

National Park Service

**SANTA MONICA MOUNTAINS
NATIONAL RECREATION AREA**

FIRE MANAGEMENT PLAN

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I. INTRODUCTION

All Department of Interior (DOI) agencies with vegetation capable of sustaining wildland fire are required by the 2008 National Park Service (NPS) Director's Order 18 (DO-18) to prepare fire management plans. The lands within the Santa Monica Mountains National Recreation Area (SMMNRA) have been marked by frequent, large, and in many cases, destructive wildfires. Despite the apparent damage caused by fires, fire plays an important role in the natural ecological processes of the chaparral environment that dominates the Santa Monica Mountains.

The fire management plan is a fundamental strategic document that guides the full range of fire management related activities. It provides a framework for the management of wildland fire, prescribed fire and hazard fuel reduction as tools to safely accomplish the resource protection and management objectives of the Santa Monica Mountains National Recreation Area as described in the General Management Plan (GMP) and the Resource Management Plan (RMP).

The 153,250 acre SMMNRA is unusual within the NPS because the park is adjacent to one of the world's largest urban areas. It is distinguished from many other national parks or recreation areas in that it is comprised of a mosaic of federal, state, and private lands. It is the NPS's best mainland example of a Mediterranean ecosystem, an ecosystem that has a limited worldwide geographic distribution and high biological diversity (<http://www.biodiversityhotspots.org/xp/Hotspots>). The SMMNRA is also an area that experiences high intensity wildfires which have periodically carried a heavy social cost from structural property losses and the massive fire fighting efforts required to protect development and lives at the wildland urban interface.

Figure 1.1 Santa Monica Mountains National Recreation Area



Wildfire is a natural process in the southern California Mediterranean ecosystem with fire tolerant or fire dependent adaptations characteristic of many species in the ecosystem. Fire history has shaped the plant communities of SMMNRA and is a major factor affecting their diversity, productivity and distribution (Barbour and Major, 1988; Keeley, 2000; Rundel, 1986).

Fire management is the range of human activities that are used to either control or utilize fire. Fire management can be used to suppress, ignite, or modify behavior of fires in order to protect human life or property or modify ecosystem properties. It is well understood that aggressive fire suppression actions during the 20th century successfully excluded fire from certain forest landscapes, allowing the buildup of forest litter and excessive vegetation, creating conditions for intense, large-scale, wildfires (Agee et al, 1978; van Wagtendonk, 1985; Stephens, 1995, 1998). During the same time period there has been a dramatic increase in the number of people living in wildland areas that are prone to wildfires. Consequently the number of people and structures at risk from wildfire has dramatically increased as have the associated costs of fighting fires (CDF, 2000 http://www.fire.ca.gov/php/fire_er_histstats.php; National Fire Plan, 2002 <http://www.fireplan.gov> ; California Fire Plan <http://www.fire.ca.gov/FireEmergencyResponse/FirePlan/FirePlan.asp>). In response to the convergence of these two trends, there has been a massive federal funding effort and substantial social and political pressure to reduce plant biomass with landscape level mechanical fuel modification or by reintroducing fire through prescribed burning (National Fire Plan, 2002).

Unfortunately, the forest model of *successful fire suppression > fuel buildup > extreme wildfires* is not true for all fire-adapted ecosystems. In the Mediterranean shrublands of southern California, fire suppression programs have not been successful in preventing large-scale, intense, wildfires and “fuel buildup” is the normal process of growth and maturation of the dominant chaparral vegetation. Because fire has not been successfully excluded from southern California shrubland ecosystems, there is no need to introduce additional fire through management actions to restore southern California shrublands. In fact, the number of fires in the SMMNRA has increased throughout this century. This is attributed to population growth and expansion of the wildland urban interface zone (Keeley and Fotheringham, 2001; Keeley, 2002). It has been suggested that aggressive fire suppression tactics in southern California is an ecologically positive management action that has been responsible for maintaining a more nearly normal fire regime than would occur in the absence of suppression actions (Keeley and Fotheringham, 2001).

In the growing wildland urban interface zone of the SMMNRA there is a need to manage wildland fire so that threats to life, property and park resources are reduced and fire’s function as a natural process is maintained. Fire management actions in the SMMNRA need to deal primarily with fire hazards created by development at the urban wildland interface and not to correct “unnatural” fuel buildup on the landscape. The financial costs of fire management actions must be assessed and be commensurate with protection of the values at risk.

Need For Action

Fire management actions are guided by fire management plans. Fire management plans are fundamental strategic documents that guide the full range of fire management activities. They are required by the *NPS Director’s Order 18* (NPS,2008) which states:

“Every park area with burnable vegetation must have a fire management plan approved by the superintendent,”

and the 2009 Modification of Federal Wildland Fire Management Policy (hereafter, 2009 Federal Fire Policy), which reiterates:

“Complete, or update, Fire Management Plans for all areas with burnable vegetation.”

In 2009 the 2001 Federal Wildland Fire Management Policy was reviewed for all federal wildland fire agencies and subsequently will be referred to as the Guiding Principles and 2009 Federal Fire Policy. The review and recommendations took place in the context of the September 8, 2000 report to the President by the Secretaries of the Interior and Agriculture, *Managing the Impact of Wildfires on Communities and the Environment: a Report to the President in Response to the Wildfires of 2000* and the *Fiscal Year 2001 Interior and Related Agencies Appropriation Act*.

The review found the 2001 policy generally sound, although the 2009 version contains some changes and updates. In addition to emphasis placed on ecosystem sustainability, restoration, science, education and communication, and program evaluation, programs will also need to consider operational and implementation aspects as a result of issues raised in the *Cerro Grande Prescribed Fire Investigation Report* and the subsequent independent review report. The revised fire management policy for the NPS has been expressed in NPS Director's Order 18 and Reference Manual 18. The revision of the fire management plan will reflect these changes in policy.

This plan will document how the park plans to accomplish land and resource objectives and to reduce the risk of fire to development adjacent to the park. The Final Environmental Impact Statement presented four alternatives for the fire management program of the SMMNRA. The alternatives are based on park values, effective fire management strategies, NPS policy and applicable law. This document also addresses primary issues of concern raised during a series of internal and public scoping sessions.

Decision to Prepare an Environmental Impact Statement

The decision to prepare an Environmental Impact Statement (EIS) on the Fire Management Plan was made by the Superintendent of SMMNRA after considering the scope, complexity, and public interest related to issues being addressed in the plan. Fire ecology and management are certainly among the most pervasive and complex influences on ecosystem processes and the human environment of the Santa Monica Mountains. The role of fire has implications for park use, ecosystem structure and function, and human activities throughout the region. This complexity and associated public interest suggested a level of analysis commensurate with an EIS. By completing an EIS for the Fire Management Plan, sufficient analysis can be undertaken to assess the effects of particular alternatives and to ensure adequate involvement by the public and interested agencies.

The Draft EIS was prepared to comply with the requirements of the National Environmental Policy Act (NEPA) and National Historic Preservation Act (NHPA) as well as the Endangered Species Act and the Wild and Scenic Rivers Act. The legal authority for preparing and implementing the SMMNRA Fire Management Plan is codified in 16 USC 1 through 4, which is the 1916 Organic Act for the NPS. This document will screen each proposed alternative for compliance with these policies, plans, and laws.

Following the public comment period on the Draft EIS and any necessary consultations for actions that may affect natural or cultural resources, the Final EIS was prepared and distributed to the public. At the conclusion of a 30-day waiting period, the NPS prepared a Record of Decision. Following the Record of Decision, the recommendations of the new plan can begin to be implemented and the plan will become the working document guiding fire management programs across the SMMNRA.

With this plan, the fire management program would employ fire management activities to accomplish land and resource management objectives and reduce the risk of wildfire in and adjacent to the recreation area. Depending on the outcome of risk assessments, fire management staff will use

different strategies to manage hazardous vegetation near urban areas and identify suppression actions appropriate to protect human life and private property. Strategies for implementation would be based on knowledge gained from fire and fuels research and suppression experience from NPS personnel and cooperating fire agencies.

II. RELATIONSHIP TO LAND MANAGEMENT PLANNING AND FIRE POLICY

The National Park Service Management Policies (2006) , Director's Order 18 (2008), and the Guiding Principles of the 2009 Federal Fire Policy provide the requirements for national park units to build a program consistent with stated land and resource goals and objectives while ensuring firefighter and public safety. These requirements for the fire management program are listed in Table 2.1. The Final Environmental Impact Statement for a Fire Management Plan is in compliance with these policies.

National Park Service Management Policies

National Park Service Management Policies, Section 4.5 – Fire Management, as revised in 2006, states the following:

“Parks with vegetation capable of burning will prepare a fire management plan that is consistent with federal law and departmental fire management policies, and that includes addressing the need for adequate funding and staffing to support the planned fire management program.”

Table 2.1 National Park Service Fire Management Program Requirements

National Park Service Policy Directing Development of Fire Management Plans— Director's Order 18: Wildland Fire Management	
Section 5: Program Requirements	
Every park area with burnable vegetation must have a fire management plan approved by the superintendent.	
All approved fire management plans will:	
• Reinforce the commitment that firefighter and public safety is the first priority. • Describe wildland fire management objectives, which are derived from land, natural and cultural resource management plans and address public health issues and values to be protected. • Address all potential wildland fire occurrences and consider the full range of wildland fire management actions. • Promote an interagency approach to managing fires on an ecosystem basis across agency boundaries and in conformance with the natural ecological processes and conditions characteristic of the ecosystem. • Include a description of rehabilitation techniques and standards that comply with resource management plan objectives and mitigate immediate safety threats. • Be developed with internal and external interdisciplinary input and reviewed by appropriate subject matter experts and all pertinent interested parties, and approved by the park superintendent. • Comply with the National Environmental Policy Act (NEPA) and any other applicable regulatory requirements. • Include a wildland fire prevention analysis and plan. • Include fuels management analyses and plan. • Include procedures for short and long term monitoring to document that overall programmatic objectives are being met and undesired effects are not occurring.	
Until a Fire Management Plan is approved, park areas must take an aggressive suppression action on all wildland fires, taking into account firefighter and public safety and resources to be protected within and outside the park.	
Although resource impacts of suppression alternatives must always be considered in selecting a fire management strategy, resource benefits may not be the primary consideration unless there is an approved Fire Management Plan.	

“Park and local fire personnel will be advised of the locations and characteristics of cultural resources threatened by fire, and of any priorities for protecting them during any planned or unplanned fire incident. At parks with cultural resources, park fire personnel will receive cultural resource protection training. At parks that have wildland or structural fire programs, cultural resource management specialists will receive fire prevention and suppression training and, when appropriate, will be certified for incident management positions commensurate with their individual qualifications.”

Federal Wildland Fire Management Policy

The Interagency Federal Wildland Fire Policy Review Working Group revised the Federal Wildland Fire Management Policy in 2009. Main elements of the policy are listed in Table 2.2.

Table 2.2 2001 Federal Wildland Fire Management Policy

<i>POLICY</i>	<i>2001 FEDERAL WILDLAND FIRE MANAGEMENT POLICY</i>
<i>Safety</i>	Firefighter and public safety is the first priority. All Fire Management Plans and activities must reflect this commitment.
<i>Ecosystem Sustainability</i>	The full range of fire management activities will be used to help achieve ecosystem sustainability including its interrelated ecological, economic, and social components.
<i>Response to Wildland Fire</i>	Fire, as a critical natural process, will be integrated into land and resource management plans and activities on a landscape scale, and across agency boundaries. Response to wildland fire is based on ecological, social, and legal consequences of the fire. The circumstances under which a fire occurs, and the likely consequences on firefighter and public safety and welfare, natural and cultural resources, and values to be protected dictate the management response to the fire.
<i>Use of Wildland Fire</i>	Wildland fire will be used to protect, maintain, and enhance resources and, as nearly as possible, be allowed to function in its natural ecological role. Use of fire will be based on approved Fire Management Plans and will follow specific prescriptions described in operational plans.
<i>Rehabilitation and Restoration</i>	Rehabilitation and restoration efforts will be undertaken to protect and sustain ecosystems, public health, and safety, and to help communities protect infrastructure.
<i>Protection Priorities</i>	The protection of human life is the single, overriding priority. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources will be based on the values to be protected, human health and safety, and the costs of protection. Once people have committed to an incident, these human resources become the highest value to be protected.
<i>Wildland Urban Interface</i>	The operational roles of federal agencies as partners in the Wildland Urban Interface are wildland firefighting, hazardous fuel reduction, cooperative prevention and education, and technical assistance. Federal agencies may assist with exterior structural protection activities under formal Fire Protection Agreements that specify mutual responsibilities of the partners, including funding. (Some federal agencies have full structural protection authority for their facilities on lands they administer; they may also enter into formal agreements to assist state and local governments with full structural protection.)

POLICY	2009 FEDERAL WILDLAND FIRE MANAGEMENT POLICY
Planning	Every area with burnable vegetation must have an approved Fire Management Plan. Fire Management Plans are strategic plans that define a program to manage wildland and prescribed fires based on the area's approved land management plan. Fire Management Plans must provide for firefighter and public safety; include fire management strategies, tactics, and alternatives; address values to be protected and public health issues; and be consistent with resource management objectives, activities of the area, and environmental laws and regulations.
Science	Fire Management Plans and programs will be based on a foundation of sound science. Research will support ongoing efforts to increase our scientific knowledge of biological, physical, and sociological factors. Information needed to support fire management will be developed through an integrated interagency fire science program. Scientific results must be made available to managers in a timely manner and must be used in the development of land management plans, Fire Management Plans, and implementation plans.
Preparedness	Agencies will ensure their capability to provide safe, cost-effective fire management programs in support of land and resource management plans through appropriate planning, staffing, training, equipment, and management oversight.
Suppression	Fires are suppressed at minimum cost, considering firefighter and public safety, benefits, and values to be protected, consistent with resource objectives.
Prevention	Agencies will work together and with their partners and other affected groups and individuals to prevent unauthorized ignition of wildland fires.
Standardization	Agencies will use compatible planning process, funding mechanisms, training and qualification requirements, operational procedures, values-to-be-protected methodologies, and public education programs for all fire management activities.
Interagency Cooperation and Coordination	Fire management planning, preparedness, prevention, suppression, fire use, restoration and rehabilitation, monitoring research, and education will be conducted on an interagency basis with the involvement of cooperators and partners.
Communication and Education	Agencies will enhance knowledge and understanding of wildland fire management policies and practices through internal and external communication and education programs. These programs will be continuously improved through the timely and effective exchange of information among all affected agencies and organizations.
Agency Administrator and Employee Roles	Agency administrators will ensure that their employees are trained, certified, and made available to participate in the wildland fire program locally, regionally, and nationally as the situation demands. Employees with operational, administrative, or other skills will support the wildland fire program as necessary. Agency administrators are responsible and will be held accountable for making employees available.
Evaluation	Agencies will develop and implement a systematic method of evaluation to determine effectiveness of projects begun under the 2001 Federal Fire Policy. The evaluation will assure accountability, facilitate resolution of areas of conflict, and identify resource shortages and agency priorities.

Enabling Legislation for SMMNRA

Congress established the SMMNRA in November 1978 to protect the largest expanse of mainland Mediterranean ecosystem in the national park system. This extraordinarily diverse ecosystem is home to 26 distinct natural communities, from freshwater aquatic habitats and coastal lagoons to oak woodlands, valley oak savanna and chaparral. Situated in densely populated southern California, the recreation area is a critical haven for more than 450 animal species, including mountain lions, bobcats and golden eagles. It is also home to more than ten threatened or endangered plants and animals. More than 1,000 archeological sites are located within the park boundary, one of the highest densities of archeological resources found in any mountain range in the world. The 26 known Chumash pictograph sites, sacred to traditional Native American Indians, are among the most spectacular found anywhere. Nearly every major prehistoric and historic theme associated with human interaction and development of the Western United States is represented here. No other national park features such a diverse assemblage of natural, cultural, scenic and recreational resources within easy reach of more than 12 million Americans, nearly 5% of the nation's total population (GMP 2003).

Based on the nature of the resources of the Santa Monica Mountains, the park was established by Congress. Section 507(a) of the enabling legislation (PL 95-625) states:

"The Congress finds that –

- (1) there are significant scenic, recreational, educational, scientific, natural, archeological, and public health benefits provided by the Santa Monica Mountains and the adjacent coastline;*
- (2) there is a national interest in protecting and preserving these benefits for the residents of and visitors to the area; and*
- (3) The State of California and its local units of government have authority to prevent or minimize adverse uses of the Santa Monica Mountains and adjacent coastline area and can, to a great extent, protect the health, safety, and general welfare by the use of such authority.*

In accordance with the enabling legislation, the SMMNRA must be managed in a manner to preserve and enhance its scenic, natural, and historical setting and its public health value as an airshed for the Southern California metropolitan area while providing for the recreational and educational needs of the visiting public.

The recreation area is a unit of the National Park System and is administered by the National Park Service. There are many different public and private agencies managing land within the Santa Monica Mountains because the 1978 legislation recognized that the recreation area would be a partnership among federal and state parks agencies, local governments and private landowners. The National Park Service and the Santa Monica Mountains Conservancy are the only agencies specifically charged with protecting resources within the entire recreation area; all other state and local agencies are limited to their jurisdictional boundaries.

