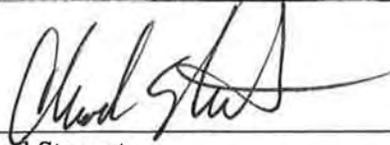


**LINCOLN NATIONAL FOREST
FIRE MANAGEMENT PLAN 2011**



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Lincoln National Forest Fire Management Plan - 2011

Interagency Federal fire policy requires that every area with burnable vegetation must have a Fire Management Plan (FMP). This FMP provides information about the fire management planning process for the Lincoln National Forest and complies with guidance from existing sources such as but not limited to, the Lincoln National Forest Land and Resource Management Plan (LRMP), national policy, national and regional directives.

The policy consequences to the firefighter and public safety and welfare, natural and cultural resources, and the values to be protected help determine the response to wildland fire, during a fire. The following chapters provide a comprehensive overview of Firefighter Management Unit (FMU) characteristics and guidance.

Chapter 1: Introduces the area covered by the FMP, includes a map of the Lincoln National Forest, addresses the agencies involved, and the states why the forest is developing the FMP.

Chapter 2: Establishes the link between higher-level planning documents, legislation, and policies and actions described in the FMP.

Chapter 3: Articulates specified goals, objectives, standards, guidelines, and/or desired future condition(s), as established in the forest's LRMP, which apply to all the forests FMU's.



Chapter 1. Introduction

The Lincoln National Forest (LNF) developed the FMP as a decision support tool to help fire personnel and decision makers determine the response to an unplanned ignition. FMPs do not make decisions, but they provide information, organized by FMUs, which provides a finer scale summarization of information than is possible at the forest level. These descriptions identify specific details which is relatable to identifiable areas. FMPs are not static documents. They will evolve as conditions change on the ground and are updatable with modifications to the unit's LRMP.

This 2011 Fire Management Plan formally documents the implementation of the fire management program for the approved Lincoln National Forest Plan (1986) as amended (2009). It provides details of the fire program in accordance to national fire management direction for the planning period. Each year, adjustments are made in the plan to reflect changes in the annual planning processes. This document is a working reference for fire program management.

The Lincoln consists of three Ranger Districts (Sacramento, Smokey Bear and Guadalupe) and three major mountain ranges, Sacramento, Guadalupe and Capitan. The area covers 1,103,441 acres in Eddy, Otero, Lincoln, and Lea counties within southeastern New Mexico. Elevations range from 4,000 to 11,500 feet and pass through five different life zones, from Chihuahuan desert to sub-alpine forest. Vegetation ranges from rare cacti in the lower elevations to Englemann spruce in higher elevations.

The climate is relatively mild with cool summers and moderate winters over most of the higher elevations and warm year-round temperatures in the lower elevations. Precipitation varies from less than 10-inches per year in the southern woodlands to over 30-inches in the mixed conifer vegetation type. The majority of precipitation during monsoons occurs between mid-July and September. Snow occurs at the higher elevations from December through March.

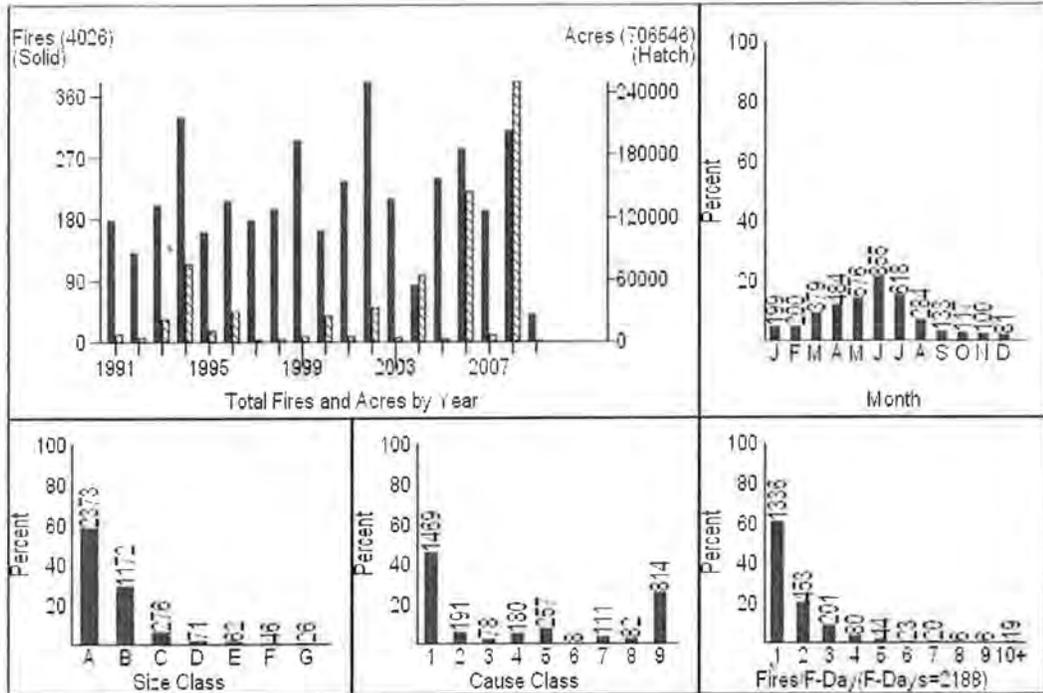
Each Ranger District has a Fire Management Officer (FMO) and Assistants that work directly for the District Ranger. The Districts manage the initial attack workload within their respective areas. Coordination and collaboration between the Districts, Supervisors Office, Fire and Resource Leadership, Alamogordo Interagency Dispatch Center and cooperators occur during the response to a wildland fire. The LNF averages 57 fires a year with 66% of those caused by lightning and the remainder is identified as human starts. Lightning starts are more frequent at a rate of 74% on the combined Forest Service and cooperator lands, (pg. 4).

This fire management plan recognizes the natural role of fire as an inherent part of resource management and includes a full range of fire management actions consistent with the LNF LRMP to ensure adequate fire suppression capability and to support fire reintroduction efforts.

