Creek Radio Tower

T 42 S R 12 W

**Wildland Fire Use:**

Not a fire use area

**Prescribed Fire:**

Prescribed fire is to be used to convert up to 10,000 acres of pinyon-juniper, juniper, sagebrush to sagebrush-perennial grass.

**Non-fire Fuels Treatments:**

Treat 2,000 acres of pinyon-juniper, juniper, sagebrush or sagebrush-perennial grass. Over ten years, reduce fuels on up to 1,000 acres of riparian areas where there are stands of tamarisk. Conduct non-mechanized/ hand thinning type fuels reduction on approximately 100 acres, at selected archeological site locations, including Little Creek Mountain ACEC, Canaan Mountain ACEC, and Gooseberry Mesa, where fuel concentrations put sensitive site types (e.g., rock art panels, artifact scatters, wooden structures) at risk of damage or loss to high-heat, high-intensity fires.

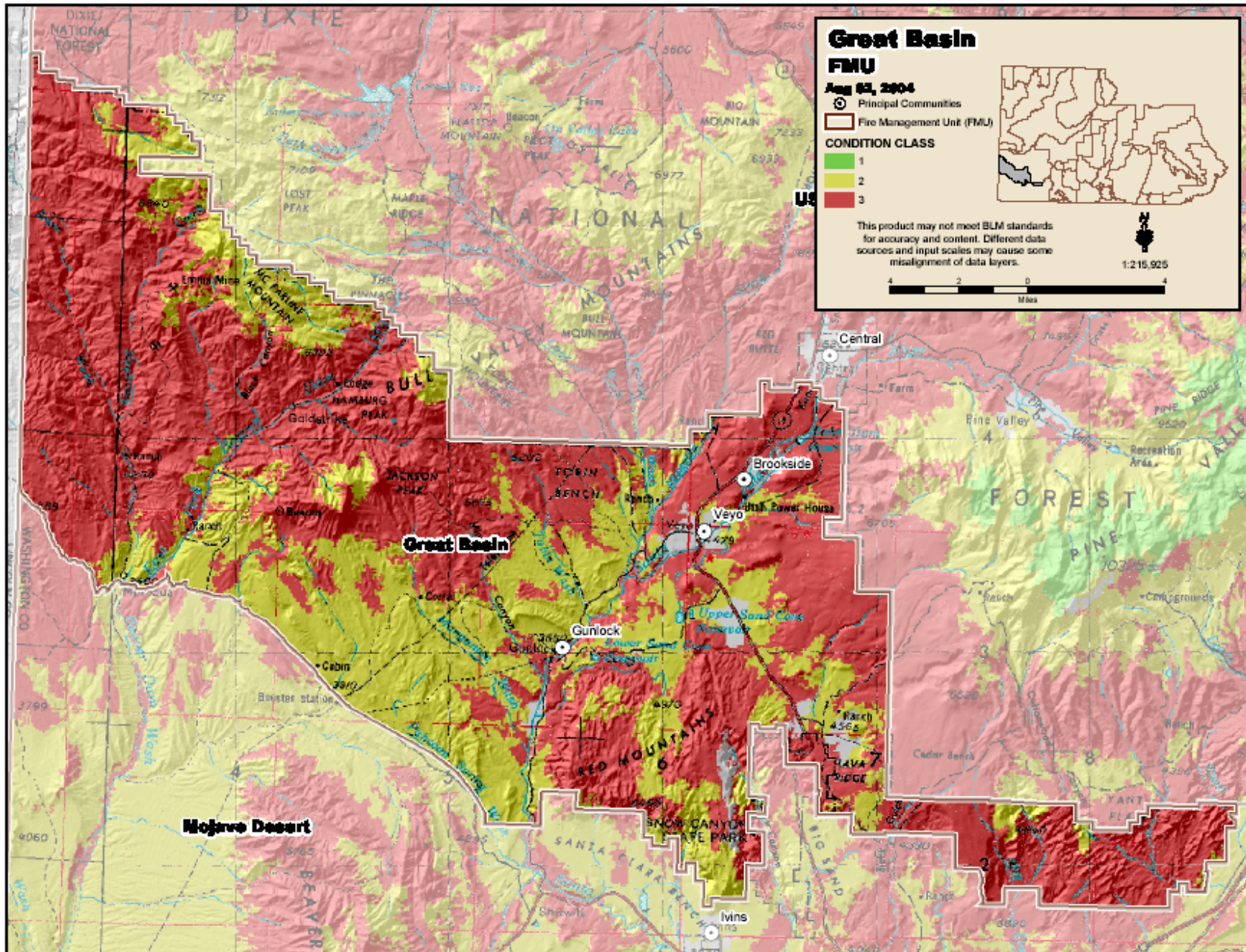
**Stabalization & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan. Stabilization and rehabilitation efforts will focus on reducing the amount and spread of cheat grass, Scotch Thistle, and other invasive species through reseeding, green stripping, and other appropriate methods.

**Community Protection/Community Assistance Objectives:**

Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans.

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**FMU DESCRIPTION**

Great Basin

**Location:**

This Fire Management Unit (FMU) is north of the Motoqua Road and Snow Canyon State Park. On the west is Nevada and on the north and east is the Pine Valley Ranger District of the Dixie National Forest.

Ownership Acres:

BLM –	174,210
Private –	18,287
State –	7,566
USFS	173
Other -	1,555
Total-	201,791

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 3,600 feet to 6,800 feet above sea level.

Precipitation

Precipitation averages from about 10 to 20 inches per year.

Vegetation

Vegetation includes primarily pinyon-juniper, sagebrush, blackbrush, manzanita, service berry and cliffrose. Large wildfires have burned recently in the Motoqua area and currently support shrubs, grasses and annual forbs and grasses (cheatgrass).

STATSGO Soil Types

Soil Type	Acres
656	566.27
664	708.02
665	11081.00
667	3391.76
668	3734.37
669	2100.03
670	56486.87
708	55364.68
709	10010.02
710	10601.06
712	41886.79
746	5521.84
unclassified	339.27
TOTAL	201,791.99

Special Status Species



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Below is a list of Federal Threatened and Endangered Species, and BLM State Sensitive Species found in the FMU.

Federal Threatened and Endangered Species:

Bald eagle (*Haliaeetus leucocephalus*)  
California condor (*Gymnogyps californianus*)  
Desert Tortoise (*Gopherus agassizii*)  
Southwest willow flycatcher (*Empidonax traillii extimus*)

State Sensitive Species:

Allen ' s big-eared bat (*Idionycteris phyllotis*)  
American white pelican (*Pelecanus erythrorhynchos*)  
Arizona toad (*Bufo microscaphus microscaphus*)  
Baird Camissonia (*Camissonia bairdii*)  
Banded gila monster (*Heloderma suspectum cinctum*)  
Bell ' s vireo (*Vireo bellii*)  
Big free-tailed bat (*Nyctinomops macrotis*)  
Black swift (*Cypseloides niger*)  
Blue grosbeak (*Guiraca caerulea*)  
Brazilian free-tailed bat (*Tadarida brasiliensis mexicana*)  
Burrowing owl (*Athene cucularia*)  
Cactus mouse (*Peromyscus eremicus*)  
California kingsnake (*Lampropeltis getulus californiae*)  
Caspian tern (*Sterna caspia*)  
Chisel-toothed kangaroo rat (*Dipodomys microps celsus*)  
Common Yellowthroat (*Geothlypis trichas*)  
Crissal thrasher (*Toxostoma crissale*)  
Desert spring snail (*Pyrgulopsis deserta*) SSS  
Desert sucker (*Catostomus clarki*)  
Ferruginous hawk (*buteo regalis*)  
Flannelmouth sucker (*Catostomus latipinnis*) SS  
Fringed myotis (*Myotis thysanodes*)  
Goldenweed (*Haplopappus leverichii*)  
Gould Camissonia (*Camissonia gouldii*)  
Happlopappus (*Happlopappus crispus*)  
Lewis ' woodpecker (*Melanerpes lewis*)  
Long-billed curlew (*Numenius americanus*)  
Merriam ' s kangaroo rat (*Dipodomys merriami*)  
Mojave desert sidewinder (*Crotalus cerastes cerastes*)  
Mojave patch-nosed snake (*Salvadora hexalepis mojavensis*)  
Mojave zebra-tailed lizard (*Callisaurus draconoides rhodostictus*)  
Nevada willowherb (*Epilobium nevadense*)  
Northern goshawk (*Accipiter gentilis*)  
Osprey (*Pandion haliaetus*)  
Peregrine Falcon (*Falco peregrinus anatum*)  
Plateau striped whiptail (*Cnemidophorus velox*)

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Ringtail (*Bassariscus astutus*)  
Short-eared owl (*Asio flammeus*)  
Sonoran lyre snake (*Trimorphodon biscutatus lambda*)  
Southern grasshopper mouse (*Onychomys torridus*)  
Southwestern black-headed snake (*Tantilla hobartsmithi*)  
Spotted bat (*Euderma maculatum*)  
Swainson's hawk (*Buteo swainsoni*)  
Townsend's big-eared bat (*Plecotus townsendii*)  
Ut. mtn. kingsnake (*Lampropeltis pyromelana infralabialis*)  
Utah banded gecko (*Coleonyx variegatus utahensis*)  
Virgin River montane vole (*Microtus montanus rivularis*)  
Virgin spinedace (*Lepidomeda mollispinis mollispinis*)  
Western chuckwalla (*Sauromalus obesus obesus*)  
Western red bat (*Lasiurus blossevillii*)  
Yellow-billed cuckoo (*Coccyzus americanus occidentalis*)

SOURCE:

U. S. Fish and Wildlife Service, 50 CFR 17.11 and 17.12 Federal Register /Vol. 61, No. 40/ February 28, 1996

Utah State Sensitive Species List, Prepared By: Utah Division of Wildlife Resources, February 1998

Bureau of Land Management Instruction Memorandum No. UT. 2003-027

Federal Register/ Vol. 64, No. 128/ July 6, 1999/ Proposed Rules

Federal Register/ Vol. 65, No. 71/ April 12, 2000/ Proposed Rules

Federal Register/ Vol. 66, No. 6/ January 9, 2001/ Proposed Rules

Federal Register/ Vol. 66, No. 189/ September 28, 2001/ Final Rule

The bald eagle (Threatened Species) occurs in the FMU during the winter months (November to April) with use being concentrated around the several reservoirs on the Virgin River and its tributaries. Upland areas maybe used for hunting and feeding opportunities. No bald eagle nests or special roost areas have been identified. All riparian areas within the FMU are considered special use areas for bald eagles. California condors (Endangered Species) are not expected to occur in the area except as occasional visitors. Condors have been released from captive breeding programs into the Grand Canyon area in the recent past. Sightings of condors have been documented in the FMU, but no special use areas have been identified. Several nesting sites of the Southwestern willow flycatcher (SWIFL) have been identified along the Virgin River (outside the FMU) with nesting occurring between May 1 and September 30. Suitable SWIFL nesting habitat does occur within the FMU along the Santa Clara River, West Fork Beaver Dam Wash and Moody Wash. These riparian areas should be protected from wildfire.

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There is one area in the FMU that is habitat for desert tortoises (Threatened Species): the Red Cliffs Desert Reserve. This area is immediately north of the communities of Ivins, St. George, Washington, and Hurricane. This area is managed as the Red Cliffs Desert Reserve (RCDR) by Washington County. Much of this area lies within city limits, and wildfires are frequently fought by a cooperative force that includes BLM, USFS, State of Utah, and local fire departments. There is some habitat for desert tortoises that is outside of the RCDR, but this makes little difference in regard to fire suppression.

Direct mortality of tortoises results from fires (Esque et al. 1997), as well as habitat degradation resulting from a temporary loss of forage, a shift in forage species, and loss of habitat structure in the form of perennial shrubs that serve as protection from predators and thermal extremes, and may be important in soil structure for desert tortoise burrows (Esque et al. 1994, 1997; Medica et al.1994).

There are 51 State Sensitive Species which may occur in the FMU. Many of these species are permanent residents of the area while others may use the areas for part of the year. Most of these species (over 50%) use riparian habitats in the FMU. All riparian areas are mapped, and should be protected. Besides riparian habitat, another important use area is the Red Cliffs Desert Reserve (RCDR). The RCDR is mapped and should be protected from wildfire.

Other Sensitive Resources

Noxious Weeds

There are a few infestations of Scotch Thistle scattered throughout the FMU but are more commonly found in the Motoqua area. There are also a couple of perennial pepperweed infestations in the Baker Dam Campground area.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

FIL 1 = 0-2 feet  
FIL 2 = 2-4 feet  
FIL 3 = 4-6 feet  
FIL 4 = 6-8 feet  
FIL 5 = 8-12 feet  
FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	1452.61
FIL 2 –	308.33
FIL 3 –	1575.53
FIL 4 –	211.45
FIL 5 –	75.02
FIL 6-	0.15
Unclassified-	510.10
TOTAL-	4133.20

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Fire Starts by year

Year	Number
1993	7
1994	5
1995	3
1996	6
1997	4
1998	11
1999	8
2000	12
2001	8
2002	3
2003	14
TOTAL	81

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**Fire Regime and Condition Class (FRCC):**

**St. George Field Office  
FRCC TABLE**

Date: 8/31/04

FMU Name: Great Basin

FMU Number:  
100GBN

174210

Convert 20% of pinyon juniper, juniper sagebrush, mountain shrub and oak to include more grass and forbs using wildfire and prescribed fire (19,778). Use non-fire fuels to convert 5,000 additional acres of the same vegetation types (24,778 acres total).

<b>EXISTING</b>					<b>DESIRED</b>			
Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon		0	2	2				0
Pinyon-juniper	1,458	1	2	3	1 or 2	forbs & grass	20	292
Juniper	98,889	57	2	3	1 or 2	forbs & grass	20	24,778
Sagebrush	400	0	2	3				0
Sagebrush/perennial Grass		0	2	3				0

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Blackbrush	39,213	23	5	2				0
Grassland		0	1	3				0
Desert Grassland	791	0	1	3				0
creosote-bursage	46	0	5	2				0
Lowland Riparian	3,333	2	4	3				0
Mtn. Shrub	5,719	3	2	2	1 or 2	forbs & grass	20	1,144
Oak	9,266	5	1	2	1 or 2	forbs & grass	20	1,853
Mtn. Riparian	8	0	4	2				0
Salt Desert Scrub	14,263	8	5	3				0
Urban	73	0						0

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Barren	675	0						0
Other	61	0						0
Agriculture	15	0						0

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**Values at Risk:**

Loss of riparian habitat through fire could locally affect bald eagle habitat within all riparian areas in the FMU by eliminating roost sites and effecting prey base. Wild fire could cause a short term affect (up to 10 years) on suitable SWIFL nesting habitat along the Santa Clara River, West Fork Beaver Dam Wash and Moody Wash. More than 50% of the State Sensitive Species (51 species) depend on riparian habitat. Loss of riparian through wild fire would locally affect these species up to 10 years.

Mortality to desert tortoises and/or loss of habitat from wildfire could occur in the Red Cliff Desert Reserve. Loss of habitat would be consider a long term impact which may take over 80 years to recover.

There are three ACECs within this FMU and they are as follows:

- The Upper Beaver Dam Wash ACEC (33,125 acres) has been proposed to conserve watershed and riparian values.
- The Santa Clara/Gunlock ACEC has been designated to protect cultural resources, improve and protect riparian systems and restore habitat for listed and sensitive species.
- The Red Mtn ACEC was designated to protect the beauty of the scenic cliff face.

There are no suitable Wild and Scenic Rivers within this FMU.

The Cougar Canyon, Red Mtn, and Cottonwood Wilderness Study areas occur within the Great Basin FMU.

Critical deer winter range is found in the area west of Damerron Valley.

**Communities at Risk:**

Communities within the FMU that are at risk from fire are Motoqua, Central, Veyo, Brookside, Gunlock, Damerron Valley, and Diamond Valley.

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Vegetation Resources (LUP pg 2.21)

The land use plan indicates that in the mountain shrub and sagebrush vegetation types, maximize habitat diversity by reducing the amount of shrubs and sagebrush and increasing grass and forbs in selected areas.

In the pinyon-juniper woodland type, maximize habitat diversity in selected areas by reducing the number of trees and increasing desirable shrubs , grasses, and forbs.

In riparian areas within the mountain shrub type, maximize habitat diversity by maintaining woody species composition while providing for stream bank protection thorough adequate forb and grass cover.

The LUP also indicates that fire management is one means of achieving this objective.



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Within the FMU, management objectives would include modified suppression activities to improve mule deer winter habitat by increasing the amount and diversity of forbs and herbaceous material. This would also improve livestock forage. Objectives to protect diverse woody age structure in cottonwood-willow riparian habitat are desired.

Reduce the susceptibility of the area to catastrophic wildfire.

General objectives for riparian areas are to protect diverse woody age structure in cottonwood-willow communities which are often irreplaceable after fire occurrences.

Fire Management Objectives

Increase herbaceous vegetation for rangeland health and habitat improvement and reduce the hazards of wildland fire.

Convert 20% (23,000 acres) of pinyon-juniper, juniper, mountain shrub, and oak to forbs and grass improving to Condition Class 1 or 2 over the next 10 years via wildfire and prescribed fire in aggregate.

Treat up to an additional 5,000 acres using non-fire mechanical treatment to reduce fuels on the same vegetation types to create herbaceous vegetation.

Fire Management Strategy

Use appropriate suppression on individual fires larger than 3,000 acres and after 10,000 acres/year. Suppress all fires within the FMU for the maximum protection of special status species and their habitat. Management constraints are mandatory and numerous as referenced below.

Riparian / Riverine Constraints: Riparian and riverine ecosystems within the FMU contain valuable habitat for threatened, endangered and sensitive wildlife species including bald eagles, SWIFLs and a number of State Sensitive Species. In addition, general objectives for riparian areas are to protect diverse woody age structure in cottonwood-willow communities which are often irreplaceable after fire occurrences. As a result, special resource consideration is required in all riparian habitats and referenced below.

Fire suppression within riparian zones is a priority to prevent destruction of endangered species habitat and maintain riparian values and condition. Management constraints within the riparian buffer include: No blading within a 1/8 -mile buffer of the riparian zone, restrictions on vehicle disturbance in the stream course, minimal vehicle disturbance and removal of unburned vegetation in the riparian area, and restrictions on use of foam and aerial retardant (requires non-toxic certification). However, if during extreme conditions where the entire riparian habitat is in jeopardy, the Resource Advisor could allow all necessary suppression tactics to avoid the total loss of habitat, especially where native communities exist.

Riparian areas within the FMU which require full suppression within 1/8-mile where possible are listed below:

Riparian Area	Segment
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Beaver Dam Wash	At Motoqua
Magotsu Creek	All Reaches
Moody Wash	All Reaches
Santa Clara River	Above Shivwits Reservation
West Fork Beaver Dam Wash	Above Motoqua

Bull Canyon	All
Big Springs	All
East Fork Beaver Dam Wash	All
Sheep Canyon	All
Pine Park Canyon	All
Jackson Spring Wash	All
Jackson Reservoir Wash	All
Bunker Peak Wash	All

All special status species habitat in the FMU will follow protocol of fire fighting strategies for "Fighting Wildfire in Desert Tortoise Habitat: Consideration for Land Managers (Duck et al, 1994 Desert Tortoise Council Symposium; 1995, International Association of Wildland Fire)." Which appears as Appendix A. The same protocol will be followed in special status plant areas as it relates to surface disturbing stipulations. A qualified biologist is required as Resource Advisor upon initial attack for these fires.

Areas containing private lands, structures (excluding range fences), mining operations, and rights-of-ways located within the FMU would be suppressed within a 1/4-mile buffer. All blading activities will be closely monitored by an archeologist. Of notable concern are rights-of-ways associated with:

Utility Corridor (across Tobin Bench)

Powerline (Central to St. George)

Several small powerlines located throughout the FMU and are identified in the Land Use Plan.

In the Cougar Canyon, Red Mountain, and Cottonwood Canyon WSAs, allow fires to play a natural role as described in the IMP. Suppression actions would be employed within 1/4-mile for protection of private land and established subdivisions due to heavy fuel loading. Suppression is required during "Red Flag" conditions due to the proximity of private lands or existing heavy fuel loads. Use of "minimum tools" described in the Interim Guidance should be followed, unless fires are located within 1/4-mile of private lands, where full suppression is allowed.

Riparian areas within WSAs do not require suppression action and will be managed in accordance with the IMP guidance.

In the Cottonwood WSA (Desert Tortoise Critical Habitat portion) fires would be suppressed to protect desert tortoise habitat in accordance with both the strategies included in the "Fighting Wildfire in Desert Tortoise Habitat: Consideration for Land Managers" and

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the WSA Interim Guidance. Objectives to protect endangered species override WSA guidelines to allow fire suppression within this WSA. Fires will be suppressed where riparian areas, within a WSA, support Special Status Species.

Objectives for this area also include prevention of fire spread into Dixie National Forest lands where fire is not desired.

**Wildland Fire Use:**

Not a fire use area

**Prescribed Fire:**

Use prescribed fire along with unplanned wildfire to convert up to 23,000 acres to herbaceous vegetation (see objectives above).

**Non-fire fuels Treatments:**

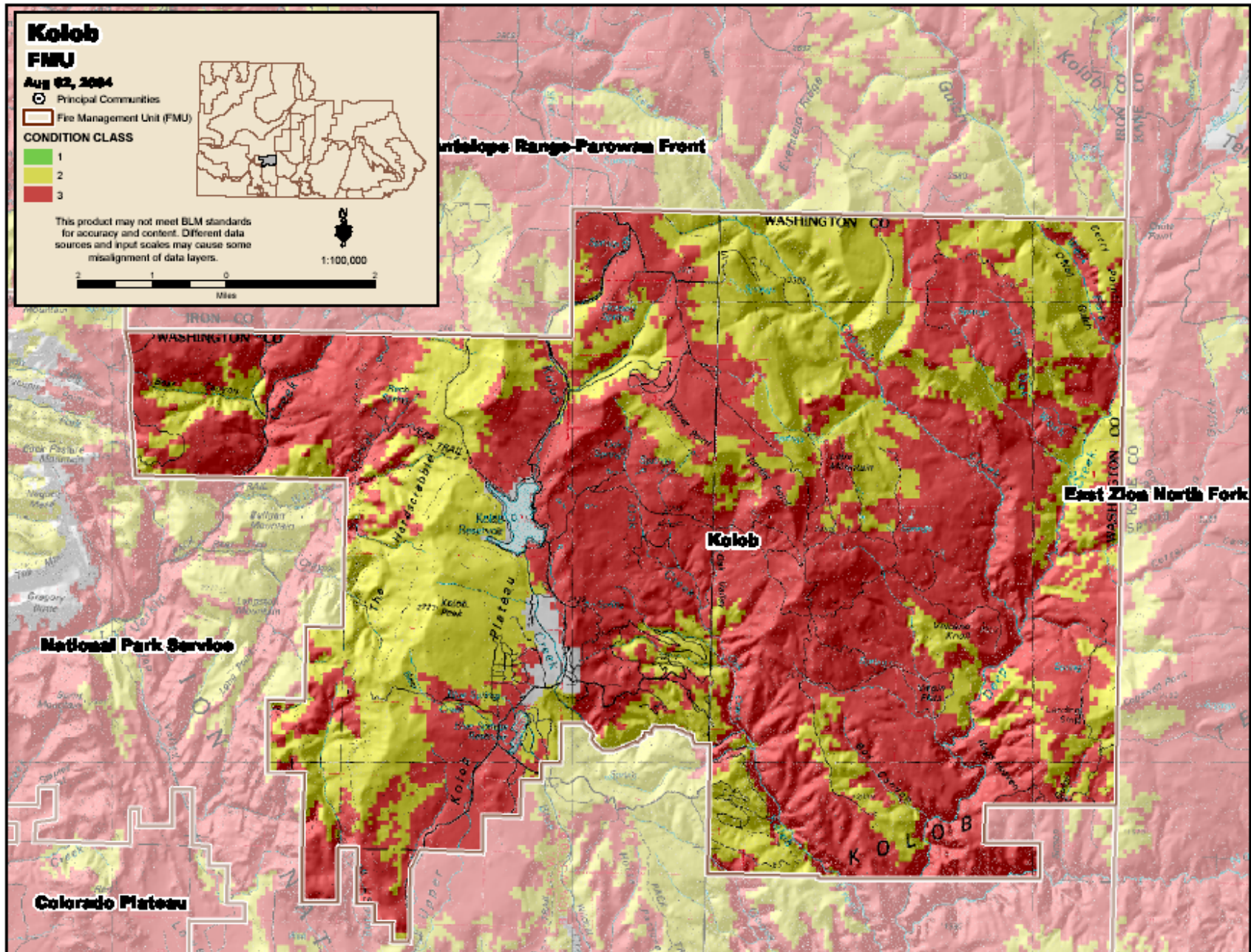
Treat 5,000 acres on pinyon-juniper, juniper, mountain shrub, and oak to create forbs and grass over the next 10 years.

**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan. Cheatgrass and red brome are serious threats to much of this FMU.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).

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**FMU DESCRIPTION**

Kolob

**Location:**

This FMU is generally located north of Zion National Park and east of Kolob Reservoir. Most of the area is within the Deep Creek drainage. On the east, the unit is bounded by the Washington/Kane county line and the Washington/Iron County line to the north.

**Land Ownership in the Kolob FMU**

Land Status	Acres
BLM –	12,178.27
Private –	44,738.23
State –	1,047.14
NPS-	25.90
Other –	43.50
Total-	58,033.00

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 6,500 feet to 7,000 feet above sea level.

Precipitation

Precipitation averages about 18 to 20 inches annually. Most precipitation comes in the late winter/early spring in the form of snow and in the late summer/early fall as thunderstorms fed by tropical moisture.

Vegetation

Vegetation consists primarily of mountain shrub, Gambel's oak, open grass meadows, and stands of ponderosa pine.

STATSGO Soil Type

Soil Type	Acres
706	16917.12
707	39404.59
712	1711.37
TOTAL	58033.08

Special Status Species: Below is a list of Federal Threatened and Endangered Species, and BLM State Sensitive Species found in the FMU.