General Management Plan and Resource Management Plan

The General Management Plan (GMP) mission goals are those goals that incorporate the mission, law, core values and policies of the three principal park agencies to manage the recreation area (GMP, p. 38-44). Fire management will be consistent with the mission goals and include strategies to support and implement those goals.

- Protect and enhance species, habitat diversity and natural processes within the SMMNRA.

- Protect and restore native plant species and plant communities, such as coastal sage scrub, coastal live oak woodland, and valley oak savannas.
- Enact programs to combat and remove the encroachment of exotic flora and fauna into natural ecosystems when possible.
- Manage fire throughout the recreation area to mimic natural fire regimes as much as possible and reduce the threat of wildfires.
- Maintain or improve water quality throughout the SMMNRA. Manage riparian communities, natural stream characteristics, estuaries and coastal waters for their significant ecological value.
- Implement collaborative scientific research and innovative resource management programs among federal, state and local agencies to manage, restore, and maintain natural processes.

National Park Service policies, with respect to fire and fire management in the SMMNRA, are described in the General Management Plan (2003) and the Resource Management Plan (1999).

The General Management Plan states:

It is the policy of the Santa Monica Mountains National Recreation Area to manage natural areas in a manner that maintains and enhances ecological values while at the same time assuring public safety. The goal is to implement a fire management program that helps to maintain a fire regime that sustains natural biotic associations and ecosystem functions while providing effective and strategic defenses against wildfire.

The park's prescribed burning program would be revised to reflect an increased understanding of the potential ecological impacts of prescribed burning, a new understanding of extreme-weather fire behavior, and recognition of the limited capacity of government agencies to implement prescribed burning. To this end, ecological management zones would be defined and established where vegetation is managed for ecological values, and dynamic fuel management zones for hazard reduction at the wildland-urban interface.

The RMP identifies the need to develop an ecologically based fire management program as a top priority conservation and restoration project as follows:

"Recent information on the effects of fire frequency, intensity, and extent on ecological communities in southern California, and new data on the effectiveness of prescribed fire programs to reduce wildfire risk, has led to a reassessment of fire management in the park. Currently the park is working to update its fire management program to reflect the most up-to-date scientific information. Ideally, an interagency fire management program implemented throughout the SMMNRA and surrounding region can be developed."

Finally, the RMP identifies fire as "an important ecological tool that resource managers can employ to achieve specific conservation or restoration objectives." Specific examples are identified as top priority conservation and restoration projects (1999).

- 1) *Restoration of Valley Oak Savanna: Explore the use of fire management for control of exotic annual grasses and the direct and indirect benefits and impacts of prescribed burning on oak establishment.*
- 2) *Restoration of Native Grasslands: Use fire to remove exotics and promote native species response.*

The Fire Management Plan (FMP) is a detailed program of action to implement fire management policies and objectives. The FMP will help meet objectives of the GMP and RMP by creating a framework to respond and use fire to protect and maintain the natural and cultural values associated with the Santa Monica Mountains. National Park Service planning documents affecting the FMP include the General Management Plan and Environmental Impact Statement and the Resource Management Plan.

III. WILDLAND FIRE MANAGEMENT STRATEGIES

General Management Considerations

All wildland fires in the Santa Monica Mountains will be suppressed by the local suppression agencies, including the Los Angeles (City) Fire Department, Los Angeles County Fire Department, and Ventura County Fire Department, with support from the National Park Service, California Department of Parks and Recreation and the Mountains Recreation and Conservation Authority. Prescribed fires on federal lands will be managed in cooperation with Los Angeles County Fire Department, Ventura County Fire Department, South Coast Air Quality Management District, and Ventura County Air Pollution Control District.

Goals and Objectives

The fire management goals below are taken from the applicable policies and resource objectives in the approved plans described above. The objectives and strategies are those actions that support the accomplishment of the stated goals.

- I. **Goal:** During all fire management activities, firefighter and public safety are first priority.

Objectives/Strategies:

- All fire personnel will comply with the National Wildfire Coordinating Group (NWCG) and agency fitness and medical requirements and will have personal protective equipment appropriate to the job or assignment.
- Qualifications and staff experience necessary to accomplish fire management program objectives in a safe manner will be established and promoted.
- All safety standards and guidelines identified within the Interagency Fire and Fire Aviation Operations handbook will be followed.
- The Job Hazard Analysis (JHA) process will be used for all potentially hazardous fire management activities.

- II. **Goal:** All SMMNRA fire management activities will be performed in accordance with the principles, policies, and recommendations of the following: Modification of Federal Wildland Fire Policy Guidance (2008), Implementation of Federal Wildland Fire Management Policy (2009); Departmental Manual (parts 350-354, 620); NPS Management Policies (2006); DO-18 Wildland Fire Management and DO-60, Aviation Management.

Objectives/Strategies

- The following key themes from the Final Report of the Federal Wildland Fire Management Policy and Program Reviews will be implemented by the park Fire Management Officer into all fire management activities:
 - Ecosystem sustainability to recognize the role of fire in sustaining healthy ecosystems, restoration, rehabilitation of burned lands, and the importance of sound science in fire management activities.
 - Fire planning with timely reviews of the park's fire management plan and related planning documents.
 - Fire operations with emphasis on safety, protection priorities, appropriate preparedness, appropriate suppression actions, use prescribed fire, prevention activities, and roles and responsibilities in the wildland urban interface.

- a. Interagency coordination and cooperation to include federal land management agencies with supporting or related programs as full partners in wildland fire management activities and programs
- b. Communication and education programs to enhance understanding of the fire management mission for both internal and external audiences.
- All aviation policies and practices will be followed during SMMNRA fire management activities, should air operations become necessary, as described in the Department of Interior Departmental Manual (part 350-354, 620) and DO60, Aviation Management. The park Fire Management Officer or designee will stay abreast of aviation policy changes by maintaining periodic contact with the regional aviation manager.

III. Goal: Identify acceptable strategic areas for fire suppression responses, mechanical hazard fuel reduction, and prescribed fire to achieve maximum benefit with the least impact.

Objectives/Strategies

- Use vegetation map, fire history map, and other tools to develop risk assessments which will identify and prioritize appropriate treatments.

IV. Goal: Educate employees and the public about the scope and effect of wildland fire management, including fuels management, resource protection, prevention, hazard/risk assessment, mitigation and rehabilitation, and fire's role in ecosystem management by cooperating with the SMMNRA Division of Interpretation to develop fire education and interpretation programs.

Objectives/Strategies

- Participate with local fire departments in the development of evacuation plans for the wildland urban interface communities.
- Develop and distribute trailhead brochures on fire safety.
- Increase fire ecology and safety programs in schools.
- Encourage Fire Safe Councils and FIREWISE communities.
- Increase public meetings and homeowner group presentations.
- Emphasize fuels reduction on private property.
- Explore grants for fire-safe construction.
- Establish and maintain an Internet site with fire safety information.
- Encourage and assist in developing more interpretive programs on fire safety and ecology.
- Develop prevention plans to reduce number of human-caused ignitions.

V. Goal: Stabilize and prevent degradation of natural and cultural resources lost in and/or damaged by impacts of wildland fires, fire suppression tactics and/or fire management projects.

Objectives/Strategies

- Employ Minimum Impact Suppression Tactics (MIST), including adjusting tactics to avoid sensitive natural resources and cultural resources where tactical feasible, minimize the construction of fireline using mechanical equipment, use helicopter long lines instead of constructing helispots, and use cold trail techniques and natural barriers instead of line construction. Other implementation guidelines can be found in Reference Manual (RM)-18, Chapter 9, Exhibit 5.

Use of MIST will not compromise firefighter or public safety or overtly impact overall strategic plans and tactical operations. NPS Resources Advisors will provide input

concerning sensitive habitats through the Incident Commander/Unified Incident Commanders or the NPS Agency Representative. This information will be incorporated into the operational decision making process to assure use of appropriate tactics on the incident.

- Post-fire rehabilitation would be initiated through the Emergency Stabilization and Rehabilitation Policy (ESR) funding request process to mitigate a broad range of threats to natural and cultural resources critical to the SMMNRA mission and resource protection mandates. See RM18, Chapter 12 for guidelines to implement BAER. Policy regarding ESR is outline in the June 6, 2003 Memorandum, "*Wildland Fire Emergency Stabilization and Rehabilitation Policy and Procedures*".

- VI. Goal:** Maintain the highest standards of professional and technical expertise in planning and safely implementing an effective wildland fire management program through annual program reviews, attending training, conducting training, and keeping abreast of latest developments and technology available to fire management.

Objectives/Strategies

- Implement annual program reviews.
- Implement training plans for each employee to reach target qualifications for the positions in the fire management organization.
- Conduct annual training appropriate to instructor qualifications.
- Attend conferences to keep abreast of the latest developments and technology applicable to fire management.

- VII. Goal:** Integrate fire management with all other aspects of park management.

Objectives/Strategies

- Develop a fire management program that helps meet the goals of the park's GMP and RMP within the five-year life of the fire management plan.

- VIII. Goal:** Manage wildland fire incidents in accordance with accepted interagency standards using appropriate management strategies and tactics and maximize efficiencies through interagency coordination and cooperation.

Objectives/Strategies

- Recognize appropriate and acceptable interagency management strategies and tactics for incidents by using MIST where possible.
- Attend interagency planning meetings prior to each fire season to enhance coordination and cooperation to maximize efficiency to manage wildland fire incidents.

- IX. Goal:** Develop a scientific fire management program using the best available knowledge and technology to restore and preserve ecosystems and maintain long-term native biodiversity.

Objectives/Strategies

- Use information gained through inventory, monitoring and review of research by others to evaluate and improve the program; translate scientific knowledge into policy and management practices, including but not limited to:
 - o Researching the role of fire in the southern California Mediterranean ecosystem,
 - o Identifying how fire can be used to target exotic plant species for eradication,
 - o Researching the effects of fire exclusion,

- o Researching how exotic plants affect native seed banks,
- o Determine how current fire frequency affects the ecosystem with respect to the historic fire regime,
- o Identify how post-fire recovery patterns may be used in restoration projects.

Wildland Fire Management Options

According to DO-18, resource management objectives drive strategies toward the restoration and maintenance of naturally functioning ecosystems within the SMMNRA. This section describes operational guidelines whereby the park can integrate a program involving application of strategies that accomplish identified resource management and protection objectives.

Wildland Fire Suppression

A “wildland fire” is defined as any non-structure fire that occurs in the wildland. This term encompasses fires previously called wildfires, prescribed fires and prescribed natural fires. Wildland fire suppression and use of wildland fire will be discussed below.

Wildland Fire Suppression

Wildfire suppression is defined as an response to wildland fire that results in curtailment of fire spread and eliminates all identified threats from the direct and indirect effects of the fire and/or management actions. All wildland fire suppression activities provide for firefighter and public safety as the highest consideration while minimizing loss of resource values, economic expenditures, and/or the use of firefighting resources (RM18 2008).

Suppression tactics will be aggressive and will be conducted with the highest regard for human safety. Furthermore, all control efforts will be evaluated for consideration of effects on resource values.

Control activities will follow the Incident Command System process and will use standard suppression practices. Fire suppression methods used should be those that cause minimum resource damage, while accomplishing effective control.

Suppression activities will avoid disturbance of all threatened and endangered (T&E) species and their habitats, as well as archeological and cultural sites, whenever reasonably possible; i.e., does not preclude life and safety consideration or private property. A representative from the National Park Service will be present during all extended attack suppression activities within or near the SMMNRA.

Wildland Fire Decision Support documentation and Delegation of Authority (DOA), Appendix D, will be prepared for the Superintendent’s approval each time a wildfire escapes initial action, or burns into a second burning period.

Use of Wildland Fire

Use of wildland fire will not be a fire management strategy within the SMMNRA. It is not feasible to implement this strategy in high population areas without being a considerable threat to public safety. Additionally, unlike certain fire-dependent forest ecosystems where fire programs have effectively excluded fire, the Santa Monica Mountains have experienced an increase in fire frequency since the 1950’s due to anthropogenic ignitions and the inability to control extreme wind-driven wildfires (Keeley, Fotheringham and Morais 1999). All available evidence suggests that the Santa Monica Mountain chaparral communities are not fire-limited (do not need additional fire, in the form of

prescribed fire, to thrive) under the current fire management strategy of active suppression actions. Chaparral communities dominated by obligate seeding species are, in fact, threatened by increased fire frequency and the potential for type conversion (Keeley and Fotheringham 2002).

Fuels Management

Prescribed Fire

For purposes of this plan and as defined by the policy, prescribed fire is any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist prior to ignition.

Wildland fuel complexes within National Park Service units are managed to achieve resource benefits and management goals such as ecosystem restoration, maintaining ecosystem health, and hazard fuels reduction. Fuels management includes strategic planning and implementation of treatments ranging in scale from site specific to landscape level. These treatments are designed to improve the park's ability to protect life and property and to maintain or restore the sustainability of healthy ecosystems, which is a fundamental legislative mandate (RM18 2008).

Ecosystem restoration projects seek to improve the health of natural communities by using prescribed fire to control non-native plants and facilitate degraded habitat restoration. Hazard fuel reduction projects remove live or dead vegetation in strategic areas. Their goal is to provide for increased protection of homes within and adjacent to parklands, and to protect sensitive species, critical habitats and important cultural resources within the park.

Non-Fire Applications

Mechanical hazard fuel reduction activities reduce the fire hazard of natural fuels when weather and/or risk assessments demonstrate a reasonable chance for future wildfire damage. The beneficial outcome is that firefighter and public safety is enhanced, real property, nature and cultural resources may be protected and potential suppression and property damage costs may be significantly reduced.

The SMMNRA is composed of private property and parklands existing as a "mixed interface" of housing embedded in a wildland matrix with high fire hazard potential. Residences within this matrix are very desirable; property values are high due to the seemingly remote and rugged natural chaparral landscape of the mountains. These characteristics can present serious problems for management of wildfire and the protection of life and property. Some of the best defenses against wildfire in this situation within the context of SMMNRA's preserve and protect natural cultural resources mandate is to use non-fire hazard fuel reduction techniques in areas most vulnerable to wildfire.

Mechanical fuel reduction projects occur annually in a number of places within the park where wildland fuels grow directly against the urban interface. Los Angeles County Fire Department has a 200-foot brush clearance ordinance for structures in the "high fire hazard zone" within the county while Ventura County Fire Protection District has a 100-foot brush clearance ordinance. Typically the mechanical fuel reduction projects occur around park structures and along the boundaries at Palo Comado/Cheeseboro Canyons in Agoura Hills, Franklin and Fryman Canyons in Studio City and Beverly Hills, and Zuma and Trancas Canyons in Malibu.

Fire Management Units (FMU)

The nature of land ownership within the SMMNRA makes it necessary to establish FMU's based mostly on political boundaries. Currently, the NPS portion of the SMMNRA has forty-six (46) parcels with political boundaries that separate each parcel from non-NPS land (Appendix E). This figure continues to grow since land acquisition for this park is not complete. These parcels of federal land will be grouped into 4 FMU's (Figure 3.1) defined by the primary fire cooperator with wildland fire jurisdiction on non-federal lands. Each unit will have a single overriding objective for wildland fires; all fires that are not management-ignited will be suppressed with an appropriate management response.

[illegible]

FMU-2 – 101 North. The FMU is defined as all National Park Service properties north of the Ventura Freeway (I-101). The County of Los Angeles Fire Department and the Ventura County Fire Protection District have wildfire protection responsibility on lands adjacent to the NRA. Both

departments are contractors to the California Department of Forestry, with expansive State Responsibility Area (SRA) lands adjacent to the park. The 101 Freeway isolates this parcel of federal land from other portions of the park. Fuel loadings in this FMU are lighter than the remainder of the parklands, as oak savannas, true grasslands and coastal sage chaparral dominate this area.

Prescribed fire will be used in this area as part of grassland restoration efforts. Open space is anticipated to continue to adjoin federal lands to the west as Ahmanson Ranch becomes the newest State Park, while urban encroachment will continue to the west of the FMU.

FMU-3 – Kanan East. The FMU is defined by I-101 to the north, Kanan Road to the west, I-405 on the east and Highway 1 on the south. Los Angeles County Fire Department has the non-federal wildland fire jurisdiction in this area. Large blocks of state parklands, including Malibu Creek State Park and Topanga State Park are also included in this FMU. The area is characterized as urban intermix with many small communities located within the boundaries of the FMU. The potential loss of property from wildland fire is greatest in this FMU, as many of the communities are built to older construction standards and have widely varying degrees of defensible space.

Potential vegetation management projects could include hazardous fuels reduction using prescribed fire or mechanical treatment to enhance defensible space. The use of prescribed fire to support the restoration of native grasslands is also anticipated. Competing interests from the multiple landowners in the area make large-scale projects unlikely. Small-scale strategic fuels treatments using the combined efforts of the SMMNRA, Los Angeles County Fire Department and California Department of Parks and Recreation are feasible.

FMU-4 – Kanan West. I-101 on the north, Kanan Road on the east, Highway 1 on the south and Lewis Road on the west define the FMU. Los Angeles County Fire Department and Ventura County Fire Protection District have wildland jurisdictional authority on non-federal lands. The FMU represents a transition to a rural setting when compared to the FMU-3. The area is characterized by scattered ranchette style residences which is reflective of an urban intermix fire setting. The rural setting increases in the Ventura County portion of the FMU. Large tracts of contiguous federal property and Point Mugu State Park are included in this unit.