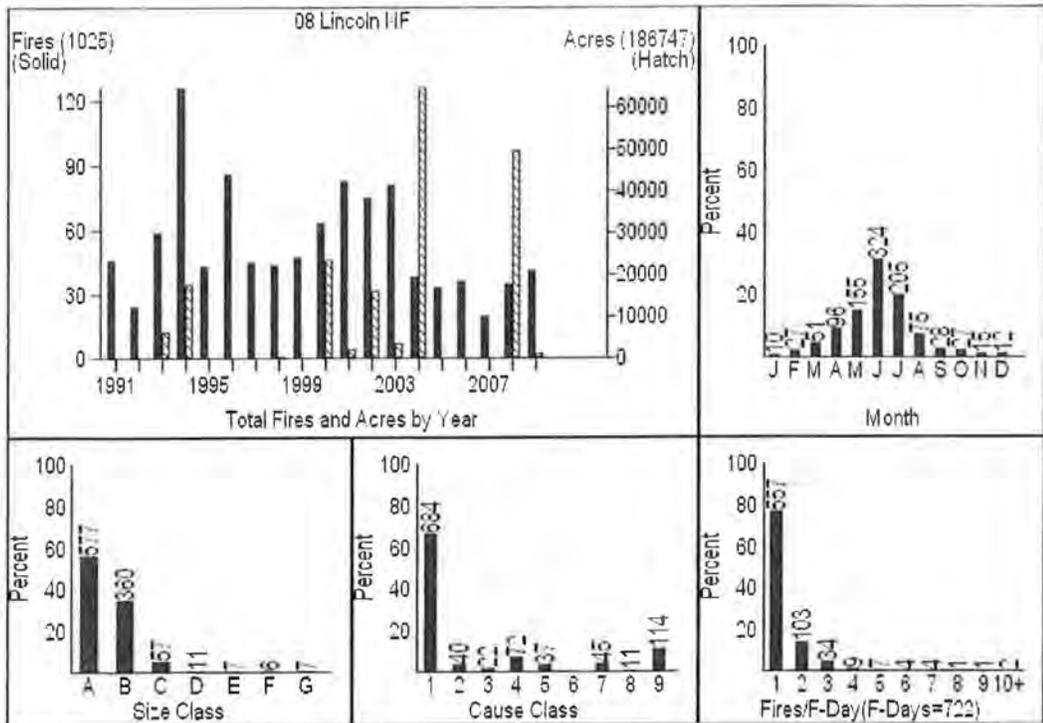


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LNF Fire Occurrence

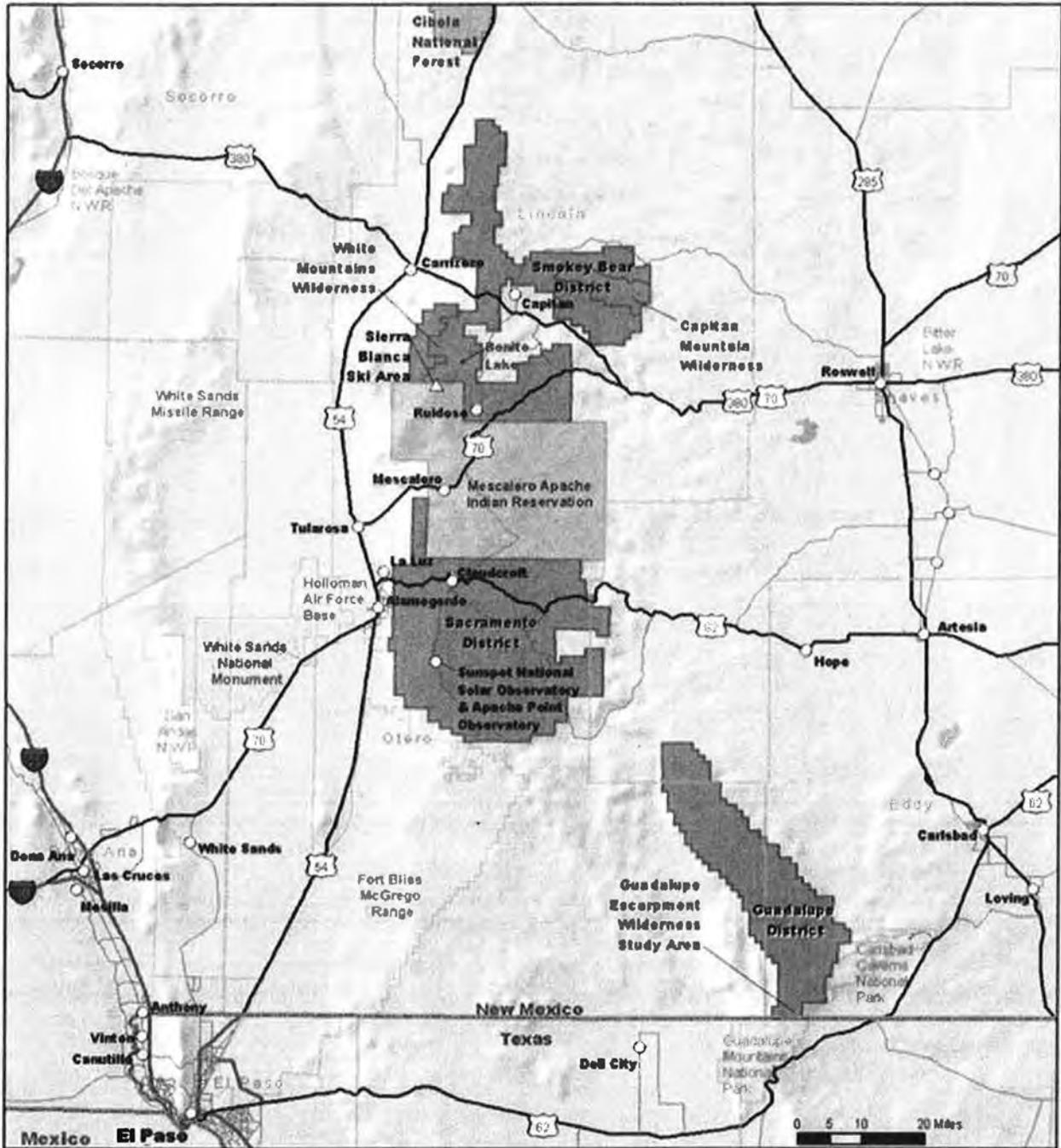


Pecos Zone Fire Occurrence





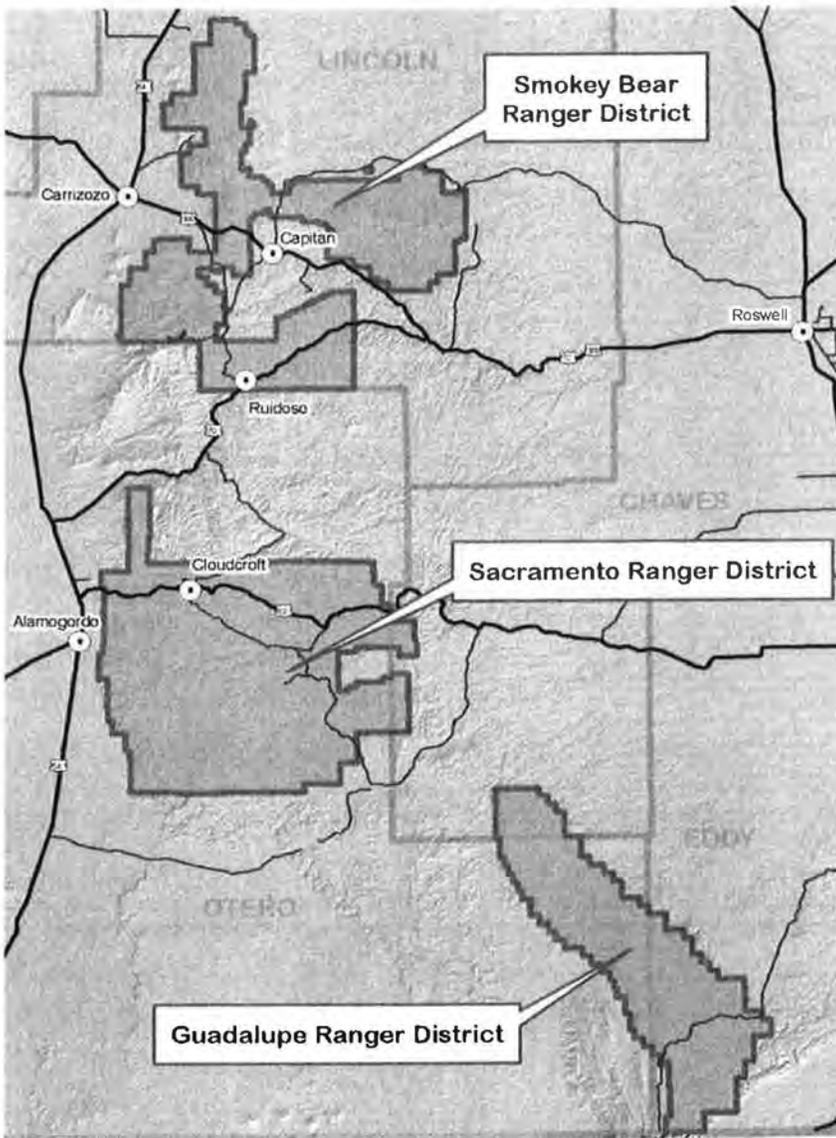
Lincoln National Forest Fire Management Plan - 2011



| | | | |
|---|---|--|--|
| Legend | | | |
| <ul style="list-style-type: none"> Lincoln National Forest Federal Lands Forest Service National Park Service Bureau of Indian Affairs Fish and Wildlife Service Department of Defense Bureau of Reclamation Other Agencies (NASA, DOE, DOT, DOP, TVA, ...) | <ul style="list-style-type: none"> Cities and Towns State Boundaries County Boundaries Roads Limited Access Highways Secondary Roads Other Highway Ramp | | |



Lincoln National Forest Ranger District Boundaries



Smokey Bear Ranger District:

- 423,416 acres in size,
- Ranges in elevation from 5,400 to 11,580 feet.
- Two wilderness areas, White Mountain and Capitan, totaling approximately 84,000 acres

Sacramento Ranger District:

- 548,865 acres in size
- Ranges in elevation from 4,600 to 9,695 feet.
- Visitors may enjoy camping, picnicking, fishing, hunting, hiking, bird watching, motorized activities, sight-seeing, or horseback riding, plus snowmobiling, inner-tubing, cross-country and downhill skiing

Guadalupe Ranger District:

- 288,540 acres in size
- 3,500 feet on the northern part to 7,500 in elevation
- Sitting Bull Falls Recreation Area is the jewel of the District. A 150-foot waterfall cascades down to natural pools



1.1 Collaboration

Many sources were included in the development of the LNF LRMP (1986). Comments were received from the public, USFS employees, other agencies, and tribal relations. The LRMP 1986 was consulted in development of this document.