Threatened and Endangered Species

Bald eagle (*Haliaeetus leucocephalus*)  
California condor (*Gymnogyps californianus*)

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Mexican spotted owl (*Strix occidentalis lucida*)

State Sensitive Species

Allen ' s big-eared bat (*Idionycteris phyllotis*)  
American white pelican (*Pelecanus erythrorhynchos*)  
Big free-tailed bat (*Nyctinomops macrotis*)  
Black swift (*Cypseloides niger*)  
Brazilian free-tailed bat (*Tadarida brasiliensis mexicana*)  
Caspian tern (*Sterna caspia*)  
Clark lomatium grazeolens var. clarki)  
Common Yellowthroat (*Geothlypis trichas*)  
Desert sucker (*Catostomus clarki*)  
Ferruginous hawk (*buteo regalis*)  
Flannelmouth sucker (*Catostomus latipinnis*)  
Fringed myotis (*Myotis thysanodes*)  
Goldenweed (*Haploppapus leverichii*)  
Lewis ' woodpecker (*Melanerpes lewis*)  
Northern goshawk (*Accipiter gentilis*)  
Osprey (*Pandion haliaetus*)  
Peregrine Falcon (*Falco peregrinus anatum*)  
Pika (*Ochotona princes*)  
Plateau striped whiptail (*Cnemidophorus velox*)  
Ringtail (*Bassariscus astutus*)  
Southwestern black-headed snake (*Tantilla hobartsmithi*)  
Spotted bat (*Euderma maculatum*)  
Swainson ' s hawk (*Buteo swainsoni*)  
Townsend ' s big-eared bat (*Plecotus townsendii*)  
Ut. mtn. kingsnake (*Lampropeltis pyromelana infralabialis*)  
Virgin River montane vole (*Microtus montanus rivularis*)  
Western red bat (*Lasiurus blossevillii*)  
Zion Canyon snail (*Physella zionis*)  
Zion daisy (*Erigeron zionis*)  
Zion jamesia (*Jamesia Americana* var. *zionis*)

**SOURCE:**

U. S. Fish and Wildlife Service, 50 CFR 17.11 and 17.12 Federal Register /Vol. 61, No. 40/ February 28, 1996

Utah State Sensitive Species List, Prepared By: Utah Division of Wildlife Resources, February 1998

Bureau of Land Management Instruction Memorandum No. UT. 2003-027

Southwest Utah Support Area Fire Management Plan

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Federal Register/ Vol. 64, No. 128/ July 6, 1999/ Proposed Rules

Federal Register/ Vol. 65, No. 71/ April 12, 2000/ Proposed Rules

Federal Register/ Vol. 66, No. 6/ January 9, 2001/ Proposed Rules

Federal Register/ Vol. 66, No. 189/ September 28, 2001/ Final Rule

The bald eagle (Threatened Species) occurs in the FMU during the winter months (November to April) with use being concentrated around the several reservoirs on the Virgin River and its tributaries. Upland areas maybe used for hunting and feeding opportunities. No bald eagle nests or special roost areas have been identified. All riparian areas within the FMU are considered special use areas for bald eagles. California condors (Endangered Species) are not expected to occur in the area except as occasional visitors. Condors have been released from captive breeding programs into the Grand Canyon area in the recent past. Sightings of condors have been documented in the FMU, but no special use areas have been identified.

Critical Habitat for Mexican Spotted Owl (MSO, Endangered Species) is designated within the FMU. One MSO nest occurs in the FMU (Kolob Creek) and additional nests occur in Zion National Park to the south. These nests are found in steep, rough canyons at higher elevation with very low potential for wildfire.

There are 30 State Sensitive Species which may occur in the FMU. Many of these species are permanent residents of the area while others may use the areas for part of the year. Most of these species (over 50%) use riparian habitats in the FMU. All riparian areas are mapped, and should be protected.

Other Sensitive Resources

Elk are known to use this area during the winter and early spring. Since elk calve in the spring, this area has been identified as a “Crucial elk calving area” by the Utah Division of Wildlife Resources.

Wilderness Study Areas (WSAs):

This FMU contains the following WSAs:

WSA	Total Acreage	BLM Proposed Acreage
LaVerkin Creek	567	567
Deep Creek	3,320	3,320
Red Butte	804	804
Taylor Creek	35	35
Goose Creek	89	89
Bear Trap	40	40

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Wild and Scenic Rivers: The following rivers have been evaluated as eligible, classified as wild, and recommended as suitable for Congressional designation into the national Wild and Scenic Rivers system.

Deep Creek (T39S., R. 10 W.)  
Crystal Creek (T38S., R. 10 W)  
Kolob Creek (T.39S., R. 10 W)  
North Fork Virgin River (T.39 S., R. 10 W)  
La Verkin Creek (T. 40S., R. 12 W)  
Smith Creek (T. 39S., R. 12 W)

Short segments, totaling 2.3 miles, of Willis Creek, Beartrap Canyon Creek, Middle Fork of Taylor Creek, North Fork of Virgin River, Goose Creek, and Kolob Creek, on public lands within this FMU (contiguous to reaches in Zion National Park), have been evaluated as eligible, classified as wild, and recommended as suitable for Congressional designation into the national Wild and Scenic Rivers system.

To confer adequate resource protection for all river segments found to be eligible and suitable, management decisions from the St. George RMP were amended (2001) to apply the following to the zone ¼ mile on each side of the high water mark of the rivers:

Will Creek Segment:

Closed to Motorized and Non-Motorized OHV Use  
Closed to Mineral Materials  
Category 3 for Fluid Minerals  
Plan of Operation required for Locatable Minerals

Kolob Narrows Segment

Closed to Motorized and Non-Motorized OHV Use  
Closed to Mineral Materials  
Category 3 for Fluid Minerals  
Plan of Operation required for Locatable Minerals

Goose Creek Segment

Closed to Motorized and Non-Motorized OHV Use  
Category 3 for Fluid Minerals  
Plan of Operation required for Locatable Minerals

River	Legal Description of Segment	Acres
Willis Creek	T.38 S., R.11 W., Sec 27 SWSW	40
Beartrap Canyon	T.39 S., R.11 W., Sec 3 SWNW	40
Goose Creek	T.39 S., R.10 W., Sec 31 NESE.S2SE	120
Middle Fork of Taylor Creek	T.38 S., R.11 W., Sec 30 SWNW	40
Kolob Creek	T.39 S., R.10 W., Sec 30	40

Special Recreation Management Area (SRMA)



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The Deep Creek SRMA encompasses 11,350 acres within this FMU. The area provides stream-based recreation, hunting, fishing, hiking, undeveloped camping, sightseeing, and cross-country skiing.

Noxious Weeds

There are a few Scotch thistle infestations, covering a total of about 10 acres in this FMU. There are extensive infestations of Bull Thistle, and although it is not currently listed as a noxious weed, it is very invasive into the grass meadows and is currently being treated (herbicide and hand control) by the BLM and private land owners in this area.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

- FIL 1 = 0-2 feet
- FIL 2 = 2-4 feet
- FIL 3 = 4-6 feet
- FIL 4 = 6-8 feet
- FIL 5 = 8-12 feet
- FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	677.36
FIL 2 –	284.75
FIL 3 –	350.47
FIL 4 –	0.31
FIL 5 –	0.16
FIL 6-	0.00
Unclassified-	5098.43
TOTAL-	6411.47

Fire Starts by Year

Year	Acres
1993	0
1994	2
1995	1
1996	1
1997	10
1998	0
1999	1
2000	0
2001	5
2002	6
2003	1
TOTAL	27

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**Fire Regime and Condition Class (FRCC):**

**St. George Field Office  
 FRCC TABLE**

Date: 8/31/04

FMU Number:  
 100KLB

FMU Name: Kolob  
 12178

Fire use of 500 acres is allowed. Use appropriate management response on 500 acres using natural fire breaks to contain the fire. Use non-fire fuels treatments on 1000 acres to reduce ponderosa competition and reduce fuels that threaten structures on private lands.

**EXISTING**

**DESIRED**

Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon	24	0	2	2				
Pinyon-juniper	2,114	17	2	3				1,000
Juniper	3,824	31	2	3				
Sagebrush		0	2	3				
Sagebrush/perennial Grass	2,837	23	2	3				

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Aspen	17	0	4	2				
Grassland	54	0	1	3				
Dry Meadow	155	1	1	3				
Mtn Fir	40	0	3	1				
Lowland Riparian		0	4	3				
Mtn. Shrub	75	1	2	2				
Oak	3,038	25	1	2				
Mtn. Riparian		0	4	2				
Salt Desert Scrub		0	5	3				
urban		0						

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Barren		0						
other		0						
Agriculture		0						

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**Values at Risk:**

Special Status Species

Loss of riparian habitat through fire could locally affect bald eagle habitat within all riparian areas in the FMU by eliminating roost sites and effecting prey base. More than 50% of the State Sensitive Species (30 species) depend on riparian habitat. Loss of riparian through wild fire would locally affect these species up to 10 years.

Watershed Protection

Maintaining the water quality of small creeks that flow through this FMU, including Deep Creek and Crystal Creek, is critical. These creeks continue within the boundaries of Zion National Park and are enjoyed by Park visitors and local private property owners. Game/non-game/coldwater fisheries are identified as water-based resource values for Deep, Crystal, Kolob, and LaVerkin Creeks in this FMU.

Riparian Areas

Native riparian vegetation and maintaining natural hydrologic processes are important values here, including those associated with LaVerkin Creek, Kolob Creek, North Creek, Deep Creek and Crystal Creek. This FMU includes the extremely remote and rugged areas of Deep Creek and Crystal Creek. Vehicle access can be difficult since several of the access roads have locked gates where passing through private lands.

Ponderosa Pine

Although present on the neighboring Park Service, Forest Service and private lands, this FMU contains some of the very few stands of Ponderosa pine are found on public lands in the SGFO. These are susceptible to catastrophic fire (crown fires) but require cool surface burns to maintain themselves. Proper fire management is critical for ponderosa pine in this FMU.

Deep Creek SRMA:

Preserving scenic vistas, water-based recreation and primitive recreation opportunities, wild and scenic rivers “outstandingly remarkable values” will require prescriptive fire management, hazard fuels reduction, and appropriate suppression tactics.

**Communities at Risk:**

Zion Panoramic subdivision is adjacent to this FMU and fuel treatment projects are being considered to reduce the fire hazard to the numerous cabins within this development. Past wildfires have threatened these cabins on several occasions and great efforts were made to prevent fire from spreading into the development. There are also several isolated cabins located on private lands scattered throughout the FMU.

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Kolob Reservoir receives intensive recreational use, especially during spring, summer and fall months.

Land Use Plan Objectives

The land use plan indicates that in the mountain shrub and sagebrush vegetation types, maximize habitat diversity by reducing the amount of shrubs and sagebrush and increasing grass and forbs in selected areas. The LUP also indicates that fire management is one means of achieving this objective.

In riparian areas within the mountain shrub type, maximize habitat diversity by maintaining woody species composition while providing for stream bank protection through adequate forb and grass cover.

Apply Interim Management Policy for WSAs, so as not to impair the suitability of the areas for preservation as wilderness.

Eligible Wild and Scenic River segments with wild classification require that “values must remain natural appearing and... practices do not have an adverse effect on the natural character of the river area”. Similar practices are mandated under the Deep Creek SRMA management to assist with maintaining the natural values of the SRMA.

Fire Management Objectives

Utilize modified suppression to improve herbaceous vegetation for elk and mule deer, livestock forage, and other upland species such as wild turkey and grouse.

Within WSAs, monitor and allow fire occurrence, as provided for in the existing Wilderness Study Area “Interim Management Policy “(IMP). Refer to the WSA Policy and Plan regarding specific suppression authority.

In areas with dominant or considerable ponderosa pine habitat, such as Deep or Crystal Creeks, objectives to protect existing stands from crown fires and loss of ponderosa communities are desired. Historically, fire suppression has created heavy loading and ladder fuels within the area, such that wildfire at this time has the potential to be disastrous with much of the ponderosa pine community being lost. With fuel management, prescribed fire or other strategies, heavy fuel loads could be reduced to decrease the potential for extreme fire conditions and maintain existing ponderosa pine communities.

Fire Management Strategies:

**Suppression:**

Utilize appropriate management response to allow burning of 500 acres cumulatively per year with no size limit per fire up to 500 acres where possible by using roads or natural fire breaks. Considerable variations could be allowed by the Resource Advisor.

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Areas containing private lands, structures (excluding range fences), and rights-of-ways would be suppressed within a 1/4-mile buffer. All heavy equipment use during suppression activities will require an archaeological inventory and avoidance of adverse effects to National Register-eligible or listed properties, to the extent practicable, in balance with the need to protect human life and property.

In areas with dominant or considerable ponderosa pine habitat, such as Deep or Crystal Creeks, objectives to protect existing stands from crown fires and loss of ponderosa communities are desired. Suppression is required during "Red Flag" conditions within this category, due to the proximity of private lands, existing heavy fuel loads, and presence of scattered ponderosa pine stands.

Riparian ecosystems within the region contain valuable habitat for numerous wildlife species, including bald eagles. General objectives for riparian areas are to protect diverse woody age structure in cottonwood-willow communities which are often irreplaceable after fire occurrences. Although special resource consideration is required in all riparian habitats, the majority of riparian habitat is along Deep Creek and Crystal Creek which have been determined eligible rivers under the Wild and Scenic Rivers Act. See below.

For eligible Wild and Scenic River segments classified as wild the "values must remain natural appearing and... practices do not have an adverse effect on the natural character of the river area.". In these segments, fires do not require suppression activities unless contiguous to private lands and in accordance with other management guidance.

Eligible Wild and Scenic River segments with wild classification are:

Crystal Creek	T 38 S, 39 S R 10 W
Deep Creek	T 38 S, 39 S R 10 W
Willis Creek	T.38 S., R.11 W., Sec 27 SWSW
Beartrap Canyon	T.39 S., R.11 W., Sec 3 SWNW
Goose Creek	T.39 S., R.10 W., Sec 31 NESE.S2SE
Middle Fork of Taylor Creek	T.38 S., R.11 W., Sec 30 SWNW
Kolob Creek	T.39 S., R.10 W., Sec 30

Any other riparian ecosystems in this area (other than Wild and Scenic River segments) would have the following management constraints within the riparian buffer: No blading within a 1/8-mile buffer of the riparian zone, restrictions on vehicle disturbance in the stream course, minimal vehicle disturbance and removal of unburned vegetation in the riparian area, and restrictions on use of foam and aerial retardant (requires non-toxic certification). However, if during extreme conditions where the entire riparian habitat is in jeopardy, the Resource Advisor could allow all necessary suppression tactics to avoid the total loss of habitat, especially where native communities exist.

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In all WSAs, allow fires to play a natural role as described in the IMP. Suppression actions would be employed within 1/4-mile for protection of private land and established subdivisions due to heavy fuel loading. In areas with dominant or considerable ponderosa pine habitat, objectives to protect existing stands from crown fires and loss of ponderosa communities are desired. Suppression is required during “Red Flag” conditions due to the proximity of private lands, existing heavy fuel loads, and presence of scattered ponderosa pine stands. Use of “minimum tools” described in the Interim Guidance should be followed, unless fires are located within 1/4-mile of private lands, where full suppression is allowed.

Riparian areas within WSAs do not require suppression action and will be managed in accordance with the IMP guidance.

**Wildland Fire Use:**

Allow 500 acres cumulatively per year with no size limit per fire up to 500 acres where possible by using roads or natural fire breaks.

**Prescribed Fire:**

Once heavy fuels are removed, use cool surface burns to maintain the ponderosa stands.

**Non-fire fuels Treatments:**

Reduce fuels on 1000 acres mostly in the ponderosa vegetative community. Also reduce fuels that may threaten structures on private lands.

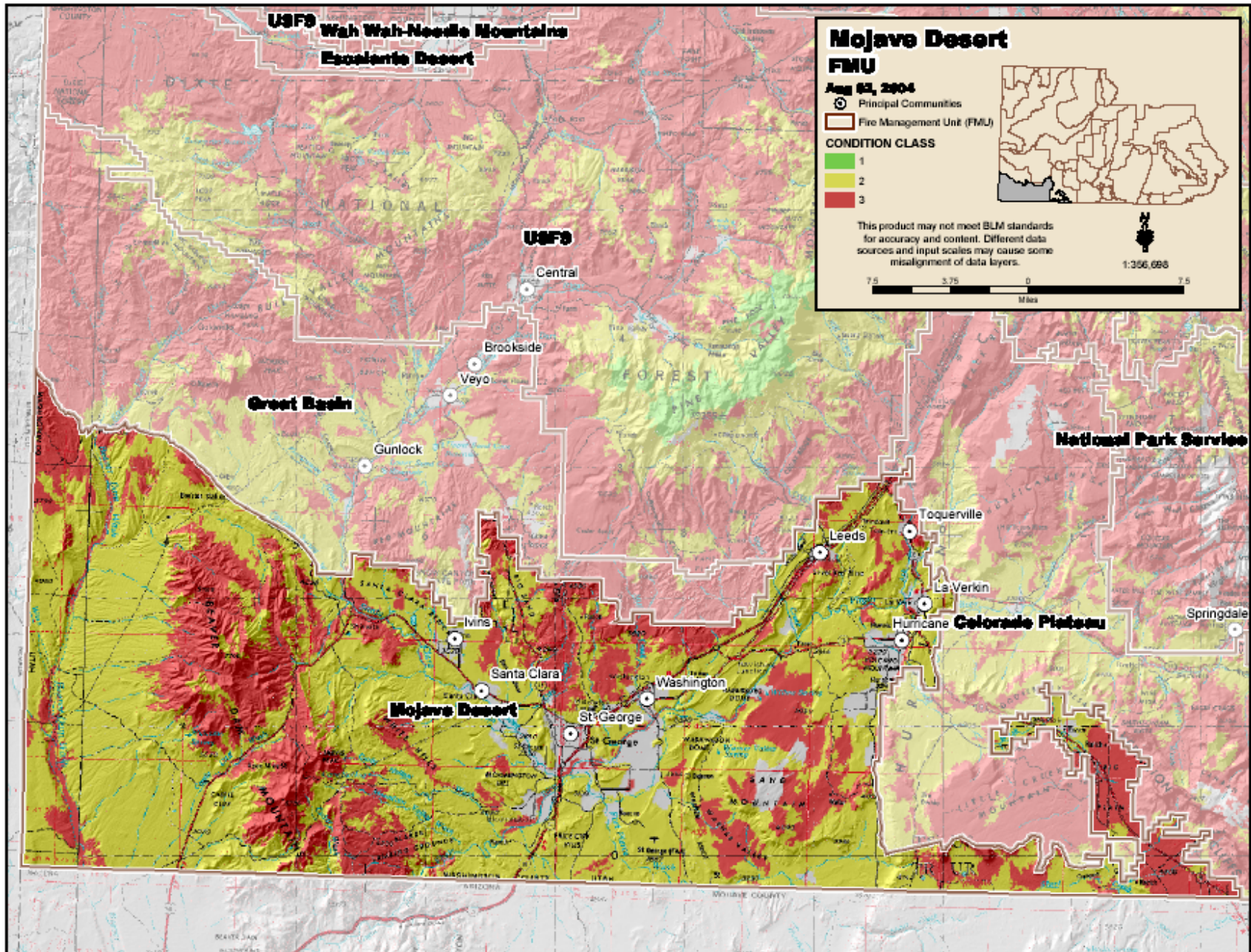
**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan. At this elevation there is generally a reduced threat from cheatgrass invasion following wildfires.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).



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**FMU DESCRIPTION**

Mohave Desert

Location:

This FMU is located in the southwest corner of the St. George Field Office. On the south is the Arizona state line & Arizona Strip Field Office and on the West is the Nevada stateline & the Caliente Field Office. The Great Basin FMU is to the north and the Colorado Plateau FMU on the east. This is a large unit encompassing the population areas of Washington County. It also has the most private land.

Within this FMU there is an area which is dominated by local communities, private and state lands, scenic corridors interfaced with public lands, and areas in the RA with less than 12 inches of precipitation per year. The blocks of public lands in the central part of the FMU include the communities of Ivins, St. George, Santa Clara, Washington Hurricane and Leeds. East of the Hurricane Cliffs within the FMU, is a smaller block of private lands near Big Plains. It includes an agricultural area and the small community of Apple Valley. Included in this area are a number of small ranches with single residential houses. The Virgin River bisects a large portion of the FMU and is surrounded primarily by private and state lands.

**Land Ownership in the Mohave FMU**

BLM	267,301
Private	126,772
State	59,515
Indian Reservation	28,182
State, County, City	6,526
Other	896
<b>TOTAL</b>	<b>489,191</b>

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**Characteristics:**

Elevation and Precipitation: Elevation ranges from approximately 2400 (2188) feet to 5200 (7618) feet above sea level. Precipitation averages about 2 inches of water per quarter and 8 inches of water per year, as recorded at St. George rain gauge.

Vegetation: Vegetation on public lands in the central part of the FMU is primarily a desert shrub community with low potential for fire. There are some isolated areas that have been previously disturbed and have greater densities of vegetation which include mesquite, skunkbush, rabbitbrush, and four-wing saltbrush. Also, some vegetation north of Leeds includes stands of live oak and pinyon-juniper. Both the previously disturbed sites and the live oak and pinyon-juniper areas have a higher potential for fire occurrence.

East of the Hurricane Cliffs, near Apple Valley, vegetation consists of sagebrush in the lower elevations, with moderate stands of pinyon-juniper at the higher elevations.

The Virgin River bisects a large portion of the FMU. Typical vegetation along the river would include Fremont cottonwood, Coyote willow and tamarisk. There are some wide riparian areas in the FMU. This is particularly true around the communities of St. George and Washington where large stands of tamarisk (1/4 to 3/8 miles across) occur. A high potential for fire exists in these wide stands of tamarisk.

Soil Types All Ownership (refer to STATSGO map)

<u>Soil Type</u>	<u>Acres</u>
662	71546.56
663	23669.33
664	36748.26
665	62578.93
667	4293.99
668	31161.00
669	7850.64
670	33222.50
708	13142.46
709	35130.2
710	208.09
712	73376.93
746	95758.25
<u>unc</u>	<u>507.20</u>
TOTAL	489191.33

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Special Status Species: Below is a list of Federal Threatened and Endangered Species, and BLM State Sensitive Species found in the FMU.

Federal Threatened and Endangered Species

Bald eagle (*Haliaeetus leucocephalus*)  
California condor (*Gymnogyps californianus*)  
Desert tortoise (*Gopherus agassizii*)  
Dwarf bear-poppy (*Arctomecon humilis*)  
Hermit milkvetch (*Astragalus ampullarioides*)  
Holmgren milkvetch (*Astragalus holmgreniorum*)  
Siler pincushion cactus (*Pediocactus sileri*)  
Southwest willow flycatcher (*Empidonax traillii extimus*)  
Virgin River chub (*Gila seminuda*)  
Woundfin (*Plagopterus argentissimus*)

State Sensitive Species

Allen ' s big-eared bat (*Idionycteris phyllotis*)  
American white pelican (*Pelecanus erythrorhynchos*)  
Arizona toad (*Bufo microscaphus microscaphus*)  
Banded gila monster (*Heloderma suspectum cinctum*)  
Bell ' s vireo (*Vireo bellii*)  
Big free-tailed bat (*Nyctinomops macrotis*)  
Black swift (*Cypseloides niger*)  
Blue grosbeak (*Guiraca caerulea*)  
Brazilian free-tailed bat (*Tadarida brasiliensis mexicana*)  
Burrowing owl (*Athene cunicularia*)  
Cactus mouse (*Peromyscus eremicus*)  
California kingsnake (*Lampropeltis getulus californiae*)  
Caspian tern (*Sterna caspia*)  
Chisel-toothed kangaroo rat (*Dipodomys microps celsus*)  
Common Yellowthroat (*Geothlypis trichas*)  
Crissal thrasher (*Toxostoma crissale*)  
Desert glossy snake (*Arizona elegans eburnata*)  
Desert iguana (*Dipsosaurus dorsalis*)  
Desert kangaroo rat (*Dipodomys deserti*)  
Desert night lizard (*Xantusia vigilis vigilis*)  
Desert spring snail (*Pyrgulopsis deserta*)  
Desert sucker (*Catostomus clarki*)

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Ferruginous hawk (*buteo regalis*)  
Flannelmouth sucker (*Catostomus latipinnis*)  
Fringed myotis (*Myotis thysanodes*)  
Goldenweed (*Haploppapus leverichii*)  
Gould Camissonia (*Camissonia gouldii*)  
Gumbo milkvetch (*Astragalus ampullarius*)  
Lewis' woodpecker (*Melanerpes lewis*)  
Long-billed curlew (*Numenius americanus*)  
Lowland leopard frog (*Rana yavapaiensis*)  
Merriam's kangaroo rat (*Dipodomys merriami*)  
Mojave desert sidewinder (*Crotalus cerastes cerastes*)  
Mojave patch-nosed snake (*Salvadora hexalepis mojavensis*)  
Mojave rattlesnake (*Crotalus scutulatus scutulatus*)  
Mojave zebra-tailed lizard (*Callisaurus draconoides rhodostictus*)  
Nevada willowherb (*Epilobium nevadense*)  
Northern goshawk (*Accipiter gentilis*)  
Osprey (*Pandion haliaetus*)  
Peregrine Falcon (*Falco peregrinus anatum*)  
Petalonyx (*Petalonyx parryii*)  
Plateau striped whiptail (*Cnemidophorus velox*)  
Ringtail (*Bassariscus astutus*)  
Sanderson ambrosia (*Ambrosia sandersonii*)  
Short-eared owl (*Asio flammeus*)  
Sonoran lyre snake (*Trimorphodon biscutatus lambda*)  
Southern grasshopper mouse (*Onychomys torridus*)  
Southwestern black-headed snake (*Tantilla hobartsmithi*)  
Southwestern Speckled rattlesnake (*Crotalus mitchellii pyrrhus*)  
Spotted bat (*Euderma maculatum*)  
Swainson's hawk (*Buteo swainsoni*)  
Townsend's big-eared bat (*Plecotus townsendii*)  
Ut. mtn. kingsnake (*Lampropeltis pyromelana infralabialis*)  
Utah banded gecko (*Coleonyx variegatus utahensis*)  
Utah blind snake (*Leptotyphlops humilis utahensis*)  
Virgin River montane vole (*Microtus montanus rivularis*)  
Virgin River thistle (*Cirsium virginensis*)  
Virgin spinedace (*Lepidomeda mollispinis mollispinis*)

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Western chuckwalla (*Sauromalus obesus obesus*)  
Western red bat (*Lasiurus blossevillii*)  
Yellow-billed cuckoo (*Coccyzus americanus occidentalis*)

**SOURCE:**

U. S. Fish and Wildlife Service, 50 CFR 17.11 and 17.12 Federal Register /Vol. 61, No. 40/ February 28, 1996

Utah State Sensitive Species List, Prepared By: Utah Division of Wildlife Resources, February 1998

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Federal Register/ Vol. 65, No. 71/ April 12, 2000/ Proposed Rules

Federal Register/ Vol. 66, No. 6/ January 9, 2001/ Proposed Rules

Federal Register/ Vol. 66, No. 189/ September 28, 2001/ Final Rule

The bald eagle (Threatened Species) occurs in the FMU during the winter months (November to April) with use being concentrated around the several reservoirs on the Virgin and Santa Clara Rivers. Upland areas maybe used for hunting and feeding opportunities. No bald eagle nests or special roost areas have been identified. All riparian areas within the FMU are considered special use areas for bald eagles. California condors (Endangered Species) are not expected to occur in the area except as occasional visitors. Condors have been released from captive breeding programs into the Grand Canyon area in the recent past. Sightings of condors have been documented in the FMU, but no special use areas have been identified. Several nesting sites of the Southwestern willow flycatcher (SWIFL) have been identified in the FMU (Virgin River). Nesting occurs between May 1 and September 30. The following riparian areas, have suitable SWIFL nesting habitat and should be protected from wildfire: Virgin River, Santa Clara River, Beaver Dam Wash, Moody Wash and Leeds Creek.