Potential vegetation management projects could include hazardous fuels reduction using prescribed fire, mechanical treatment and vegetation restoration through the use of prescribed fire. Large scale fuels treatments are possible in area, as ownership patterns are more conducive to landscape level treatments. However, the current focus will continue to be on strategic treatments to enhance the protection of life and property.

Historic Role of Fire and Impacts on Native Plant Communities

Fire has shaped the ecosystem of the Santa Monica Mountains and is a major factor controlling nutrient cycles and energy pathways. Fire influences the diversity, productivity, and stability of the ecosystem. The park's vegetation and wildlife evolved in partial response to periodic lightning-caused fires. These lightning fires, in combination with aboriginal burning during the last 12,000 years, shaped the landscape. Fire was an integral part of the lives of the Chumash and Gabrielino as well as the early Spanish and European settlers, and continues to affect the inhabitants of the mountains today.

The expansion of settlement and human activities into California shrublands during the twentieth century has been accompanied by an increase in catastrophic fires. Even though improved technology and increased firefighting efforts have provided effective suppression actions of small fires, they have not prevented the large wind-driven fires that present the greatest public danger and account for most of the land burned in southern California. It has been suggested that these large

fires result from the effective suppression actions of smaller, mild-weather fires. This view holds that the natural fire regime of southern California is one of frequent small fires that fragment shrublands into a mosaic of young fire-resistant stands interspersed among older more fire-prone stands. Fires starting in the older stands are presumably stopped at the boundaries of the young stands, preventing the development of large fires even under extreme-weather conditions. It is argued that the suppression actions of small fires has created an “unnatural” accumulation of older brush and coarsened the mosaic into large continuous stands of highly flammable vegetation that under extreme-weather conditions generates intense, rapidly spreading fires (Philpot 1977, Minnich 1983).

This “age-mosaic” model also holds that by artificially lengthening the fire-free interval, suppression of fires has produced detrimental ecological effects that result in loss of diversity and “senescence” of shrublands (Zedler 1995). The model also supposes that increased fuel accumulations resulting from extended fire-free intervals produce unnaturally intense fires that are destructive to plants and soil and reduce the ability of vegetation to regenerate after fire (Minnich and Dezzani 1991).

The shrublands age-mosaic model is consistent with observations in western coniferous forests which show that long-term fire exclusion has led to fuel accumulations that have made fires more damaging and have had profound ecological impacts within these forests (Agee 1993, Stephenson 1999). It thus offers an apparent unifying principle underlying the wildfire problem in the western states. More importantly, the age-mosaic model implies that shrubland fire safety can be achieved at the landscape level through relatively small controlled burns conducted in areas removed from the urban interface. State and federal land management agencies, which have little control over the social issues that contribute to the fire hazard problem, would have an opportunity through prescribed burning to create a fire-safe environment without endangering the public in the process. At the same time, the model supposes that the introduction of “less destructive” low-intensity fires would reduce unnaturally long fire free intervals and restore fire as “a natural process” that “rejuvenates” senescent shrublands. The appeal of the age-mosaic model is such that it has been widely adopted and is the basis for fire management planning by all of the southern California national forests as well as the current program for the SMMNRA (NPS 1994, Conard and Weise 1998).

It is unfortunate that, despite its regional application, the age-mosaic model is not supported by recent studies conducted in California shrublands. These studies indicate that large fires are a natural part of the fire regime of southern California, that age-class mosaics have only a limited ability to prevent the spread of wind-driven fires and that suppression activities have not increased the occurrence of large fires (Radtke et al. 1982, Dunn 1989, Davis and Michaelsen 1995, Moritz 1997, Conard and Weise 1998, Keeley et al. 1999, Mensing et al. 1999).

Significantly, research indicates that in many areas, including the Santa Monica Mountains, fire return intervals have shortened in association with increasing settlement and human activity (Radtke et al. 1982, Barro and Conard 1991, NPS 1994, Conard and Weise 1998, Keeley et al. 1999). In some areas fire occurrences are increasing to a frequency beyond which native vegetation can successfully recover, threatening the long-term persistence of shrublands. Thus, management actions based on the assumption of the age-mosaic model that fire has been excluded from shrublands may be counter to the goal of maintaining long-term biodiversity in chaparral and coastal sage scrub ecosystems.

Although chaparral and coastal sage scrub may be adapted to the occurrence of fire, they are not adapted to all fire regimes. Where fires are frequent, non-native herbaceous annual vegetation has been observed to increase and replace shrublands (Vogl 1977, Barro and Conard 1987, Haidinger and Keeley 1993, Beyers et al. 1994). This “type conversion” of shrubland to annual grassland has been widely observed in California (Keeley, 1990, Minnich and Dezzani 1998, Keeler-Wolf 1995).

Natural variability in the fire regime interacts with varying plant regeneration strategies to maintain species diversity. However, if fire frequency exceeds that to which species are adapted, post-fire plant regeneration will be reduced and vegetation will respond negatively. Sensitivity to high fire frequencies varies with regeneration strategies. Non-sprouters show the greatest sensitivity to short fire return intervals and may be eliminated by a single premature burn. If an area is reburned before plants reach maturity and replenish seedbanks, local extinction can occur (Biswell 1989, Zedler 1995). Non-sprouting species need at least seven years to reach seed producing maturity (FMP 1994) and if conditions are unfavorable, up to 15 years or longer (Biswell 1989). Non-sprouting shrubs have only limited dispersal ability and once lost from an area, recolonization from other established populations can be extremely slow (Zedler and Zammit 1989).

Obligate re-sprouters show greater resilience under short fire return intervals (Zedler et al. 1993, Fabritius and Davis 2000), but nevertheless may be severely impacted by sustained high-frequency fire regimes. Successful germination and recruitment of new individuals is correlated with the cooler, moister, low light conditions and increased litter depth associated with the mature closed-canopy chaparral that develops over fire-free intervals of forty years or more (Lloret and Zedler 1991, Keeley 1992a & b, DeSimone 1995). If a short-interval fire regime is maintained, senescent individuals and lignotubers that inevitably perish in fires will not be replaced, resulting in loss of re-sprouting populations over time (Zedler 1995).

Although facultative seeders re-sprout after fire, mortality of lignotubers, particularly in chamise, can be very high if fire returns prematurely (Kay et al. 1958, Zedler et al. 1983, Haidinger and Keeley 1993). Since a premature fire also kills seedlings that germinated in response to the previous fire, facultative seeders show only limited ability to persist under repeated disturbance. Coastal sage shrub lignotubers may be similarly sensitive to short fire return intervals. However, mortality is highly variable and the ability of surviving shrubs to seed in the first year after fire appears to allow coastal sage scrub to persist under fire frequencies that eliminate chaparral (O'Leary 1995b).

Chaparral is generally believed to be adapted to fire return intervals ranging between 20 and 150 years, with average natural return intervals of 50 to 70 years (Minnich 1983, Davis and Michaelson 1995, Conard and Weise 1989, Mensing et al. 1999). The return interval which eliminates shrublands is not clearly defined and is dependent on the interaction of fire with other environmental conditions and disturbances (Keeler-Wolf 1995, Minnich and Dezzani 1998). O'Leary (1995b) estimated that fire return intervals of five to 10 years can result in chaparral replacement by coastal sage scrub while others have found that this same interval will cause the replacement of coastal sage scrub with exotic grasslands (Timbrook et al. 1982, Minnich and Dezzani 1998). However, even fire intervals of 20 years or longer may result in significant changes in stand structure (Parker 1989).

Sensitivity of vegetation to short fire return intervals varies with species composition. A single premature fire can dramatically transform vegetation dominated by non-sprouters while vegetation dominated by re-sprouters may require years of sustained high frequency fires before a significant loss of shrubs occurs. Despite the apparently greater resilience of coastal sage scrub to short fire return intervals, vegetation conversion to annual grasses has been widely reported, particularly at drier inland locations (Callaway and Davis 1993, Riggan et al. 1994, Minnich and Dezzani 1998, O'Leary 1995b). This may be due to interaction with other disturbance types such as grazing or drought or the ready establishment of exotic annual herbs which support high fire frequencies (Minnich and Dezzani 1998).

Natural and Anthropogenic Fire Regimes in the Santa Monica Mountains

The natural fire regime in the Santa Monica Mountains is not known. The mountains have a long history of settlement and almost all recorded fires were human caused (Radtke et al. 1982). However, climate, vegetation, paleoecological evidence and recorded fire history all indicate that the natural regime is one of infrequent large fires.

Climate and Topography

Low-elevation coastal areas have the lowest natural fire frequencies in southern California due to the rarity of lightning strikes (Malanson and O'Leary 1982, Keeley 1982). In the Santa Monica Mountains lightning fires are almost unknown since they start primarily in the wet season, out of phase with the occurrence of hot, dry Santa Ana winds (Radtke et al. 1982). Prior to organized fire suppression programs, infrequent Santa Ana driven fires likely resulted from lightning ignitions that occurred weeks earlier and "held over" as slow burns or smolders, flaring up when winds increased and fuel moisture dropped (Minnich 1987, Keeley et al. 1999). Santa Ana driven fires may also have occasionally carried into the Santa Monica Mountains from the north (Jon Keeley, personal communication).

When fires occur under Santa Ana conditions weather patterns and local topography contributes to extensive and rapid fire spread. Fires driven by high velocity Santa Ana winds (up to 90 M.P.H.) are little influenced by vegetation structure, rather their spread is regulated by the interaction of winds and topographic features (Radtke et al. 1982, Turner and Romme 1994, Keeley et al. 1999). In the Santa Monica Mountains the steep terrain and the general alignment of canyons with the prevailing fire-winds promotes intense rapidly moving fires and, in the western section of the mountains, extensive lateral spread (Weide 1968, Radtke et al. 1982). This propensity for fire to spread laterally is aided by the dynamic wind circulation patterns created when Santa Ana winds overlay local near-shore weather patterns (Radtke et al. 1982). Thus, under extreme weather conditions fires can move rapidly through the mountains from north to south often exhibiting extensive lateral spread. The vegetation mosaic plays only a limited role in controlling this movement.

Paleoecology and Historical Records

Paleoecological evidence and the historical record provide further evidence for the existence of large infrequent fires prior to effective suppression programs. Charcoal deposits in the Santa Barbara Channel indicate that large fires occurring at intervals of 40 to 50 years have been part of the coastal landscape since at least the seventeenth century (Mensing et al. 1999). In the Santa Monica Mountains reliable historical records only date back to the beginning of the twentieth century. However, these records show that large fires occurred prior to organized fire suppression programs and are thus not a result of suppression actions on small fires (Radtke et al. 1982).

Changes in Fire Frequency with Settlement

The large amount of human activity in and around the Santa Monica Mountains has reduced the length of fire-free intervals relative to natural conditions (NPS 1994). The park's fire history maps, which include all fires over 100 acres occurring between 1925 and 1996, show fire return intervals of between 10 and 30 years are common throughout the mountains. Most fires start along access routes leading into or through the mountains and almost every fire recorded has been accidentally or deliberately set (Radtke 1982). Based on fire history maps from 1919 to 1980, Radtke et al. (1982) determined that the coastal zone from Las Flores Canyon to the Ventura County line had an average interval between fires of 12 to 21 years. The Ventura Freeway – Las Virgenes Road area also experienced high fire frequency, burning on average every 21 years. On the other hand, areas to the west and east of this high-traffic corridor had burned only once or twice over the 62-year record period. In a more recent study, Keeley et al. (1999) determined the age of stands burned by the six fires over 12,400 acres (5000 ha) that occurred between 1967 and 1996 in the Santa Monica Mountains and Simi Hills. Of 203,000 acres of vegetation burned in these fires, the majority was under 20 years old: 16% was under 10 years old and 38% was 10 to 20 years old. It is likely that

these high fire frequencies are unprecedented. While Native Americans actively burned grasses and herbaceous vegetation, there is no evidence that they burned in chaparral or that their early season fires carried extensively into shrublands (Timbrook et al. 1982).

IV. WILDLAND FIRE MANAGEMENT PROGRAM COMPONENTS

The mission of the SMMNRA is to “protect and enhance, on a sustainable basis, one of the world’s last remaining examples of a Mediterranean ecosystem and to maintain the area’s unique natural, cultural, and scenic resources, unimpaired for future generations” (GMP 2002). Any fire management strategies, including suppression actions, prescribed fire, or mechanical fuel reduction projects should factor in the protection of natural and cultural resources, while maintaining that safety of employees and private citizens is the highest priority in any activity. On all wildland fire management actions, use of minimum impact tactics is the policy of the National Park Service. MIST is defined as the application of those techniques that effectively accomplish wildland fire management objectives with the least cultural and environmental impact, commensurate with public and firefighter safety (RM18 2008).

General Implementation Procedures

All wildland fires will be suppressed with an appropriate response. Generally, all suppression activities on federal lands will be managed in Unified Command with a primary cooperator according to jurisdiction. The Angeles Emergency Operations Center (EOC) is responsible to contact the appropriate fire management or law enforcement personnel to respond to the report of a wildland fire. Typically the Fire Management Officer or Chief Ranger responds to the Incident Command Post and serves as a Unified Incident Commander, Agency Representative or Resource Advisor. A qualified Resource Advisor will be requested to proceed to all fires on SMMNRA lands or to fires that have potential to spread on these lands. The Resource Advisor will assist in identifying sensitive resources and provide input on appropriate actions to minimize the impacts to these resources. The National Park Service Incident Commander or Agency Representative is responsible for requesting a Resource Advisor through the Angeles EOC.

FIRE SUPPRESSION Program

The objective of the wildland fire suppression program, as an integral part of wildland fire management in the National Park Service, is to manage wildland fires safely and efficiently to accomplish protection objectives. It will be integrated into land and resource management plans and activities on a landscape scale, across agency boundaries, and will be based on best available science. Protection priorities are (1) human life and (2) property and natural/cultural resources (RM18 2008).

All non-management ignited wildfires in the Santa Monica Mountains will be suppressed due to the close proximity of improvements and private property to wildland fuels (RM18 2008). Because the SMMNRA has limited fire management capabilities most suppression activities will be accomplished in conjunction with the local fire agency. Within the boundary all wildland fires will be suppressed according to federal and local government protocols as determined by the Unified Incident Commanders. Federal actions will be consistent with direction provided in RM 18, DO 60 and *Interagency Standards for Fire and Fire Aviation Operations*.

Initial and Extended Attack

Initial Action. Wildland fires must receive appropriate initial action (IA) by the nearest available suppression forces. Generally first on scene will be either a Los Angeles County or Ventura County engine company. National Park Service personnel will respond after notifying the Angeles EOC. As safety allows, initial action Incident Commanders will assess the complexity of the fire to determine their capacities to manage the incident utilizing the SMMNRA Complexity Guide (Appendix F). If the initial action Incident Commander (IC) is unable to initiate action due to the management complexity of the incident, forces will be staged in a safe location or modified tactics will be utilized until a fully qualified type III Incident Commander arrives on scene. Cooperating fire agencies may fill the role of IC on all

type III initial actions until qualified personnel from the park arrives on scene and assumes the role of IC for fires on federal lands.

Closest Forces. Fire Protection Agreements with adjacent agencies must include the use of closest resources. The closest resource concept is a standard operating procedure for all cooperating fire protection agencies in the Santa Monica Mountains.

Extended Attack. Extended attack occurs when a fire has not been contained or controlled by initial action forces and continues into the next operational period. At a minimum, a qualified type III IC will respond to all extended attack incidents to assure adequate oversight of federal firefighting resources. Qualified IC's from cooperating agencies can fill this role until federal oversight can be provided. A transition to a higher level incident management team may be necessary as the incident grows in complexity. The Santa Monica Mountains Fire Transition Checklist, will be used to assist in making a transition determination. A Delegation of Authority will be prepared for all incidents involving federal lands which transition to a type I or II Incident Management Team.

Suppression tactics on fires will be aggressive and will be conducted with the highest regard for human safety. Furthermore, all control efforts will be evaluated for consideration of effects on resource values.

Fire control activities will follow the Incident Command System process and will use standard suppression practices. Any fire suppression strategy will first take into consideration human life and safety, then private property, natural and cultural resources. Fire suppression methods used should be those which cause minimum resource damage while accomplishing effective control.

Suppression activities will avoid disturbance of all T&E species and their habitats, as well as archeological and cultural sites, whenever reasonably possible. A qualified National Park Service representative will be present at the Incident Command Post (ICP) during all extended attack suppression incidents. Maps of sensitive natural and cultural resources are available to representatives prior to any suppression incidents.

Minimum Impact Suppression Tactics

The goal of MIST is to minimize fire suppression impacts on the land while ensuring the actions taken are safe, timely and effective. Strategies for suppression activities and tactical operations will be planned to have the least long-term impact to the resource. All fire management activities within the SMMNRA should adhere to MIST where possible.

WildFire Emergency Stabilization and Rehabilitation (ESR)

Every effort should be made to prevent excessive human-caused impacts during a suppression effort through careful planning and supervision, individual education and commitment, and the use of minimum impact suppression techniques.

When rehabilitation is necessary, efforts will be initiated by the Incident Commander while the fire is being suppressed and through mop-up. If performed after the incident, the Chief Ranger will designate an employee, usually a Resource Management Specialist, to organize and direct rehabilitation efforts. However, it is not the intent of ESR to stop all erosion or eradicate all non-native species that may appear following a fire. The ESR program should focus only on mitigating significant damage, following the policies laid out in the Department of the Interior's ESR guidelines in 620 DM 3 and NPS RM-18. ESR plans must be submitted to the regional office within five (5) calendar days following control of a wildfire.