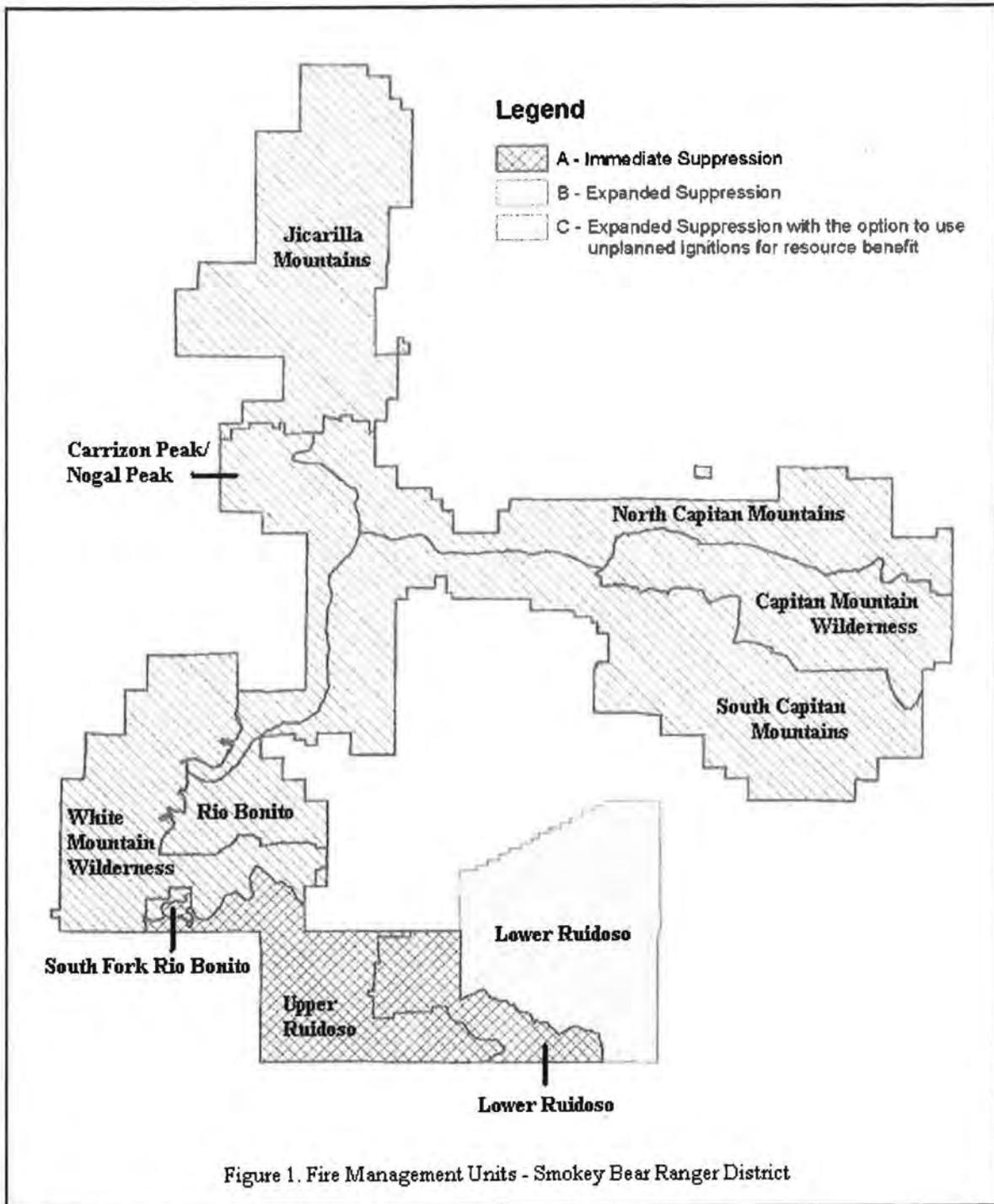
The Forest collaborates with the local County Commissioners on the continual development and maintenance of their County Fire Plans and CWPPs. Collaboration in the development and planning of fire and fuels projects occurs with interested and affected parties on every project with the introduction of the Fire Program Analysis (FPA) the Forest has begun collaboration with all represented Federal, State and Local agencies designated in the Fire Planning Units (FPUs). Agencies included but not limited to:

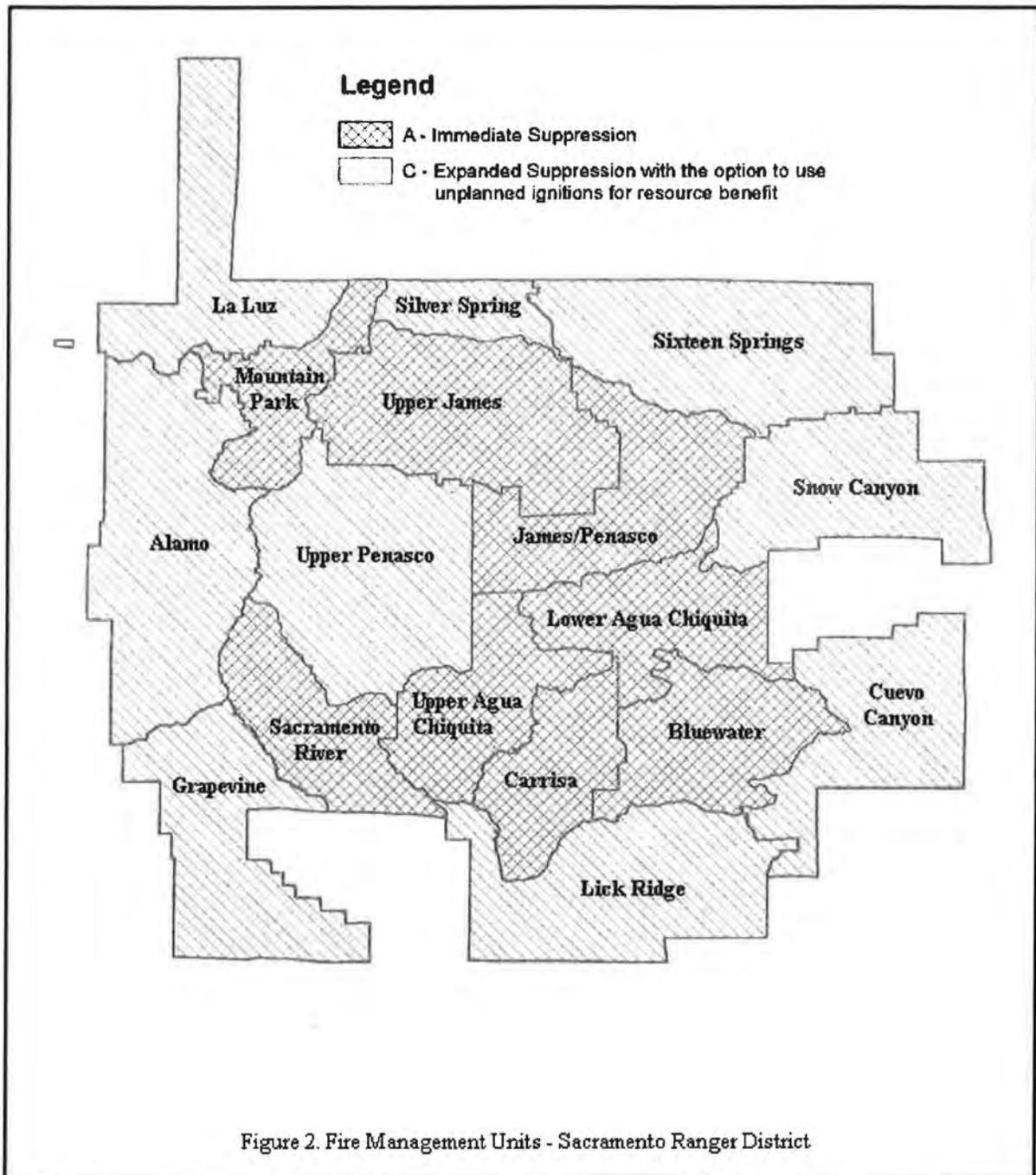
- Bureau of Land Management
- US Fish and Wildlife Service
- National Park Service
- Bureau of Indian Affairs
- Bureau of Reclamation
- State of New Mexico Forestry Department