There are two areas in the FMU that are habitat for desert tortoises (Threatened Species): the Beaver Dam Slope and the Red Cliffs Desert Reserve. The Beaver Dam Slope in Utah lies in the extreme southwestern corner of Utah, and is part of a larger habitat area that includes portions of Nevada and Arizona. This area is designated as critical habitat and most of it is managed as the Beaver Dam Slope Area of Critical Environmental Concern (BDS ACEC). The other area is immediately north of the communities of Ivins, St. George, Washington, and Hurricane. This area is managed as the Red Cliffs Desert Reserve (RCDR) by Washington County. Much of this area lies within city limits, and

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wildfires are frequently fought by a cooperative force that includes BLM, USFS, State of Utah, and local fire departments.

There is some habitat for desert tortoises that is outside of the BDS ACEC and RCDR, but this makes little difference in regard to fire suppression.

Direct mortality of tortoises results from fires (Esque et al. 1997), as well as habitat degradation resulting from a temporary loss of forage, a shift in forage species, and loss of habitat structure in the form of perennial shrubs that serve as protection from predators and thermal extremes, and may be important in soil structure for desert tortoise burrows (Esque et al. 1994, 1997; Medica et al.1994).

The following Threatened and Endangered Plant Species occur in the FMU: Dwarf bear-claw poppy (Endangered Species), Holmgren milkvetch (Endangered Species), Shivwits milkvetch (Endangered Species) and Siler cactus (Threatened Species). Except for one isolated population of siler cactus (Spendlove Well) and one population of Shivwits milkvetch (West of Shivwits Reservation), all of these plant populations occur adjacent to the communities of St. George, Washington and Santa Clara. All of these plants occur at lower elevations, in low density vegetation, with low potential for wildfire. All populations of these plants have been mapped and should be protected.

The woundfin (Endangered Species) and the Virgin River chub (Endangered Species) occur in the Virgin River from Pah Tempe Spring down to the Arizona-Utah Stateline. This area has been designated Critical Habitat for these species. All riparian vegetation associated with the Virgin River should be protected.

There are 61 State Sensitive Species which may occur in the FMU. Many of these species are permanent residents of the area while others may use the areas for part of the year. Most of these species (over 50%) use riparian habitats in the FMU. Besides riparian habitat, other important use areas identified for these species include: Red Cliffs Desert Reserve and the Beaver Dam Slope ACEC.

Noxious Weeds: Small and isolated out breaks of scotch thistle have occurred in the past on the north end of the Beaver Dam Mountains (near Motoqua Road). Potential exists in the FMU for noxious weeds such as Scotch thistle and invasive weeds such as red brome grass to spread and establish after fire due to the ineffectiveness of restoration work at lower elevations and precipitation found in the FMU.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

- FIL 1 = 0-2 feet
- FIL 2 = 2-4 feet
- FIL 3 = 4-6 feet
- FIL 4 = 6-8 feet
- FIL 5 = 8-12 feet

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FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	7976.39
FIL 2 –	427.92
FIL 3 –	2152.23
FIL 4 –	0.86
FIL 5 –	1827.79
FIL 6-	201.45
Unclassified-	59443.18
TOTAL-	72029.80

Number of Fire Starts by year

1993	23
1994	17
1995	45
1996	16
1997	35
1998	97
1999	51
2000	6
2001	20
2002	21
2003	132
TOTAL	463



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**Fire Regime and Condition Class (FRCC):**

**St. George Field Office**  
 FRCC TABLE

Date: 8/31/04 \_\_\_\_\_

FMU Name: Mojave Desert  
 267301

FMU Number: 100MDS

Full suppression area. Use prescribed fire and non-fire fuels to control tamarisk on 1000 acres over the next 10 years.

<b>EXISTING</b>					<b>DESIRED</b>			
Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon		0	2	2				
Pinyon-juniper	3,868	1	2	3				
Juniper	40,868	15	2	3				
Sagebrush	0	0	2	3				
Sagebrush/perennial Grass		0	2	3				

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Blackbrush	111,546	42	5	2				
Grassland		0	1	3				
Desert Grassland	9,845	4	1	3				
creosote-bursage	63,483	24	5	2				
Lowland Riparian	3,413	1	4	3	1 or 2	reduce tamarisk		1000
Mtn. Shrub	4,662	2	2	2				
Oak	923	0	1	2				
Mtn. Riparian		0	4	2				
Salt Desert Scrub	26,637	10	5	3				
urban		0						
Barren	1,423	1						

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other	403	0						
Agriculture	188	0						

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**Values at Risk:**

Loss of riparian habitat through wildfire would have significant effects on Critical Habitat for the woundfin and Virgin River chub. The loss of vegetation along this river would locally affect the water quality in the river and the short term hydrology and morphology of this stream. Fish kills could result from ash being washed into the river from subsequent storms. Loss of riparian habitat through fire could locally affect bald eagle habitat within all riparian areas in the FMU by eliminating roost sites and effecting prey base. Wild fire could cause a short term affect (up to 10 years) on occupied or suitable SWIFL nesting habitat along the Virgin River, Santa Clara River, Beaver Dam Wash, Moody Wash and Leeds Creek. More than 50% of the State Sensitive Species depend on riparian habitat. Loss of riparian through wild fire would locally affect these species up to 10 years.

Mortality to desert tortoises and/or loss of habitat from wildfire could occur in the Beaver Dam Slope ACEC and the Red Cliff Desert Reserve. Loss of habitat would be consider a long term impact which may take over 80 years to recover.

It is not known what affect wild fire may have on threatened and endangered plant species in Washington County. The dwarf bear-claw poppy, Holmgren milkvetch and Shivwits milkvetch are extremely vulnerable to any disturbances because of their limited size of populations and their low number of individuals in each population. Generally, potential for wild fire in these habitats is low due to low density of vegetation.

This FMU contains the Beaver Dam Slope, Lower Virgin River, Red Bluff, Santa Clara/Land Hill and Warner Ridge/Ft. Pearce ACEC's

**Communities at Risk:**

Wild fire could affect transmission of power, water and gas in 3 major utility corridors (Central to Middleton, Inter-mountain power project, and Navajo McCullough) in the FMU. A number of smaller utility corridors may have transmission affected by wildfire. All corridors are mapped and discussed in the St. George Field Office Resource Management Plan, March, 1999.

The communities of St. George, Washington and Santa Clara are at higher risk from wildfire in the large blocks of tamarisk along the Virgin and Santa Clara Rivers. Also, the communities around St. George are at higher risk in some isolated areas that have been previously disturbed and have reestablished with greater densities of vegetation (mesquite, skunk bush, rabbit brush, and four-winged salt bush). Areas around Leeds and Apple Valley are at greater risk due to the dense stands of Pinyon-juniper and mountain shrubs (live oak, service berry and manzanita).

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

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Land Use Plan Objectives: Fire suppression on public lands in Washington County will be directed by objectives and prescriptions identified in the Fire Management Plan. The highest priority of fire suppression will be to protect life, fire fighters safety, property, and critical resource values.

Fire Management Objectives: Suppress all fires within the FMU to protect life, and private property.

Suppress all fires within the FMU to keep to a minimum size. Maintenance of the existing vegetative communities is desired since most areas are currently at their potential or located below the 12" precipitation line which has little potential for rehabilitation. Full suppression in the low precipitation zones is required in order to curtail the spread of introduced, invasive, undesirable weed species such as cheat grass, Russian thistle, and scotch thistle. Once an area has burned and undesirable weed species fill the open niche, these areas have an increased burn potential creating numerous problems.

Suppress all fires within the FMU for the maximum protection of special status species and their habitat. Management constraints are mandatory and numerous as referenced below.

**Fire Management Strategies:**

Suppression: Full suppression of all fires within this FMU. Use direct tactics where appropriate. When using natural barriers, fuels treatments, and roads for indirect attack keep acreage at the minimum level possible.

Management Constraints: Protection of life and private property is the first priority within the FMU. A Resource Advisor is required during initial attack to facilitate identification of ownership boundaries and special resources such as rights-of-ways, structures, riparian habitat, cultural sites, and areas of special value located on public lands. This category contains scattered concentrations of cultural sites often in association with river and riparian areas. These areas would require cultural clearances if surface disturbing activities, such as blading, were engaged.

A 1/2-mile buffer is established around non-BLM lands, structures (excluding range fences because it is more economical to repair burned fences than to suppress fires to protect them) and rights-of-ways, with no limitation on suppression tactics or surface disturbances within the buffer. Public lands outside the 1/2-buffer include special value scenic corridors which have surface disturbance restrictions. In these areas, no blading would be allowed on public lands outside buffers, but no other restrictions exist regarding use of suppression vehicles or tactics. Blading could be allowed under extremely specific conditions, with cultural clearances, outside of buffer zones with Resource Advisor concurrence.

Full suppression is required, but off-road vehicle access would be restricted on special value areas listed below:

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Red Cliffs Recreation and Cultural site	1,085 acres	T 41 S R 14 W
Fort Pearce Riparian and Historic Site	40 acres	T 43 S R 14 W
Dinosaur Trackway	40 acres	T 43 S R 13 W

All special status species habitat in the FMU will follow protocol of fire fighting strategies for "Fighting Wildfire in Desert Tortoise Habitat: Consideration for Land Managers (Duck et al, 1994 Desert Tortoise Council Symposium; 1995, International Association of Wildland Fire)." The same protocol will be followed in special status plant areas as it relates to surface disturbing stipulations. The document includes nineteen mandatory terms and conditions to implement reasonable and prudent measures for protection of desert tortoise and habitat which include: measures to reduce incidental take of desert tortoises, environmental education for fire crews, designation of Resource Advisors, minimal off-road vehicle activity, maximum protection of habitat, and maintaining sanitary conditions to minimize predation. A qualified biologist is required as Resource Advisor upon initial attack for these fires.

The Joshua Tree Instant Study Area (ISA) will require full suppression although also considered a Wilderness Study Area. The Woodbury Desert Study Area would also require full suppression. Suppression activities would be the same as for the adjacent Critical Desert Tortoise Habitat due to important desert vegetative communities (Joshua Tree/creosote) that do not recover after fire. Desert tortoise habitats located within the Cottonwood Canyon Wilderness Study Area follow the same protocols but are discussed under Category C-1 and must also follow the Wilderness Study Area Interim Management Guidance.

Areas containing private lands, structures (excluding range fences), and rights-of-ways located within Critical Habitat for desert tortoise would be suppressed with a 1/4-mile buffer with no restrictions. Of notable concern are rights-of-ways associated with:

- Kern River Natural Gas Pipeline
- Navajo-McCullough Power Line
- Central to Middleton Power Line

Riparian / Riverine Constraints: Riparian and riverine ecosystems within the FMU contain valuable habitat for threatened, endangered and sensitive wildlife species including bald eagles, SWIFLs, woundfin, Virgin River chub, and a number of State Sensitive Species. In addition, general objectives for riparian areas are to protect diverse woody age structure in cottonwood-willow communities which are often irreplaceable after fire occurrences. As a result, special resource consideration is required in all riparian habitats and referenced below.

Fire suppression within riparian zones is a priority to prevent destruction of endangered species habitat and maintain riparian values and condition. Management constraints

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within the riparian buffer include: No blading within a 1/4-mile buffer of the riparian zone, restrictions on vehicle disturbance in the stream course, minimal vehicle disturbance and removal of unburned vegetation in the riparian area, and restrictions on use of foam and aerial retardant (requires non-toxic certification). However, if during extreme conditions where the entire riparian habitat is in jeopardy, the Resource Advisor could allow all necessary suppression tactics to avoid the total loss of habitat, especially where native communities exist.

Riparian areas within the FMU which require full suppression within 1/8-mile where possible are listed below:

Riparian Area	Segment
Beaver Dam Wash	At Motoqua, Bentley Spring and Lytle Ranch
Fort Pearce Wash	Fort Pearce Ruins Springs to Utah-Arizona State Line
Leeds Creek	USFS Boundary to Quail Creek confluence
Quail Creek	USFS Boundary to Quail Creek Reservoir
Santa Clara River	Gunlock Reservoir to Virgin River confluence
Virgin River	Pah Tempe Spring to Utah-Arizona State Line
Beaver Dam Wash	all other portions
Fort Pearce Wash	Utah-Arizona State Line to Virgin River confluence
Gould Wash	total length
Graveyard Wash	total length
Harrisburg Wash	total length

Wild and Scenic River Constraints: Portions of the Virgin River and parts of its numerous tributaries have been determined suitable for Wild and Scenic River inclusion. There are three different classifications under which river segments can qualify: wild, scenic or recreational. Proposed Wild and Scenic River segments do not require special consideration with regard to suppression activities, with the exception of segments with wild classification, where "...values must remain natural appearing and... practices do not have an adverse effect on the natural character of the river area...". In these segments, fires do not require suppression activities unless contiguous to private lands and in accordance with other management guidance.

River segments which have been determined suitable for Wild and Scenic River inclusion and their respective classification are listed below:

Virgin River	UT-AZ Border	Wild Classification
--------------	--------------	---------------------

Wilderness Constraints: The Beaver Dam Mountains Wilderness Area is within the FMU. Generally, fire will be allowed to play its natural role in the wilderness ecosystem subject to requirements for public safety and protection of private and other nonfederal property. Critical wilderness values such as Joshua trees or desert tortoise habitat will be aggressively protected.

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**Prescribed Fire:** Prescribed fire will be planned on an individual project basis and will primarily be designed to treat tamarisk for hazardous fuel and wildland/urban interface work as well as provide resource benefit for riparian and wildlife values. Combined with non-fire fuels treatments, prescribed fires can be used to treat up to 1,000 acres within this FMU over the life of this plan.

**Non-fire fuels Treatments:**

Reduce fuels from tamarisk found in riparian areas by 1000 acres over the next 10 years using prescribed fire or non-fire fuels treatments.

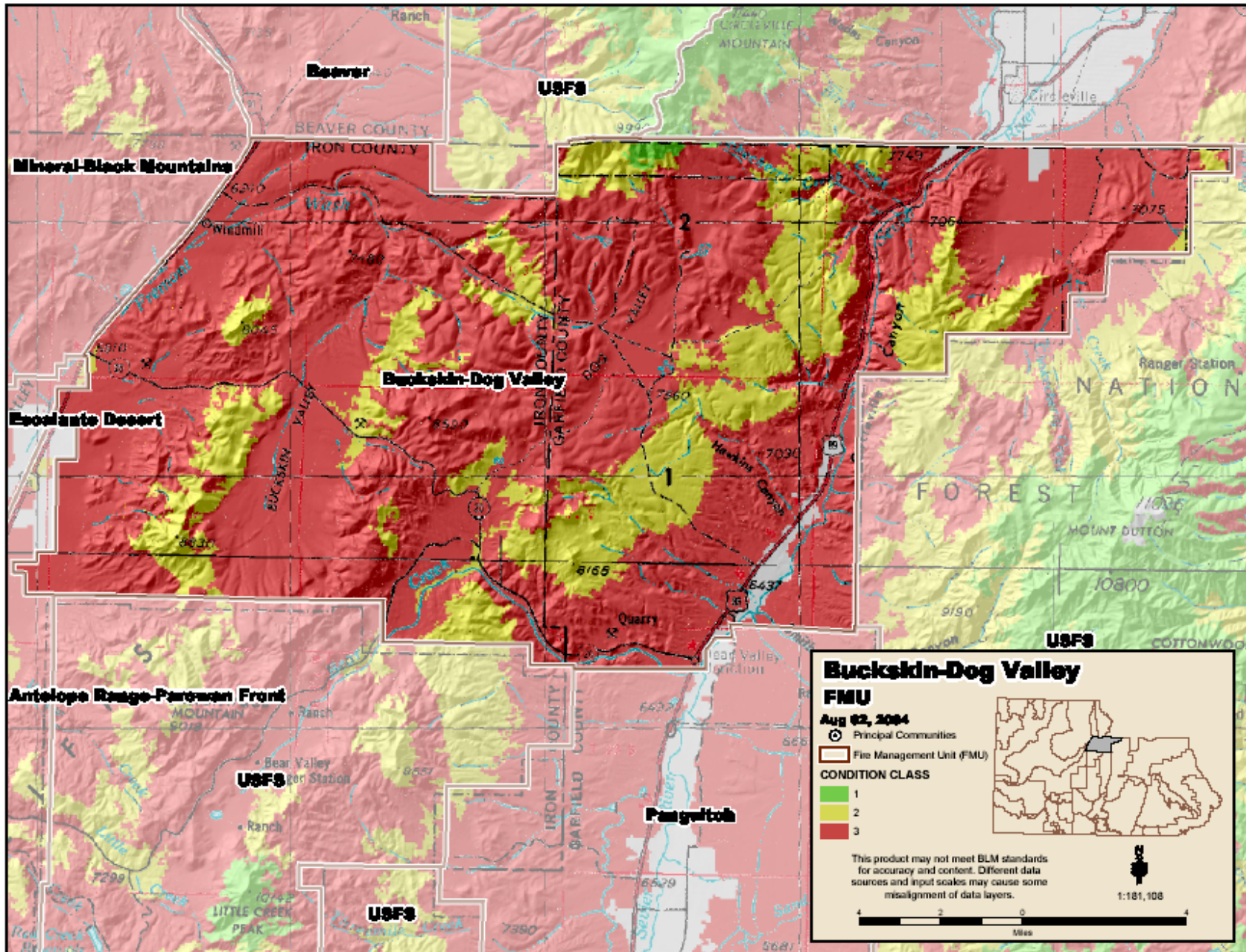
**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).



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**FMU DESCRIPTION**

Buckskin/Dog Valley

**Location:**

The Buckskin Valley/Dog Valley FMU is shared between the Cedar City Field Office and the Kanab Field Office. State Highway 20 passes through this area from I-15 on the west to State Highway 89 on the east. On the north is the Beaver FMU and on the south is the Parowan Front—Antelope Range FMU.

Ownership Acres:

BLM –	121403
Private –	21633
State –	13838
USFS	3419
Other –	11
TOTAL	160303

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 6400 feet to 7500 feet above sea level. Topography is variable, ranging from flat to extremely steep rock outcrops.

Precipitation

Precipitation averages about 12 inches of water per year, as recorded at the Buckskin Valley rain gauge. However, average annual precipitation calculated using the PRISM method is 13 to 15 inches (from data prepared by the Spatial Climate Analysis Service of the Oregon Climate Service).

Vegetation

Vegetation on this unit is diverse. The primary vegetation types are pinyon-juniper (p-j) and sagebrush, with important inclusions of grasslands, mountain brush, riparian zones, conifers and aspen. The sagebrush and sagebrush-bunchgrass type provides important habitat for Utah prairie dogs, sage grouse, mule deer, and elk. Antelope bitterbrush is an important component of both the p-j and sagebrush types and generally intolerant of hot fires during the warm summer months.

Soils

Soil erosion is generally within acceptable limits with steeper slopes which would be susceptible to increased erosion following a wildfire. Only about 690 acres of public land were determined to be in critical soil erosion condition during the early 1980's modified soil and vegetation inventory.

STATSGO Soil Type

Soil Type	Acres
516	1179.52
522	34.21

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523	3450.10
581	4475.86
697	9008.30
703	69290.12
713	2500.63
720	6748.55
724	54760.62
731	1979.33
755	4060.90
759	2815.26
TOTAL	160303.40

Special Status Species

Special status animal species found in this area include Utah prairie dog, bald eagle, northern goshawk, ferruginous hawk, Swainson's hawk, peregrine falcon, greater sage grouse, burrowing owl, long-billed curlew, Lewis' woodpecker, Townsend's big-eared bat, and fringed myotis. There are no sensitive plant species in this unit.

Other Sensitive Resources

Wildlife

This FMU contains important and crucial deer winter ranges (CDWR). CDWR is defined as that portion of the deer habitat, that if lost, would affect future survivability of the deer herd. Much of the more valuable CDWR habitat is in the sagebrush type. It is critical that uncontrolled wildfires not be allowed to burn in CDWR as these habitats are impractical, if not impossible, to restore to a desirable condition class following wildfire. Also has important elk wintering and calving areas.

Riparian

Riparian resource consists of small isolated springs, wetland areas and perennial streams. Fire management is important in achieving riparian improvement objectives.

Noxious Weeds

Small, isolated populations of Musk and Canada Thistle occur within the FMU. All machinery and equipment should be high pressure washed to remove loose soil before entering project/incident areas where appropriate. Natural rehabilitation potential is dependent upon existing perennial grasses and forbs on site and virtually all vegetation types at all elevations are subject to invasion by undesirable invader species, such as cheatgrass, following a wildfire.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

- FIL 1 = 0-2 feet
- FIL 2 = 2-4 feet
- FIL 3 = 4-6 feet
- FIL 4 = 6-8 feet
- FIL 5 = 8-12 feet

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FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	0.15
FIL 2 –	0.0
FIL 3 –	35.32
FIL 4 –	7.92
FIL 5 –	0.08
FIL 6	0.0
Unclassified-	1495.81
TOTAL-	1539.28

Fire Starts by Year

Year	Number
1993 –	0
1994 –	3
1995 –	0
1996 –	0
1997 –	2
1998 –	4
1999 –	4
2000 –	5
2001 –	8
2002 –	3
2003 -	6
TOTAL	35

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**Fire Regime and Condition Class (FRCC):**

**Kanab Field Office  
FRCC TABLE**

Date: 9/2/04

FMU Name: Buckskin-Dog Valley

121403

Except for pinyon-juniper and seedings use full suppression. Use wildfire, prescribed fire, and non-fire fuels to convert 30,000 acres of pinyon-juniper and juniper to sagebrush and grass. Restore 2,000 acres of old seedings in pinyon and sagebrush vegetation types using prescribed burns and non-fire fuels projects. In the mountain fir community treat 400 acres using prescribed burning and mechanical treatment to allow aspen to regenerate.

**EXISTING**

Veg type	Acres	% Area	Fire Regime	Existing CC	DESIRED			
					Desired CC	Veg type	% Change	Acres
Pinyon	22,711	19	2	2	1 & 2	sagebrush/grass (restore old seedings)		1000
Pinyon-juniper	53,127	44	2	3	1 & 2	sagebrush/grass		30000
Juniper	5,620	5	2	3	1 & 2	sagebrush/grass		combined with PJ above
Sagebrush	3,456	3			1 & 2	sagebrush/grass (restore old seedings)		1000
Sagebrush/perennial Grass	18,048	15					0	

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Ponderosa Pine	495	0					0	
PIPO/Mtn. shrub	14419	12					0	
Mtn. Shrub	441	0					0	
Mountain fir	1,634	1			1 & 2	Aspen	24	400
Mtn. riparian	75	0					0	
Mountain shrub	441	0					0	
Agriculture	158	0					0	
Dry Meadow	1,219	1					0	

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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Communication Sites
- Private lands including at least one primary residence and one cabin.
- Range Improvements
- DWR and BLM guzzlers
- Wind towers
- Habitats for special status species
- Transmission Lines (smoke)
- Dispersed Recreation such as hunting
- Rights of Way: material sites, powerlines, water facilities, natural gas pipelines, telephone lines, communication sites, railroad

**Communities at Risk:**

Cabins in Buckskin and Bear Valley. Structures along I-15, south of Circleville, Fremont Canyon.

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Maintain and enhance habitat for sage grouse, mule deer, Utah prairie dogs, and elk through use of small, mosaic type fires in the sagebrush type. These small desirable fires generally result under a full suppression response.

Fire Management Objectives

Maintain and improve sage grouse and mule deer critical habitat. Apply full suppression in areas that are not PJ, or in seedings. Contain fires in the juniper vegetation type at 250 acres or greater.

In both field offices, convert 30,000 acres of pinyon-juniper and juniper to sagebrush/grass using all methods including wildfire. Reduce the effects of the invasion of fir into aspen by treating 400 acres of mountain fir to allow more aspen to grow. Improve about 1000 acres of old seedings using mechanical treatments and prescribed burning. In the sagebrush community treat about 1000 acres to create a mosaic of different age classes.

Fire Management Strategies:

**Suppression:**

Limit fires in sagebrush to as small as possible. Implement full suppression in areas that are not PJ, or in seedings. Use indirect tactics when possible, taking advantage of natural and man made fuel breaks to contain fires in the juniper vegetation type at 250 acres or greater.

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**Wildland Fire Use:**

No fire use.

**Prescribed Fire:**

Prescribed fires are desired and would be planned to include desired acreage of individual vegetation types to achieve resource objectives. Treat up to 6,050 acres using prescribed fire and non-fire fuels treatments in aggregate.

**Non-fire fuels Treatments:**

Treat up to 6,050 acres with mechanical and other non-fire fuels treatments to achieve resource objectives. Non-fire fuels treatments would primarily be implemented in pinyon/juniper, fir, and sagebrush vegetation.