If revegetation or seeding is required, only native plant species will be utilized and the park's Fire Ecologist or Plant Ecologist will be consulted. Rehabilitation planning for each fire will be the responsibility of the Incident Commander in consultation with the resource advisor. Rehabilitation of damage due to suppression actions should be performed prior to complete demobilization. ESR is a long-term commitment to protect resources, which occurs outside of the suppression organization.

Permanent Park Records The following will be held as permanent historic resource records:

- Fire reports (DI-1202, supplementary reports, ICS forms).
- Fire weather records.
- Historic records of the park, including photos or maps showing vegetative cover, etc.
- Monthly reports or other records which document fire occurrence or behavior.
- Maps or records pertinent to fire management.

Situation Reports Situation reports contain current information about fire danger, fire status, and resource availability. Parks prepare situation reports during the fire season or when (1) fire danger is very high or extreme, (2) when a fire has occurred or is in progress, (3) or when required. The Fire Management Program Assistant (FMPA) prepares and transmits situation reports via the Shared Access Computer System (SACS). Since situation reports are used in the Fire Program Analysis budget development, it is important that daily entries be made for all fires.

Fire Report Records Each fire of significance (five acres or greater) on federal property within the SMMNRA will be reported immediately to the Superintendent by name, location and size. An ICS-209 report will be accomplished twice daily for extended fire situations. A DI-1202 will be completed for all fires that occur inside of the designated NRA boundary or in the identified mutual threat zones with Los Angeles and Ventura County Fire Departments. The fire reporting process is a critical element within the FIREPRO analysis and must accurately reflect the fire load of the SMMNRA.

The IC will maintain a complete accountability of fire costs for each fire. A qualified cause and origin fire investigator will investigate all wildland fires within the SMMNRA. Any investigations involving potential claims against the government, trespass fires, or other illegal activities on federal lands will be immediately turned over to the Law Enforcement Branch of the Resource Protection Division.

Completion of the Individual Fire Reports is the responsibility of the ranking National Park Service employee on scene of the wildland fire. These reports will be submitted to the Fire Management Officer within 48 hours after the fire is declared out. Within 10 days individual fire reports will be entered into SACS.

An NWCG qualified fire investigator will be assigned to fires where a responsible party can be identified. A Case/Incident Record (Form 10-343) will be completed, with attachments, to document the fire activities. A case report is required when a potential suspect can be identified, if a claim for recovery of suppression costs may occur, or when resource damage has occurred to federal property.

WILDLAND FIRE SITUATION

Historical Weather Analysis

The climate of the Santa Monica Mountains is classified as a “Mediterranean Type”, which is characterized by mild, wet winters, and hot, dry summers, typical of a semi-arid, sub-tropical region.

According to the University of California, Los Angeles, precipitation records from 1948 to 2001, precipitation in the area ranges from six inches to 43 inches in extreme years while annual average is approximately 15 to 16 inches. Proximity to the coast affects variations in precipitation values for each area. The average represents values from coastal to inland areas.

Most of the precipitation occurs in several large storm events between the months of January through March. Because the Santa Monica Mountains are situated along the coast, they can receive 10 inches more rain annually than inland areas due to the “rain shadow” effect. Coastal fog layers also penetrate coast canyons into the interior of the mountains, which influences distribution of several plant community types. This coastal fog layer also influences chaparral growth rates, causing heavier fuel loading in coastal chaparral communities than in inland communities, as well as influencing fire behavior by helping to maintain higher live-fuel moisture levels later into the summer fire season.

High temperatures regularly in excess of 100°F characterize inland environments during the summer. The extreme temperature causes severe moisture stress in vegetation and predisposes it to burning with high intensity. A thermal low develops over the deserts in the summer which draws in the marine fog over the coastal slopes of the park during May, June, and July. As the temperature differential between the coast and desert decreases in late summer, the pressure gradient decreases leading to a reduced number of foggy days.

The Great Basin High traditionally develops in October, November, and December, setting the stage for an offshore flow during the fall and winter. These winds are channeled through mountain passes and canyons attaining great velocity. These gravity winds, called “Santa Ana winds” attain velocities that can exceed 80 m.p.h. Santa Ana weather conditions can potentially occur any time of year. Fast moving low-pressure centers moving across the northern United States can also cause northeast winds in the Los Angeles Basin during winter and spring.

The climatic characteristics directly influence the predominance of fire as a major ecosystem influence within the Santa Monica Mountains. The dry Mediterranean-type summer season imposes considerable moisture stress on plant communities. During these periods of moisture stress, the volatile oil concentration of certain species increases significantly in relation to wet season moisture content. The net effect of the summer drought is to make chaparral vegetation susceptible to intense combustion reactions. Historic fire records indicate that fires occurring in the Santa Monica Mountains rarely exceed 1,000 acres in size except during periods of Santa Ana winds. Very few fires have exceeded 500 acres in size without the influence of Santa Ana winds.

Fire Season and Fuels/Fire Behavior Characteristics

Fire seasons can be divided into three distinct periods in the Santa Monica Mountains based upon fire behavior characteristics. The first period generally occurs during early May as the annual grasses begin to cure. Fires generally occur in, and are restricted to grasslands that may move into the coastal sage scrub but diminish in chaparral due to the high live-fuel moisture content in the chaparral plant community.

The second phase of the fire season occurs as summer progresses, the weather becomes hotter, and the live-fuel moisture content of chaparral decreases to critical levels. These fires begin to involve more chaparral-covered areas, but rarely exceed 500 acres in size, and are usually contained at watershed boundaries. The third and most extreme phase of the fire season begins when live-fuel moisture levels drop below critical levels during the last summer and coincide with the strongest Santa Ana winds. Santa Ana winds and critical live fuel moisture levels are the common denominator of the characteristic southern California conflagrations. Los Angeles County Fire Department does not declare fire season over even after the winter storms come because fires over 100 acres have been recorded for every single month of the year (personal comment-Herb Spitzer, Los Angeles County Fire Department, Chief of Forestry, Jan 2002). Fire history indicates that there is large fire potential every month of the year.

Santa Ana winds are considered "gravity" winds and are characterized by high pressure systems centered within the deserts of the Great Basin to the east of California. The cool, dry air blowing from the northeast is of greater density than the air mass situated above the Los Angeles Basin. As these gravity winds flow into the basin, the effects of compression warms and dries the air. Wind velocity increases as air is channeled within the narrow mountain passes of the San Gabriel and San Bernardino mountains. These Santa Ana winds attain extreme velocity (over 80 M.P.H.) by the time they reach the coastal areas of southern California. These dry winds can reduce localized relative humidities to 2%, 10-hour fuel moisture to 3%, and accelerate the drying of live fuels. Santa Ana wind conditions can occur during any month of the year, with the exception of August, for which there are no historic records of occurrence. The highest concentration of Santa Ana winds occurs during the months of October, November and December, where north to east wind gradients occurs 48.8 percent of the time (FireFamily Plus, Cheeseboro RAWs, 1997-2002). These months also represent periods of low live fuel moisture due to cessation of the growing season. This, along with volatile oils present in the vegetation, sets the stage for the highest potential for extreme fire behavior.

Historic Fires of Record in the Santa Monica Mountains

The beginning of the 20th century brought about the urban expansion of a growing Los Angeles to the coastline of the Santa Monica Mountains. Along with increasing populations, the Malibu coastline began to experience congruent increases in the frequency of fire occurrence. These fires started at the coast and burned to the crest of the Santa Monica Mountains (Radtke 1981). The intensity of these fires was relatively low because they burned primarily in the coastal sage fuel types without the influence of Santa Ana winds. These fires usually burned until they went out naturally because of the lack of organized suppression forces in the Santa Monica Mountains at that time. According to Radtke (1981), the coastal areas of Malibu have experienced the highest fire frequency of all areas within the Santa Monica Mountains. The high fire frequency experienced in coastal areas, along with the influence of grazing has, according to some researchers, expanded the distribution of the coastal sage-scrub vegetation type.

With the construction of roads into the interior regions north of the Santa Monica Mountains in the early part of the 20th century, new ignition points and sources of wildfire were introduced which changed and influenced the local fire regime. Fires starting in the interior areas north of the crest of the Santa Monica Mountains burned substantial areas under the influence of Santa Ana conditions (FMP 1994).

Congruent with the increases in fire frequency and yearly acreage burned, are the increases in property losses. The increase in the amount of structural damage and property loss can primarily be attributed to the increasing number of structures built with inappropriate building materials within

high fire hazard areas. Historically, only wildfires under Santa Ana weather conditions have caused significant property losses in terms of residential structural damage. However, the encroachment of residential development into all areas of the Santa Monica Mountains has created potential for extensive structural damage during fires of less than 100 acres in size. The Laurel Canyon Fire of 1981 burned approximately 17 residences while consuming less than 50 acres of vegetation. The 1985 Baldwin Hills Fire, which burned 53 homes and killed 3 people (<http://www.lafd.org/brush>) graphically illustrates the dangers of crowding residences into hillside areas that are interspersed with native brush and ornamental exotic plants. These types of situations create optimal conditions for small fires to consume numerous structures, and cause fatalities even under moderate fire weather conditions.

On November 6, 1961 the Bel Air Fire burned 6,090 acres in the eastern end of the Santa Monica Mountains, resulting in the loss of 484 structures. On the very same day, the Topanga Fire started, creating a multi-fire emergency that strained fire suppression forces beyond their capabilities. The Topanga Fire burned 673 acres with only a small amount of structural loss. Over a period of time, the houses were rebuilt and the scars left behind by the fire disappeared in the lush post-fire regrowth. However, for the first time public perception of the brush fire problem in the Santa Monica Mountains was aroused. The dramatic loss of residences in these fires prompted numerous investigations, studies, agency task forces, and legislation aimed at preventing a recurrence of similar conflagrations. The numerous agency task forces appointed to study the fire problem developed recommendations for increasing the size of local fire suppression forces and enacted brush clearance ordinances and building material standards. The agency findings concluded that roofing material type and distance of brush clearance from structures were the two most important factors in structural survival during a chaparral fire. A study done by the Stanford Research Institute showed that 54% of the houses with wood roofs and no brush clearance burned during the Bel Air Fire in comparison with only .08% of the houses with approved non-wood roofs and 100 feet of brush clearance (Howard 1973).

The Wright Fire of 1970, the Kanan Fire of 1978, and the Dayton Canyon Fire of 1982 set the precedent for future fires in the Santa Monica Mountains with respect to the possibility of extensive damage to structures. Large fires in excess of 20,000 acres had burned through the Santa Monica Mountains in the past but the burned areas were largely undeveloped resulting in little property damage. The Wright, Kanan, and Dayton Canyon fires all exceeded 20,000 acres, burned under Santa Ana weather conditions and burned through chaparral fuels exceeding 30 years of age. Each of these fires caused extensive property damage while burning in a southwesterly direction from the interior to the Pacific Ocean (FMP 1995).

During October and November of 1993, two fires burning under Santa Ana conditions exceeded all previous records for number of acres burned in a single year. The Green Meadow Fire burned 38,152 acres in the extreme western end of the SMMNRA. This area was last burned in 1955 by the Ventu Park Fire and in 1965 by the Sherwood Fire. The Old Topanga Fire consumed 17,040 acres in the area between Topanga Canyon and Malibu Canyon. Both fires, pushed by Santa Ana winds, traveled from the interior valleys to the Pacific Ocean in a period of six hours or less, a distance of approximately eight miles. Numerous homes were destroyed and three lives lost. Four firefighters were injured when their engine burned over (Ibid).

As demonstrated by the analysis of the 1964 Bel Air Fire, massive structure loss during wildfires can be avoided. A more recent analysis of the 1990 Paint Fire, near Santa Barbara, where 488 structures were lost and more than 800 threatened, indicates that if the roofing on the structure was other than wood shakes or shingle, survival increased from 19% to 70%. In addition, if flammable

vegetation were cleared beyond 30 feet of the structure, survival rose from 15% to 90% (http://www2.ruf.uni-freiburg.de/fireglobe/iffn/country/us.us_5htm).

Existing Wildland Fire Potential

By integrating information on fire history, vegetation types, and values at risk (primarily private homes), together with the known effects of topography and Santa Ana winds on fire behavior, assumptions can be made to the probable path of future wildfires in the Santa Monica Mountains. This same information can be utilized in the development of fuel treatment priorities as well as fire suppression strategies.

Radtke (1981) noted that the north/south alignment of canyons in the Santa Monica Mountains is generally parallel with the direction of the Santa Ana winds. In terms of fire behavior, the congruent conditions of wind direction and canyon alignment create situations conducive to extremely rapid fire spread, as is the case in Santa Ana type fires in the Santa Monica Mountains. The fire patterns generally broaden in the coastal zone due to a high degree of spot fires started ahead of the main fire front by wind-borne embers in the highly flammable coastal sage scrub fuel type.

Lateral fire spread, characteristic of Santa Ana type fires, are generally contained where a fuel bed changes by the boundaries of previous fires (Minnich 1983) or barriers or soil conditions limit the fuel size, biomass and/or flammability to the degree that the decreased fire behavior allows suppression tactics to hold a flank of the fire. This is particularly true in areas dominated by recently burned stands (less than five years old) of chaparral due to decreased fuel loading and less dead material within the fuelbed. The overall effect of the decreased levels of biomass in younger stands of chaparral is the maintenance of higher levels of live-fuel moisture throughout the year as a result of less leaf surface being exposed to evaporative influences, and intact root systems which previously supplied moisture to a much larger plant. Fire return intervals of such a short duration have a negative impact on coastal and chaparral ecosystems due to the inability of immature plants to add to the seed bed, some loss of resprouting plants and the introduction of invasive species that compete with native plants and add to the fine fuels that make the fuel bed susceptible to increased fires.

It should be noted that the extensive amount of lateral fire spread that is being experienced in areas along the Ventura Freeway corridor is due to the predominance of annual grasslands in the area. Annual grasslands dry out early in the summer, which inhibits the ability to contain lateral fire spread.

Generally, evaluating existing wildfire potential is a function of vegetation type, fire history, and location of values at risk. Stands of chaparral with low levels of biomass accumulation generally remain high in live-fuel moisture content and are assumed to be low risk in terms of wildfire potential. Areas dominated by stands of chaparral that have not burned for twenty years or more are considered extreme in terms of wildfire potential. It is generally assumed that chaparral accumulates biomass at a rate of one ton/acre/year so that, at 30 years, the typical stand of chaparral would contain approximately 30 tons/acre of above ground biomass. Biomass accumulation rate may be higher in the Santa Monica Mountains due to proximity to the ocean and the consequent influence of marine moisture, which can extend the growing season and reduce drought. Stands of chaparral accumulate dead material below the green canopy at the rate of approximately 1% of the total stand biomass per year up to 30 years approximately. Dead biomass within stands of chaparral exceeding 20 years of age can override the effects of live-fuel moisture on fire behavior (Ibid.).

Preparedness

Preparedness is defined in this plan as pre-season fire management planning. The following elements of pre-season fire management planning will be accomplished prior to the onset of fire season in the Santa Monica Mountain, which begins in May and ends late December.

The FMO will annually, before July 15 complete a Fire Readiness Review based on direction found in the Interagency Standards for Fire and Fire Aviation Operations handbook. Checklists for the Readiness Review are located at http://www.nifc.gov/policies/preparedness_reviews/checklists.htm. A Pre-Season Risk Analysis will be obtained from the Southern California Geographic Area Coordination Center (SCGACC). Through the use of long-range weather forecasts and analysis of National Fire Danger Rating Indices, Predictive Services at the SCGACC prepares a 90-day outlook of fire potential in the Southern California area. The FMO will provide the Chief Ranger and Superintendent this outlook as part of the required pre-season orientation for Line Officers.

The minimum initial action staffing level (SC-I) specified in the Step-Up Plan (Appendix G) for the park is available year round from both Los Angeles County and Ventura County Fire Departments. From July 1 to December 15, the minimum initial action staffing level in the park will be SC-II, regardless of the National Fire Danger Rating System (NFDRS) Staffing Class.

Efforts should be made to bring on seasonal staffing beginning on or about May 15 to assure that required training is accomplished prior to the local fuel conditions fully curing. Early staffing will also allow for participation in the Angeles and Los Padres National Forests fire schools.

Refer to the following section for the Annual Fire Program Outline, which indicates actions to be taken on a month-by-month basis.

Fire dispatch is provided by agreement from the Angeles National Forest. Fire situations, fire danger, current staffing levels, resource availability and mobilization information are maintained by Angeles National Forest.

All Risk Management

The SMMNRA is located in a uniquely urban environment that presents special challenges to fire management personnel assigned to the park. The probability that personnel will be responded to, or come upon as part routine patrols, incidents which are non-traditional for wildland fire fighters is much greater than for personnel assigned to more rural environments. Areas of all risk incident management include vehicle fires, structure fires, emergency medical services and hazardous materials.

Vehicle fires: Vehicle fire suppression response inside the jurisdictional boundary of the NRA is the responsibility of Los Angeles County, Los Angeles City and Ventura County Fire Departments. SMMNRA personnel respond to these incidents because of the threat of a vehicle fire spreading into adjacent wildland vegetation. Several major commuter corridors pass through the park, increasing the probability that fire personnel will be required to take action to protect the natural resources from this ignition source.