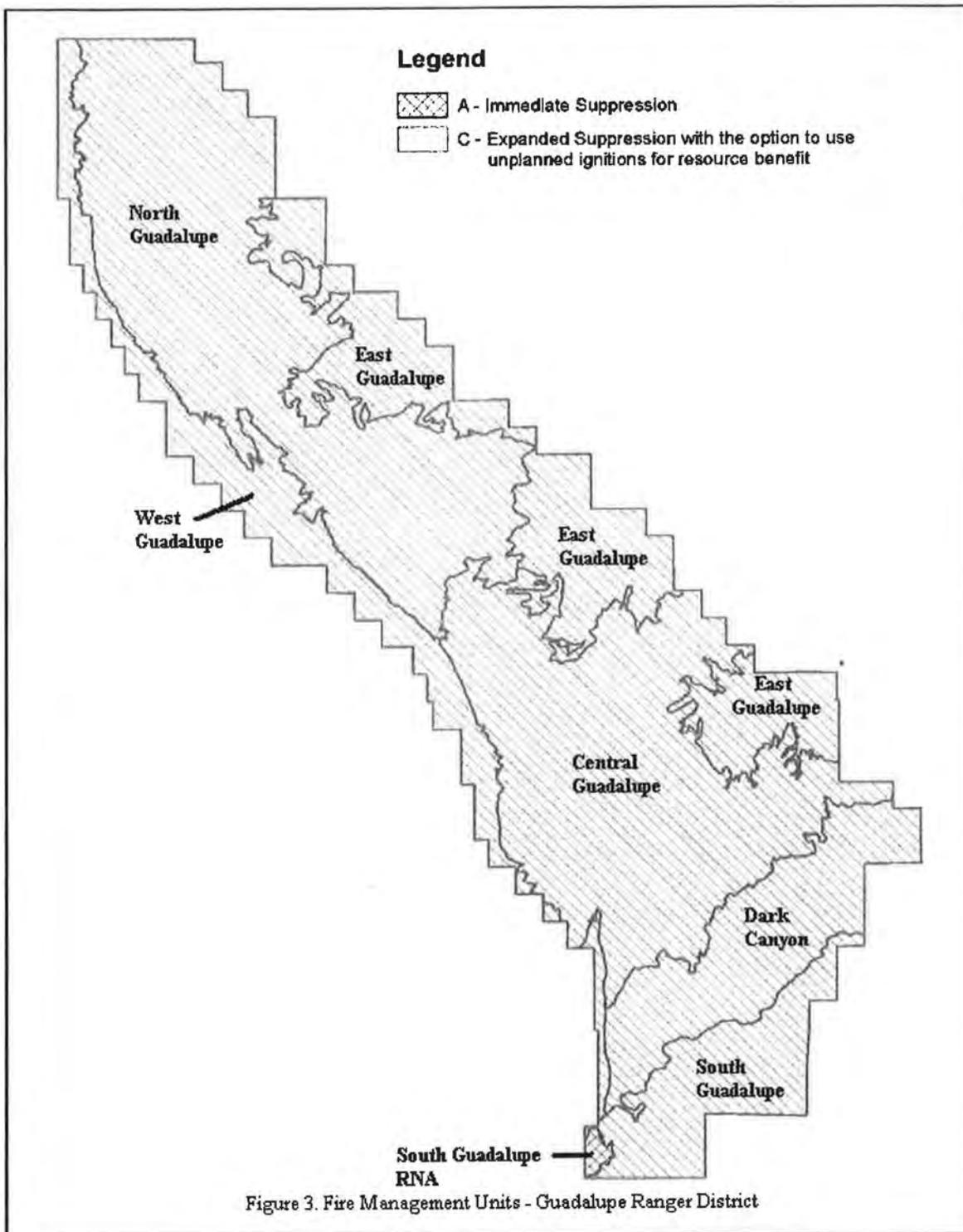
On May 6, 2010 the New Mexico Wildland Fire Management Joint Powers Agreement (JPA) was signed. This document provides guidance for collaboration and coordination of wildland fire response. The Pecos Zone National Fire Danger Rating System Operating Plan is currently being developed to enhance collaboration and coordination of FMPs within the zone provides specific zone guidance.

1.2 Fire Management Units (FMUs)

All FMUs on the LNF are associated with one of three distinct fire suppression objectives. The three suppression objectives on the LNF include immediate suppression, expand suppression and expanded suppression with the option to use unplanned ignitions for resource benefit. These are spatially defined in the following three figures. Refer to Chapter 3 for FMU descriptions.









Forest Fire Suppression available to all FMUs

| RESOURCE ID | PRODUCTION TYPE | DISPATCH LOCATION | TOTAL PERSONAL |
|-------------|-----------------|-------------------|----------------|
| Engine 133 | Type 3 Engine | Ruidoso | 5 |
| Engine 135 | Type 6 Engine | Capitan | 3 |
| Engine 137 | Type 6 Engine | Ruidoso | 3 |
| Engine 233 | Type 3 Engine | Cloudcroft | 6 |
| Engine 235 | Type 6 Engine | Cloudcroft | 5 |
| Engine 237 | Type 3 Engine | Mayhill | 5 |
| Engine 239 | Type 6 Engine | Mayhill | 3 |
| Engine 335 | Type 6 Engine | Queen | 3 |

• **Fixed Detection:**

Fixed detection is the primary means of detecting wildland fire on the LNF. Staffing level is based on NFDRS. Funded lookouts within compliance of the area wide Mobilization Guide are staffed from mid-April until fire season has ended. The following are the staffed Forest lookouts and the districts on which they are located:

| <u>STATION</u> | <u>DISTRICT</u> |
|---------------------|------------------|
| Monjeau Lookout | Smokey Bear – D1 |
| Ruidoso Lookout | Smokey Bear |
| James Ridge Lookout | Sacramento – D2 |
| Sacramento Lookout | Sacramento |
| Dark Canyon Lookout | Guadalupe – D3 |

Additional lookout stations that are staffed only on an emergency basis:

| <u>STATION</u> | <u>DISTRICT</u> |
|-----------------|-----------------|
| Wofford Lookout | Sacramento – D2 |
| Weed Lookout | Sacramento |
| Bluewater | Sacramento |
| Carrisa | Sacramento |

Lookouts will report storm events throughout the day. The events include observation of lightning, the beginning of a storm, location, path of the storm and other pertinent details including precipitation and wind. Lookouts are responsible for communicating arrivals, departures and time off with Dispatch.