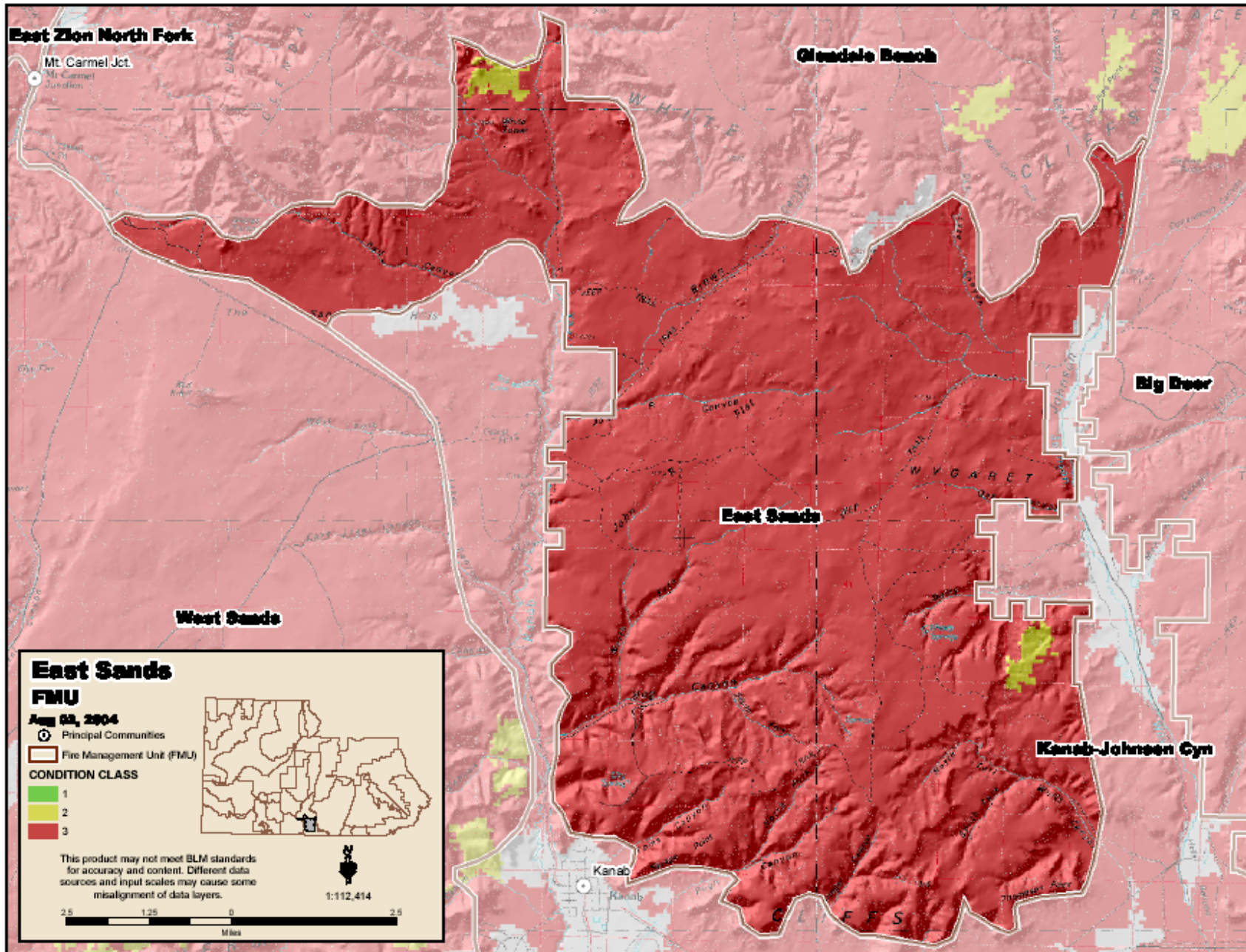
**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).



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**FMU DESCRIPTION**

East Sands

**Location:**

This FMU is the sand country above the vermilion cliffs just north of Kanab. It is bordered on the north by Glendale Bench FMU, and surrounded on the west, south and east by Kanab-Johnson Canyon.

Ownership Acres:

BLM –	52070
Private –	843
State –	5671
Other –	
<b>TOTAL</b>	<b>58584</b>

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 5000 feet to 6600 feet above sea level. This FMU contains a critical municipal watershed for Kanab and adjacent subdivisions. The area consists of mostly steep rocky areas where fires are unlikely.

Precipitation

Precipitation averages about 14-16 inches per year, as modeled by the Parameter-elevation Regressions on Independent Slopes Model (PRISM). 1961-1990.

Vegetation

Dominant vegetation consists of pinyon-juniper, juniper, sagebrush, grassland and salt desert shrub.

Soils

STATSGO Soil Type

Soil Type	Acres
681	16779
682	41468
683	271
689	57
690	9
<b>TOTAL</b>	<b>58584</b>

**Special Status Species from the Utah Natural Heritage Program- Kane County List, Not all species and habitats occur in this FMU**

ALLEN'S BIG-EARED BAT	IDIONYCTERIS PHYLLOTIS	SPC
AMERICAN WHITE PELICAN	PELECANUS ERYTHORHYNCHOS	SPC
ARIZONA TOAD	BUFO MICROSCAPHUS	SPC
BIG FREE-TAILED BAT	NYCTINOMOPS MACROTIS	SPC
BURROWING OWL	ATHENE CUNICULARIA	SPC
DESERT NIGHT LIZARD	XANTUSIA VIGILIS	SPC

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DESERT SUCKER	CATOSTOMUS CLARKI	SPC
FERRUGINOUS HAWK	BUTEO REGALIS	SPC
FRINGED MYOTIS	MYOTIS THYSANODES	SPC
<b>Kane County</b>		
KIT FOX	VULPES MACROTIS	SPC
LEWIS'S WOODPECKER	MELANERPES LEWIS	SPC
LONG-BILLED CURLEW	NUMENIUS AMERICANUS	SPC
NORTHERN GOSHAWK	ACCIPITER GENTILIS	CS
ROUNDTAIL CHUB	GILA ROBUSTA	SPC
SPOTTED BAT	EUDERMA MACULATUM	SPC
THREE-TOED WOODPECKER	PICOIDES TRIDACTYLUS	SPC
TOWNSEND'S BIG-EARED BAT	CORYNORHINUS TOWNSENDII	SPC
WESTERN TOAD	BUFO BOREAS	SPC
<b>SPECIAL STATUS PLANTS-KANAB FIELD OFFICE</b>		
GUMBO MILK-VETCH	ASTRAGALUS AMPULLARIUS	C-2
ATWOOD'S CAMISSONIA	CAMISSONIA ATWOODII	C-2
SLENDER CAMISSONIA	CAMISSONIA EXILIS	C-2
REVEAL INDIAN PAINTBRUSH	CASTILLEJA REVEALII	C-2
SAND-DWELLING CRYPTANTH	CRYPTANTHA CINEREA ARENICOLA	C-2
YELLOW-WHITE CATSEYE	CRYPTANTHA OCHROLEUCA	C-2
HIGGINS BISCUITROOT	CYMOPTERUS ACAULIS VAR. HIGGINSII	C-2
CEDAR BREAKS BISCUITROOT	CYMOPTERUS MINIMUS	C-2
ZION DAISY	ERIGERON SIONIS	C-2
ALCOVE DAISY	ERIGERON ZOTHECINUS	C-2
CEDAR BREAKS GOLDENBUSH	HAPLOPAPPUS ZIONIS	C-2
KANE BREADROOT	PEDIOMELUM EPIPSILUM	C-2
PARIA BREADROOT	PEDIOMELUM PARIENSE	C-2
SANDLOVING PENSTEMON	PENTEMON AMMOPHILUS	C-2
ZION TANSY	SPHAEROMERIA RUTHIAE	C-2

Other Sensitive Resources

Critical deer winter range

Noxious Weeds

Small, isolated populations of Scotch Thistle occur within the FMU. All machinery and equipment should be high pressure washed to remove loose soil before entering project/incident areas where appropriate.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

FIL 1 = 0-2 feet  
 FIL 2 = 2-4 feet  
 FIL 3 = 4-6 feet  
 FIL 4 = 6-8 feet  
 FIL 5 = 8-12 feet  
 FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	0.0
FIL 2 –	0.07
FIL 3 –	18.62
FIL 4 –	0.16
FIL 5 –	12.23
FIL 6	0.0
Unclassified-	15.26
TOTAL-	46.34

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Fire Starts by Year

1993 –	0
1994 –	2
1995 –	0
1996 –	2
1997 –	1
1998 –	1
1999 –	1
2000 –	2
2001 –	0
2002 –	2
2003 -	3
TOTAL	14

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**Fire Regime and Condition Class (FRCC):**

FRCC TABLE

Date: 8/31/04

FMU Name: East Sands

52070

Full suppression due to Kanab muni watershed values. Keep fires to 250 acres if possible. Use prescribed fire and non-fire fuels projects to convert 6600 acres of juniper and 560 acres of pinyon-juniper to sagebrush/grass, 1380 acres of sagebrush and 681 acres of sagebrush/perennial grass for age class diversity objectives.

Prescribed fire and fuels treatments combine to 9220 acres. No fire use is proposed in this FMU..

**EXISTING**

Veg type	Acres	% Area	Fire Regime	Existing CC	DESIRED			
					Desired CC	Veg type	% Change	Acres
Pinyon		0	2	2				
Pinyon-juniper	1,861	4	2	3	1 or 2	sagebrush grass	30	558
Juniper	16,270	31	2	3	1 or 2	sage grass	40	6597
Sagebrush	4,591	9	2	3	1 or 2	age class mosaic	30	1381
Sagebrush/perennial Grass	6,599	13	2	3	1 or 2	age class mosaic	10	681

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Grassland	13,435	26	1	3				
Desert Grassland	3675	7	1	3				
Mountain Shrub	492	1	2	2				
Salt Desert Shrub	4,723	9	5	3				
Greasewood	346	1	5	3				
Mountain fir		0	4	2				
Agriculture	29	0						
Barren	48	0						

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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Communication Sites
- Private lands including private residences.
- Range Improvements
- Habitats for special status species
- Transmission Lines (smoke)
- Dispersed Recreation such as hunting
- Rights of Way

**Communities at Risk:**

There are small scattered tracts of undeveloped private land.

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Land Use Plan lists nothing specific for fire.

Fire Management Objectives

Protect critical deer habitat. Need erosion control following a wildfire (see Skutumpah/Glendale Bench). Use appropriate suppression techniques and contain fires at 250 acres or less. Cheatgrass invasion is a concern. (Access for fire suppression is a problem due to sandy soil conditions.)

Protect Kanab municipal watershed.

Protect cultural and historic sites.

Use prescribed fire and non-fire fuels project to convert 6600 acres of juniper to sagebrush/grass to improve deer habitat and provide better watershed cover.

Fire Management Strategies:

**Suppression:**

Full suppression is desired within this FMU due to municipal watershed values for the community of Kanab. Cultural and historic sites would require protection and full suppression if threatened. No heavy equipment use until resource advisor arrives.

**Wildland Fire Use:**

No fire use.

**Prescribed Fire:**

Small prescribed fires to create a diversity of age classes in vegetation communities can be planned and implemented on an individual project basis. Prescribed fire can be used in conjunction with mechanical treatments to treat up to 9,220 acres within this FMU: 6600

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acres of pinyon, 1380 acres of sagebrush, 680 acres of sagebrush/perennial grass and 560 acres of pinyon-juniper.

**Non-fire fuels Treatments:**

Mechanical and chemical treatments can be planned and implemented to treat up to 9220 acres in aggregate with prescribed fire within this FMU over the life of this plan. (See the Prescribed Fire section above.)

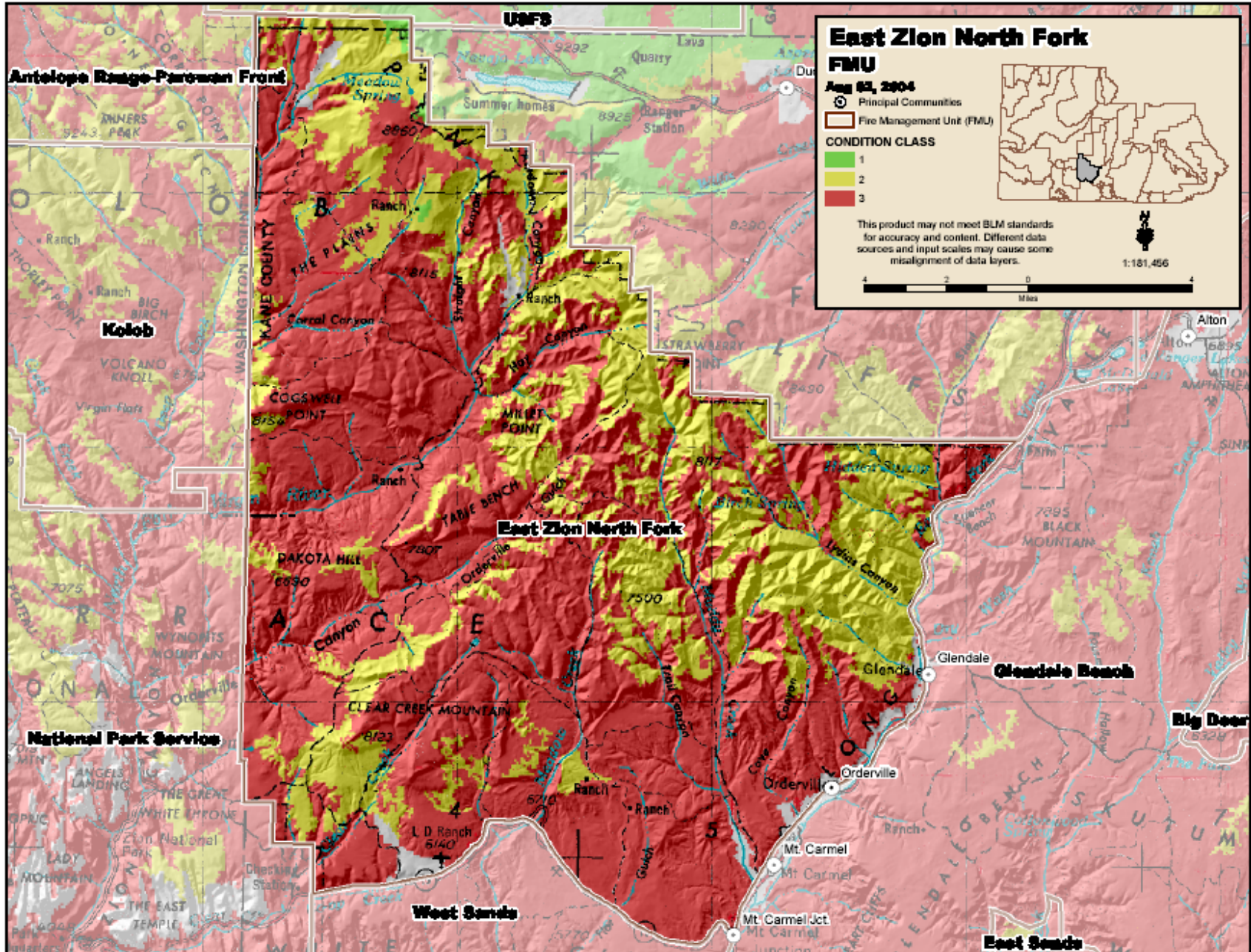
**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan. Cheatgrass invasion is a concern.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).



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**FMU DESCRIPTION**

East Zion North Fork

**Location:**

This FMU is the sand country in the southwest corner of the field office with Zion National Park on the west, the West Sands FMU on the south, and the US Forest Service Dixie National Forest on the north. On the east are Glendale Bench, East Sands, and Kanab-Johnson Canyon FMU's. This is relatively high elevation country with a complex land pattern and poor access due to topography and locked private access. Public lands are scattered parcels and are difficult to manage.

Ownership Acres:

BLM –	41049
Private –	103298
State –	16529
USFS	1599
NPS	361
TOTAL	162836

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 5500 feet to 8500 feet above sea level.

Precipitation

Precipitation averages about 14-20 inches of water per year, as modeled by the Parameter-elevation Regressions on Independent Slopes Model (PRISM). 1961-1990.

Vegetation

Dominant vegetation consists of pinyon-juniper, mountain brush sagebrush grasslands, open ponderosa pine stands, and scattered mountain fire and aspen.

Soils

STATSGO Soil Types

Soil Type	Acres
680	27778
690	856
706	18659
707	38910
712	1523
727	75109
TOTAL	162836

Special Status Species

Critical Spotted owl habitat shared with Zion NP, SS speices from Utah Natural Heritage Program Kane County List, not all species and habitats occur in this FMU

ALLEN'S BIG-EARED BAT  
AMERICAN WHITE PELICAN

IDIONYCTERIS PHYLLOTIS  
PELECANUS ERYTHORHYNCHOS

SPC  
SPC

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ARIZONA TOAD	BUFO MICROSCAPHUS	SPC
BIG FREE-TAILED BAT	NYCTINOMOPS MACROTIS	SPC
BURROWING OWL	ATHENE CUNICULARIA	SPC
DESERT NIGHT LIZARD	XANTUSIA VIGILIS	SPC
FERRUGINOUS HAWK	BUTEO REGALIS	SPC
FRINGED MYOTIS	MYOTIS THYSANODES	SPC
<b>Kane County</b>		
KIT FOX	VULPES MACROTIS	SPC
LEWIS'S WOODPECKER	MELANERPES LEWIS	SPC
LONG-BILLED CURLEW	NUMENIUS AMERICANUS	SPC
NORTHERN GOSHAWK	ACCIPITER GENTILIS	CS
SPOTTED BAT	EUDERMA MACULATUM	SPC
THREE-TOED WOODPECKER	PICOIDES TRIDACTYLUS	SPC
TOWNSEND'S BIG-EARED BAT	CORYNORHINUS TOWNSENDII	SPC
WESTERN TOAD	BUFO BOREAS	SPC
<b>SPECIAL STATUS PLANTS-KANAB</b>		
GUMBO MILK-VETCH	ASTRAGALUS AMPULLARIUS	C-2
ATWOOD'S CAMISSONIA	CAMISSONIA ATWOODII	C-2
SLENDER CAMISSONIA	CAMISSONIA EXILIS	C-2
REVEAL INDIAN PAINTBRUSH	CASTILLEJA REVEALII	C-2
SAND-DWELLING CRYPTANTH	CRYPTANTHA CINEREA ARENICOLA	C-2
YELLOW-WHITE CATSEYE	CRYPTANTHA OCHROLEUCA	C-2
HIGGINS BISCUITROOT	CYMOPTERUS ACAULIS VAR. HIGGINSII	C-2
CEDAR BREAKS BISCUITROOT	CYMOPTERUS MINIMUS	C-2
ZION DAISY	ERIGERON SIONIS	C-2
ALCOVE DAISY	ERIGERON ZOTHECINUS	C-2
CEDAR BREAKS GOLDENBUSH	HAPLOPAPPUS ZIONIS	C-2
PARIA IRIS	IRIS PARIENSIS	C-2
KANE BREADROOT	PEDIOMELUM EPIPSILUM	C-2
PARIA BREADROOT	PEDIOMELUM PARIENSE	C-2
SANDLOVING PENSTEMON	PENTEMON AMMOPHILUS	C-2
ZION TANSY	SPHAEROMERIA RUTHIAE	C-2

Other Sensitive Resources

Critical deer winter range

Riparian

North Fork, and Orderville WSA's

Muddy Creek Watershed—sediment, salinity, watershed values.

Noxious Weeds

Small, isolated populations of Scotch Thistle occur within the FMU. All machinery and equipment should be high pressure washed to remove loose soil before entering project/incident areas where appropriate.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

FIL 1 = 0-2 feet

FIL 2 = 2-4 feet

FIL 3 = 4-6 feet

FIL 4 = 6-8 feet

FIL 5 = 8-12 feet

FIL 6 = 12 + feet

Acres by FIL

FIL 1 – 1207

FIL 2 – 110

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FIL 3 –	0.39
FIL 4 –	0.16
FIL 5 –	0.31
FIL 6	0.0
Unclassified-	4498
TOTAL-	5815

Fire Starts by Year

1993 –	1
1994 –	5
1995 –	0
1996 –	5
1997 –	11
1998 –	2
1999 –	1
2000 –	0
2001 –	10
2002 –	12
2003 -	4
TOTAL	51

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**Fire Regime and Condition Class (FRCC):**

**Kanab Field Office  
 FRCC TABLE**

Date: 7/30/04

FMU Name: East Zion North Fork

41049

Use mechanical and prescribed fire to treat pinyon-juniper or juniper understory beneath ponderosa to reduce competition on 1000 acres. Also use non-fire and prescribed fire to treat juniper and oak to add more sagebrush/perennial grass/ forbs into the plant community on 2000 acres.

**EXISTING**

**DESIRED**

Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon	806	2	2	2				
Pinyon-juniper	2,984	7	2	3	Ponderosa & PJ	Release PIPO from PJ		1000
Juniper	12,768	31	2	3	1 or 2	sagebrush/perennial grass		2000
Sagebrush	87	0	2	3				
Sagebrush/perennial Grass	13,786	34	2	3				

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Grassland	2,158	5	1	3				
Desert Grassland		0	1	3				
Mountain Shrub	661	2	2	2				
Salt Desert Shrub	3	0	5	3				
Ponderosa/Mtn Shrub	8	0						
Mountain Riparian	1	0						
Dry Meadow	1037	3						
Oak	6,673	16						included in acres above
Aspen	42	0						
Agriculture	37	0						

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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Communication Sites
- Multiple private lands including private residences.
- Range Improvements
- Habitats for special status species
- Power Lines (smoke)
- Dispersed Recreation such as hunting and hiking
- Rights of Ways
- Ponderosa Pine with dense P-J understory
- Watershed

**Communities at Risk:**

Area consists of numerous private land residences and resorts.

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

**Land Use Plan Objectives**

Utilize appropriate suppression actions to allow fire to play its natural role in the ecosystem where possible by using roads or natural fire breaks, subject to requirements for public safety and protection of private property.

Protect unique plant communities, and WSA's. Improve ponderosa vigor and reproduction by reducing competition by pinyon juniper trees using

**Fire Management Objectives**

Protect upper Virgin River Watershed. Protect cultural and historic sites.

Improve the vigor of the ponderosa pine trees by reducing competition by Pinyon/Juniper in the understory. Treat 1000 acres to reduce PJ competition (Hand cutting and bull hog.) Improve critical deer winter range by treating 2,000 acres in Pinyon-juniper and sagebrush to create more sagebrush and create a mosaic of age class diversity. Use mechanical and prescribed fire and wildfire.

**Fire Management Strategies:**

Apply full suppression in areas containing private lands, structures and rights-of-ways. All fires occurring within a 1/2-mile buffer of structures would be suppressed with no restrictions. All blading activities will be closely monitored by a Resource Advisor.

Monitor wind direction and smoke drift, take actions needed to minimize effects on the Zion Canyon N. P. Class 1 air quality zone.

**Suppression:**

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Use full suppression in this FMU. Access is difficult due to restricted access on non-public lands and topography.

Constraints for fire suppression in a WSA are discussed in the Interim Management Policy for Wilderness Study Areas. Use of “minimum tools” described in the Interim Guidance should be followed, unless fires are located within 1/2-mile of private lands, where full suppression is allowed. No heavy equipment or cross country vehicle use until resource advisor arrives.

**Wildland Fire Use:**

No fire use.

**Prescribed Fire:**

Coordinate with Zion NP who has prescribed fire/fire use on adjacent areas. Plan individual prescribed fire projects, in conjunction with partners when possible, to treat primarily ponderosa pine, oak, and pinyon/juniper vegetation to achieve up to 3,000 acres of treatment in aggregate with non-fire fuels treatments within this FMU

**Non-fire fuels Treatments:**

Treat the pinyon-juniper understory of the ponderosa pine community to reduce risk to ponderosa pine due to fire (if applicable). Use small mechanical treatments (less than 300 acres each) in oak, PJ and ponderosa. Treat up to 3,000 acres in conjunction with prescribed fire treatments within the FMU.

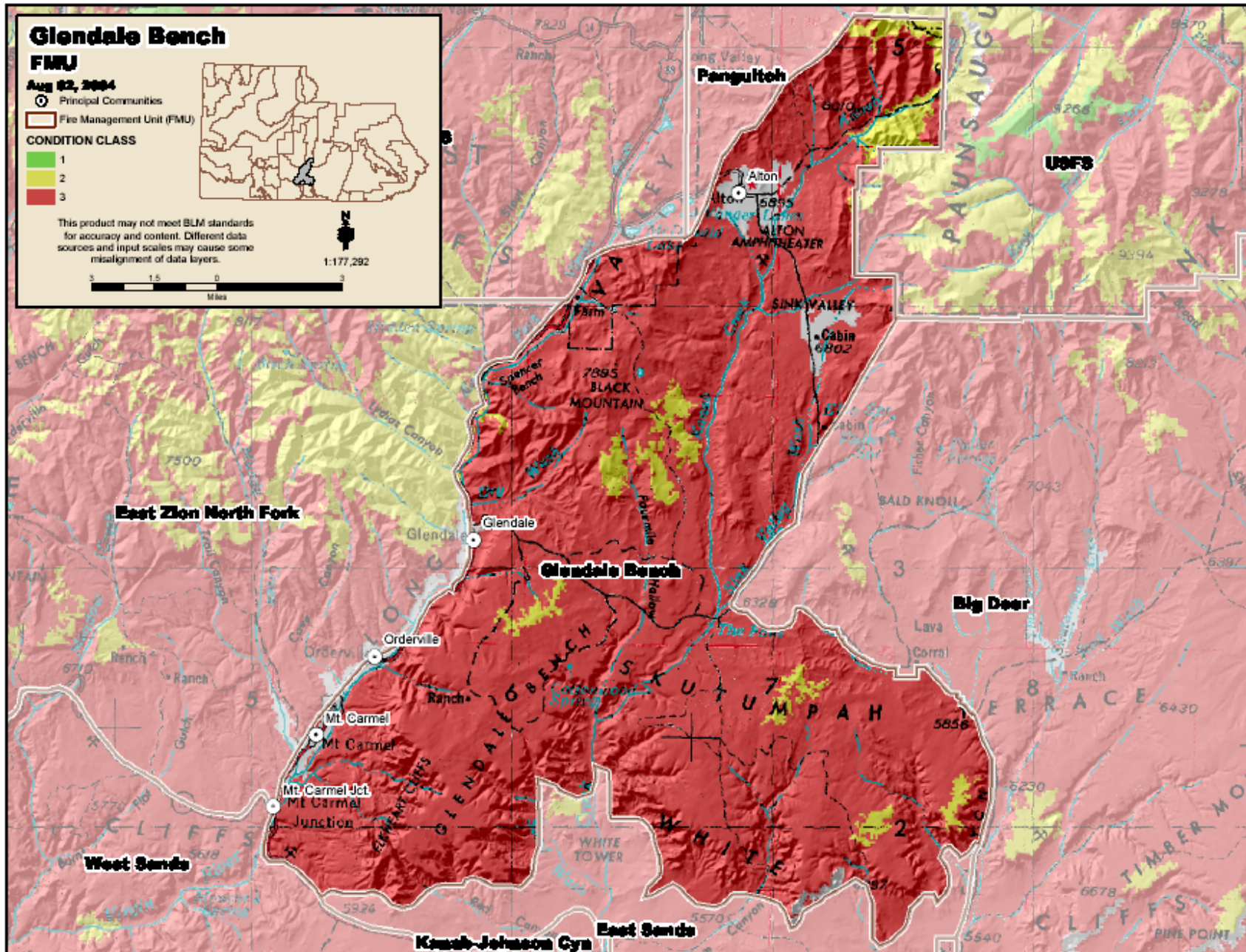
**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan. Cheatgrass invasion may be a concern.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).