With current equipment and training, personnel may only engage in protection of the wildland exposure when arriving first on scene of a vehicle fire. In situations where the module leader has determined that a fire extinguisher is the only suppression tool required to contain the fire, actions may be initiated. However, exposure protection remains the primary responsibility.

The fire apparatus and personnel are not currently equipped or trained for direct action on fully involved vehicle fires. Requirements to engage a fully involved vehicle include full structure fire turnouts and boots; double lined gloves, structure helmet with visor and full respiratory protection. The National Fire Protection Association (NFPA) defines the requirements for personal protective equipment in section 704.

Training in vehicle fire suppression techniques is available from local fire agencies including Los Angeles County and Ventura County and the City of La Verne. Federal wildland agencies sponsor vehicle fire training during the Suburban Emergency Response training course.

The public has the expectations that emergency equipment will initiate appropriate actions at a fire scene. Given the public visibility at Santa Monica Mountains, it is politically unpalatable to continue the practice of only providing exposure protection during vehicle fires operations. The program should move forward in procuring equipment and training to support a full range of actions on these fires. This will not only meet the expectation of the public, but also provide a mechanism to limit the potential spread of these fires into adjacent fuels by extinguishing the ignition source.

Structure Fire: The local fire agencies have the jurisdictional authority for all structures fire that occurs inside of the NRA. This includes any structure fire involving National Park Service improvements. Direction for participation in a structure fire program is defined in Director Order and Reference Manual 58. SMMNRA does not meet current direction in RM58; therefore wildland fire employees may only participate on a structure fire incident utilizing exterior attack tactics or by logistical support of the jurisdictional fire agency.

SMMNRA personnel may not provide the “two-out” requirement for interior attack made by other fire agencies. OSHA 1910.134, Respiratory Protection Standards, requires that the individuals filling the “two-out” role be trained and equipped to enter a structure in the event that tactical support or rescue of the interior firefighters is required.

Emergency Medical Services (EMS): The National Park Service Management Policies, 2001, Section 8.2.5.1, states that *“The saving of human life will take precedence over all other management actions as the Park Service strives to protect human life and provide for injury free visits.”*

In keeping with this policy, RM 51 provides the authority to the park to establish appropriate levels of EMS training for its personnel. While RM 51 only recommends CPR and First Aid for all employees, it states that the National Park Service will provide the opportunity to employees to obtain the level of EMS training required of them to perform their duties. Given the number of visitors and the complexity of the terrain and transportation routes in the park, all permanent and subject-to- furlough employees assigned to emergency fire equipment will maintain a minimum certification of First Responder.

EMS inside the park boundary is the jurisdictional responsibility of Los Angeles City, Los Angeles County and Ventura County Fire Departments, depending upon the location of the incident. While not responded to EMS incidents by the Angeles EOC, fire personnel may find themselves in support of the jurisdictional fire agencies or come upon EMS incidents during their normal duties. When National Park Service employees are first on-scene the Angeles EOC will be provided an incident update that will include the specific geographic location of the incident and a patient assessment based on the standards defined in the *Incident Response Pocket Guide*.

As first on-scene of an EMS incident personnel may be required to initiate basic life support actions until they are relieved of these duties by a higher medical authority. In the course of these actions employees may be exposed to bodily fluids that could potentially contain infectious pathogens. Because of this potential exposure, fire management personnel will be held accountable to standards defined in OSHA 29 CFR 1910.1030, Bloodborne Pathogens. This regulation establishes a broad range of training, equipment, documentation and housekeeping requirements of fire management personnel. RM 50B provides direction that the National Park Service will meet OSHA 1910.1030 standards. These standards are available in Fact Sheets at:
http://www.osha.gov/OshDoc/data_BloodborneFacts/

The FMO in collaboration with the park Safety Officer and EMS Coordinator are responsible for the administration of the EMS program as it relates to fire management personnel. This includes assuring that training and funding is made available to support the required actions. The annual Fire Readiness Review will be the forum for verifying that fire management personnel meet the required standards. The FMPA is tasked with maintaining all training records and certifications and will work with Human Resources staff to track vaccination records or waivers of immunization.

Hazardous Materials: Because hazardous material incidents are often misidentified as wildland fires, vehicle accidents or debris dumps, fire management personnel have the potential to encounter these types of incidents. Given the probability of encountering a hazardous material incident, it becomes incumbent on the National Park Service to provide adequate training for the potential first responders. The training level required of all engine module leaders and duty officers assigned to the fire management branch is "*Hazardous Materials First Responder*." Any fire management personnel not module leader qualified will receive annual Hazardous Materials Awareness training. This direction is provided in the 2004 revision of the *Interagency Standards for Fire and Fire Aviation Operations*, Chapter 9.

The training curriculum of the California Specialized Training Institute (CSTI) or equivalent will be the standard for the fire management program. The focus of this training is on a defensive response where isolating the incident and preventing exposure to employees and the public is the priority. Standard competencies required of First Responders are defined in NFPA 472, "*Standard Competencies for Responders to Hazardous Material Incidents*",
<http://www.esd.uga.edu/hart/Web%20Page/Publications/NFPA472.PDF>.

When a hazardous material incident has been identified the Angeles EOC will be immediately notified of the event. A request or Health Hazmat from Los Angeles City, Los Angeles County or Ventura County will be placed for static incidents. Where the incident is not static, a request for a response from the jurisdictional fire agency will be placed with the EOC. The request will clearly identify the situation as involving hazardous materials and will suggest a response route that will not place incoming equipment in immanent danger. This route generally will be from an upwind, uphill direction. Under no conditions will park fire personnel attempt offensive actions to control the incident.

Jurisdictional authority for the management of a hazardous material incident varies with the location and scope of an incident. Hazardous material incidents are mandated to be managed utilizing the Incident Command System. In situations where National Park Service land is involved, a Unified Incident Commander from the park is required to be present on-scene.

Annual Fire Program Outline

The following outline details fire management program activities for the calendar year for Santa Monica Mountains National Recreation Area:

January

- a) Update the fire call-out list (FMO/FMPA).
- b) If RX Plan to be implemented meet with South Coast Air Quality Management District and Ventura County Air Pollution Control District regarding smoke management. Review the current prescribed fire program with the regulators (FMO and/or Chief Ranger).
- c) Review current burn plans and any mechanical treatment projects (Fuels Tech).
- d) Archive training and experience records of seasonal personnel (FMPA).
- e) Update fire GIS database with previous year's fires.
- f) Update FMP key contact list (p. 53)

February

- a) Meet with cooperators, final review and revision of interagency agreements (FMO and/or Chief Ranger).
- b) Submit proposed revisions of Fire Management Plan to Pacific West Region (PWR) FMO for review and approval (FMO).
- c) Check with Pacific West Region (PWR) fire management staff on procedure for utilizing suppression and emergency preparedness accounts (FMO and/or FMPA).
- d) Coordinate emergency dispatch procedures with Angeles Emergency Operations Center (FMO and/or Chief Ranger).
- e) Inventory fire cache; all tools, equipment, kits and supplies are ready, order needed personal protective equipment and tools (Engine Captains).
- f) Semiannual service of equipment (Fuels Tech or Engine Captains).
- g) Meet or discuss with PWR FMO to review plans and current program (FMO and/or Superintendent or Chief Ranger).
- h) Continue coordination with Home Owners Association (HOA)/neighborhood groups/resource cooperators concerning National Fire Plan hazardous fuels funds and contract requirements (Fire Communication and Education Specialist/Information Specialist).
- i) Evaluate seasonal firefighter candidates and make job offers (FMO/Engine Captains).

March

- a) Permanent employees take physical fitness exams (FMPA/HR).
- b) Conduct Work Capacity Testing (FMPA/Engine Captains).
- c) Update fire experience and training records for red-carded personnel (FMPA).
- d) Submit updated red-carded personnel records and physical fitness scores to National Interagency Fire Center (NIFC) (FMPA).
- e) Continue planning for prescribed fire program (FMO/Fuels Tech).
- f) Issue red cards to permanent personnel (FMO).
- g) Update station catalog and perform annual maintenance on Cheeseboro RAWS (Fuels Tech/Engine Captain).
- h) Assess location/need for future brush clearance projects, in preparation for funding deadline (Fire Communication and Education Specialist/Information Specialist/Fuels Tech/Fire Ecologist).
- i) Finalize hazardous fuels treatment contracts (Fuels Tech/FMO)

April

- a) Conduct pre-season coordination meeting with fire cooperators (FMO).
- b) Begin hazard fuel reduction projects in annual grasslands (Fuels Tech).
- c) Continue implementation of prescribed fire projects (Fuels Tech/FMO).

- d) Conduct partner/fire agency meeting in preparation for hazardous fuels funding deadline (FMO/Fire Communication and Education Specialist/Information Specialist).
- e) Participate in Spring Fire Qualification Review Committee meeting with Angeles National Forest. Assign local priority trainees. (FMFA/FMO)
- f) Complete out-year fire training needs assessment

May

- a) Maintain fire contacts with PWR FMO, nearby agencies, and cooperators (FMO).
- b) Draft FIREPRO budget request and submit to Region (FMO).
- c) Preseason planning completed; all cooperative agreements revised and in effect (FMO).
- d) Probable beginning of fire season in county areas.
- e) Conduct annual fire refresher training/hazmat awareness training (FMO/Engine Captains)
- f) Ensure engine/cache/equipment/personnel are ready for response to local fires (Engine Captains/FMO).
- g) Continue prescribed burning, as required (Fuels Tech/FMO)
- h) Begin seasonal staffing of type III engine (Engine Captains)
- i) Recurrent and hire temporary Fuels Technician to support in-house activities (Fuels Tech).

June

- a) Issue updated fire call-out list to the PWR FMO (FMO).
- b) Submit FIREPRO budget request to park staff to Superintendent for approval.
- c) Continue prescribed burning (Fuels Tech/FMO).
- d) Inspect all NPS facilities for exterior structure fire protection readiness (Fire Communication and Education Specialist/Information Specialist)
- e) Update pre-attack data layer for NPS properties (Fire GIS/FMO)
- f) Staff Fuels Technician position to support in-house activities (Fuels Tech)
- g) Complete Status of Funds Report (FMO)
- h) Contract administration for hazardous fuels projects (Fuels Tech)
- i) Conduct semiannual PWR Readiness Review for fire response readiness and safety (FMO).

July

- a) Continue in-house hazardous fuels abatement work (Fuels Tech)
- b) Mail signed hard copy of FIREPRO budget request to PWR FMO (FMO).
- c) Implement Step-Up Plan, adjust level of readiness in response to fire danger levels (FMO).
- d) Complete purchasing in preparation for suspension of spending (Engine Captains/FMFA)
- e) Contract administration for hazardous fuels projects (Fuels Tech)

August

- a) Review policies/prepare draft memos for ground fire restrictions/park closures during Santa Ana wind events (FMO).
- b) Continue to support requests for out of park fire assignments (FMO).
- c) Contract administration for hazardous fuels projects (Fuels Tech)

September

- a) Prepare for beginning of Santa Ana fire season (Everyone).
- b) Continue to support request for out of park fire assignments (FMO)
- c) Complete Status of Funds Report (FMO).
- d) Contract administration for hazardous fuels projects (Fuels Tech)
- e) Contact partners/fire cooperators concerning out-year hazardous fuels treatment proposals

October

- a) Maintain readiness for continuation of Santa Ana fire season (Everyone).
- b) Forward nominations for interagency fire training to superintendent, then PWR FMO (FMO).
- c) Contract administration for hazardous fuels projects (Fuels Tech)
- d) Training nomination forms due to the region

November

- a) Maintain readiness for continuation of Santa Ana fire season (Everyone).
- b) Sign inventory; submit sign requests (Fire Communication and Education Specialist/Information Specialist).
- c) Contract administration for hazardous fuels projects (Fuels Tech)
- d) Update and implement recruiting plan for seasonal hiring (FMO Fire Communication and Education Specialist/Information Specialist/Engine Captains).

December

- a) Conduct after Action Review for past fire season. Identify areas of weakness to be corrected (FMO).
- b) Compile Fire Atlas; prepare annual summary report (FMPA).
- c) Forward outstanding fire reports to Region (FMPA).
- d) Review Interagency Agreements, draft revisions as necessary, and submit to the Superintendent for approval (FMO or Chief Ranger).
- e) Contract administration for hazardous fuels projects (Fuels Tech)
- f) Advertise for seasonal positions (FMO).

Training

The FMO will coordinate and document training; issue fire qualification cards and certify qualifying experience prior to its entry in SACS. All National Park Service employees assigned to wildland fire management duties will meet the training and qualification standards set by the National Wildfire Coordinating Group (NWCG), as defined by NWCG 310-1. Wildland fire qualifications standards for positions other than those defined in NWCG 310-1 will be defined and maintained on the DOI Incident Qualification System.

The Angeles National Forest's Fire Qualifications Rating Committee (FQRC) serves as the point of contact for fire qualifications and training of SMMNRA personnel. The FMPA or Engine Captain is designed as the representative to the FQRC. Meetings are held on a semi-annual basis at the Don Biediebach Regional Training Center. The spring meeting establishes the priority trainee list utilized by the EOC for fire assignments, while the fall meeting sets allocation for training attendance at the southern California training centers.

The annual Training Needs Assessments are required to be submitted to the Deputy Regional Fire Management Officer by April 10. NWCG training nomination forms based upon the Needs Assessment are to be submitted to the region and the sponsoring training centers in October. Only electronically submitted NWCG nomination forms will be accepted by the training centers.

The FMO will prioritize the Park's training allocations and training locations to assure the most cost efficient method to accomplish necessary training. Biediebach Regional Training Center and Los Angeles County Fire Camp 2 are the two most cost efficient training locations as travel and per diem are minimized. The Deputy Regional Fire Management Officer will provide the park by November 10, a regional priority training list for each of the recognized training centers in the PWR. Courses sponsored by the National Advanced Resource Training Center (NARTC) must have nomination forms submitted through the Deputy Regional Fire Management Officer. The FMO is expected to

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monitor the NARTC website to assure that nomination due dates are met.

SMMNRA will conform to the requirements of RM18, NPS Fire Management Guideline, and Wildland Fire Qualification Subsystem Guide, PMS 310-1 for specific job training and experience standards, and NWCG for fitness standards. All park employees involved in wildland fires will meet the physical fitness standards established for those positions for which they are qualified.

Fire qualification cards are mandatory for personnel engaged in fire duties, as required in RM18. Only individuals qualified and certified at the command level appropriate to the complexity level of the incident will manage wildland fires. Red cards must be current and firefighters must have all required protective clothing and equipment with them before being dispatched to fires. No employee will be accepted for wildland fire training or receive a fire qualification card until he or she has agreed to be available for a fire assignments. Employees must understand that assignments may keep them on fire duty for extended periods.

The park will provide the basic fire courses (S-130 & S-190) as needed each summer, or coordinate such training through other agencies. The Fire Academy at Oxnard College offers these courses as well as the Los Padres and Angeles National Forests. Advanced training may be offered in-house to meet specific park needs. Only NWCG/AM qualified instructors may conduct these in-house sessions.

Physical Fitness

Personnel assigned fire line suppression duties will maintain a high level of physical fitness due to the arduous nature of such duties. A Work Capacity Test (WCT) commensurate with duties assigned, as detailed in RM-18, PMS 310-1 and NWCG guidelines must be maintained. Only qualified WCT administrators will conduct testing. Documentation of results will be maintained by the FMPA at the Fire Office and in SACS.

Arduous duty medical requirements are now required of all Pacific West Region employees. The medical standards require all individuals maintaining a qualification identified in 310-1 as being arduous complete a medical examination prior to participating in a WCT. A local medical provider will be contracted by the National Office to administer the arduous duty physical examinations. Law enforcement employees with arduous duty qualifications may have the LE medical protocols substituted for the firefighter medical examination.

Supplies and Equipment

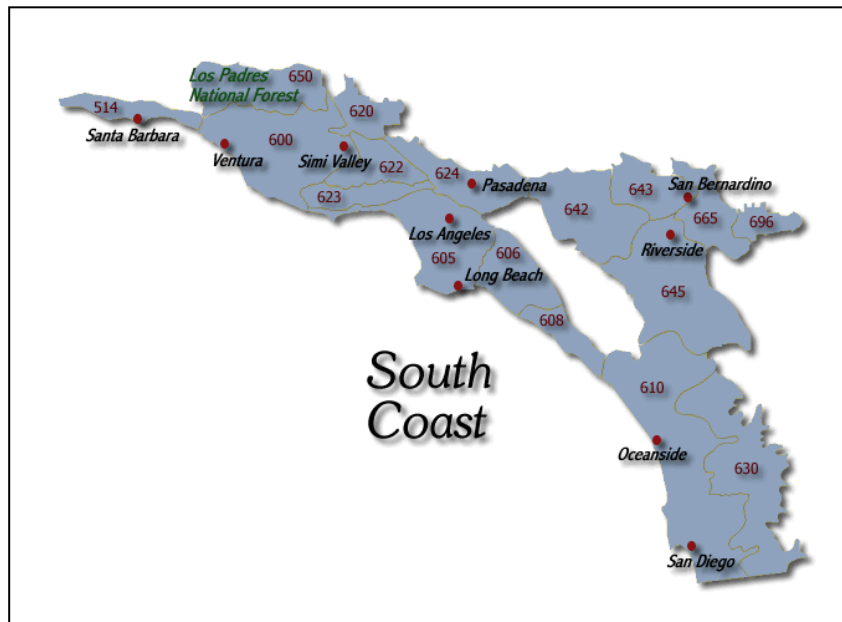
A central fire cache will be maintained at Paramount Ranch. This cache will provide all equipment and materials necessary to outfit at least all qualified firefighters. The engine captains are responsible for maintaining the inventory. FIREPRO support dollars will be used to procure necessary supplies.