• The LNF also hosts the following national resources:

- Smokey Bear IHC
- Sacramento IHC
- Alamogordo Air Tanker Base



Chapter 2. Policy, Land Management Planning and Partnerships

Regulations and direction are provided by Reference manuals, handbooks and the LRMP (1986). The Forest Plan meets the National Environment Policy Act (NEPA) requirements as well as other State and Federal regulatory requirements. FSM 5101 describes the authority for fire management activities on the National Forest System Lands. FSM 5108 provides pertinent references on the minimum standards and procedures for wildland fire management.

The Lincoln National Forest Fire Management Program can use a variety of responses to Wildland fire to meet resource objectives. This is intended to enhance safety while preventing loss of life, structures and property. The first priority during a selection of a suppression action will be the safety of the firefighting personnel and the public, including adjacent land owners. Safety priorities include protection of private property, resources, cost containment, and suppression actions while protecting the environment.

Prescribed fire and wildland fire used to achieve LRMP objectives (formerly known as wildland fire use) will be utilized to enhance ecosystem integrity and resilience, accomplish wilderness goals within designated wilderness areas and progress toward desired fuel levels outside designated wilderness areas. Wildland fire will be utilized to accomplish LRMP direction while following policy referenced in the FMP.

The LNF FMP contains regulations and policy in the documents:

2.1 National and Regional Fire Management Policy

- 1995 Federal Wildland fire Management Policy and Program Review (January 2001)
- National Fire Plan
- Forest Service Manual 5100
- Interagency Standards for Fire and Aviation Operations 2010
- Guidance for Implementation of Federal Wildland Fire Management Policy, February 13, 2009

Additional documents used to develop LNF FMP:

- Lincoln National Forest Land and Resource Management Plan 1986 (as amended)
- Environmental Assessment, Biological Assessment and Evaluation 1994, Biological Opinion and Decision Notice associated, LNF
- Interagency Prescribed Fire, Planning and Implementation Procedures Reference Guide, July 2008
- Federal review and update of the 1995 Federal Wildland Fire Management Policy and Program Review, January 2001
- Healthy Forests Restoration Act, 2003

2.2 Lincoln National Forest Land and Resource Management Plan

The LRMP was approved in December 1986, and implementation of the Plan began in 1987. The plan was written to provide the LNF with management direction over 10-15 years. Goals and objectives for management of the natural resources were identified along with scheduled projects to achieve them. Within the inception of the plan it was widely acknowledged that the plan direction would be modified, new issues and concerns surfaced and legal casework evolved shaping resource management direction. The Plan was designed to be a changing document that is responsive to the current trends and demands of the public.

The plan provides management direction in a broad sense but does not serve for project level decision making. The plan is due for revision, with no definite timetable set. Sixteen amendments have been made to the plan since the record of the decision was signed in December, 1986.

2.3 Partnership

Forest management planning is a coordinated effort with other land managers and private landowners including Mescalero Apache Tribe, Mescalero Agency BIA, Pecos and Las Cruces Districts BLM, Guadalupe and Carlsbad Caverns NPS and the New Mexico State Forestry. This is a continuous effort facilitated and described in the Lincoln National Forest Land and Resource Management Plan.



Chapter 3. Fire Management Unit Descriptions

The primary purpose of developing FMUs in fire management planning is to assist in organizing information in complex landscapes. For planning purposes FMUs will divide landscape into smaller geographical areas based on the following characteristics: Safety considerations, Physical, Biological and Social characteristics

To determine the response to an unplanned ignition in accordance with the LNF LRMP the FMUs consider the following characteristics: fuel conditions, weather, burning patterns and others as indicated in the FMU.

The Wildland Fire Decision Support System (WFDSS) will be used to help with developing the strategy for all wildland fires. The depth of WFDSS analysis will depend on the length and complexity of the incident.

For Land Management Plan directions refer to FMUs.

3.1 Fire Management Considerations Applicable to all Fire Management Units

Many of the Fire Management Considerations in the Lincoln LRMP are applicable to all FMUs on the Forest; refer to the FMUs for specifics.

3.2 Fire Management Considerations for Specific Fire Management Units

FMU A: Suppression Objective 10 Acres or less

This category applies to the suppression of wildland fires that pose a threat to life or property in developed areas. Planned ignitions will be used to accomplish fuel treatments and resource management objectives in these areas. Suppression tactics will be selected as response to wildland fire that prioritize firefighter and public safety, and have the least impact on the land while still meeting the suppression objective. (Lincoln National Forest LRMP, p. 48)

- 1. FMU Characteristics:** This FMU is located throughout the Forest especially on the Smokey Bear and Sacramento Ranger Districts. It includes all fuel types and terrain and is characterized by as the wildland urban interface (WUI). A Resource Natural Area located on the Guadalupe Ranger District is also included in this FMU type.
 - o Vegetation types include all of those found on the LNF, including ponderosa pine, mixed conifer, aspen, pinyon/juniper/oak woodlands, desert scrub and desert grasslands
 - o Most of the reliable water sources on the Forest are included in this area.
 - o Soils are of coarse texture, usually shallow with a moderate to severe erosion hard rating.
 - o Air quality is generally good to excellent most of the time. Wildland and prescribed fires can impact adjacent communities, many of which have residents who are smoke/chemically sensitive or have other pulmonary disorders.
 - o Historic and pre-historic sites are common throughout the forest; however, most are small and are easily avoided.
 - o There are numerous wildlife, plant and noxious weed species that are addressed in project level planning and implementation. Peregrine Falcon, Mexican Spotted Owl, Bald Eagle and Northern Goshawk have nesting, roosting, and foraging requirements that may impact fire management operations.
 - o This FMU type contains over 20,000 residences that are adjacent to or surrounded by National Forest Lands. Many areas have poor access, limited water sources and numerous electrical transmission lines.