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**FMU DESCRIPTION**

Glendale Bench

**Location:**

The western boundary of this FMU is Highway 89 in Long Valley where the communities of Glendale, Orderville, Mt. Carmel, and Mt. Carmel Junction are located. Alton is also located in this FMU. East Zion North Fork FMU is found on the west and Big Deer FMU is on the east. To the south is located the East Sands FMU.

Ownership Acres:

BLM –	67423
Private –	44198
State –	6764
Other –	233
<b>TOTAL</b>	<b>118618</b>

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 5200 feet to 8900 feet above sea level.

Precipitation

Precipitation averages about 14 to 18 inches of water per year, as modeled by the Parameter-elevation Regressions on Independent Slopes Model (PRISM) 1961 to1990.

Vegetation

Dominant vegetation consists of pinyon-juniper, mountain brush sagebrush grasslands, isolated ponderosa pine and mountain fir stands.

Soils

STATSGO Soil Types

Soil Type	Acres
680	49403
682	22573
685	22283
690	931
721	9141
727	14287
<b>TOTAL</b>	<b>118618</b>

**Special Status Species from the Utah Natural Heritage Data Base for Kane County- Not all of these species and habitats occur in this FMU**

ALLEN'S BIG-EARED BAT	IDIONYCTERIS PHYLLOTIS	SPC
AMERICAN WHITE PELICAN	PELECANUS ERYTHORRHYNCHOS	SPC
ARIZONA TOAD	BUFO MICROSCAPHUS	SPC
BIG FREE-TAILED BAT	NYCTINOMOPS MACROTIS	SPC
BLUEHEAD SUCKER	CATOSTOMUS DISCOBOLUS	SPC
DESERT NIGHT LIZARD	XANTUSIA VIGILIS	SPC
FERRUGINOUS HAWK	BUTEO REGALIS	SPC
FRINGED MYOTIS	MYOTIS THYSANODES	SPC

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**Kane County**

Common Name	Scientific Name	State Status
GREATER SAGE-GROUSE	CENTROCERCUS UROPHASIANUS	SPC
KIT FOX	VULPES MACROTIS	SPC
LONG-BILLED CURLEW	NUMENIUS AMERICANUS	SPC
NORTHERN GOSHAWK	ACCIPITER GENTILIS	CS
SPOTTED BAT	EUDERMA MACULATUM	SPC
THREE-TOED WOODPECKER	PICOIDES TRIDACTYLUS	SPC
TOWNSEND'S BIG-EARED BAT	CORYNORHINUS TOWNSENDII	SPC
WESTERN TOAD	BUFO BOREAS	SPC
<b>SPECIAL STATUS PLANTS-KANAB FIELD OFFICE</b>		
GUMBO MILK-VETCH	ASTRAGALUS AMPULLARIUS	C-2
ATWOOD'S CAMISSONIA	CAMISSONIA ATWOODII	C-2
SLENDER CAMISSONIA	CAMISSONIA EXILIS	C-2
REVEAL INDIAN PAINTBRUSH	CASTILLEJA REVEALII	C-2
SAND-DWELLING CRYPTANTH	CRYPTANTHA CINEREA ARENICOLA	C-2
YELLOW-WHITE CATSEYE	CRYPTANTHA OCHROLEUCA	C-2
JONES HIGGINS BISCUITROOT	CYMOPTERUS ACAULIS VAR. HIGGINSII	C-2
CEDAR BREAKS BISCUITROOT	CYMOPTERUS MINIMUS	C-2
ZION DAISY	ERIGERON SIONIS	C-2
ALCOVE DAISY	ERIGERON ZOTHECINUS	C-2
CEDAR BREAKS GOLDENBUSH	HAPLOPAPPUS ZIONIS	C-2
PARIA IRIS	IRIS PARIENSIS	C-2
KANE BREADROOT	PEDIOMELUM EPIPSILUM	C-2
PARIA BREADROOT	PEDIOMELUM PARIENSE	C-2
SANDLOVING PENSTEMON	PENTEMON AMMOPHILUS	C-2
ZION TANSY	SPHAEROMERIA RUTHIAE	C-2

Other Sensitive Resources

Sage grouse  
Deer summer range  
Upper Kanab watershed  
Water quality and salinity  
Archeological resources

Noxious Weeds

Small, isolated populations of Scotch Thistle occur within the FMU. All machinery and equipment should be high pressure washed to remove loose soil before entering project/incident areas where appropriate.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

FIL 1 = 0-2 feet  
FIL 2 = 2-4 feet  
FIL 3 = 4-6 feet  
FIL 4 = 6-8 feet  
FIL 5 = 8-12 feet  
FIL 6 = 12 + feet

Acres by FIL

FIL 1 – 7.68  
FIL 2 – 7.92  
FIL 3 – 8.00  
FIL 4 – 0.08  
FIL 5 – 0.0

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FIL 6	0.0
Unclassified-	31.36
TOTAL-	55.02

Fire Starts by Year

1993 –	1
1994 –	0
1995 –	0
1996 –	3
1997 –	3
1998 –	0
1999 –	1
2000 –	3
2001 –	5
2002 –	1
2003 -	0
TOTAL	17

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**Fire Regime and Condition Class (FRCC):**

**Kanab Field Office  
FRCC TABLE**

Date: 9/1/03

FMU Name: Glendale Bench

FMU Number: 110GDB

67423

Use full suppression to protect communities and private property. Improve habitat and meet other resources objectives on 15,000 acres of pinyon-juniper, 5,000 acres of juniper using a combination of wildfire, prescribed fire, and non-fire fuels treatments. Improve 2000 acres of sagebrush using non-fire fuels treatments.

**EXISTING**

**DESIRED**

Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon		0	2	2				
Pinyon-juniper	40,250	60	2	3	1 or 2	sagebrush/grass	37	15,000
Juniper	11,394	17	2	3	1 or 2	sagebrush/grass	44	5,000
Sagebrush	4,177	6	2	3	1 or 2	age class mosaic	36	1,500
Sagebrush/perennial Grass	5,291	8	2	3	1 or 2	age class mosaic	10	530
Grassland	3,018	4	1	3				
Desert Grassland		0	1	3				
Mountain Shrub	575	1	2	2				

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Salt Desert Shrub	547	1	5	3				
Blackbrush		0						
Ponderosa/Mtn. Shrub	4	0						
Dry Meadow	109	0						
Barren	135	0						
Oak	1,877	3						
Agriculture	45	0						

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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Communication Sites
- Multiple private lands including private residences.
- Range Improvements
- Habitats for special status species
- Power Lines (smoke)
- Dispersed Recreation such as hunting and hiking
- Rights of Ways
- Ponderosa Pine with dense P-J understory
- Watershed

**Communities at Risk:**

Mt. Carmel Junction, Mt. Carmel, Orderville, Glendale, Alton. Other communities as Identified.

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Utilize appropriate suppression actions to allow fire to play its natural role in the ecosystem where possible by using roads or natural fire breaks, subject to requirements for public safety and protection of private property.

Protect unique plant communities, and WSA's. Improve ponderosa vigor and reproduction by reducing competition by pinyon juniper trees using prescribed fire and/or non-fire fuels treatments.

Fire Management Objectives

Pinyon-juniper: Convert 15,000 acres to sagebrush grass over the next 10 years using natural fire, prescribed fire and mechanical treatment.

Juniper: Convert 5,000 acres to sagebrush grass over the next 10 years using natural fire, prescribed fire and mechanical treatment.

Sagebrush: Using mechanical methods create a mosaic of age classes in the sagebrush and sagebrush perennial grass vegetation types on about 2000 acres over the next 10 years.

Fire Management Strategies:

**Suppression:**

Use full suppression to protect communities and private property within the FMU. When possible, follow sage grouse habitat guidelines to develop fire suppression strategies in this habitat so that less than 20% of the habitat is disturbed in a single year.

Use appropriate management response to achieve the objectives above in pinyon-juniper, juniper, and sagebrush areas. Utilize roads and existing natural and man made fuel breaks

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to suppress fires when possible to achieve resource objectives and provide for firefighter and public safety.

**Wildland Fire Use:**

No fire use.

**Prescribed Fire:**

Treat pinyon-juniper and juniper to create or enhance sage grouse habitat using prescribed fire on up to 22,000 acres in aggregate with non-fire fuels treatment.

**Non-fire fuels Treatments:**

Use non-fire fuels treatment where prescribed fire is not practical to treat up to 22,000 acres in aggregate with prescribed fire and natural ignition to obtain resource objectives as stated above.

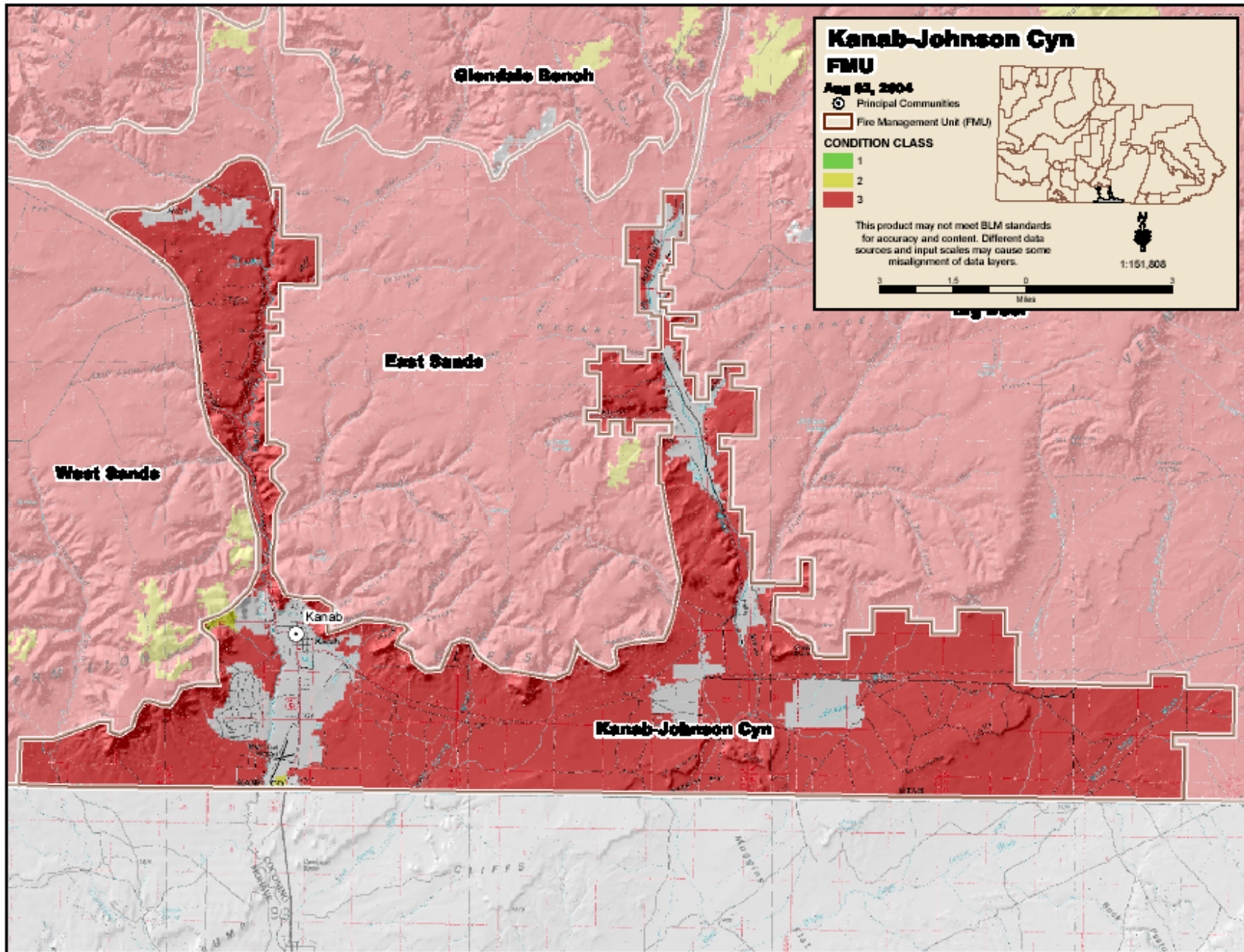
**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan. No threat from cheatgrass invasion.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans.



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**FMU DESCRIPTION**

Kanab-Johnson Canyon

**Location:**

This FMU has within its boundaries the population centers of Kane County including the communities in Long Valley, Kanab, subdivisions east of Kanab including Johnson Canyon. It is along the Arizona border. The Kaibab Reservation and the community of Fredonia, are adjacent to this FMU on the south boundary.

Critical watershed for Kanab and adjacent subdivisions. Mostly steep rocky areas where fires are unlikely.

Ownership Acres:

BLM –	21948
Private –	36345
State –	3941
Other –	26
TOTAL	62260

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 4800 feet to 6400 feet above sea level.

Precipitation

Precipitation averages about 10-14 inches of water per year, as modeled by the Parameter-elevation Regressions on Independent Slopes Model (PRISM). 1961-1990.

Vegetation

Dominant vegetation consists of pinyon-juniper, salt desert shrub, sagebrush grasslands.

Soils

STATSGO Soil Type

Soil Type	Acres
681	6416
682	10601
683	43767
689	1476
TOTAL	62260

Special Status Species

T&E Species Habitat

Area along Arizona border east of Kanab, Pediocactus sileri, Siler pincushion cactus - Currently listed as threatened. It occurs on gypsiferous, gray colored, clay soils of the Moenkopi formation. Small population occurs in Kane county. Additional populations occur in Arizona and Washington County. It is susceptible to damage by off road

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vehicles and trampling. Kane County List Natural Heritage Program Not all species/habitats occur in this fmU

ALLEN'S BIG-EARED BAT	IDIONYCTERIS PHYLLOTIS	SPC
AMERICAN WHITE PELICAN	PELECANUS ERYTHORHYNCHOS	SPC
ARIZONA TOAD	BUFO MICROSCAPHUS	SPC
BIG FREE-TAILED BAT	NYCTINOMOPS MACROTIS	SPC
DESERT NIGHT LIZARD	XANTUSIA VIGILIS	SPC
DESERT SUCKER	CATOSTOMUS CLARKI	SPC
FERRUGINOUS HAWK	BUTEO REGALIS	SPC
FRINGED MYOTIS	MYOTIS THYSANODES	SPC
<b>Common Name</b>	<b>Scientific Name</b>	<b>State Status</b>
GREATER SAGE-GROUSE	CENTROCERCUS UROPHASIANUS	SPC
LEWIS'S WOODPECKER	MELANERPES LEWIS	SPC
LONG-BILLED CURLEW	NUMENIUS AMERICANUS	SPC
NORTHERN GOSHAWK	ACCIPITER GENTILIS	CS
SPOTTED BAT	EUDERMA MACULATUM	SPC
THREE-TOED WOODPECKER	PICOIDES TRIDACTYLUS	SPC
TOWNSEND'S BIG-EARED BAT	CORYNORHINUS TOWNSENDII	SPC
WESTERN TOAD	BUFO BOREAS	SPC
<b>SPECIAL STATUS PLANTS-KANAB FIELD OFFICE</b>		
GUMBO MILK-VETCH	ASTRAGALUS AMPULLARIUS	C-2
ATWOOD'S CAMISSONIA	CAMISSONIA ATWOODII	C-2
SLENDER CAMISSONIA	CAMISSONIA EXILIS	C-2
REVEAL INDIAN PAINTBRUSH	CASTILLEJA REVEALII	C-2
SAND-DWELLING CRYPTANTH	CRYPTANTHA CINEREA ARENICOLA	C-2
YELLOW-WHITE CATSEYE	CRYPTANTHA OCHROLEUCA	C-2
HIGGINS BISCUITROOT	CYMOPTERUS ACAULIS VAR. HIGGINSII	C-2
CEDAR BREAKS BISCUITROOT	CYMOPTERUS MINIMUS	C-2
ZION DAISY	ERIGERON SIONIS	C-2
ALCOVE DAISY	ERIGERON ZOTHECINUS	C-2
CEDAR BREAKS GOLDENBUSH	HAPLOPAPPUS ZIONIS	C-2
PARIA IRIS	IRIS PARIENSIS	C-2
KANE BREADROOT	PEDIOMELUM EIPSILUM	C-2
PARIA BREADROOT	PEDIOMELUM PARIENSE	C-2
SANDLOVING PENSTEMON	PENTEMON AMMOPHILUS	C-2
AUTUMN ZION TANSY	SPHAEROMERIA RUTHIAE	C-2

Other Sensitive Resources

Critical deer winter range (Pansagunt herd unit). A-2: Critical watershed for Kanab and adjacent subdivisions. These are mostly steep rocky areas where fires are unlikely.

Noxious Weeds

Small, isolated populations of Scotch Thistle occur within the FMU. All machinery and equipment should be high pressure washed to remove loose soil before entering project/incident areas where appropriate.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

- FIL 1 = 0-2 feet
- FIL 2 = 2-4 feet
- FIL 3 = 4-6 feet
- FIL 4 = 6-8 feet
- FIL 5 = 8-12 feet
- FIL 6 = 12 + feet

Acres by FIL

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FIL 1 –	0.08
FIL 2 –	23.67
FIL 3 –	0.23
FIL 4 –	0.16
FIL 5 –	0.39
FIL 6	0.0
Unclassified-	30.13
TOTAL-	54.65

Fire Starts by Year

1993 –	2
1994 –	2
1995 –	0
1996 –	2
1997 –	0
1998 –	5
1999 –	2
2000 –	3
2001 –	3
2002 –	4
2003 -	6
TOTAL	29

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**Fire Regime and Condition Class (FRCC):**

FMU Number:  
110KJC

FMU Name: Kanab-Johnson Canyon

21,948 Acres

Full suppression due to muni watershed values and community and private property concerns. Treat 2440 acres of juniper and 560 acres of sagebrush using mechanical methods to improve deer habitat and increase sagebrush age class diversity. No fire use and no prescribed.

**EXISTING**

Veg type	Acres	% Area	Fire Regime	Existing CC	DESIRED			
					Desired CC	Veg type	% Change	Acres
Pinyon		0	2	2				
Pinyon-juniper		0	2	3				
Juniper	6,093	28	2	3	1 or 2	sage grass	40	2437
Sagebrush	1,750	8	2	3	1 or 2	age class mosaic	30	525
Sagebrush/perennial Grass	393	2	2	3	1 or 2	age class mosaic	10	39
Grassland	1,215	6	1	3				

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Desert Grassland	2047	9	1	3				
Mountain Shrub	46	0	2	2				
Salt Desert Shrub	9,556	44	5	3				
Lowland Riparian	25	0						
Ponderosa/Mtn.Shrub		0						
Barren	619	3						
Unclassified	133	1						
Urban	24	0						
Agriculture	48	0						

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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Communication Sites
- Multiple private lands including private residences.
- Range Improvements
- Habitats for special status species
- Power Lines (smoke)
- Dispersed Recreation such as hunting and hiking
- Rights of Ways
- Ponderosa Pine with dense P-J understory
- Watershed
- Deer winter range
- Wildlife guzzler
- Private homes

**Communities at Risk:**

Intermixed private land.

Culinary Water Systems

Stampin up Business, and Youth Center (Junction)

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

**Land Use Plan Objectives**

Protect special status species, improve critical deer winter range and maintain or improve watershed values.

**Fire Management Objectives**

Apply full suppression due to wildland urban interface (Kanab and Johnson Canyon and subdivisions in between) and to protect municipal watershed for drinking water. Use mechanical treatment for improvement of critical deer habitat in the east portion of the FMU. Apply full suppression to protect the siler pincushion cactus and other sensitive plants.

Maintain and or enhance existing vegetation communities while keeping fire at a minimum

**Fire Management Strategies:**

**Suppression:**

Full suppression due to wildland/urban interface and municipal watershed values for the community of Kanab. Cultural and historic sites would require protection and full suppression if threatened.

No heavy equipment use until resource advisor arrives.

**Wildland Fire Use:**

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No fire use.

**Prescribed Fire:**

None, due to urban interface issues.

**Non-fire fuels Treatments:**

Use mechanical treatment for fuels reduction to protect communities and private lands as well as to improve mule deer critical winter habitat. Projects should be planned to provide protection to communities while including significant acreage to allow for resource benefit. Projects would total up to 3,000 acres of treatment in the aggregate.

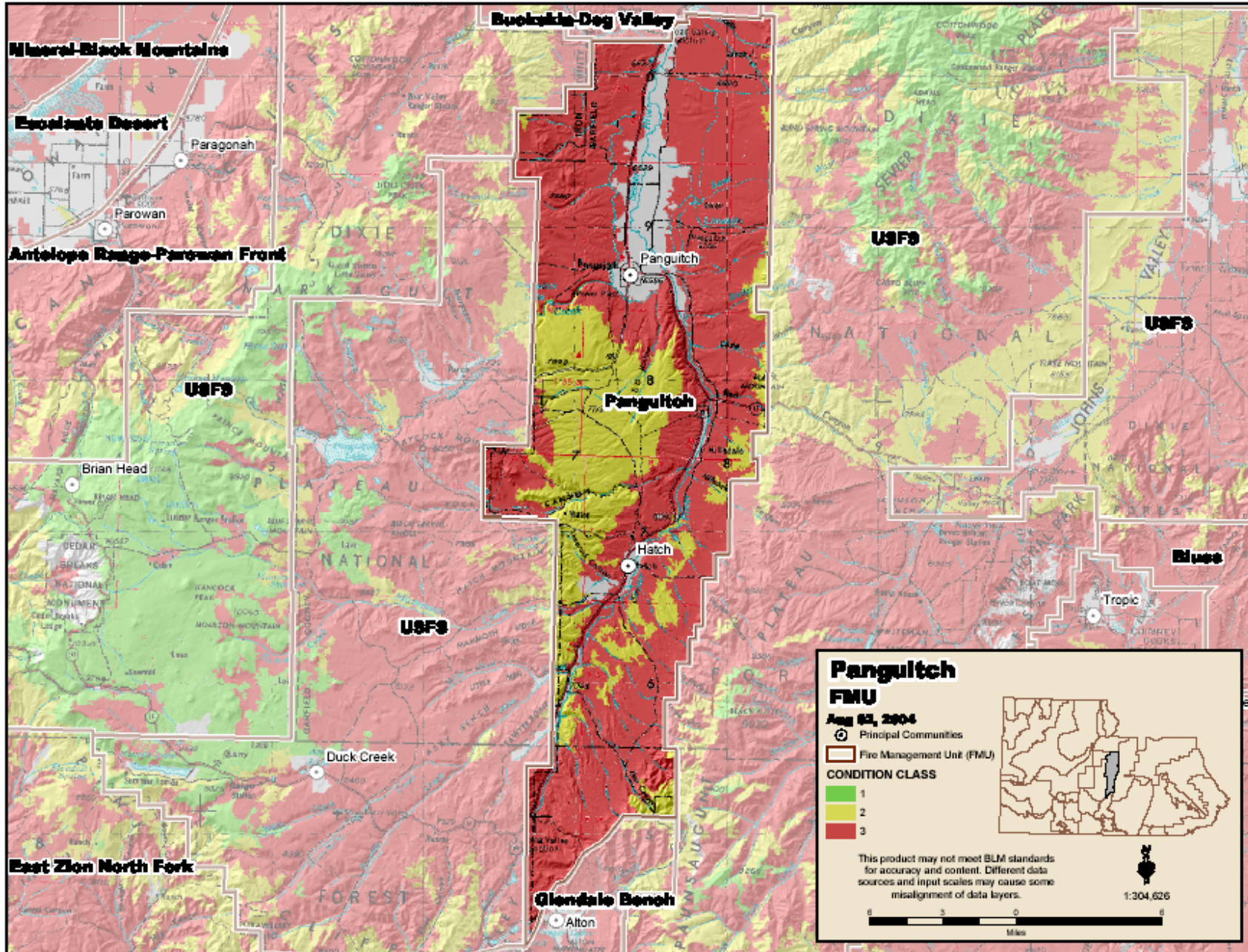
**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan. Cheatgrass invasion may occur.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).



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**FMU DESCRIPTION**

Panguitch

**Location:**

This FMU includes the BLM administered portion of the Panguitch Valley from U-20 on the north to the watershed divide above Alton on the south. This FMU is interfaced by the communities of Panguitch, Hatch, Long Valley Junction and Alton, private and state lands, scenic corridors and public lands.

Ownership Acres:

BLM –	83235
Private –	67640
State –	21225
USFS	2882
Other –	55
TOTAL	175036

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 6400 feet to 9000 feet above sea level. The Sevier River bisects this FMU with a large portion surrounded primarily by private and state lands. The eastern boundary is the USFS, Dixie National Forest.

Precipitation

Precipitation averages about 10-18 inches of water per year, as modeled by the Parameter-elevation Regressions on Independent Slopes Model (PRISM). 1961-1990.

Vegetation

n-juniper, oak, sage, and mountain shrub vegetation with isolated stands of aspen.

Soils

STATSGO Soil Types

Soil Type	Acres
653	367
713	20697
714	2953
720	46570
721	25115
722	3509
723	45289
724	11855
725	5921
727	8709
728	2133
729	198

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731            1721  
TOTAL        175036

Special Status Species, Utah Natural Heritage Program Data , not all of these species and habitats occur in this FMU County wide list only.