National Fire Danger and Weather Information Program Management

The Fire Communication and Education Specialist (FCES) is assigned the management of the fire danger and weather information program at the park level. This individual assures maintenance of RAWs, verifies the accuracy of the station catalog, establishes green-up dates, prepares Pocket Cards and monitors weather data collection. Access to WIMS and historic fire and weather information is available to the FCES, FMO and FMPA.

SMMNRA is divided between Fire Danger Rating Areas 605 and 623. Area 605 is representative of the coastal slopes and is covered by the Leo Carillo RAWs and the Camp 8 RAWs. Area 623 best represents the inland areas of the park and is covered by the Cheeseboro and Beverly Hills RAWs.

Figure 4.1 Southern California NFDRS Zones



Fire Danger Indices are not computed for the SMMNRA by the Angeles EOC, however the County of Los Angeles Fire Department maintains a website where current information concerning fire danger may be obtained. The site is <http://fire.lacounty.gov/Forestry/FireWeatherDanger.asp> and is maintained for the designated County Fire season, May 1 to December 15. Predicted indices are posted at this location by 1400 hours. The County groups fire danger into five geographic areas, with the Malibu group most appropriate for an overall evaluation of fire danger park-wide. Staffing decisions based upon NFDRS indices should be based upon the Cheeseboro reporting location as it is reflective of the greatest potential fire danger.

SMMNRA monitors weather from four primary RAWs, Cheeseboro, Camp 8, Leo Carillo and Beverly Hills. Information collected from these stations is archived in KCFast and can be used for fire program analysis work. Only the Cheeseboro RAWs is operated and maintained by the park, the remaining reporting locations are managed by the County of Los Angeles Fire Department. The use of manual reporting stations at Rancho Sierra Vista and Diamond X has been discontinued.

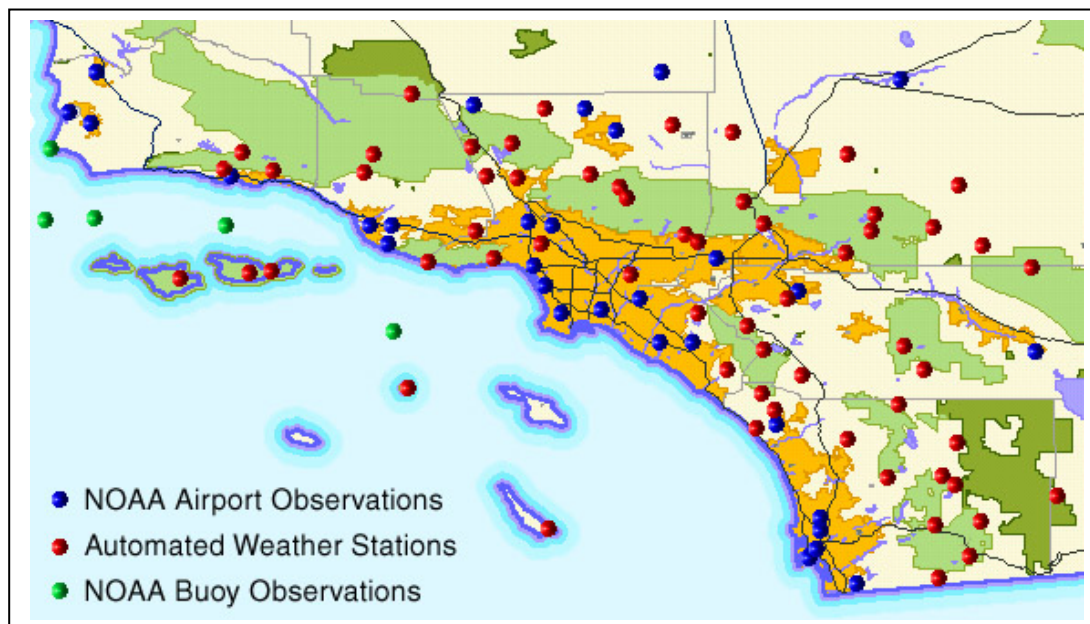
Table 4.1 SMMNRA Remote Automated Weather Stations

Station Name	Location	Station ID	Fuel Model	Elevation
Cheeseboro	Aguora Hills	045313	4	1650
Beverly Hills	Beverly Hills	045442	4	1260
Leo Carillo	Malibu	045447	6	50
Camp 8	Malibu	045433	4	1575

Southern California has one of the highest densities of RAWs in the nation and the ability to monitor the approach of significant weather events is enhanced by this network of station. The University of California, Santa Barbara, Institute for Computational Earth Systems Science maintains a website,

allowing the FMO to easily retrieve real time weather data from inland and coastal water reporting locations in order to evaluate the potential magnitude of a pending weather event. The site is <http://www.icesb.ucsb.edu/resac/lws.html>.

Fig. 4.2 University of California Santa Barbara Weather Monitoring



Fire Danger Pocket Cards

As part of the 30-Mile Fire hazard mitigation plan, the SMMNRA maintains two Fire Danger Pocket Cards. The cards have been developed for an “Inland” location based on historic weather data from the Cheeseboro RAWS and a “Coastal” location based on data from the Camp 8 RAWS. Both cards have been posted on the Fire Danger Working Team website, <http://fam.nwcg.gov/fam-web/pocketcards/southzon.htm>.

The Fire Danger Pocket Card is a method of communicating information on fire danger to firefighters. The purpose of the card is to create greater awareness of fire danger and subsequently increased firefighter safety. The Pocket Card provides a description of seasonal changes in fire danger in a local area. It is therefore useful to both local and out-of-area firefighters.

The Pocket Card has an important day-to-day “preparedness” use. Firefighters can reference their card and see just where they are in the range of possible values for danger rating. This important information should be discussed at morning crew meetings, as well as tailgate safety meetings.

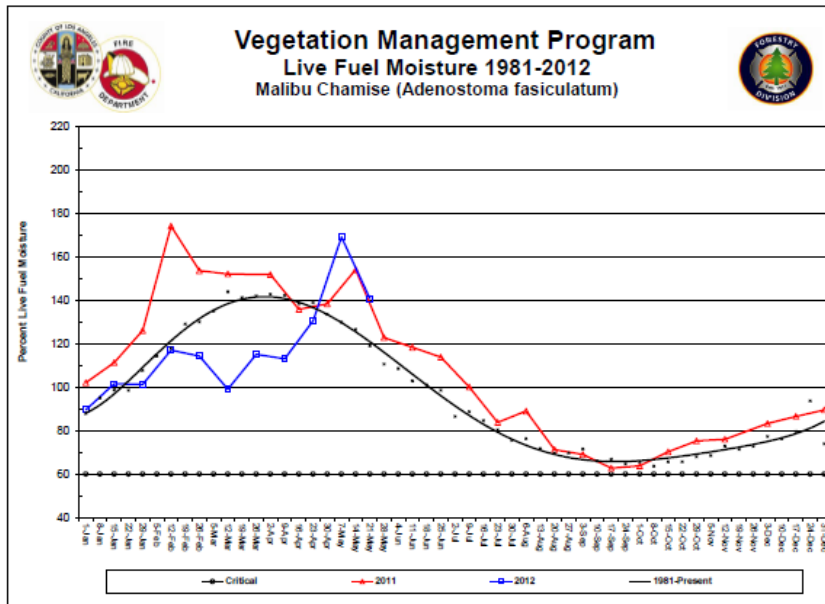
It is the responsibility of the Incident Commander to assure that all firefighters assigned to type 3, 4 and 5 incidents have had a briefing on the Pocket Card. It is important to stress that the card relates only to “potential” fire danger and does not equate to daily fire behavior. Large fires and extreme fire behavior have been associated with days with Low or Moderate fire danger ratings.

Live Fuel Moisture Monitoring

One of the most critical factors determining fire spread rates in chaparral is the moisture content of

living vegetation. Live-fuel moisture levels are determined more by the physiological condition of the plant community relative to yearly growth cycles, than by short-term changes in local weather.

Fig. 4.3 Los Angeles County Live Fuel Moistures



During spring when new growth occurs, chaparral moisture contents can exceed 150% based on oven dry weight. At these levels of live-fuel moisture content, chaparral is very resistant to sustaining fire spread, which may partially explain the lack of large fires occurring early in fire season, even with Santa Ana wind conditions. This principal also has ramifications for prescribed burning in chaparral in that burning at high moisture will require modification of the fuel bed to create dead material within the stand structure in order to achieve desired results.

Due to the importance of live-fuel moisture in chaparral, Los Angeles County Fire Department measures live-fuel moisture and posts the results to a website monthly http://gacc.nifc.gov/oscc/predictive/fuels_fire-danger/index.htm.

Cooperating Agencies

Santa Monica Mountains National Recreation Area maintains cooperative fire protection agreements with the Los Angeles County Fire Department, Ventura County Fire Department, and the Los Angeles (City) Fire Department (Appendix H). The agreements cover wildland fire suppression only, as the fire agencies have the jurisdictional authority for structure fire suppression on federal property.

Agreements with the cooperators are based on the principle of “*assistance by hire*”. A reciprocal agreement where agencies agree to share equipment for a pre-determined length of time is not operationally feasible, as the National Park Service is unable to reciprocate to a degree which would provide a benefit to our cooperators.

Since all wildland suppression actions conducted on federal property are billable to the National Park Service it is critical that a Duty Officer or Agency Representative respond to all fire incidents on the park. It is the responsibility of the responding official to agree to payment for suppression operations with the Incident Commander from the assisting fire cooperator. Payment should only be agreed to for resources used for suppression actions that occurred on federal property or were used in order to directly protect federal property. Resources ordered to suppress fire on or protect State Responsibility Areas (SRA) or Local Responsibility Areas (LRA) are not billable.

A signed agreement concerning billable resources should be completed prior to or immediately after the demobilization of the incident. This signed agreement will be the document of record when approving payment for fire suppression assistance. It is the responsibility of the FMO to approve all bills submitted for suppression actions by the local cooperating agencies.

Maintaining the currency of agreements with the fire cooperators is the responsibility of the FMO. The Chief Ranger will approve all changes to the agreements prior to them being forwarded for final signature. The current agreements are scheduled to expire on the following dates:

- Los Angeles City – Currently under revision
- Los Angeles County – Currently under revision
- Ventura County – Current to 2013
- Angeles National Forest – Current to 2016

Direct Protection Areas (DPA)

The NPS has wildland fire protection responsibility for all federally owned lands inside of the congressionally designated boundary of the National Recreation Area. Currently these lands total approximately 22,000 acres. Fire management actions that occur on federal land need to meet direction provided in RM-18, DO-60, Interagency Standards for Fire and Fire Aviation Operations, and all other applicable federal requirements.

SMMNRA fire personnel will fill the position of Incident Commander, if qualified, for fires burning exclusively on federal property inside of the NRA. Where a qualified National Park Service Incident Commander is not available to respond, the Chief Ranger, or other member of his/her staff will respond as an Agency Representative to work with the Incident Commander of the jurisdictional fire agency. This individual must be fully involved in the command structure of the incident in order to protect park resources and make commitment of federal firefighting resources and funds.

Staffing and Action Guide/Step-up Planning

A “Staffing and Action Guide” (Appendix M) has been developed to guide daily fire management actions on the park. The guide establishes pre-approved actions based on the NFDRS staffing classes derived from the Cheeseboro RAWS. The FMO is responsible to assure that the response to wildland fire occurs. As fire danger increases, actions outlined in the Step-up Plan will be taken to enhance prevention and preparedness.

Detection

There are no staffed fire lookouts in the SMMNRA. Fire detection is often accomplished through 911 calls from passers-by. The volunteer group Arson Watch often patrols the mountains in marked vehicles, especially during Santa Ana wind events. The local engine and law enforcement patrols also serve a detection purpose.

All park personnel will report detected fires directly to Angeles EOC providing the dispatcher with an incident size-up based on the standard *"Report on Conditions"* in the Incident Response Pocket Guide.

Communications

Angeles National Forest provides dispatch services to SMMNRA. The EOC is staffed 24 hours per day, 7 days a week, year-round. SMMNRA fire management staff may be contacted after normal business hours via cellular or home telephones.

The park radio system consists of base stations at the park headquarters in Thousand Oaks, the fire and ranger offices at Paramount Ranch, and the ranger office at Rancho Sierra Vista. Radio repeaters are located at Castro Crest (PL 110.9), Laguna Peak and Franklin Canyon (PL 110.9), and Solstice Canyon (PL 127.300)

The Angeles EOC is the dispatch facilitator for the NRA; however the EOC does not have the capability to monitor either Ventura County or Los Angeles City Fire Command centers. This requires the Fire Management staff to monitor these agencies on desktop scanners, informing the EOC of fire activity in these jurisdictional areas of the NRA and self-dispatching to the incident. The inability of the EOC to monitor Los Angeles City Fire and Ventura County Fire is problematic, as smaller wildland fires are never brought to the attention of SMMNRA personnel.

Fire ground communications vary between the cooperators. Ventura County Fire operates in a frequency range compatible with the NPS radio system, generally conducting fire ground operations on 154.010 or 154.325.

Los Angeles County operates on 400-megahertz frequencies for command and VHF frequencies for tactics. The FMO and the type III engine have handheld radios compatible at 450 to 480 megahertz.

Los Angeles City operates on 800-megahertz radios. No members of the fire management organization have compatible radios. Fire ground operations are limited, requiring that SMMNRA resources to "marry-up" with Los Angeles City personnel in order to maintain a communications during operations. Appendix I contains a complete list of local and cooperator radio frequencies.

Dispatching

When a fire occurs within the initial action zone of the NRA, the Angeles EOC notifies the on-duty Engine Captain and Duty Officer of a reported vegetation fire. For after-hours incidents the on-call Duty Officer is contacted by the EOC. It is the responsibility of the Duty Officer to evaluate the fire situation and request the activation of the NPS engine module.

SMMNRA only has dispatching coverage for the Los Angeles County portion of the park. This includes the Los Angeles City jurisdictional area. Through agreement with the EOC, Los Angeles County sends a Mobile Data Terminal (MDT) text message notifying the EOC of a vegetation fire within the initial action zone.

Dispatching for the Ventura County portion of the NRA is limited to monitoring the Ventura Fire dispatch frequency. When a vegetation fire is dispatched by Ventura Fire Command and Control, SMMNRA fire resources notify the Angeles EOC of the incident, provide a geographic location and respond. The EOC will track the status of the fire resources but cannot monitor fire ground operations in Ventura County. It is the responsibility of the on-scene Duty Officer to maintain a

communication link with the EOC in order to provide incident updates and request federal fire resources.

On all fire or all-risk incidents the Duty Officer or Chief Ranger will report to the Incident Command Post to serve as a Unified Incident Commander if qualified or Agency Representative. This individual must have delegated decision-making authority to commit park resources and federal funds, as well as provide technical information concerning special cultural and biological resources to the Incident Command staff. The National Park Service representative or Unified Incident Commander will participate fully in the incident command process and be a party to all decisions made involving federal lands and resources.

The Park Superintendent or the designated acting superintendent will be notified immediately by the Duty Officer of all fires 5 acres or greater and of fires that poses at threat to public safety or property.

The January 2001 *Review and Update of the 1995 Federal Wildland Fire Management Policy* recommended that federal “guiding principles” should include several key elements. Highlighted in the review is that firefighter and public safety is the first priority, and that fire management plans, programs, and activities should support land and resource management plans and their implementation. Additionally, fire management plans and activities should be based on the best available science, and fire management programs and activities are economically viable, based on values to be protected, costs, and land and resource management objectives. The Implementation of Federal Wildland Fire Management Policy (2009) review reiterates the basic tenets of 2001 policy. The response to wildland fire will consider a full range of alternatives. Incident Commanders should consider all available tactical options, but choose the suppression option with the least potential environmental impacts, as long as firefighter and public safety is not compromised. Tactical options that should be considered include:

- Use natural barriers as fireline, where feasible
- Use cold trail, wet line, or a combination
- Utilize roads and trails as fireline
- Avoid riparian areas and other sensitive habitats
- Use low impact tools

All fires, except prescribed fires, in the Santa Monica Mountains will be actively suppressed. All suppression strategies may be considered in order to maximize the safety of firefighters and the public.

Aircraft Use

DO-60 provides management direction for aviation operations. The Department of the Interior’s Aviation Management Directorate (AM) provides program oversight to Department of Interior agencies. Direction from the AM, DO-60 and the Interagency Helicopter Operations Guide (IHOG) provide guidance on aviation management and operations.

Rotor-wing

Los Angeles County Fire, Los Angeles City Fire and Ventura County Sheriffs Department manage all aircraft operations on wildfire incidents within their respective jurisdictions. Each department operates according to internal protocols. Under current direction National Park Service personnel may only fly in AM certified aircraft. None of the three primary fire cooperators have AM certified aircraft as of the date of this document.