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2. Strategic and Measurable Management Objectives (Lincoln LRMP, p. 48-49):

- Exchange initial attack zones with the State of New Mexico when an analysis shows that cost effectiveness can be improved.
- Evaluate all planned and unplanned ignitions for coordination with other resource activity needs.
- Used fixed detection points (lookouts) as the primary method to detect fires. Aerial patrols or detection flights will supplement fixed detection when conditions warrant.
- Human-caused ignitions will be suppressed utilizing one or a combination of the options available to respond to wildland fire.
- Fire management activities would be designed to sustain ecosystems, including the interrelated ecological, economic, and social components.
- All unplanned ignitions will receive a response to the wildland fire. The response will depend on location, fuel, weather conditions, priority and safety concerns. Fire suppression objectives are established for the three Fire Management Unit types which cover the LNF.
- Maintain fire forces and their equipment with fire funds allocated for immediate action in the suppression of Forest fires which meet the preceding objectives and have a pre-determined action plan.

3. Management Constraints or Criteria affecting Operation Implementation:

Fire managers would be allowed discretionary use of a full spectrum of fire response and management options to suppress all human-caused and naturally occurring wildland fires.

4. Historical Wildland Fire Occurrence:

Human-caused and lightning-caused wildland fires are common in the unit. The sources of most of the human-caused wildland fires are abandoned campfires and smoking. Incendiary fires are less frequent but a few are started each year. Several large wildland fires (over 1,000 acres) have occurred from 1950-2009, with three occurring in the past 10 years.

5. Fuel Conditions:

The fuel profile in this FMU is a complex mixture including ponderosa pine and mixed conifer, pinyon/juniper woodlands and grasslands. Fuel types are arranged in such a manner that one type or another dominates. Thousands of acres of drought stressed trees were killed during an extensive looper infestation from 2005-2007 resulting in many areas being dominated with snags.

6. Fire Regime Alteration:

Ponderosa pine has the most altered fire regime of any vegetation on the Forest. Local fire history studies estimate the historical fire return interval to be 3-10 years however, fire has been excluded in this type for decades. The oak understory in ponderosa pine is the result of fire exclusion in otherwise pure ponderosa pine stands and is therefore shown as Fire Regime Condition Class 3.

7. Control Problems and Dominate Topographical Features:

Ponderosa pine is problematic and often demonstrates a rapid buildup and transition from a surface fire to a crown fire. In this same fuel type are areas with a complex land ownership pattern and poor access. Many communities and structures lie in and/or adjacent to problematic control features such as, limited accessibility, one-way access, limited water supplies, and multijurisdictional boundaries.



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8. Other Elements of the Fire Environment Affecting Management:

Well over 20,000 residential and business structures are within or immediately adjacent to this FMU. The rapid growth in Ruidoso and Otero County has prevented an accurate assessment of the actual number of structures within or adjacent to the forest lands. Many newer structures are built with fire safe material and are in areas where fuels have been reduced due to the required landscaping. These areas also have the best access. Older communities have poor access and the older structures are mostly constructed with wood siding and are often surrounded by dense vegetation. More isolated areas tend to have expensive homes/cabins with poor access, virtually no defensible space and no local fire protection. Many of these residents are very vocal regarding fuel treatment priorities, prevention activities, and fire suppression operations.

FMU B: Suppression Objective of 1000 acres or less

A calculation of probabilities will be made based on fuels, weather, and knowledge of the terrain where the wildland fire occurs. Suppression tactics will be selected as a response to wildland fire which prioritize firefighter and public safety, have least impact on the land, and are most cost effective. Planned ignitions will be used to accomplish fuel treatment and resource management objectives. Suppression action will give protection to private in-holdings and other land ownership whenever possible. (Lincoln LRMP, p. 48).

1. **FMU Characteristics:** This suppression zone is located on the southeast corner of the Smokey Bear Ranger District.
 - Vegetation types include pinyon/juniper woodlands with some intermixed ponderosa pine.
 - Soils are coarse textured; usually shallow with a moderate to severe erosion hazard rating.
 - There is little dependable water in this FMU type with the exception of stock tanks during the wetter years.
 - Air quality is generally good to excellent most of the time. Wildland and prescribed fires can impact adjacent communities many of which have residents who are smoke/chemically sensitive or have other pulmonary disorders.
 - Historic and pre-historic sites are common throughout the forest however most are small and easily avoided.
 - There are numerous wildfire, plant and noxious weed species that are addressed in project level planning and implementation. The northern goshawk has nesting/roosting/foraging requirements that may impact fire management operations.
 - This FMU contains isolated parcels of private land with structures but does border substantial holding of private rangeland.

2. **Strategic and Measurable Management Objectives (Lincoln LRMP, P. 48, 52):**
 - Exchange initial attack zone with the State of New Mexico when an analysis shows that cost effectiveness can be improved.
 - Evaluate all planned and unplanned ignitions for coordination with other resource activity needs.
 - Used fixed detection points (lookouts) as the primary method to detect fires. Aerial patrols or detection flights will supplement fixed detection when conditions warrant.
 - Human-caused ignitions will be suppressed utilizing the appropriate response for the fire.
 - Fire management activities would be designed to sustain ecosystems, including the interrelated ecological, economic, and social components.
 - Utilize planned and unplanned ignitions where feasible and appropriate, to accomplish resource management goals and objectives.
 - All unplanned ignitions will receive a response to the wildland fire. The response will depend on location, fuel, weather conditions, priority and safety concerns. Fire suppression objective are established for the three Fire Management Unit types which cover the LNF.



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- o Maintain fire forces and their equipment with fire funds allocated for immediate action in the suppression of Forest fires which meet the preceding objectives and have a pre-determined action plan.

3. Management Constraints or Criteria Affecting Operational Implementation:

Fire managers would be allowed discretionary use of a full spectrum of fire response and management options to suppress all human-caused and naturally occurring wildland fires.

4. Historical Wildland Fire Occurrence:

Human-caused fires are less frequent in these FMU type because residential and recreational use is minimal.

5. Fuel Conditions

The Pinyon-Juniper Woodlands located in this FMU are not viewed as a significant wildland fire threat. Minimal suppression action will be taken on the majority of these fires while still meeting protection and resource objectives.