**Garfield County**

Common Name	Scientific Name	State Status
ALLEN'S BIG-EARED BAT	DIONYCTERIS PHYLLOTIS	SPC
BURROWING OWL	ATHENE CUNICULARIA	SPC
COMMON CHUCKWALLA	SAUROMALUS ATER	SPC
DESERT NIGHT LIZARD	XANTUSIA VIGILIS	SPC
FERRUGINOUS HAWK	BUTEO REGALIS	SPC
FRINGED MYOTIS	MYOTIS THYSANODES	SPC
KIT FOX	VULPES MACROTIS	SPC
LEWIS'S WOODPECKER	MELANERPES LEWIS	SPC
LONG-BILLED CURLEW	NUMENIUS AMERICANUS	SPC
NORTHERN GOSHAWK	ACCIPITER GENTILIS	CS
PYGMY RABBIT	BRACHYLAGUS IDAHOENSIS	SPC
SHORT-EARED OWL	ASIO FLAMMEUS	SPC
SPOTTED BAT	EUDERMA MACULATUM	SPC
TOWNSEND'S BIG-EARED BAT	CORYNORHINUS TOWNSENDII	SPC
UTAH PHYSA	PHYSELLA UTAHENSIS	SPC
WESTERN TOAD	BUFO BOREAS	SPC

**SPECIAL STATUS PLANTS-KANAB FIELD OFFICE**

GUMBO MILK-VETCH	ASTRAGALUS AMPULLARIUS	C-2
ATWOOD'S CAMISSONIA	CAMISSONIA ATWOODII	C-2
SLENDER CAMISSONIA	CAMISSONIA EXILIS	C-2
REVEAL INDIAN PAINTBRUSH	CASTILLEJA REVEALII	C-2
SAND-DWELLING CRYPTANTH	CRYPTANTHA CINEREA ARENICOLA	C-2
YELLOW-WHITE CATSEYE	CRYPTANTHA OCHROLEUCA	C-2
JONES CYCLADENIA HIGGINS BISCUITROOT	CYMOPTERUS ACAULIS VAR. HIGGINSII	
C-2		
CEDAR BREAKS BISCUITROOT	CYMOPTERUS MINIMUS	C-2
ZION DAISY	ERIGERON SIONIS	C-2
ALCOVE DAISY	ERIGERON ZOTHECINUS	C-2
CEDAR BREAKS GOLDENBUSH	HAPLOPAPPUS ZIONIS	C-2
PARIA IRIS	IRIS PARIENSIS	C-2
KANE BREADROOT	PEDIOMELUM EPIPSILUM	C-2
SANDLOVING PENSTEMON	PENTEMON AMMOPHILUS	C-2

Other Sensitive Resources

Noxious Weeds

Small, isolated populations of Musk and Canada Thistle occur within the FMU. All machinery and equipment should be high pressure washed to remove loose soil before entering project/incident areas where appropriate.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

- FIL 1 = 0-2 feet
- FIL 2 = 2-4 feet
- FIL 3 = 4-6 feet
- FIL 4 = 6-8 feet
- FIL 5 = 8-12 feet
- FIL 6 = 12 + feet

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Acres by FIL

FIL 1 –	0.0
FIL 2 –	0.08
FIL 3 –	7.83
FIL 4 –	0.0
FIL 5 –	0.23
FIL 6	0.0
Unclassified-	188.14
TOTAL-	196.29

Fire Starts by Year

1993 –	2
1994 –	0
1995 –	0
1996 –	6
1997 –	2
1998 –	1
1999 –	1
2000 –	4
2001 –	2
2002 –	1
2003 -	1
TOTAL	20

Southwest Utah Support Area Fire Management Plan  
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**Fire Regime and Condition Class (FRCC):**

**Kanab Field Office  
FRCC TABLE**

Date: 9/1/04

FMU Name: Panguitch

FMU Number: 110PGH

83235

full suppression around communities, private property and riparian habitat. Improve sagegrouse and Utah prairie dog habitat on 15,000 acres using wildfire, prescribed fire and non-fire fuels treatments. Use non-fire fuels treatments to improve 800 acres of sagebrush. No fire use.

**EXISTING**

**DESIRED**

Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon	26,704	32	2	2	1 & 2	sagebrush/grass	19	5000
Pinyon-juniper	47,371	57	2	3	1 & 2	sagebrush/grass	21	10,000
Juniper		0	2	3				
Sagebrush	5,393	6	2	3	1 & 2	diversify age class	15	800
Sagebrush/perennial Grass	1,682	2	2	3				

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Ponderosa Pine		0	1	3				
Grassland	1122	1	1	3				
Dry Meadow	16	0	1	3				
Oak	1	0	1	2				
PIPO/Mountain fir	878	1	1	3				
Agriculture	67	0						

Southwest Utah Support Area Fire Management Plan  
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**Values at Risk:**

Resource values associated with the River include wild and scenic river eligibility along all public land portions, as well as riparian, wildlife, fisheries, plants, and recreation. State Route 89 bisects a portion of the FMU.

This FMU contains habitat for sage grouse, mule deer, antelope, bald eagle and Utah prairie dog. Range improvements, riparian habitat, and wildlife guzzlers.

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Communication Sites
- Private lands including at least primary residences and cabins.
- Range Improvements
- DWR and BLM guzzlers
- Wind towers
- Habitats for special status species
- Transmission Lines (smoke)
- Dispersed Recreation such as hunting
- Rights of Way\
- Boneville CCT stream 3 mile drainage

**Communities at Risk:**

Major WUI areas: Panguitch, Alton, Hatch, Long Valley Junction

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

(See the Upper Sevier CRMP for objectives. Also check Cedar FO Mineral/Black Mountain FMU)

Fire Management Objectives

Improve sage grouse brooding habitat where invaded by PJ by converting 10,000 acres to sagebrush/grass using mechanical, prescribed fire, and natural fire. In pinyon convert 5,000 acres sagebrush/grass. Improve sagebrush age class diversity by mechanical treatment on about 800 acres to improve sage grouse and UPD habitat.

Use appropriate sage grouse and UPD guidelines in all fire suppression and habitat improvement work.

Fire Management Strategies:

**Suppression:**

## Southwest Utah Support Area Fire Management Plan

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Protection of life and private property is the first priority. A 1/2-mile buffer is established around non-BLM lands, structures and rights-of-ways, with no limitation on suppression tactics or surface disturbances within the buffer. Public lands outside the 1/2-buffer have surface disturbance restrictions. Blading could be allowed under specific conditions, with cultural clearances, outside of buffer zones with Resource Advisor concurrence.

A Resource Advisor is required during extended attack to facilitate identification of ownership boundaries and special resources such as rights-of-ways, structures, riparian habitat, cultural sites, and areas of special value located on public lands.

Fire suppression within riparian zones is a priority to prevent destruction of fisheries habitat and maintain riparian values and condition. Management constraints within the riparian buffer include: No blading within a 1/4-mile buffer of the riparian zone, restrictions on vehicle disturbance in the stream course, minimal vehicle disturbance and removal of unburned vegetation in the riparian area.

In pinyon-juniper areas contain fires at 1,000 acres or greater using appropriate management response. In sagebrush areas use full suppression containing fires to 50 acres if possible.

#### **Wildland Fire Use:**

No fire use.

#### **Prescribed Fire:**

Convert pinyon and pinyon-juniper using prescribed and natural fire: up to 5,000 acres in pinyon, and 10,000 acres in pinyon-juniper in aggregate.

#### **Non-fire fuels Treatments:**

There are several completed and on-going fuels treatments in this FMU. Non-fire fuels treatments should be planned in conjunction with the Upper Sevier River CRMP effort to reduce hazardous fuels and improve resource conditions on up to 15,800 acres in aggregate with prescribed fire treatments.

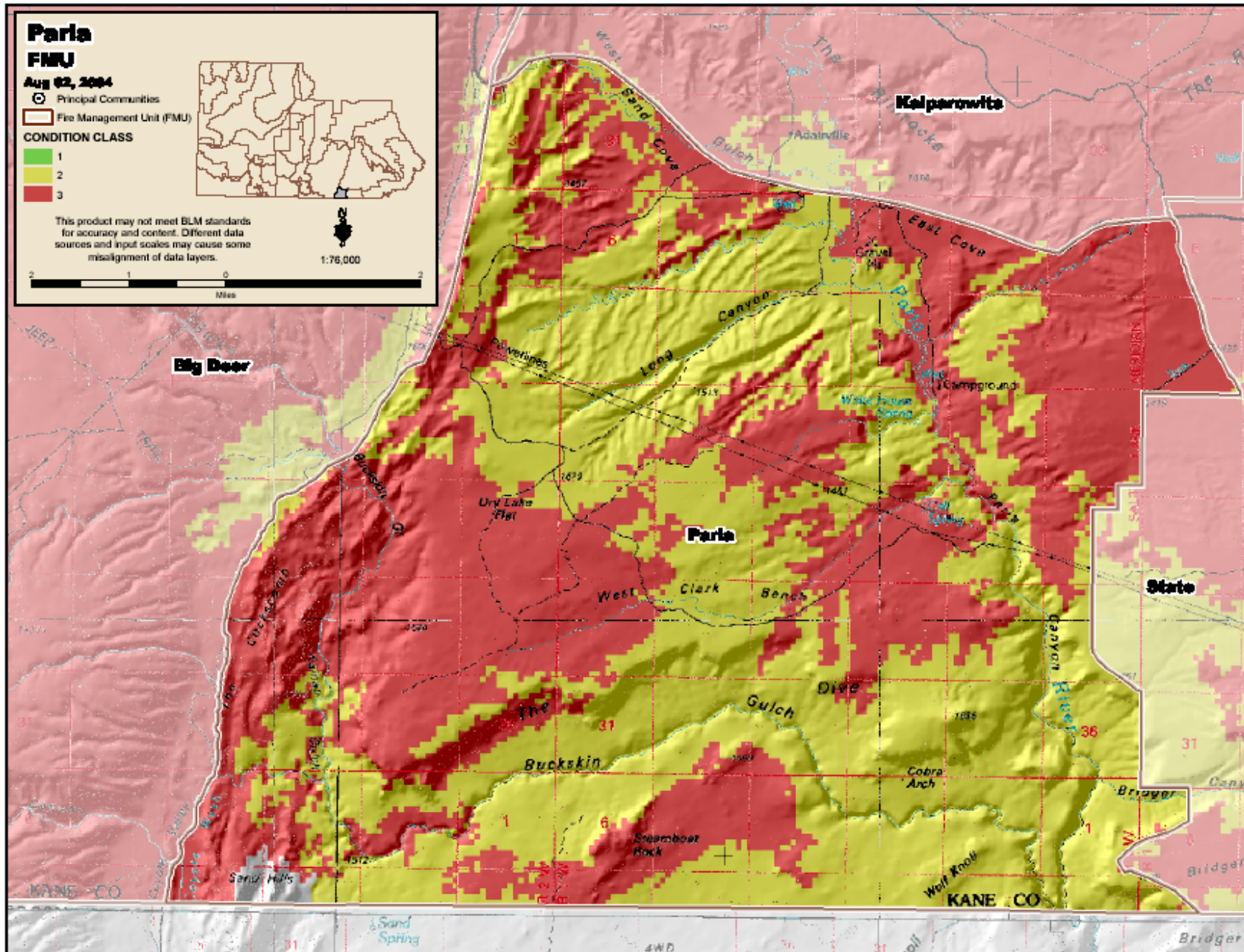
#### **Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan. There is an increased threat of rabbitbrush invasion after fire. This area has traditionally exhibited a limited threat of cheatgrass invasion.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).



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Southwest Utah Support Area Fire Management Plan  
Cedar City Field Office  
9/29/04  
**FMU DESCRIPTION**

Paria

**Location:**

This FMU contains the northern portion of the Paria Canyon/Vermilion Cliffs Wilderness and lands within the Grand Staircase-Escalante National Monument. The northern boundary is Highway 89. On the east is the East Clark Bench which is nearly all state land and on the west is the Big Deer FMU. Arizona lies to the south.

Ownership Acres: From GIS

BLM –	40791
Private –	677.80
State –	678.66
Other –	5.73
TOTAL	42152.79

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 4400 feet to 6000 feet above sea level.

Precipitation

Precipitation averages about 10 to 14 inches of water per year, as modeled by the Parameter-elevation Regressions on Independent Slopes Model (PRISM). 1961-1990.

Vegetation

Vegetation varies from sparse stands of grass intermixed with brush to widely spaced pinyon and juniper trees and riparian growth in the canyon bottoms. Fire history of this FMU is one of low occurrence, few acres burned and low fire potential. The potential for significant resource damage caused by natural fire is extremely low.

STATSGO Soil Type

Soil Type	Acres
673	6735.92
676	30511.37
684	4905.50
TOTAL	42152.79

**Special Status Species-Kane County List Natural Heritage Program Not all species/habitats occur in this FMU –**

ALLEN'S BIG-EARED BAT	IDIONYCTERIS PHYLLOTIS	SPC
AMERICAN WHITE PELICAN	PELECANUS ERYTHORHYNCHOS	SPC
ARIZONA TOAD	BUFO MICROSCAPHUS	SPC

## Southwest Utah Support Area Fire Management Plan

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BIG FREE-TAILED BAT	NYCTINOMOPS MACROTIS	SPC
BURROWING OWL	ATHENE CUNICULARIA	SPC
COMMON CHUCKWALLA	SAUROMALUS ATER	SPC
DESERT NIGHT LIZARD	XANTUSIA VIGILIS	SPC
DESERT SUCKER	CATOSTOMUS CLARKI	SPC
FERRUGINOUS HAWK	BUTEO REGALIS	SPC
FRINGED MYOTIS	MYOTIS THYSANODES	SPC

#### **Kane County**

<b>Common Name</b>	<b>Scientific Name</b>	<b>State Status</b>
KIT FOX	VULPES MACROTIS	SPC
LEWIS'S WOODPECKER	MELANERPES LEWIS	SPC
LONG-BILLED CURLEW	NUMENIUS AMERICANUS	SPC
NORTHERN GOSHAWK	ACCIPITER GENTILIS	CS
SPOTTED BAT	EUDERMA MACULATUM	SPC
TOWNSEND'S BIG-EARED BAT	CORYNORHINUS TOWNSENDII	SPC
WESTERN TOAD	BUFO BOREAS	SPC
<b>SPECIAL STATUS PLANTS-KANAB FIELD OFFICE</b>		
GUMBO MILK-VETCH	ASTRAGALUS AMPULLARIUS	C-2
ATWOOD'S CAMISSONIA	CAMISSONIA ATWOODII	C-2
SLENDER CAMISSONIA	CAMISSONIA EXILIS	C-2
REVEAL INDIAN PAINTBRUSH	CASTILLEJA REVEALII	C-2
SAND-DWELLING CRYPTANTH	CRYPTANTHA CINEREA ARENICOLA	C-2
YELLOW-WHITE CATSEYE	CRYPTANTHA OCHROLEUCA	C-2
HIGGINS BISCUITROOT	CYMOPTERUS ACAULIS VAR. HIGGINSII	C-2
CEDAR BREAKS BISCUITROOT	CYMOPTERUS MINIMUS	C-2
ZION DAISY	ERIGERON SIONIS	C-2
ALCOVE DAISY	ERIGERON ZOTHECINUS	C-2
CEDAR BREAKS GOLDENBUSH	HAPLOPAPPUS ZIONIS	C-2
PARIA IRIS	IRIS PARIENSIS	C-2
KANE BREADROOT	PEDIOMELUM EIPSILUM	C-2
PARIA BREADROOT	PEDIOMELUM PARIENSE	C-2
SANDLOVING PENSTEMON	PENTEMON AMMOPHILUS	C-2

All special status plant species (BLM Sensitive) – No mechanized equipment and hand tools are recommended for these populations. Fire size should be restricted to 5 acres.

There are habitats for special status species including endangered Mexican spotted owls and southwest willow flycatchers.

#### Other Sensitive Resources

##### Deer winter range

The FMU is adjacent to critical deer winter range in the Big Deer FMU and undoubtedly provides winter range as well.

##### Riparian areas/Seeps and springs

No mechanized equipment and use of hand tools is recommended. Fire size should be limited to 100 acres.

##### Water quality and salinity

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Designated Wilderness

Recreational uses

Noxious Weeds

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

FIL 1 = 0-2 feet  
FIL 2 = 2-4 feet  
FIL 3 = 4-6 feet  
FIL 4 = 6-8 feet  
FIL 5 = 8-12 feet  
FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	0.0
FIL 2 –	7.27
FIL 3 –	0.0
FIL 4 –	0.0
FIL 5 –	0.0
FIL 6	0.0
Unclassified-	0.08
TOTAL-	7.35

Fire Starts by Year

Year	Number
1993 –	0
1994 –	0
1995 –	0
1996 –	1
1997 –	0
1998 –	0
1999 –	0
2000 –	2
2001 –	1
2002 –	0
2003 -	0
TOTAL	4

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 Cedar City Field Office  
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**Fire Regime and Condition Class (FRCC):**

**GSENM Field Office  
 FRCC TABLE**

Date: 9/1/04

FMU Number:  
 030PRA

FMU Name: Paria

40791

Use appropriate management response on the whole FMU based on the manager's decision. Full suppression on private lands or when life is threatened. Also full suppression on special status plant species habitat and riparian. No prescribed fire and no fire use.

**EXISTING**

**DESIRED**

Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon		0	2	2				
Pinyon-juniper		0	2	3				
Juniper	88	0	2	3				
Sagebrush		0	2	3				

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Sagebrush/perennial Grass		0	2	3				
Grassland	513	1	1	3				
Desert Grassland	13,752	34	1	3				
PIPO/Mtn Shrub		0	1	3				
Mountain Shrub		0	2	2				
Salt Desert Shrub	4,360	11	5	3				
Ponderosa Pine		0	4	3				
Ponderosa/Mtn. Shrub		0	1	3				
Dry Meadow		0	1	3				
Oak		0	1	2				

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Blackbrush	21,815	53	5	2				
Other	55	0	5	3				
Barren	208	1						
Agriculture		0						

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**Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Range Improvements
- Paria subdivision
- Habitats for special status species
- Power Lines, 500Kv Navajo-McCullough (smoke)
- Dispersed Recreation such as hiking
- Paria Contact Station and developed recreation sites
- Rights of Ways
- Blackbrush community

**Communities at Risk:**

There is a subdivision adjacent to the Paria River with private residences.

**Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

Land Use Plan Objectives

Paria MFP

D-4 Management Objectives: Fire will be allowed to play its natural role in the wilderness ecosystem.

Management Constraints: Wildfires will be allowed to run their course unless life or private property is endangered.

The decision to suppress human-caused fires will be done on a case-by-case basis by the District Manager.

When suppression is needed, techniques will be used that result in the least possible impact to the wilderness resource. All surface disturbances caused by suppression actions will be rehabilitated to the fullest extent possible.

A Wilderness resource advisor will be assigned to all fires when suppression action has been determined necessary.

Monument Management Plan

FIRE-1            "...The objective of the fire management program will be to allow fire to play its natural role in the ecosystem. Management ignited fires may be initiated in areas where fire suppression has disrupted natural fire regimes.



Southwest Utah Support Area Fire Management Plan

Cedar City Field Office

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- FIRE-2 “...Specific zoned areas (FMUs) and policies have been established to indicate how suppression activities will be managed in specific areas of the Monument. Most of the Monument is included in zones that have little fire suppression activity.”
- FIRE-3 “Heavy equipment use is allowed through authorization of the Monument Manager.”
- FIRE-4 “A designated fire resource advisor familiar with WSA issues will be consulted on all fires within the Monument that involve WSAs.”

Fire Management Objectives

Allow fire to resume its role in the ecosystem.

Where possible with consideration to Values at Risk, use fire to achieve management objectives.

Utilize Light-on-the-Land minimum suppression strategies and Wildland Fire Use to achieve management objectives, limit surface disturbance and reduce costs.

Fire Management Strategies:

**Suppression:**

The decision to suppress human-caused fires will be done on a case-by-case basis by the Field Office Manager or Monument Manager. Generally unless life or private property is involved, use appropriate management response as determined by the Field Office Manager or the Monument Manager. Limit wildfires within identified special status plant species habitat to 5 acres and within riparian areas to 100 acres.

When suppression is needed, techniques will be used that result in the least possible impact to the wilderness resource (MIST). All surface disturbances caused by suppression actions will be rehabilitated to the fullest extent possible. Heavy equipment use for suppression/prescribed fire and mechanical treatments is allowed only through authorization by either the Monument Manager or Field Office Manager.

A Wilderness resource advisor will be assigned to all fires when suppression action has been determined necessary.

**Wildland Fire Use:**

No wildland fire use.

**Prescribed Fire:**

None

**Non-fire fuels Treatments:**

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None

**Restoration & Rehabilitation:**

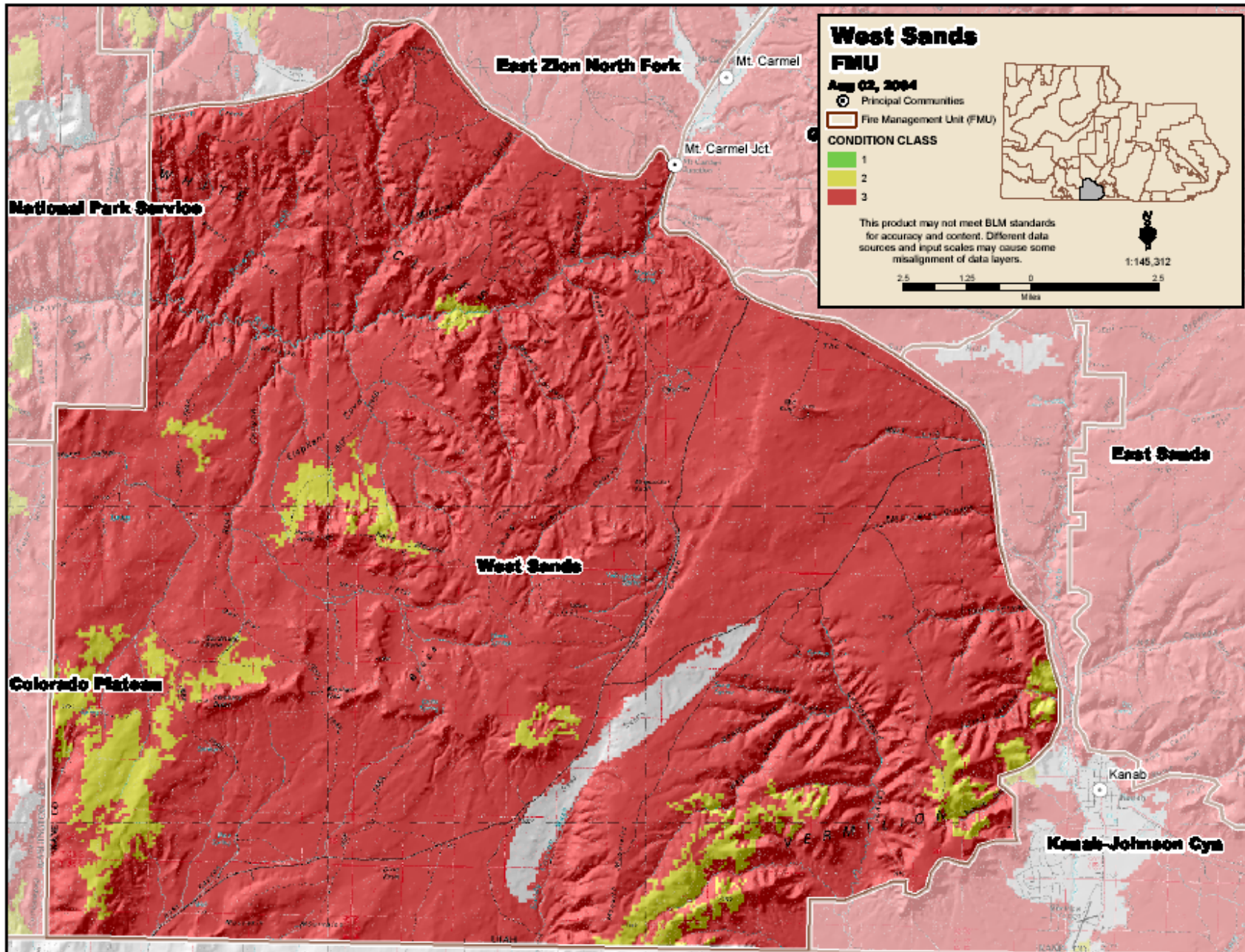
Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan. This area has a moderate to high threat for cheatgrass invasion following fire.

Fire rehabilitation and stabilization should begin as soon as possible following suppression of fires. Seeding, where appropriate, should take place as soon as conditions favor successful seed germination but no later than the following spring. Prevention of cheat grass dominance and noxious weed invasion should be high priorities in developing rehabilitation and seeding plans.

Areas with high species diversity may not need to be reseeded if conditions are beneficial to natural re-establishment. Conditions which may preclude natural re-seeding include high fire intensity, large fire size, lack of a residual plant community, seed bank, or adjacent seed source. Post fire weed management will include all invasive plant species not just noxious weeds. Fire rehabilitation areas will be monitored annually for three years and in five year increments thereafter for invasive and noxious weeds.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).

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Southwest Utah Support Area Fire Management Plan  
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**FMU DESCRIPTION**

West Sands

**Location:**

This FMU is the sand country in the southwest corner of the field office with Zion National Park on the west, the Kaibab Indian Reservation on the south (in Arizona), and bordered by (from west to east) East Zion-North Fork, Glendale Bench, East Sands, and Kanab-Johnson Canyon FMU's. Moquith Mountain WSA and South Fork Indian Canyon/Water Canyon ACEC are found in this FMU. Within the FMU are high value ponderosa forest and critical watershed for Fredonia water supply. This area also has high value cultural resources.

Ownership Acres:

BLM –	140322
Private –	9631
State –	18989
NPS	868
Other –	45
TOTAL	169856

**Characteristics:**

Elevation and Topography

Elevation ranges from approximately 4600 feet to 7100 feet above sea level.

Precipitation

Precipitation averages about 14 to 16 inches of water per year, as modeled by the Parameter-elevation Regressions on Independent Slopes Model (PRISM). 1961-1990.

Vegetation

Vegetation consists of pinyon-juniper, juniper, sagebrush, grassland, mountain brush and scattered open ponderosa pine stands.