Los Angeles City, Los Angeles County and Ventura County field an impressive helicopter program. The fleet is dominated by Bell Helicopter airframes with the City and Los Angeles County featuring Bell 212 and 412's while Ventura County staffs Bell 205's. These helicopters respond to both emergency medical and fire suppression roles. Los Angeles City and Los Angeles County have dedicated fire suppression ships during wildland fire season while Ventura County supports both functions with all available aircraft.

Los Angeles City and Los Angeles County also manage a type one helicopter program operated from Van Nuys airport. The ships are contacted between July 1 and December 1 each year. Contracts have been extended beyond the December 1 contract period based on fire severity. The type one program is managed from Van Nuys airport. These aircraft are not responded on initial report of an incident but need to be requested by a Chief Officer from their department. Refueling operations for the type one helicopters should occur at either Van Nuys or Camarillo airports to minimize refueling issues.

When no fixed wing aircraft are assigned to a fire, the fire departments assign a Helicopter Coordinator for the incident. When federal fixed wing aircraft are assigned to an incident an Air Attack platform must be ordered by the National Park Service Unified Incident Commander to provide overall air space management for the incident.

Designated helispots are located throughout Los Angeles County, Los Angeles City and Ventura County. One permanent helibase is located within the boundaries of the SMMNRA at Camp 8. In Ventura County, the permanent helibase is located at Camarillo Airport.

The primary initial action aviation frequencies for SMMNRA are:

- Air Tactics 3: 169.200 (Fixed Wing)
- Rotor-wing VHF: 135.950
- Air to ground: 169.1125

Fixed-wing

Fixed wing aircraft are available for fire suppression operations from the United States Forest Service airtanker based at Fox Field in Lancaster California. Fox Field is the primary refill base for tanker operations, with Goleta and Norton airtanker bases as alternate locations.

All orders for fixed-wing aircraft will go through the Angeles EOC. As per policy, an air attack platform will be dispatched when airtankers are ordered. A lead plane will also be part of any airtanker order. Air attack platforms are available from any of the three primary tanker base locations with a lead plane available from Fox Field.

Los Angeles County Fire Department contracts from Canadair for two CL-215 or CL 415 "Superscoopers" each fall. The aircraft are currently not board certified federal airtankers and are not permitted to drop on federal fires or federal property. The aircraft may work the airspace on Los Angeles County fires, SRA fires and federal fires under Unified Command as long as separation from the federal air tanker fleet is maintained. The Canadair aircraft are stationed at Van Nuys airport and are dispatched directly by the County's Command and Control Center.

Use of Water Resources in Air Operations

Helicopters from the County and City Fire Departments typically fill from fixed water points, such as hydrants or water tenders at a helispot. Recently the County of Los Angeles has added snorkels to their Type 2 helicopter fleet. The use of snorkels to fill the fixed tanks on the ships increases the

flexibility of the overall program and aligns Los Angeles County with federal wildland agencies in southern California.

Table 4.2 Type 1 Helicopter Water Points

Water Point	Latitude	Longitude
Encino Reservoir	34.08'49.1"	118.30'20.9"
Las Virgenes Reservoir	34.07'38.8"	118.49'35.4"
Lake Eleanor	34.08'01.4"	118.51'03.7"
Lake Sherwood	34.08'27.7"	118.52'21.3"
Nicholas Flats	34.03'52.5"	118.54'25.8"
Westlake Lake	34.08'08"	118.49'27.1"
Stone Canyon Reservoir	34.06'.30'	118.27'30"
Malibu Lake	34.07'30"	118.45'
Hollywood Reservoir	34.07'30"	118.20'
Chatsworth Reservoir	34.14'	118.37'30"
Century Reservoir	34.06'30"	118.44'.00"
Sliverlake Reservoir	34.06'	118.16'

The Type 1 helicopters operated by the Forest Service, Los Angeles City and Los Angeles County exclusively use snorkels as a fill mechanism. Table 4.3 identifies potential water points for type one helicopter operations within the Santa Monica Mountains. The pilots have final approval on any suggested water sources based on an evaluation of safety and effectiveness.

Use of salt water from the Pacific Ocean is discouraged within the SMMNRA. While the impacts to flora and fauna from extended utilization of salt water during fire operations is not well documented; the practice should be minimized. The Canadair CL-215/415's are normally the only users of the ocean as a water point. The corrosive nature of salt water on the fixed tanks makes the ocean an undesirable dip-site for rotor-winged aircraft.

FUELS MANAGEMENT

Wildland fuels within National Park Service units are managed to achieve resource benefits and management goals such as ecosystem restoration, maintaining ecosystem health, and hazard fuels reduction. Fuels management includes strategic planning and implementation of treatments ranging in scale from site specific to landscape level. These treatments are designed to improve the park's ability to protect life and property, and to maintain or restore the sustainability of healthy ecosystems, which is a fundamental legislative mandate (RM18 2008).

Ecosystem restoration projects restore ecosystem health by controlling fire-promoting non-native plants and increasing the diversity of habitat available to plants and animals. Hazard fuel reduction projects remove excessive live and dead fuels to protect life and property, including communities at risk; natural resources, including critical native plant communities and their processes, and threatened and endangered species; and important cultural resources. Many of these projects are designed to achieve both simultaneously, while some projects achieve either ecosystem restoration or hazard fuel reduction goals (RM18 2008).

Prescribed Fire

The distinction between wildfires and prescribed fires is that wildfires are unplanned and trigger an aggressive full “control” suppression response. Prescribed fires are planned, scheduled, organized and implemented according to a rigorous protocol. The purpose of prescribed fires is safe accomplishment of approved resource or hazard fuel reduction objectives.

Each prescribed fire must have a plan approved by the park superintendent before it may be implemented. Park specialists must review prescribed fire plans, particularly when clearances for the protection of cultural resources or threatened or endangered species are needed, air quality permits are required, or new programs are being implemented. All prescribed fire plans must be consistent with the direction given in RM18.

The following is a list of action items to be considered when developing project-level plans involving prescribed fire treatment.

- With the Fire Ecologist/Fuels Technician, develop project objectives and site-specific treatment methods to accomplish objectives by the FMO prior to July 1 for the FIREPRO budget request for next year’s field season. The Chief Ranger and Chief of Planning, Science and Resource Management will review this project list.
- When project plans are developed, ensure the FCES covers project compliance. If the project plan has been developed outside of the FCES, compliance must be initiated and completed before the project can be implemented. The FMO or Fuels Technician initiates compliance by completing an on-line PEPC form (Appendix J). Proposed projects will become an agenda item at the monthly Environmental Review Team (ERT) meeting.
- A smoke management plan must be submitted to the air quality districts several months in advance of the planned prescribed burn. Current Open Burn Coordinators for the local air districts are:
 - Arun Kumar - South Coast Air Quality Management District, (909) 396-2357
 - Kent Field - Ventura County Air Pollution Control District, (805) 662-6960

A technical review will be completed for each prescribed fire plan to ensure elements of the plan and stated goals and objectives can be obtained and completed successfully. The Superintendent is responsible for final approval of the prescribed fire plan (RM18 2008).

Technical Reviewer: The Technical Reviewer is responsible to the FMO for reviewing each prescribed fire plan element for content and evaluating the risk and complexity analysis to ensure that the stated goals and objectives can be safely and successfully achieved when properly implemented. The reviewer will be qualified or previously qualified at or above the level of project complexity. The reviewer should have local knowledge of the area, experience burning in similar fuel types and should conduct an on-site review. Individuals involved in the plan preparation may not do the technical review. The reviewer will be a qualified individual independent of the preparation of the plan and should be from another park unit or an interagency cooperator or contractor. Responsibilities include:

1. Ensures the Complexity Rating is appropriate for the planned project and that the rationale supports the assigned rating.
2. Ensures that the Prescribed Fire Risk Analysis accurately represents the project and mitigation actions identified are appropriate.
3. Checks the prescription parameters against the fuel types to ensure that the project as planned has a reasonable chance of meeting the stated objectives.
4. Ensures that the fire behavior calculations are correct.

5. Ensures that the ignition, holding actions and available ground forces are consistent with the predicted fire behavior for the duration of the project.
6. Completes the prescribed fire plan review checklist including comments and feedback as appropriate.

The focus of the prescribed fire program for the five year period covered by this Fire Management Plan is the restoration of native grasslands in areas associated with the urban interface. The benefits from the proposed actions are both community protection and resource management in nature. Table 4.3 lists prescribed fire projects for the life of this fire management plan.

Table 4.3 Five Year Prescribed Fire Plan

Name of Unit	Acres	General Objectives
Cheeseboro/Palo Commado	0 - 300	Reduce exotics; restore to native.
Paramount Ranch	0 - 96	Reduce exotics; restore to native.
Rancho Sierra Vista	0 - 275	Reduce exotics; restore to native.
Diamond X East	0 - 3	Reduce exotics; restore to native.
Deer Creek	0 - 8	Reduce exotics; restore to native.

Under the auspicious of the National Fire Plan the primary fire cooperators are developing prescribed fire projects adjacent to SMMNRA lands. These projects may involve federal lands if project design and overall effectiveness of the treatment will be enhanced by the inclusion of the federal property. When the SMMNRA is approached by a cooperator to include prescribed fire treatments on federal property a project proposal will be submitted to the park staff through the ERT. An analysis conducted by the park staff will be required of the project. Every effort will be made to provide a timely response to the project proponent concerning inclusion of federal lands. The project evaluation criteria as defined in the Final Environment Impact Statement will be the starting point for the project analysis. Where determined to have no negative impact, the SMMNRA will fully participate with the project proponent in the planning and implementation of the burn.

Non-Fire Treatment: Mechanical treatment methods will be a primary tool to reduce fire hazard and create defensible space in the wildland-urban interface. Fire hazard is defined as ecological or social values that may be placed at risk from wildland fire. Effective fire management strategies are those which maximize safety, protection of life and property, and are cost effective for the values at risk. Mechanical removals of fuels from the urban edge to reduce radiant and convective heat from wildfires that threaten improvements are needed to provide a margin of protection from wildland fires. Prescribed fire follow-up treatments may or may not be employed, depending on effectiveness and feasibility. Table 4.6 includes a list of mechanical fuels treatment areas.

The following is a list of action items to be considered when developing project plans involving mechanical fuels treatment.

- With the Fire Ecologist/Fuels Technician, develop project objectives and site-specific treatment methods to accomplish objectives by the FMO prior to July 1 for the FIREPRO budget request for next year's field season. The Chief Ranger and Chief of Planning, Science and Resource Management will review this project list.

- When project plans are developed, ensure the FMP EIS covers project compliance. If the project plan has been developed outside of the current plan, compliance must be initiated and completed before the project can be implemented. The FMO or Fuels Technician initiates compliance by completing an PEPC proposal and submitting to the Environmental Review Coordinator. Proposed projects will become an agenda item at the monthly ERT meeting.
- Requests for clearance of vegetation on NPS lands will be evaluated on a case-by-case basis. This evaluation will include an onsite inspection of the property by a member of the Fire Management staff to determine the risk to the property from a wildland fire. The evaluation will include an inspection of the private property to ascertain if the property owner has taken all reasonable actions on their lands to fire safe the property. If the evaluation identifies that the contribution of the fuels on National Park Service lands do not significantly impact the fire safety of the property the request for additional clearance will be denied.
- In cases where the vegetation on NPS land is deemed a potential hazard to private property, a fuels treatment proposal will be brought to the ERT for evaluation. As approved or modified by the ERT, the project will be implemented in cooperation with the jurisdictional fire agency to mitigate the hazardous situation.

Mitigation Measures

When implementing mechanical treatment special precaution will be utilized to minimize resources damage. However, the underlying purpose of each project is to minimize the risk to firefighters and the public, while providing protection of private property during a wildfire incident. The projects will be implemented to standards that will meet with these primary purposes.

Where mitigation is required to protect natural resources specific actions may include:

- Trimming large native shrubs to reduce ladder fuels yet provide for soil stability.
- Leave some ground-level shrub to provide for soil stability and aesthetics.
- Monitoring for invasion of exotic species.

Table 4.4 Five Year Mechanical Treatment Plan

Name of Unit	Acres	Objectives
Franklin Canyon	4.2	Hazard fuel reduction at urban edge. Completed annually or semiannually.
Fryman Canyon	3.4	Hazard fuel reduction at urban edge. Completed annually or semiannually.
Decker School	1	Hazard fuel reduction at urban edge. (Annual plowing)
Malibu Bowl (Corral Canyon)	0.8	Hazard fuel reduction at urban edge (Annual plowing).
Diamond X West	3.9	Hazard fuel reduction around park facilities. (Annual)
Zuma/Trancas	16.1	Hazard fuel reduction at urban edge, including some plowing. (Annual)
Cheeseboro/Palo Comado	22	Hazard fuel reduction at urban edge. (Annual)
Circle X	11.6	Hazard fuel reduction around park facilities. (Annual)
Paramount	5.8	Hazard fuel reduction at urban edge and park facilities. (Annual)

RSV	12.8	Hazard fuel reduction around park facilities. (Annual)
Arroyo Sequit	2.3	Hazard fuel reduction around park facilities. (Annual)
Rocky Oaks	0.9	Hazard fuel reduction around park facilities. (Annual)
Solstice Canyon	1.4	Hazard fuel reduction around park facilities. (Annual)

Personnel and Qualifications

All fire personnel assigned to prescribed fires will meet NWCG requirements for the position assigned for training and experience. See RM18 for those standards. The burn boss assigned to prescribed fires will be certified according to complexity and in the fuel type proposed to treat. Individual burn plans include a complexity analysis, which determines the qualifications and number of personnel resources required to conduct each burn.

Documentation and Reporting

Each signed original project plan will be filed in a separate folder in the FMO's files. An Individual Fire Report, DI-1202, will be submitted by the FMPA within 10 days after declaring the prescribed fire out.

Critiques

An After Incident Review (AIR) will be conducted on all prescribed fires. The Burn Boss or FMO will serve as the facilitator for the AIR. At a minimum the review will include the elements outlined in the *Incident Response Pocket Guide*.

Air Quality/Smoke Management

Management of the air resources in the SMMNRA is delegated to state or local agencies in the Clean Air Act of 1970 as amended in 1990. The regulatory agencies with authority for protection of the air resources within the Santa Monica Mountains are the South Coast Air Quality Management District and the Ventura County Air Pollution Control District.

Title 17 of the California Code of Regulations, Subchapter 2, Smoke Management guidelines for Agricultural and Prescribed Burning (2001), provide direction to air pollution control and air quality management districts (air districts) in the regulation and control of prescribed burning, including agricultural burning in California. The guidelines are intended to provide for the continuation of prescribed burning, including agricultural burning, as a resource management tool, and provide increased opportunities for prescribed burning and agricultural burning, while minimizing smoke impacts on the public. The regulatory actions called for are intended to assure that each air district has a program that meets air district and regional needs.

SMMNRA will fully cooperate with the South Coast Air Quality Management District for Los Angeles County and Ventura County Air Pollution Control District for Ventura County before prescribed burn projects are ignited. Special requirements for prescribed burning in wildland fuels are as follows, although requirements may vary slightly between air management districts:

- a) Require registration of all planned burn projects annually or seasonally, with updates as they occur.

- b) Require the submittal of smoke management plans for all burn projects greater than 10 acres in size or estimated to produce more than one ton of particulate matter. Smoke management plans must contain, at the minimum, the following information:
 - i) Location, types, and amounts of materials to be burned;
 - ii) Expected duration of the fire from ignition to extinction;
 - iii) Identification of responsible personnel, including telephone contacts;
 - iv) Identification and location of all smoke sensitive areas.
- c) Require that smoke management plans for burn projects greater than 100 acres in size or estimated to produce more than 10 tons of particulate matter contain, at a minimum, the information contained above plus the following:
 - i) Identification of meteorological conditions necessary for burning (weather parameters of prescription);
 - ii) The smoke management criteria the land manager or designee will use for making burn ignition decisions;
 - iii) Projections, including a map, of where the smoke from burns are expected to travel, both day and night;
 - iv) Specific agency contingency actions (such as fire suppression or containment) that will be taken if smoke impacts occur or meteorological conditions deviate from those specified in the smoke management plan.
 - v) An evaluation of alternatives to burning considered; if an analysis of alternatives has been prepared as part of the environmental documentation required for the burn pursuant to the National Environmental Policy Act (NEPA), the analysis should be attached to the smoke management plan in satisfaction of this requirement.
 - vi) Discussion of the public notification procedures.
- d) If smoke may impact smoke sensitive areas, smoke management plans are required to include appropriate monitoring, which may include visual monitoring, ambient particulate matter monitoring or other monitoring approved by the district for the following burn projects:
 - i) projects greater than 250 acres;
 - ii) projects that will continue burning or producing smoke overnight;
 - iii) projects conducted near smoke sensitive areas; or
 - iv) as otherwise required by the district.
- e) Require, as appropriate, daily coordination between the land manager or designee and the air district or the Air Resources Board (ARB) for multi-day burns, which may impact smoke sensitive areas, to affirm that the burn project remains within the conditions specified in the smoke management plan, or whether contingency actions are necessary.
- f) Alternate threshold to those specified in sections (b), (c), and (d) may be specified by a district consistent with the intent of this section.
- g) Require district review and approval of smoke management plans. Districts shall provide notice to the ARB of large or multi-day burns as specified in (d) or (e) and consult with the ARB on procedures for ARB review and approval of large or multi-day burns as specified in (d) and (e).
- h) Require that the land manager or designee conducting a prescribed burn to ensure that all conditions and requirements stated in the smoke management plan is met on the day of the burn event and prior to ignition.
- i) Require a post-burn smoke management evaluation by the burner for fires greater than 250 acres.
- j) Require procedures for public notification and education, including appropriate signage at burn sites, and for reporting of public smoke complaints.
- k) Require vegetation to be in a condition that will minimize the smoke emitted during combustion when feasible, considering fire safety and other factors.
- l) Require material to be burned/to be piled where possible, unless ecological goals dictate otherwise.

m) Require piled material to be burned to be prepared so that it will burn with a minimum of smoke.