6. Fire Regime Alteration

Ponderosa pine has the most altered fire regime of any vegetation type on the Forest. Local fire history studies estimate the historical fire return interval to be 3-10 years; however fire has been excluded in this type for decades. The oak under story in ponderosa pine is the result of the fire exclusion in otherwise pure ponderosa pine stands and is therefore shown below as Fire Regime Condition Class 3.

Some studies indicate that areas of Juniper Woodland having good soils were once a grass or juniper savannah with frequent fires. Therefore, it is rated as Fire Regime III. This ecosystem has far exceeded its fire return interval natural range of variability and is altered more extensively as a functioning ecosystem than ponderosa pine.

7. Control Problems and Dominant Topographical Features:

There are no distinct elements in this FMU.

8. Other Elements of the Fire Environment Affecting Management:

There are no distinct elements in this FMU.

FMU C: With option to use unplanned ignitions for resource benefit

A calculation of probabilities will be made on each fire based on existing fuels, predicted weather, and known terrain. Suppression tactics, when necessary, will be chosen prioritizing firefighter and public safety, minimizing impact on the land, and are the most cost effective. Suppression action will give protection to private in-holdings and other land ownership whenever possible (Lincoln LRMP, P.49).

Pinyon-Juniper Vegetation: Based on actual and predicted fire weather and fire behavior modeling, unplanned ignitions for resource benefit would be considered if less than 60 percent of the burned area would experience complete overstory mortality. This objective allows for sustained crown fires as long as 80 percent of the area will survive the associated fire behavior. (Lincoln, LRMP, P.49).

Mixed Conifer Vegetation: Based on actual and predicted fire weather and fire behavior modeling, utilized unplanned ignitions for resource benefit would be considered if less than 20 percent of the burned area would experience complete overstory mortality. This objective allows for sustained crown fires as long as 80 percent of the area will survive the associate fire behavior (Lincoln LRMP, P.49).



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Ponderosa Pine Vegetation: Based on actual and predicted fire weather and fire behavior modeling, utilizing unplanned ignitions for resource benefit would be considered if less than 30 percent of the burned area would experience complete overstory mortality. This objective allows for sustained crown fires as long as 70 percent of the area will survive the associated fire behavior (Lincoln LRMP, P.49).

1. **FMU Characteristics:** The largest area included in the FMU is the Guadalupe Ranger District. This area is characterized by steep rocky canyons with predominate pinyon/juniper fuels. The other areas on the Smokey Bear and Sacramento districts cover all fuel types and terrain common to the forest.
 - o Vegetation types include ponderosa pine, mixed conifer, pinyon/juniper/oak woodland and grasslands.
 - o Soils are coarse textured; usually shallow with a moderate to severe erosion hazard rating.
 - o Some drainage may provide sufficient water for limited fire management activities.
 - o Air quality is generally good to excellent most of the time. Wildland fires can impact adjacent communities many of which have residents who are smoke/chemically sensitive or have other pulmonary disorders
 - o Historic and pre-historic sites are common throughout the forest; however, most are small and are easily avoided.
 - o Included in this FMU are Capitan and White Mountain wildernesses: . Capitan and White Mountain Wilderness are the only Class I Air shed areas in the Forest.
2. **Strategic and Measurable Management Objectives (Lincoln LRMP, P. 48, 52, 62):**
 - o Exchange initial attack zones with the State of New Mexico when an analysis shows that cost effectiveness can be improved.
 - o Evaluate all planned and unplanned ignitions for coordination with other resource activity needs.
 - o Used fixed detection points (lookouts) as the primary method to detect fires. Aerial patrols or detection flights will supplement fixed detection when conditions warrant.
 - o Human-caused ignitions will be suppressed utilizing the appropriate management response for fire.
 - o Fire management activities would be designed to sustain ecosystems, including the interrelated ecological, economic and social components.
 - o Utilize planned and unplanned ignitions where feasible and appropriate, to accomplish resource management goals and objectives.
 - o All unplanned ignitions will receive a response to the wildland fire. The response will depend on location, fuel, weather conditions, priority and safety concerns. Fire suppression objective are established for the three Fire Management Unit types which cover the LNF.
 - o Maintain fire forces and their equipment with fire funds allocated for immediate action in the suppression of Forest fires which meet the preceding objectives and have a pre-determined action plan.
 - o Evaluate existing helispots in light of wilderness designation and maintain only those needed to meet current fire management prescriptions. New helispots for fire pre-suppression will not be constructed.
3. **Management Constraints or Criteria Affecting Operational Implementation:**
 - o Minimum Impact Suppression Tactics (MIST) should be used to manage wildland fires within Wilderness areas
 - o The use of chainsaws, pumps, retardant, helicopter bucket drops, helicopters for personnel shuttles, helispots, and motor vehicles requires authorization from the Forest Supervisor or as otherwise stipulated with a Decision Analysis Report (DAR) or "Delegation of Authority" signed by the line office with jurisdiction. Prescribed Fire and BAER projects require approval from the Forest Supervisor as well. Tractor (Heavy Equipment) uses requires approval from the Regional Forester.
4. **Historical Wildland Fire Occurrence:**

Fire occurrence is balanced between human and natural ignitions. Four large fires (>1000 acres) have occurred since 2000.



5. Fuel Conditions:

Fuels are highly variable among the two wilderness areas. Conditions range from pinyon/juniper stands in the lower elevations to beetle-killed mixed conifer stands at the highest of elevations.

6. Fire Regime Alteration:

- Ponderosa pine has an altered fire regime on the Forest and is rated as Fire Regime I. Local fire history studies estimate the historic fire return interval to be 3-10 years; however, fire has been excluded in this type for over a century.
- Some studies indicate that areas of Juniper Woodland located on the good soils were once a grass or juniper savannah with frequent fires similar to ponderosa pine. Therefore, it is rated as Fire Regime I. This ecosystem is way beyond its natural range of variability of fire frequency and is altered more extensively as a functioning ecosystem than ponderosa pine.

7. Control Problems and Dominate Topographical Features:

Accessibility to Wilderness areas and steep canyons pose that most difficulties for suppression efforts.

8. Other Elements of the Fire Environment Affecting Management:

Several areas are immediately adjacent to Wildland Urban Interface (WUI). Potential threats to the WUI and the related safety concerns are key criteria in determining eligibility for using wildland fire to meet resource objectives.