Soils

STATSGO Soil Type	
Soil Type	Acres
680	12192
681	15874
682	108495
683	1666
689	4463
690	25564
712	1602
TOTAL	169856

Special Status Species

Southwest Utah Support Area Fire Management Plan  
Cedar City Field Office  
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From the Utah Natural heritage Program Data base for Kane County, not all species and Habitats occur in this FMU

ALLEN'S BIG-EARED BAT	IDIONYCTERIS PHYLLOTIS	SPC
AMERICAN WHITE PELICAN	PELECANUS ERYTHORHYNCHOS	SPC
ARIZONA TOAD	BUFO MICROSCAPHUS	SPC
BALD EAGLE	HALIAEETUS LEUCOCEPHALUS	S-ESA
BIG FREE-TAILED BAT	NYCTINOMOPS MACROTIS	SPC
BLUEHEAD SUCKER	CATOSTOMUS DISCOBOLUS	SPC
BONNEVILLE CUTTHROAT TROUT	ONCORHYNCHUS CLARKI UTAH	CS
BONYTAIL	GILA ELEGANS	S-ESA
BURROWING OWL	ATHENE CUNICULARIA	SPC
COLORADO PIKEMINNOW	PTYCHOCEILUS LUCIUS	S-ESA
COMMON CHUCKWALLA	SAUROMALUS ATER	SPC
DESERT NIGHT LIZARD	XANTUSIA VIGILIS	SPC
DESERT SUCKER	CATOSTOMUS CLARKI	SPC
FERRUGINOUS HAWK	BUTEO REGALIS	SPC
FLANNELMOUTH SUCKER	CATOSTOMUS LATIPINNIS	SPC
FRINGED MYOTIS	MYOTIS THYSANODES	SPC
<b>Kane County</b>		
<b>Common Name</b>	<b>Scientific Name</b>	<b>State Status</b>
GREATER SAGE-GROUSE	CENTROCERCUS UROPHASIANUS	SPC
HUMPBACK CHUB	GILA CYPHA	S-ESA
KANAB AMBERSNAIL	OXYLOMA KANABENSE	S-ESA
KIT FOX	VULPES MACROTIS	SPC
LEWIS'S WOODPECKER	MELANERPES LEWIS	SPC
LONG-BILLED CURLEW	NUMENIUS AMERICANUS	SPC
NORTHERN GOSHAWK	ACCIPITER GENTILIS	CS
RAZORBACK SUCKER	XYRAUCHEN TEXANUS	S-ESA
ROUNDTAIL CHUB	GILA ROBUSTA	SPC
SOUTHWESTERN WILLOW FLYCATCHER	EMPIDONAX TRAILLII EXTIMUS	S-ESA
SPOTTED BAT	EUDERMA MACULATUM	SPC
SPOTTED OWL	STRIX OCCIDENTALI	S S-ESA
THREE-TOED WOODPECKER	PICOIDES TRIDACTYLUS	SPC
TOWNSEND'S BIG-EARED BAT	CORYNORHINUS TOWNSENDII	SPC
UTAH PRAIRIE-DOG	CYNOMYS PARVIDENS	S-ESA
WESTERN TOAD	BUFO BOREAS	SPC
YELLOW-BILLED CUCKOO	COCCYZUS AMERICANUS S-	ESA
<b>SPECIAL STATUS PLANTS-KANAB FIELD OFFICE</b>		
WELSH'S MILKWEED	ASCLEPIAS WELSHII	ESA
GUMBO MILK-VETCH	ASTRAGALUS AMPULLARIUS	C-2
ATWOOD'S CAMISSONIA	CAMISSONIA ATWOODII	C-2
SLENDER CAMISSONIA	CAMISSONIA EXILIS	C-2
REVEAL INDIAN PAINTBRUSH	CASTILLEJA REVEALII	C-2
SAND-DWELLING CRYPTANTH	CRYPTANTHA CINEREA ARENICOLA	C-2
YELLOW-WHITE CATSEY	CRYPTANTHA OCHROLEUCA	C-2
JONES CYCLADENIA	CYCLADENIA HUMILIS VAR. JONESII	ESA
HIGGINS BISCUITROOT	CYMOPTERUS ACAULIS VAR. HIGGINSII	C-2
CEDAR BREAKS BISCUITROOT	CYMOPTERUS MINIMUS	C-2
ZION DAISY	ERIGERON SIONIS	C-2
ALCOVE DAISY	ERIGERON ZOTHECINUS	C-2
CEDAR BREAKS GOLDENBUSH	HAPLOPAPPUS ZIONIS	C-2
PARIA IRIS	IRIS PARIENSIS	C-2
KODACHROME BLADDERPOD	LESQUERELLA TUMULOSA	ESA
SILER PINCUSHION CACTUS	PEDIOCACTUS SILERI	ESA
KANE BREADROOT	PEDIOMELUM EPIPSILUM	C-2
PARIA BREADROOT	PEDIOMELUM PARIENSE	C-2
SANDLOVING PENSTEMON	PENTEMON AMMOPHILUS	C-2
AUTUMN BUTTERCUP	RANUNCULUS ACRIFORMIS AESTIVALIS	ESA
ZION TANSY	SPHAEROMERIA RUTHIAE	C-2

Other Sensitive Resources

Critical deer winter range

Riparian

WSA's and Canaan Mountain Wilderness

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Archaeology

Water Canyon water system for Fredonia Town  
ACEC Indian Canyon

Noxious Weeds

Small, isolated populations of Scotch Thistle occur within the FMU. All machinery and equipment should be high pressure washed to remove loose soil before entering project/incident areas where appropriate.

**Fire History: previous 10 years (based on BIs from DI-1202 database where BI / 10 yields flame length; flame lengths classified by:**

FIL 1 = 0-2 feet  
FIL 2 = 2-4 feet  
FIL 3 = 4-6 feet  
FIL 4 = 6-8 feet  
FIL 5 = 8-12 feet  
FIL 6 = 12 + feet

Acres by FIL

FIL 1 –	23.10
FIL 2 –	8.77
FIL 3 –	18.54
FIL 4 –	30.04
FIL 5 –	1.63
FIL 6	0.08
Unclassified-	116.47
TOTAL-	198.62

Fire Starts by Year

1993 –	2
1994 –	5
1995 –	5
1996 –	4
1997 –	5
1998 –	6
1999 –	4
2000 –	9
2001 –	16
2002 –	25
2003 -	7
TOTAL	88

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**Fire Regime and Condition Class (FRCC):**

**Kanab Field Office  
FRCC TABLE**

Date: 7/30/04

FMU Name: West Sands

140322

This is a full suppression area to protect unique habitats, municipal watersheds and private property. Prescribed fire and non-fire fuels treatments can be used on up to 3,000 acres: There are 1,000 acres of ponderosa pine enhancement and 2,000 acres of fuels reduction and habitat improvement for a total of 3,000 acres.

**EXISTING**

**DESIRED**

Veg type	Acres	% Area	Fire Regime	Existing CC	Desired CC	Veg type	% Change	Acres
Pinyon		0	2	2				
Pinyon-juniper	20,616	15	2	3		see sagebrush (Ponderosa understory)		
Juniper	39,963	28	2	3				
Sagebrush	3,324	2	2	3	! & 2	see below		
Sagebrush/perennial Grass	15,162	11	2	3	1 & 2	sagebrush/grass age class mosaic	Combined with pinyon-	3000

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							juniper	
Grassland	33,429	24	1	3				
Desert Grassland	5155	4	1	3				
Mountain Shrub	8,220	6	2	2				
Salt Desert Shrub	12,546	9	5	3				
Blackbrush	274	0	5	2				
Barren	1,196	1						
unclassified	436	0						



### **Values at Risk:**

The following values are at risk, primarily due to unplanned wildfire, including prescribed burns which may escape. Additional risk factors, where applicable, are shown inside parenthesis.

- Communication Sites
- Private lands including private residences.
- Range Improvements
- Habitats for special status species
- Transmission Lines (smoke)
- Dispersed Recreation such as hunting
- Rights of Way

This FMU contains Moquith Mountain WSA and South Fork Indian Canyon/Water Canyon ACEC. The FMU also includes high value ponderosa forest and critical watershed for Fredonia, AZ municipal water supply. This area also has high value cultural resources.

Critical deer, riparian, municipal water system/ watershed, archeology, WSA's, T&E, Coral Pink Sand Dunes State Park, ponderosa pine on coral pink dunes,

### **Communities at Risk:**

Private land and homes on the east, Cave Lakes, Kaibab Indian reservation to the south, Zion National Park to the west. State Road 9 runs through Zion National Park on north boundary, Ponderosa Campground (BLM), Coral Pink Sand Dunes State Park are also located within or adjacent to the FMU.

### **Fire Management Objectives: (Specific Measurable Attainable Realistic Timely)**

#### Land Use Plan Objectives

Protect unique plant communities, ACEC's, WSA's, and wilderness. Improve ponderosa vigor and reproduction by reducing competition by pinyon and juniper trees.

#### Fire Management Objectives

Protect Fredonia, Az. municipal watershed. Protect cultural and historic sites.

Improve the vigor of the ponderosa pine trees by reducing competition by Pinyon/Juniper in the understory. Treat 1000 acres to reduce PJ competition (Hand cutting and bull hog.) Improve critical deer winter range by treating 2,000 acres in Pinyon-juniper and sagebrush to create more sagebrush and create a mosaic of age class diversity. Use mechanical and prescribed fire and wildfire.

#### Fire Management Strategies:

**Suppression:** The appropriate suppression action within WSA, as provided for in the existing Wilderness Study Area Interim Management Policy. Refer to the WSA Policy and Plan regarding specific suppression authority.

Cottonwood, Indian and Water Canyons: will require full suppression within the side canyons due to municipal watershed for the community of Fredonia. Cultural and historic sites would require protection and full suppression if threatened. Suppression action would be in accordance with the Interim Management Guidance.

Suppression actions would be allowed within 1/4-mile for protection of private land. In areas with dominant or considerable ponderosa pine habitat, objectives to protect existing stands from crown fires and loss of ponderosa communities are desired. Suppression is required during “Red Flag” conditions within this category, due to the proximity of private lands, existing fuel loads, and presence of scattered ponderosa pine stands.

Constraints for fire suppression in a WSA are discussed in the Interim Management Policy for Wilderness Study Areas. Use of “minimum tools” described in the Interim Guidance should be followed, unless fires are located within 1/4-mile of private lands, where full suppression is allowed. No heavy equipment or cross country vehicle use until resource advisor arrives.

**Wildland Fire Use:**

No fire use.

**Prescribed Fire:**

Small prescribed fires to create a diversity of age classes in all vegetation types within the FMU. Prescribed fire can be used to treat up to 3,000 acres in aggregate with non-fire fuels treatments.

**Non-fire fuels Treatments:**

Treat the pinyon-juniper understory of the ponderosa pine community to reduce risk to ponderosa pine due to fire. Non-fire fuels treatments can be used to treat up to 3,000 acres in aggregate with prescribed fire within this FMU.

**Restoration & Rehabilitation:**

Emergency Stabilization and Rehabilitation will be accomplished as per the Normal Year Fire Plan. No threat from cheatgrass invasion.

**Community Protection/Community Assistance Objectives:** Forestry Fire and State Lands will take the lead on rural fire assistance. Community fire plans. (Refer to Southwest Utah Fire Management Plan UFF&SL).

## IV. Fire Management Component

### A Wildland Fire Suppression

#### Fire Planning Unit Fire History

The table below shows the statistics for fire occurrence from 1992 to 2004 (13 years) for the BLM, Dixie National Forest, SW region of State Lands, Zion National Park and Bryce National Park. However, this discussion is for BLM administered public lands only. For the period of 1992 to 2004 annual average for all fire causes is approximately 136 fires and 12,400 acres per year in the Cedar City Interagency Fire Center area. Human caused fires account for only 11.4% of all fire causes; approximately 88.6% of fires in the FPU were lightning caused. Fires generally occur from May through October.

#### CEDAR CITY INTERAGENCY FIRE CENTER

##### FIRE STATISTICS

##### YEARS 1992 - 2004

	Cedar BLM	Dixie NF	State Lands	Zion NP	Bryce NP
No. Human Fires	202	211	223	2	0
No. Lightning Fires	1565	1159	264	80	13
<b>Total No. Fires</b>	<b>1767</b>	<b>1370</b>	<b>487</b>	<b>82</b>	<b>13</b>
Average Annual No. Fires	136	105	122	21	3
Percent No. Fires Human Caused	11.4	15.4	45.8	2.4	0.0
Human Acres	56681	56681	5985	2	0
Lightning Acres	104524	52428	9196	1114	10
<b>Total Fire Acres</b>	<b>161205</b>	<b>109109</b>	<b>15181</b>	<b>1116</b>	<b>10</b>
Average Annual Fires Acres	12400	7428	3795	279	2
Percent Acres Human Caused	35.2	51.9	39.4	0.2	0.0

## 1) Suppression/Preparedness Action

The Cedar City Division of Fire and Aviation utilizes Appropriate Management Response that integrates resource management goals, objectives, and concerns with fire management activities. Key functions of this management philosophy are as follows:

- Safely reintroduce fire into ecosystems to meet desired resource management objectives by utilizing the best science.
- Use wildland fire control and suppression strategies and tactics that emphasize resource management objectives while minimizing total fire management costs.
- Utilize a fire suppression strategy that balances resource management objectives and goals for protecting values at risk while minimizing fire management costs.

The decision on whether wildland fires might be monitored, minimally suppressed, or aggressively attacked and the types of tactics used to suppress the fires would be based on decision criteria that would include firefighter and public safety, resource management objectives, resource values, other values at risk, fire season severity, predicted weather and fire behavior, suppression costs, and other criteria specific to the fire site and time of occurrence. Both direct and indirect attack suppression tactics are used.

Fire suppression emphasizes managing wildland fire in order to meet resource management objectives with the goal of safely reintroducing fire in ecosystems while minimizing costs and protecting values at risk. A “Full Suppression” strategy is implemented in areas where fire would not be desired (near wildland urban interface areas and areas within individual FMU polygons where wild fire does not meet with resource objectives) while a less aggressive “Resource Suppression” and “Natural Suppression” strategies may be utilized in areas of FMU polygons where fire would be desired or of little concern).

Due to this aggressive approach to fire suppression in the cheatgrass and salt desert shrub vegetation, and the need to more actively manage fires in upland areas containing critical habitats and growing wildland/urban interface dominated by sagebrush and juniper, the Field Office suppression strategy would require a fire organization capable of greater fire line producing capabilities. The primary pieces of fire equipment that have greater fire line producing capabilities are mechanical equipment. However, due to environmental concerns associated with this suppression resource, mechanized equipment has not been considered a preferred fire suppression tool. Fire engines and hand crews, combined with air support from air tankers and helicopters, have proven effective in the past.

Suppression strategies and tactics in the juniper/mountain shrub types not adjacent to human development is modified to allow a greater use of “Resource Suppression” and “Natural Suppression” strategies and/or “indirect attack” methods when appropriate to meet resource management objectives while protecting values at risk and minimizing costs. Use of burning operations to aid in managing fires in the juniper/mountain shrub type is common. When extreme burning conditions, resource

concerns, or values-at-risk warrant; a “Full Suppression” strategy with aggressive suppression is utilized in all fuel types.

Preparedness action guidance can be found in the Interagency Standards for Fire and Fire Aviation Operations (Red Book) and the Office of Fire and Aviation website at <http://www.fire.BLM.gov/>.

An interagency Fire Danger Operating and Preparedness Plan has been developed which clarifies the roles and responsibilities regarding appropriate preparedness actions. This plan is located in Appendix B.

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

A) Prevention and Education Program

This field office has significant opportunity to participate in fire education, prevention and community assistance due to a rapidly increasing population and an aggressive existing program of school presentations and public event education. The program in this office is interagency and interdisciplinary and is coordinated to a large degree through the Color Country Information and Education Committee. For more information on any of the items discussed in this section, please see the Fire Prevention Plan in Appendix B.

B) Enforcement:

The fire investigation and trespass (cost recovery) programs have been fully developed at this Support Center office in cooperation with Law Enforcement, the Field Solicitor, and the United States Attorney’s office. Costs will be recovered via both in-kind service as well as hard dollars. Standard operating procedures have been developed for cause determination and investigation. (See the Fire Prevention Plan in Appendix B).

A field office sign plan and patrol plan have been developed and are part of the Fire Prevention Plan. Patrols will be conducted by the fire education/mitigation staff and engine crews.

C) Fire Education:

Fire education will be pursued for all ages with a special emphasis in the wildland urban interface, fire prevention, and the benefits of fire. The field office will use statewide and local programs in conjunction with Firewise principles to motivate community members to mitigate hazards. Whenever possible, fire education efforts will be coordinated on an interagency basis and on a statewide basis for maximum effect when needed. The field office will work closely with other interagency committees and groups to develop prevention campaigns, coordinate programs, and provide assistance to implement action plans. Committees include a statewide strategic communications committee, Color Country Information and Education Committee, Utah Living with Fire Committee, and the Utah BLM Fire Education and Mitigation Group.

D) Community Assistance:

The field office will focus significant time on community assistance given the highly populated and growing communities adjacent to BLM land. Community assistance will be an interagency effort with the State of Utah and other agencies in cooperation with local government, organizations and private landowners or other potentially affected people. Communities will be guided to take on the responsibility of the hazard mitigation for private land. Hazard assessments will be completed in conjunction with each community considered at risk and community fire plans developed. The priority will be designated by interagency need, community interest, and the total of risks, hazards, and values in a specified community. A community fire planning template was developed by the State of Utah Division of Forestry, Fire and State Lands that this support center uses. Legislation was passed in 2004 that will require each county to complete a similar ordinance in order to receive wildfire suppression funds from the State of Utah.

#### Special Orders and Closures

The Field Office Managers have the authority to issue and rescind restrictions or closures on BLM lands within the individual Monument and field offices. Fire prevention orders (i.e., restrictions or closures) are coordinated and implemented on an interagency basis as described in the Color Country Annual Operating Plan. Any combination of factors may be present such as extreme fire danger, high fire occurrence, or exhaustion of fire resources and personnel due to statewide or geographic area fire activity. Consideration should be given to the timing of implementation and the notification of the public to ensure there is adequate notice.

#### Industrial Operations and Fire Precautions

Environmental documents and permits are reviewed by the fire education and mitigation staff for risk potential. Standard stipulations are incorporated into every special use and recreation permit that has potential to cause a wildfire.

The Adjective Fire Danger Rating notifies the public of the relative fire danger during the fire season.

#### Public Information

The SUSA is in a significant media area with a rapidly growing population, placing great demand for information about wildland fires on the area dispatch and SUSA personnel. The Cedar City Field Office will have information officers either on staff or available during times of fire activity to serve the public information and media needs. The web site [Utahfireinfo.gov](http://Utahfireinfo.gov) is a public resource for current fire information and education statewide.

#### 1) Fire Training Activities

##### A) Qualifications and Fire Refresher

The Cedar City Field Office/Support Center for SUSA utilizes the Incident Qualification and Certifications System (IQCS) to record and maintain employee training, experience, fitness, and incident qualification records. Currently, the Field Office tracks

approximately 150 employees in IQCS. This is a time-consuming (but critical) task which is accomplished by the CCIFC Logistics Coordinator in order for the Fire Management Officer and Qualification and Certification Committee to review and approve. The Assistant Field Manager for the Division of Fire and Aviation has the delegated responsibility for Red Card certification in conjunction with the committee.

Two sessions of the annual Fire line Refresher course are taught each year during the first week of May. A third session is taught in April for permanent fire staff personnel who will become the cadre for the May sessions. In addition, Work Capacity Tests (WCTs) are administered as needed in various locations throughout the SUSA from March through May.

BLM Manual 9215 and the Interagency Standards for Fire and Aviation Management identified the qualification, training, and fitness requirements for BLM personnel with jobs associated with the fire management program.

A) Fire Season Readiness

Since the typical fire season begins during late May or early June, initial attack personnel and equipment must complete all required fitness and currency training during the first and second week of May. The Field Office maintains Normal Use Stocking levels for two initial attack caches; one interagency cache at the Color Country Interagency Fire Center and one at the Kanab Field Office.

1) Detection

Detection is accomplished by both aircraft and ground patrols. Engines patrol areas affected by frequent lightning. Fixed-wing aircraft, which may also function as an Air Tactical platform, will provide reconnaissance after lightning transit through the area. Early detection of fires is crucial for initial attack resources to minimize acreage burned.

2) Fire Weather and Fire Danger

3) Aviation

<b>Cedar City Field Office Flight hour Statistics</b>			
<b>FY</b>	<b>A/T Retardant flight hours</b>	<b>Tactical flight hours</b>	<b>Resource flight hours</b>
1999	54.1	109.8	185.1
2000	72.0	124.3	210.1
2001	59.6	103.9	160.2
2002	160.3	244.2	87.5
2003	107.2	183.6	41.1

4) Management

The Aviation Program Management Specialist has the delegated responsibilities of the Unit Aviation Manager for the Cedar City Field Office.

The Cedar City Division of Fire and Aviation has significant aviation activity throughout the year; primarily related to fire suppression. The Cedar City Field Office administers one National Long-term Retardant contract. Aviation activity remains constant from May through September at the Cedar City Interagency Air Center. Retardant operations comprise an integral part of the workload along with tactical aircraft sorties originating from the Center. Non-fire special use flights are conducted for wild horse census and roundups, WSA monitoring, Ecosystem health assessment, and wildlife, and recreation projects.

Flight hours depicted above represent those flights directly suppressing fires or meeting Resource Management objectives on Lands administered by the Cedar City Field Office and includes the Grand Staircase/Escalante National Monument.

The unit aviation plan can be found in Appendix C.

#### 1) Initial Attack

Initial attack actions are based on firefighter and public safety, cost effectiveness, and values to be protected consistent with resource objectives, by using the full range of strategic and tactical options otherwise know as Appropriate Management Response (AMR) as described in the Fire Management Plan (FMP).

The closest available suppression resources are dispatched to an incident regardless of agency affiliation. When jurisdiction is determined, the responsible agency will assume incident command (or delegate command of the incident to a qualified incident commander).

Initial attack dispatch and fire reporting procedures are located in the Color Country Interagency Fire Center Mobilization Guide.

#### 1) Extended Attack and Large Fire Suppression

Type 1 and 2 incidents occur regularly within the FPU. When these Incident Management Teams are mobilized, it impacts all agencies. Most often, these higher complexity incidents are multi-jurisdictional and affect several local, State, and/or Federal agencies. In addition, initial attack resources are usually drawn to support large fires for extended periods of time which diminishes the ability to suppress fires during the initial attack phase.

Direction for extended attack operations can be found in the Interagency Standards for Fire and Fire Aviation Operations.

#### 1) Other Fire Suppression Considerations

#### **A) Wildland Fire Use**



1) Description of Wildland fire use opportunities:

Wildland fires will either be managed for resource benefits or suppressed. Since a wildland fire cannot be managed for both objectives concurrently, fires will be suppressed utilizing an Appropriate Management Response (AMR). The management of naturally ignited wildland fires to accomplish specific pre-determined resource management objectives is planned only in certain FMUs under specific conditions when coordinated with other agencies, Utah State Office and The Eastern Great Basin Coordination Center. An AMR will be determined based upon firefighter/public safety risks, weather/fuel conditions, natural/cultural resource management objectives, protection priorities, and values to be protected. The AMR enables the implementation of a broad spectrum of tactical options (from monitoring to intensive management actions) which is tiered to the FMU strategies and objectives identified in the FMP/LUP.

1. Public Information

Although wildland fire use is not currently implemented in the majority of these FMUs, public education and information will include the benefits of wildland fire use. These concepts are currently incorporated into fire education programs and information that is distributed to the public.

**B) Prescribed Fire**

5. Planning and Documentation

The prescribed fire program is moderate to large in size compared to other BLM programs. The program has several large projects ready for implementation and planning efforts for future projects are being completed. A typical burning season would average 3-5 broadcast burns ranging from 500 acres to 5,000 acres and up to 5 pile burns up to 1,000 acres in aggregate for the pile burning season. Focus has been on treating condition class 3 areas first. Some smaller projects can be completed in house with current fire staff. Larger prescribed projects involve the use of outside resources for both preparation and implementation. All burns thus far have been in Condition Class 3 and moved each area closer to CC1 or CC 2 or a combination based on resource objectives and burn success. The vast majority of prescribed fire projects within the SUSA area are closely tied to habitat, watershed, and other natural resource objectives as well as hazardous fuels reduction. These projects are almost always followed up by seeding/planting and additional vegetation enhancement work. Funds for this additional work are provided by non-fire sub activities and by partner agencies and non-profit wildlife interest groups. Local contractors have not been used for prescribed burning due to the small numbers of acres burned each year. The following chart shows the prescribed burning program over the past 3 years:

	<b>Actual treatments</b>	<b>Actual Acres</b>
<b>FY02</b>	2	51
<b>FY03</b>	4	2,880
<b>FY04</b>	3	69

The prescribed burn season begins prior to green-up in the late winter/early spring for burning in the sagebrush-steppe and pinyon-juniper woodlands. Pile burns are planned and implemented during the winter months, usually when snow is present on site.

The Cedar City Field Office Division of Fire and Aviation Fuels Program Manager and staff are responsible for initiating, planning and prioritizing all fuels projects, including prescribed fire, within the three field offices and the GSEMN. The projects are listed by office and fiscal year in the Risk Assessment and Mitigation Strategies (RAMS) database which was completed in 2002 and runs through 2008. The projects listed in RAMS are then prioritized for each fiscal year based on:

Fuels reduction around Communities-at-Risk

- 1) Fuels reduction around Communities-of-Interest
- 2) Improvement of Condition Class from 3 to 2 or 1
- 3) Improvement of Condition Class from 2 to 1
- 4) Re-introduction of fire into ecosystems

The prioritized listing of projects for fiscal year 2005 is located in Appendix D. Future project workloads are maintained in the RAMS database.

Collaboration is on-going, and is conducted in many venues including the Color Country Fuels Committee. The committee has representatives from US Forest Service, Bureau of Indian Affairs, Bureau of Land Management, National Park Service, and State of Utah Division of Forestry, Fire, and State Lands.

The field offices coordinate with adjoining private landowners, homeowners associations, and individual communities as well as neighboring agencies.

Prescribed burn bosses are required to ensure that first order fire effects monitoring is completed each day by a qualified individual. The fuels technician is responsible to collect the data and then analyze and display it in a monitoring report. The report is very specific and assists the burn boss and the fuels specialist in order to determine the effectiveness of the treatment as planned and implemented. Lessons learned are incorporated into future burn plans. Long term effectiveness is monitored by the fuels technician through vegetation transects that track the changes due to the treatment. The procedure for short and long-term monitoring is shown in the monitoring plan of the environmental analysis document for the project. The fuels technician accomplishes all monitoring according to the SUSA 10 year fuels monitoring plan.

Hardcopy maps displaying prescribed fire treatments since the early 1990's are located in the individual project folders. Due to the increased emphasis placed on the fuels program by the National Fire Plan of 2000, electronic maps of all fuels projects, including prescribed fire, since January 2002 are now maintained in Geographical Information System (GIS) by the Fire/Fuels GIS Specialist. Future treatments are also listed in GIS.

## 5) Air Quality and Smoke Management

Air Quality across the entire FPU is very good. The FPU includes the Class I airsheds for Bryce Canyon National Park, Zion National Park, and Glenn Canyon National Recreation Area. Communities, the Interstate 15 corridor and US hwy 89 corridors are also common areas of concern for smoke management. The FPU also borders FPUs containing Capitol Reef National Park and Grand Canyon National Park. This makes smoke management a high priority for the fuels program. Sound smoke management techniques are critical in reducing the likelihood for impacts to these and other smoke sensitive areas.

Coordination with the Utah Interagency Smoke Management Coordinator ensures that permits will be issued by the Utah Division of Air Quality.

The Utah Annual Burn Schedule (Form 2) is due by March 15 annually. Pre-Burn Information (Form 3) is due two weeks before beginning ignition. Burn Requests (Form 4) must be submitted two business days before planned ignition and the Daily Emission Report (Form 5) must be submitted by 0800 on the day following the burn. All forms, instructions, and approvals for each burn are posted on the Utah Smoke homepage at [www.utahsmp.net](http://www.utahsmp.net).

Burning is only allowed when the Clearing Index (CI) is greater than 500. This requirement can be difficult to achieve due to the nature of winter conditions in Utah when attempting to implement pile burning.

Many options are available to mitigate smoke effects. The one most commonly used is to ignite under conditions that facilitate high smoke lofting into the transport winds and carried over any non-attainment or smoke sensitive areas. The use of favorable wind directions can also be used to completely avoid sensitive sites. Emission reduction techniques must also be used to some degree on every burn. These include using mass ignition techniques such as aerial ignition by helicopter to produce high intensity fires with short duration impacts, removing large diameter fuels mechanically or by hand, allowing the vegetation adequate time to cure or dry out, and quick mop-up. Ensure that good smoke trajectory maps have been produced showing the planned direction of day and night time smoke. Coordinate with the National Weather Service in Salt Lake City, Utah for a favorable forecast for smoke dispersion and direction.

### **3) Public Information**

The public information effort on any prescribed fire will begin with the environmental analysis. A communications plan will be developed and followed for each project that outlines affected groups or individuals (may include private landowners, residents, permit holders, recreation users, and media), key messages, methods of delivery, and a schedule of implementation. This plan will cover all stages from issue identification to post-implementation. Prescribed fire information will be shared with adjacent agencies. Prescribed fires will be coordinated with community assistance efforts. Opportunities may be identified to use projects as public education tools on the benefits of fire, how fire

managers use fire, and hazard mitigation. Mitigation measures that can be taken on private land will be a regular message in this communication.

**B) Non-fire Fuel Treatments**

The following charts show the total fuels management workload within the SUSA field offices.

<b>FY01</b>	<b>Actual Treatments</b>	<b>Actual Acres</b>
Mechanical	3	1,150
Rx	3	2,250
Other	3	0
<b>Totals</b>	<b>9</b>	<b>3,400</b>

<b>FY02</b>	<b>Actual Treatments</b>	<b>Actual Acres</b>
Mechanical	5	3,310
Rx	2	0
Other	3	0
<b>Totals</b>	<b>10</b>	<b>3,310</b>

<b>FY03</b>	<b>Actual Treatments</b>	<b>Actual Acres</b>
Mechanical	10	7,884
Rx	3	1,788
Other	2	1,065
<b>Totals</b>	<b>20</b>	<b>10,737</b>

<b>FY04</b>	<b>Actual Treatments</b>	<b>Actual Acres</b>
Mechanical	10	10,495
Rx	3	4,940
Other	0	0
<b>Totals</b>	<b>31</b>	<b>15,435</b>

The SUSA has an aggressive approach to mechanical treatments and has been extremely successful in enhancing resource values and reducing hazardous fuels. Production has increased significantly in recent years and this has become the most often utilized type of treatment acres within the SUSA. Mechanical treatments meet multiple objectives on SUSA lands where wildland /urban interface and critical winter range for mule deer typically overlap. Also, weather, resource availability, clearing index and risk are much more manageable with equipment than prescribed fire. Mechanical treatments that are being used include: hand thinning, hand piling, brush crunching, mowing, Dixie harrow, and bullhog thinning. Mechanical treatments account for 10,000-15,000 acres per year. Refer to section C ‘Prescribed Fire’ above for a detailed discussion of the burning program. Seeding is used for most and falls under the category of ‘other’. Chemical treatments have been completed in conjunction with mechanical treatments to enhance and prolong the life of the projects. Chemical application has been limited to approximately 2,000 acres in aggregate over the last 3 years. However, significant herbicide applications could be planned for future use in order to curtail cheatgrass,

tamarisk, and other undesired species domination of sites where resource values and hazardous fuel loading are important issues.

The Fuels Program Manager and staff are responsible for initiating, planning and prioritizing all fuels projects, including non-fire treatments. The projects are listed by fiscal year in the Risk Assessment and Mitigation Strategies (RAMS) database which was completed in 2002 and runs through 2008. The projects listed in RAMS are then prioritized for each fiscal year based on:

- a. Fuels reduction around Communities-at-Risk
- b. Fuels reduction around Communities-of-Interest
- c. Improvement of Condition Class from 3 to 2 or 1
- d. Improvement of Condition Class from 2 to 1

All projects that have been completed since the National Fire Plan in 2000 have converted the treatment areas from Condition Class 3 to Condition Class 2 or 1, or a combination of the two depending on resource management objectives. The prioritized listing of projects for fiscal year 2005 is located in Appendix D. Future project workloads are maintained in the RAMS database.

### **Public Information**

Similarly to prescribed fire, public involvement for non-fire fuels treatments will start with the environmental analysis and a communications plan developed. Projects will be coordinated with community assistance efforts of this field office and other agencies. Opportunities may be identified to use projects as public education tools on hazard mitigation and to initiate the community fire planning process in a community at risk from fire.

### **B) Emergency Stabilization and Rehabilitation (ESR)**

Summarize the fire planning units, stabilization, and rehabilitation program (see NYFP, Appendix E).

Historically ESR workload for the past twelve years has been approximately 10,321 acres a year. Acres treated have ranged from 29,668 acres in 1996 to 233 acres in 2000. Over a third of the years have at least five digit figures that were treated for Stabilization or Rehabilitation.

<b>Fiscal Year</b>	<b>Public Acres</b>
<b>2004</b>	<b>24,620</b>
<b>2003</b>	<b>15,843</b>
<b>2002</b>	<b>4,157</b>
<b>2001</b>	<b>1,011</b>
<b>2000</b>	<b>233</b>
<b>1999</b>	<b>4,943</b>

<b>1998</b>	<b>6,024</b>
<b>1997</b>	<b>10,196</b>
<b>1996</b>	<b>29,668</b>
<b>1995</b>	<b>14,542</b>
<b>1994</b>	<b>9,896</b>
<b>1993</b>	<b>2,712</b>

Short term objectives of ESR actions are to determine the need for and to prescribe and implement emergency treatments to minimize threats to life or property, and stabilize/prevent unacceptable degradation to natural and cultural resources resulting from the effects of fire.

To prepare for and implement the ESR program is the responsibility of the Fuels Program Manager and fuels staff. The individual Field Office Managers have direct organizational responsibility for managing the FMUs and direct the functional aspects of each emergency. This involves providing a team of interdisciplinary specialists to provide resource input in the preparation of a plan during and after the containment of wildfire. The Fuels Program Manager and staff complete the ES plan and prescribe and implement treatments based on recommendations and input from the interdisciplinary team from the affected field office. Usually a lead Resource Advisor would be designated for each individual project prior to containment of the fire.

ES/R Team duties include:

- 1) Planning actions to stabilize and prevent unacceptable degradation to resources,
- 2) Minimize threats to life or property resulting from the effects of fire,
- 3) Develop monitoring plans to assure success,
- 4) Evaluate the treatment recommend and develop further actions with a Rehabilitation Plan, and
- 5) Assist other disciplines in Restoration beyond the allotted recovery time for stabilization.

ES/R activities will comply with the NEPA, Department of Interior Manual DM 620, Part 3, Interagency Burned Area Response Handbook (version 4.0), Field Office Policy, and any pertinent federal or state laws.

ES/R templates implementing treatment planning as well as cost of treatments provided by National and DOI policies. Form 1310-20 will be submitted to the State Office/and the Washington Office for approval of funding for any treatment before any on the ground implementation occurs.

- 1) ES/R Teams will be formed and a Stabilization Plan will be submitted no later than 7 calendar day after containment of a fire.
- 2) Emergency Stabilization actions will be taken within one year of containment of the fire.

- 3) Rehabilitation actions must be taken within three years of a wildland fire to repair or improve fire-damaged lands unlikely to recover naturally to a management approved condition.
- 4) ES/R actions are aimed primarily at stabilizing burned areas to prevent, to the extent possible, damage to soils via excessive erosion and loss of significant resource values long term as a result. Treatments include, but are not limited to, construction of protective fences, construction of water erosion abatement structures, aerial seeding, chaining to cover seed with either an Ely or smooth chain, and drill seeding a mixture of grass and forb species to re-establish ground cover to hold soil in place.
- 5) In the short term, non-native species may be seeded in conjunction with native plant materials to promote soil stability and reduce the encroachment of cheatgrass and/or other invasive weed species.
- 6) Exclusion of livestock is critical for the recovery of any stabilization or rehabilitation project. Livestock, and wild horses will not be permitted until the vegetation has recovered or has been established (this is usually a minimum of two growing seasons).
- 7) Accomplishments of each plan are performance and fiscally evaluated, tracked and reported in the National Fire Operations and Reporting System for ES/R tracking and project implementation.
- 8) Once the ES/R treatment is completed and monitored, over a three year period, the project will be turned back to the respective field office MLR program for any further restoration and incorporated into the Rangeland Improvement Project System (RIPS).

Monitoring and evaluation of post-fire treatments are critical for understanding and improving ESR treatments. Collection and dissemination of information are key parts of all ES/R treatments within the SUSA.

Each treatment specification must include provisions for monitoring, evaluation, and technique. Monitoring and reporting will be kept as simple as possible to insure the completion of all activities. Another aspect for treatment effectiveness is to monitor treatment failure and/or maintenance of treatments.

At a minimum, monitoring should have a base or control area, as well as, a data gathering phase ending with post treatment results.

Monitoring may be needed to determine if a treatment is needed (i.e. invasive species control).

Monitoring for invasive species will be an integral part of any ES/R project. Prevention of any infestations of weeds or insect pests is the preferred method of control, and requires monitoring to prevent out of control situations

## **B) Community Protection/Community Assistance**

### **A) Listing of Communities**

There are 147 communities within the SUSA boundary listed on the Communities at Risk list that was published in the Federal Register on August 17, 2001. The Cedar City Field Office Division of Fire and Aviation is a major player in the Color Country Fuels Committee that coordinates and prioritizes fuels, wildland urban interface, and community assistance projects throughout the Fire Planning Unit. It should be noted that development is rapidly progressing in many wildland areas of southern Utah as urban areas expand and new developments begin in outlying areas. Other communities may be identified as “at risk” as urban growth continues into wildland areas and as new communities define themselves.

i) The Color Country Interagency Fuels Committee has developed a risk assessment process that assigns a numerical risk rating for each of the 147 communities. From this rating, communities are grouped into categories of extreme, high, or moderate risk. Using this data base, the interagency committee can prioritize areas or groups of communities where more than one agency has opportunity to implement actions to reduce the areas wildland fire risk. These areas are known as interagency focus areas and are given priority for receiving funding and project work. (See attached Community Risk Assessment data in appendix).

### **C) Rural Fire Assistance**

There are 67 local fire departments within the SUSA area, and nearly 60 of these departments assist with fire suppression on BLM lands. The BLM fire program works regularly with many of these departments on the fireline and has developed good relations with them. With many local communities participating in the National Fire Plan and writing community fire plans, relations with many of these fire departments continues to build. In addition, members of the fire staff frequently meet work with the county wardens in Beaver, Iron, Washington, Kane, and Garfield Counties. Rural Fire Assistance grant information is distributed each year and workshops have been held to assist departments in writing grants. In Utah, all federal grant money available to communities is administered by the State, but with oversight by an interagency committee. The field office will work with the state to distribute the grant applications and provide technical information and support to the fire departments. In addition, the field office will assess the needs of departments so that grant money can be prioritized and will ensure that federal funds are used for their appropriate purposes.



## V. Organization and Budget

### A. Organization & Budget

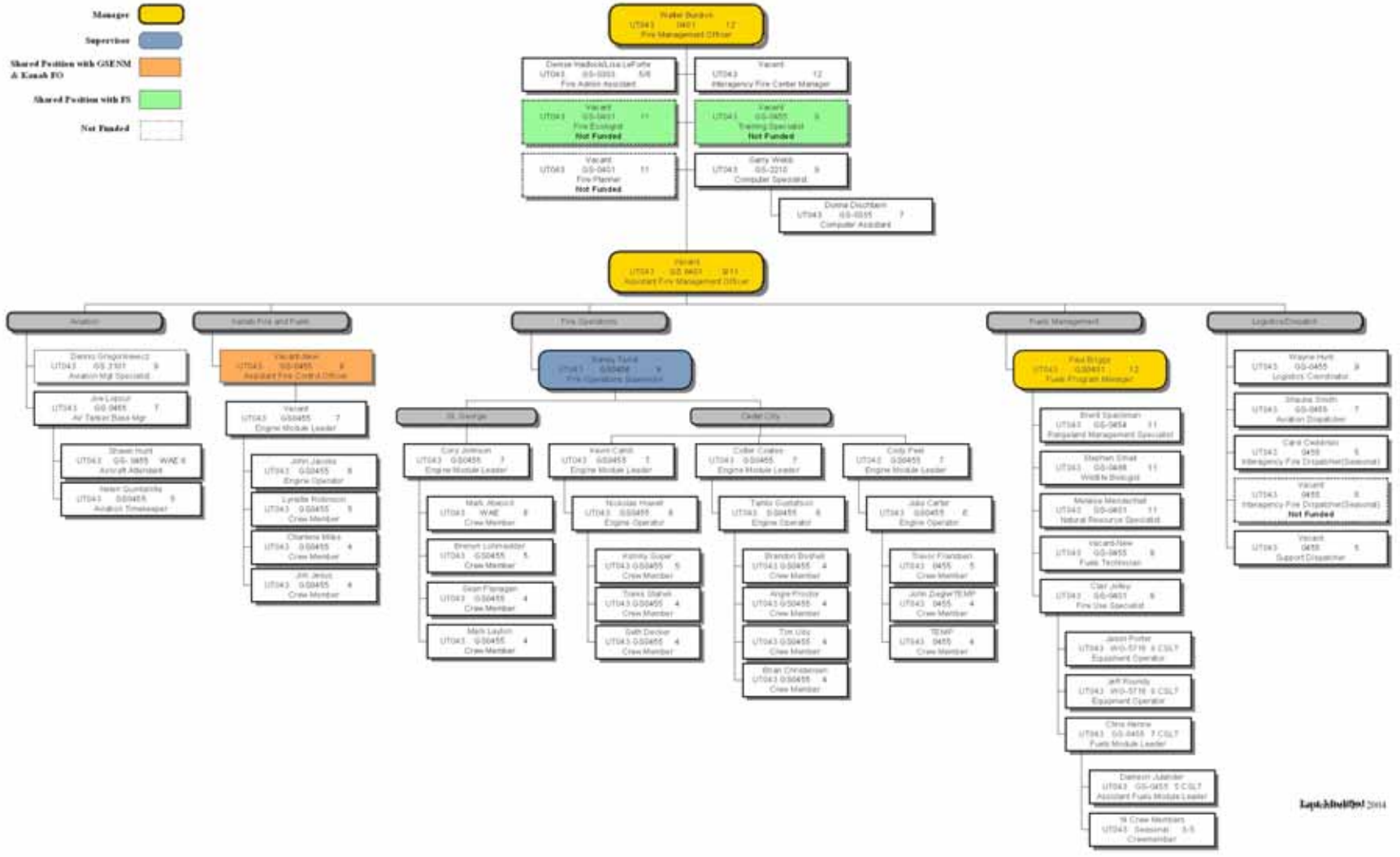
The table below is the organization and equipment required to meet 100% of Normal Year Readiness.

Resource	IIAA Budget Item	Current Staffing	Desired Staffing	Normal Activation	Subactivity	Cost
Assistant Field Manager (Fire, Fuels, and Aviation)	DFMOCCD	1	1	Yearly	2810	
Assistant Fire Management Officer	AFMOCCD	1	1	Yearly	2810	
Fuels Program Manager	FPMCCD	1	1	Yearly	2810/2823/2824	
Administrative Assistant	ADMIN ASST	1	1	Yearly	2810/2823/2824	
Education, Mitigation, Prevention	PREVPROGRAM	1	1	Yearly	2810/2823/2824	
Rangeland Management Specialist	RMSCCD	1	1	Yearly	2823/2824/2822	
Wildlife Biologist	WBCCD	1	1	Yearly	2823/2824	
Natural Resource Specialist	NRSCCD	1	1	Yearly	2823/2824	
Fuels Technician	FTCCD	0	1	Yearly	2823/2824	
Monitoring Specialist	MSCCD	0	0	Yearly	2823/2824	
Fire Use Specialist	FUSCCD	1	1	Yearly	2823/2824	
Fire Operation Supervisor	FSTMG Cedar City	1	1	Yearly	2810	
Type-4 Engine (Cedar City)	CCD E-406	5	5	May-Oct	2810	
Type-4 Engine (Cedar City)	CCD E-407	5	5	May-Oct	2810	
Type-6 Engine (Cedar City)	CCD E-601	5	5	May-Oct	2810	
Type-6 Engine (St. George)	CCD E-602	5	5	May-Oct	2810	
Type-6 Engine (Kanab)	CCD E-604	5	5	May-Oct	2810	
Watertender (Cedar City)	CCD WT-10	0	2	May-Sept	2810	
Fuels Crew (Cedar City)	C2CCD	16	16	May-Sept	2823/2824	
Equipment Operator	EOCCD	2	2	Jan-Nov	2823/2824	
Interagency Fire Center Manager	IFCM	0	1	Yearly	2810/2823	
Fire Center/Dispatch	DISPCCIFC	5	5	Yearly	2810/2823	
Unit Aviation Manager	DAMCCDO	1	1	Yearly	2810	
Air Tanker Base Manager	ATBM	1	1	May-Oct	2810	

Aircraft Attendant	AACCD	1	1	May-Oct	2810
Aviation Timekeeper	ATCCD	1	1	May-Oct	2810
Computer Specialist	CSCCD	1	1	Yearly	2810
Computer Assistant	CACCD	1	1	Yearly	2810
Fire Ecologist	FECCD	1	1	Yearly	2810/2823/2824
Training Specialist	TSCCD	0	1	Yearly	2810
Fire Planner	FPCCD	0	1	Yearly	2810
Assistant Fire Control Officer	AFCOCCD	0	1	Yearly	2810/2823/2824
Support Vehicles	SUPPV**				2810/2823/2824
Training/Travel	FIRETRAIN				
Administrative Support (10%)	ADMSCCDO				2810/2823/2824

# Table of Organization-Cedar City Fire (UT043), Utah

**Manager** (Yellow)  
**Supervisor** (Blue)  
**Shared Position with GSENM & Kanab FO** (Orange)  
**Shared Position with FS** (Green)  
**Not Funded** (White)



## **Assistance Agreements and Intra/Interagency Agreements**

- Utah State-wide Cooperative Fire Management Agreement
- Utah Statewide Annual Operating Plan
- Annual Operating Plan between the USFS Uinta, Wasatch-Cache, Sawtooth and Caribou National Forests, BLM SUSA, NPS Timpanogos Cave National Monument and Golden Spike National Historic Site, BIA Uintah and Ouray Agency and The State of Utah Division of Forestry Fire and State Lands
- Annual Operating Plan for Color Country Interagency Fire Planning Unit, SUSA BLM, USFS, UFF&SL, BIA and BLM, Elko Field Office and BLM, Ely Field Office
- Memorandum of Understanding for Fire Protection Between BLM, SUSA and BLM, Burley Field Office
- Interagency Agreement between BIA, Phoenix Area Office, BLM, Nevada State Office, and BLM, Utah State Office
- Interagency Agreement for Fire Management among the BLM, BIA, NPS, USFWS, and Forest Service
- Interagency Agreement for Wildland Fire Management and Support between the USDI BLM, SUSA and Dugway Proving Ground
- Annual Operating Plan for Wildland Fire Management and Support between BLM SUSA and US Dept of Defense, Dugway Proving Grounds
- Annual Operating Plan, Northern Utah Interagency Fire Center Interagency Agreement
- Memorandum of Understanding between State of Utah Air Quality Board and USDI Bureau of Land Management, and the USDA Forest Service
- Agreement for Mutual Aid in Fire Protection between the US Air Force and BLM, SUSA.

The BLM has a Cooperative Agreement with the State of Utah and the U.S. Forest Service covering fire suppression on State, private, and Forest Service lands. This agreement is updated annually through a local Annual Operating Plan which addresses items such as initial attack responsibilities, cost sharing, and boundary fires. In addition, BLM has the responsibility and financial liability to suppress fires that start on public land and also extends to State and private lands.

The Color Country Annual Operating Plan is a cooperative effort as mentioned above, and defines areas for suppression. By agreement, the SUSA fire program provides initial attack for all public lands within the FPU based upon the closest available resources concept.

As part of our agreement, the SUSA adheres to applicable State Laws that apply to State and private lands. Some of these laws are:

### **65A-8-4. Uncontrolled fire is a public nuisance**

Any fire on forest, range, or watershed land in the state burning uncontrolled and without proper and adequate action being taken to control or prevent its spread is a public nuisance.

**65A-8-5. Fire control - County responsibilities**

- 1) Counties shall abate the public nuisance caused by uncontrolled fire on privately owned or county owned forest, range, and watershed lands.
- 3) The state forester shall make certain that appropriate action is taken to control wildland fires on nonfederal forest, range, and watershed lands.

**65A-8-7. Responsibilities of county sheriffs and district fire wardens in controlling fires**

- 1) . . . , the county sheriff shall take appropriate action to suppress uncontrolled fires on state or private lands.

Based on these suppression agreements and State Laws, it may be necessary for the BLM to take aggressive suppression action on 1) State and private lands adjacent to public lands; or 2) wildland fires that start on public lands and threaten State and private land.

**B) Equipment Rental Agreements**

A copy of the Equipment Rental Agreements can be located in the Field Office Service and Supply Plan.

**C) Contract Suppression and Prescribed Fire Resources**

A copy of the agreements/contracts for suppression resources can be located in the Field Office Service and Supply Plan.

<b>VI. Monitoring and Evaluation</b>
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The current program calls for monitoring of vegetation on treatment, rehabilitation and stabilization areas. Standard vegetation parameters are collected to evaluate the effectiveness of the treatment. Results will shape the use of particular treatment methods as more knowledge is gained, then more custom applications can be formulated.

Monitoring of project level plans will be evaluated to ensure that the treatment/action meets the purpose and need for the project.

## List of Preparers

Support Area Primary Contact: Pete Wilkins

Support Area Secondary Contact: Paul Briggs

TABLE OF ID TEAM MEMBERS:

ISSUE	CCFO	SGFO	KFO	GSENM
Air quality/smoke	Craig Egerton	Kim Leany	Randy Beckstrand	Harry Barber
water quality	Craig Egerton	Dave Corry	Randy Beckstrand	James Holland
Watershed and soils	Craig Egerton	Dave Corry	Randy Beckstrand	James Holland
Livestock grazing	Rich Barry	Kim Leany	Shawn Peterson	Rick Oyler
Invasive and noxious weeds	Rich Barry	Kim Leany	Randy Beckstrand	Laura Fertig
Vegetation	Rich Barry	Dave Corry/Bob Douglas	Shawn Peterson	Laura Fertig
Wildlife habitat	Steve Hedges	Bob Douglas	Lisa Church	Dennis Pope
Special status species	Steve Hedges	Bob Douglas	Lisa Church	Animals-D. Pope Plants- L. Fertig
Cultural resources	Gardiner Dalley	Geralyn McEwen	Doug McFadden (GSENM)	Matt Zweifel
Native American concerns	Gardiner Dalley	Dawna Ferris	Doug McFadden (GSENM)	Doug McFadden
Wildland urban interface	Paul Briggs	Paul Briggs	Paul Briggs	Paul Briggs
Fire	Tooter Burdick	Tooter Burdick	Tooter Burdick	Tooter Burdick
Fuels	Paul Briggs	Paul Briggs	Paul Briggs	Paul Briggs
GIS Support 1	Andrew Dubrasky	Andrew Dubrasky	Andrew Dubrasky	Andrew Dubrasky
GIS Support 2	Kent Dastrup	Kent Dastrup	Kent Dastrup	Kent Dastrup
FRCC	Melanie Mendenhall	Melanie Mendenhall	Melanie Mendenhall	Melanie Mendenhall

## References

Health Forest Initiative <http://www.whitehouse.gov/infocus/healthyforests/>

National Fire Plan <http://www.fireplan.gov/content/home/>

Fire Management Planning for the SUSA, April 1998, UT-020-1998-0008

Interagency Burned Area Emergency Response Handbook, For the Emergency Stabilization of Federal and Tribal Trust Lands Version 4.0

SLFO Normal Fire Year Rehabilitation and Emergency Fire Rehabilitation UT-020-2001-0045

Environmental Protection Agency,  
<http://www.airquality.utah.gov/PLANNING/Nonattnm.htm>

Published Soil Surveys for Utah

NRCS Soil surveys are being completed and published on a continuing schedule. For ordering or obtaining information on reference copies, contact: State Conservationist P.O. Box 11350 Salt Lake City, UT 84147-0350.

[http://soils.usda.gov/survey/printed\\_surveys/utah.html](http://soils.usda.gov/survey/printed_surveys/utah.html)

### List of Acronyms

ACEC	Area of Critical Environmental Concern	UWC	Utah Wilderness Coalition
AUM	Animal Unit Month	VRM	Visual Resource
BLM	Bureau of Land Management	Management	
CCC	Civilian Conservation Corps	VUD	Visitor Use Days
CRMP Plan	Coordinated Resource Management	WHA	Wildlife Habitat Area
DOI	Department of the Interior	WSA	Wilderness Study Area
EA	Environmental Assessment	WUI	Wildland Urban Interface
EIS	Environmental Impact Statement		
ERMA	Extensive Recreation Management Area		
FLPMA Act	Federal Land Policy and Management		
FMAP	Fire Management Activity Plan		
FMP 98	Fire Management Plan 1998		
FMU	Fire Management Unit		
FMZ	Fire Management Zone		
FPA	Fire Program Analysis		
FPU	Fire Planning Unit		
FUDS	Formerly Used Defense Site		
GAPA	Ground to Air Pilotless Aircraft		
HF	Hazardous Fuels		
HMP	Habitat Management Plan		
IAA	Initial Attack Analysis		
LUP	Land Use Plan		
MEL	Most Efficient Level		
MFP	Management Framework Plan		
MOU	Memorandum of Understanding		
NEPA	National Environmental Policy Act		
NFMAS System	National Fire Management Analysis		
NHS	National Historic Site		
OHV	Off-Highway Vehicle		
PFC	Properly Functioning Condition		
PNC	Potential Natural Community		
RMP	Resource Management Plan		
SLFO	SUSA		
SASEM Model	Simple Approach Smoke Estimation		
SEAT	Single Engine Air Tanker(s)		
SHPO	State Historic Preservation Office		
SLFO	SUSA, BLM		
SRMA	Special Recreation Management Area		
SRP	Special Recreation Permit		
T&E	Threatened and Endangered		
TAD	Tooele Army Depot		
USDA	United States Department of Agriculture		
USDI	United States Department of the Interior		
USFS	United States Forest Service		