V. ORGANIZATIONAL AND BUDGETARY PARAMETERS

Funding

Planning Data System (PDS) will be the funding mechanism for Fire Preparedness, Leadership and Training at the park level. The FMO is responsible for the development of an annual operating budget for the fire management program. Budget development occurs in PDS, with budget data entry only available during certain times of the year. Information concerning the budget submittal schedule is available at: <http://npsfamshare/wildlandfire/default.aspx> .

Hazardous Fuels, Wildland-Urban Interface projects and Community Assistance programs, including Rural Fire Assistance, are currently funded based on inputs to the National Fire Program Operations System (NFPORS). The schedule for inputs into NFPORS for project funding does not coincide with the FIREPRO schedule. The Regional Wildland Fire Specialist provides an annual call letter for inputs. Access to NFPORS is password protected. The FMO, FMPA and Fuels Technician and the currently have access to the program. Requests for additional access can be made from the NFPORS website at: <https://www.nfpors.gov/> .

Emergency fire suppression funds will be requested through the Regional Office as needed. A blanket E-11, Emergency Preparedness account is established on the park at the beginning of each fiscal year. This account can be accessed based on direction in the approved Specific Staffing and Action Guide and Step-up Plan. The FMO and FMPA area responsible for tracking all expenditure associated with this account and will maintain a file that verifies the fire danger condition or specific event that authorized the expenditure of E-11 funds.

The fire management program at SMMNRA is a branch within the Division of Visitor Protection and is supervised by the Chief Ranger. The current Fire Management organization includes eight permanent-full-time or subject-to-furlough employees. Four temporary positions are approved in the fire preparedness organization and are funded for 13 pay periods each. These positions provide augmented staffing to the Type III engine during the designated fire season. Additional seasonal positions for fuels management are requested through NFPORS fuels projects.

Two PFT employees, the Fire Ecologist and Fire GIS Specialist work in the Division of Planning, Science and Resource Management. These employees receive all of their funding through FIREPRO and are expected to spend a minimum of 80% of their time working on fire related projects. The approved organizational chart is included as Appendix K.

The fire management program maintains two Department of Interior Vehicles, a Type 3 engine (2005) and a Type 6 engine (1997). The fire management branch also maintains five GSA fleet vehicles.

The program receives its budget in four primary "project work elements" (PWE's), preparedness, (P11), hazardous fuels (H11), and wildland/urban interface (W11& W14). The park also receives W12 and W22 funding for specific hazardous fuels treatment projects. A breakout of the funding structure is shown in Table 5.1

Table 5.1 Fire Management Funding Structure

Position	PWE	Pay Periods	Comment
Fire Management Officer	P11	26	
Engine Captain	P11	26	
Fire Engine Operator	P11	26	
Asst. Fire Engine Operator	P11	20	
Fire Management Program Assistant	P11	26	
Fuels Technician	W11	25	
Fire GIS specialist	W11	26	
Fire Ecologist	W14	26	
Fire Communication & Education, Specialist	W11	26	
Temporary Firefighters	P11	13	
Temporary Fuels Technicians	W22		

Agreements

The park maintains fire protection agreements with the City of Los Angeles Fire Department, Los Angeles County Fire Department and the Ventura County Fire Protection District. Each of the agreements is an “*Assistance by Hire*” agreement. The park maintains an agreement with the Angeles National Forest to provide for fire and law enforcement dispatching. A Fairshare agreement is in place to pay for the dispatching service. Fire management currently contributes \$26,000 as their portion of the Fairshare.

Each agency will bill the SMMNRA for services provided during the suppression response to wildland fires involving the direct protection area of the park. Billing rates are provided by the agencies annually and are the basis for payment. A list of resources utilized by the agencies during suppression actions is available through the Command and Control Centers of the departments and should be reviewed prior to approving final payment.

On multi-jurisdictional incidents, the Unified Incident Commander has the authority to enter into cost sharing or apportionment agreements with the local fire agencies. This agreement must be signed by the Unified Incident Commanders and should enumerate the quantity and duration of resources used. The cost share agreement is the basis of the final bill for the protection of National Park Service lands.

Interagency Coordination

SMMNRA is dependent on the support of other federal and local agencies to support the fire management program at the park. In addition to the support from the fire department during wildland fire suppression responses, the counties provide a substantial workforce in the form of camp crews to assist in implementing labor intensive projects. Los Angeles County Fire Department maintains as many as 55 crews countywide. Camp 13, located within the SMMNRA boundary, fields four crews on a daily basis. Ventura County Fire Department acts as a broker for the park, providing access to the crews from the California Department of Forestry & Fire Protection, Ventura Camp.

The Angeles National Forest provides dispatching services through a Fairshare agreement with the park. The forest, through its dispatching procedures assures that the park engine is integrated into the engine strike team rotation. With limited initial action activity inside the SMMNRA it is important for employee development that the park receives a fair portion of the assignments for Type 3 modules. The FMO should meet annually with the manager of the ECC to assure that local resources are in status and available for dispatch.

The Angeles NF also provides training opportunities for SMMNRA employees. The Type II crew program hosted by the Forest Service is the primary mechanism by which SMMNRA personnel obtain crew boss trainee assignments. The helicopter program has traditionally provided the annual basic aviation class for park personnel and has made aviation detail opportunities available as well.

Fuels management activities could not occur without the support of the cooperators. Crews for burn preparation are provided to the park free of charge in most cases. The cooperators also provide overhead for staffing of the burns. The Angeles National Forest is a willing participant with the park on prescribed burns. It is the responsibility of the FMO with the assistance of the FMFA to develop task orders under the auspices of the DOI/USDA Cooperative agreement to allow for reimbursement of the forest for there personnel.

Ventura County Fire and Los Angeles County Fire departments are implementing hazardous fuels reduction contract actions funded through the National Fire Plan. The work accomplished by these agencies assist the region in meeting the goal of contracting a minimum of 50% of the hazardous fuels modification dollars. The Mountains Recreation and Conservation Authority, California Department of Parks & Recreation and the Resource Conservation District of the Santa Monica Mountains contract vendors for hazardous fuels projects. All of the agencies operate as sole source vendors as their work is accomplished off of National Park Service lands, but in contiguous fuel beds to the park.

Key contacts

The park maintains close working relations with the three primary fire agencies, the Angeles National Forest and California Department of Parks and Recreation. There are many more local contacts

Table 5.2 Key Fire Management Contacts

Contact	Position	Office Location
<i>Los Angeles County Fire Department</i>		
Anthony Whittle	Division Chief	Station 70
	Prescribed Fire Specialist	Camp 2
J Lopez	Vegetation Mgmt. Specialist	Pacoima, CA
Frank Vidalis	Assistant Chief of Forestry	Commerce, CA
<i>Ventura County Fire Department</i>		
Mike LaPlant	Assistant Chief for Emergency Services	Camarillo, CA
	Division Chief 3	Station 30
Chad Cookr	Battalion Chief 3 – Wildland Fire	Camarillo, CA
Brendan Ripley	Captain – Pre-Fire Planning	Camarillo, CA
<i>Los Angeles City Fire Department</i>		
	Chief	Sepulveda, CA
	Battalion Chief – agreements	Sherman Oaks
<i>Angeles National Forest</i>		
Jim Hall	Assistant Chief	Arcadia, CA
Tracy McGuff	Training Officer	Station 51
Edward Hesbol	EOC Manager	Lancaster, CA
<i>Mountains Recreation & Conservation Authority</i>		
Walt Young	Chief Ranger	Calabasas, CA
	Fire Management	Calabasas, CA

that are important to the operations of the fire management program. The FMPA and FMO maintain this information. Table 5.2 includes the primary fire cooperators and the current contacts.

FIRE MANAGEMENT ORGANIZATION AND RESPONSIBILITIES

Fire Analysis/Fire Management Team

The Fire Management Team should meet annually prior to fire season to discuss areas of responsibility, review and update the FMP, and to discuss/evaluate fire management capabilities.

The Fire Management Analysis Committee will consist of the following:

- Superintendent - Chair
- Chief, PSRM
- Chief Ranger
- Fire Management Officer
- Fire Ecologist

The Superintendent has the overall responsibility for the execution of the fire management program at Santa Monica Mountains National Recreation Area.

The Superintendent will:

- Approve the park's Fire Management Plan and any proposed revisions.
- Be apprised of the daily fire situation during fire season.
- Be the sole authority to approve any prescribed burn plans.
- Provide direction to Type I and Type II Incident Commanders working in the park, or designate a representative to do so.

Deputy or Acting Superintendent

The Deputy or Acting Superintendent is delegated all decision making responsibility when the Superintendent is absent from the park.

Chief Ranger will:

- Carry out fire activities called for in this plan.
- Manage wildland fire plan implementation, review, and revision.
- Approve filling vacant fire management staff positions.
- Make at least an annual inspection, with the FMO, of fire suppression, detection, dispatch, and training facilities and procedures.
- Direct the park fire suppression and preparedness program.
- Evaluate prescribed fire prescriptions.

Fire Management Officer will:

- Has immediate responsibility for overseeing all aspects of the fire management program.
- Translates science and research to policy and fire management practices.
- Develops short and long-range plans for network parks' wildland fire management programs.
- Establish liaison with cooperating agencies, and coordinate and maintain cooperative agreements.
- Prepares and/or revises annually, cooperative agreements concerning wildfire management,

prescribed fire, smoke management, and cross-agency fiscal matters.

- Formulates and directs the budget accountability program for preparedness, hazard fuels operations, emergency fire accounts and approves all FIREPRO expenditures.
- Responds to regional and national office information requests.
- Maintain fire weather/fire records and Fire Program Analysis data.
- Coordinate park-wide fire training and equipment acquisition.
- Maintain park-wide crew lists and equipment records.
- Maintain Weather Information Management System (WIMS) and FPA data input.
- Advise the Angeles EOC Center Manager on fire dispatch and reporting responsibilities.
- Coordinate annual review of this plan.
- Perform administrative duties, i.e., approving work hours, completing fire reports for command period, maintaining property accountability, providing or obtaining medical treatment and evaluating performance of subordinates.
- Ensure fire reports (DI-1202) are properly prepared and submitted to the Pacific West Regional Office and/or entered into FPA.
- Maintain qualification and training records.

Chief of Planning, Science, and Resource Management will:

- Provide scientific expertise, technical advice, and review regarding:
 - Ecological effects of fire and fire suppression activities.
 - Effects of fire and suppression activities on cultural resources.
 - Distribution of vegetation, fuels, and natural and cultural resources, including sensitive resources.
 - Geographic information system (GIS) databases and analysis options.
 - Park and resource management alternatives related to fire.
 - Resource, Fire Management, and site-specific burn plans.

Incident Commander will:

Use strategies and tactics that are as resource sensitive as possible while maintaining the first priority of firefighter and public safety. A Delegation of Authority will be provided to each Incident Commander prior to assuming responsibility for an incident. Major duties of the Incident Commander are given in the NWCG Fireline Handbook and include:

- Brief subordinates, direct their actions and provide work tools.
- Ensure that safety standards identified in the Fire Orders and agency policies are followed at all times.
- Personally scout and communicate with others to be knowledgeable of fire conditions, fire weather, tactical progress, safety concerns and hazards, condition of personnel, and needs for additional resources.
- Order resources to implement the management objectives for the fire.
- Inform appropriate dispatch of current situation and expected needs.
- Coordinate mobilization and demobilization with dispatch and FMO, or designee.

VI. MONITORING AND EVALUATION

Fire is the most significant disturbance factor that affects the vegetation in the Santa Monica Mountains. Fire management decisions from all agencies in the Santa Monica Mountains require information on fire behavior and the resources at risk, including park resources and private property. The primary purposes of fire monitoring are:

- To ensure that any fire management activities that the SMMNRA proposes and implements are meeting management objectives,
- To provide guidance to the fire protection agencies within the Santa Monica Mountains,
- To limit possible legal actions against the park
- To ensure that the park collects at least the minimum information necessary to evaluate the SMMNRA fire management program (Fire Monitoring Handbook 2001).

The benefits to establishing standardized data collection procedures in a fire monitoring program include documenting basic information, detecting trends, identifying future research needs, and facilitating information exchange between resource protection staff and fire suppression agencies. The fire monitoring program will be in accordance with the National Park Service Fire Ecology Assessment Tools (FEAT) and Inventory and Monitoring standards as they apply to the needs of the SMMNRA.

Point Reyes National Seashore is the host park for the Fire Effects Monitoring Crew associated with SMMNRA. Fire effects monitoring is funded through the National Fire Office but is in financial constraints under recent budgetary reductions. The crew used to visit the park to read the approximately 70 established plots on a schedule defined in the Fire Monitoring Handbook. This schedule requires the plots to be monitored one, two, five and ten years after a prescribed fire treatment. The Fire Ecologist at the park is the point-of-contact for the crew and maintains the data associated with these monitoring plots.

It is anticipated that a very little shrubland acreage within the park will be burned with prescribed fire, while there is the potential for large areas to burn in a single wildfire event. The park therefore needs to be able to study fire effects on the local plant communities from unpredictable fire events on a more opportunistic basis. The park is in the process of developing a monitoring program of fire effects plots that would be installed following a major wildfire. The program description will include the major hypotheses to be tested, plot design, location and number of plots, season and frequency of readings, and duration of monitoring. Existing I&M plots or FMH plots may be adapted for this purpose. The program will address how to fund emergency-type projects that will occur after the beginning of the fiscal year and will need to be carried out for a 5-year time horizon beyond the first funding year.

In native shrubland communities, the majority of the post-fire diversity is in the herbaceous flora within the first two years after fire. Many of the FMH plots are read too late in the season because of budget and hiring schedules, to identify this element of the flora. FMH field crews may need to be re-organized in order to read plots earlier in the field season. In the future, two readings in both the spring and late fall should also be considered for shrub plots in the first two years postfire to determine seedling mortality over the summer dry season.

The park will be prepared to monitor any sensitive plant populations that experience wildfire in order to develop basic information on fire effects in these species.

VII. FIRE RESEARCH

The SMMNRA is one of three parks in the Mediterranean Coast Network which includes Cabrillo National Monument, Channel Islands National Park, and Santa Monica Mountains National Recreation Area. These parks are relatively small, isolated, remnant examples of a coastal Mediterranean ecosystem within the larger, urbanized southern California landscape.

All three parks are aggressively managed for an aggressive suppression response to wildland fires. The parks' coastal environment has a low natural ignition rate and while the vegetation is adapted to survive fire, it does not require a frequent fire return interval to maintain the health of the shrub communities. With the urbanization of southern California, the historic fire regime has changed by increasing the rate of anthropogenic fire ignitions. Consequently, the potential exists to have large areas burn in a single fire event if ignition occurs under extreme climatic conditions when wildfires are not easily controlled. With the current fire environment, prescribed fire is not believed to offer any resource benefits in the shrubland community types.

The SMMNRA fire research program priorities are to identify the most effective strategies for wildland fire management so that threats to life, property and park resources are reduced at the urban interface; to determine how fire history has influenced the modern vegetation pattern; to assess how variation in the fire regime is likely to affect the future trajectory of community structure and composition, especially the potential for type conversion due to increased fire frequency; to examine the effect of increased fire frequency on the biological diversity of the flora, especially the 70% of the flora considered to be uncommon or rare; and to evaluate fire as a restoration technique in degraded habitat types. Prescribed fire is expected to be used primarily for restoration of degraded habitat types. Specific research topics are summarized below.

Relative Risk Factors to Populations of Obligate Seeders and Obligate Sprouters from Short Fire Return Intervals.

Obligate seeders are known to be at risk of extirpation from a too-short fire return interval. The critical threshold of the minimum fire return interval may vary among the different obligate seeding species and secondary environmental factors (fire intensity, rainfall, duration of drought period, presence of non-natives) may influence threshold values. These data are necessary to determine the limits of resiliency to fire return interval among species. Similarly the effect of repeated short fire return intervals and the relative resiliency among obligately resprouting species needs to be determined. Data on individual species responses will be used to make predictions about the effect of fire frequency on community structure and composition.

Fire Effects in Coastal Sage Scrub

Coastal sage scrub species have mixed modes of regeneration following fire. The potential for changes in community composition as the result of differential fire-frequency induced mortality of lignotubers, seedlings or seeds should be investigated.

Vegetation Changes Observed in VTM Maps and VTM Plots in The Santa Monica Mountains.

United States Forest Service Vegetation Type Maps (VTM or Wieslander maps, 1938) exist for the Santa Monica Mountains. Cursory visual comparison of the 1938 maps and the 1997 SMMNRA vegetation map show shifts in the composition of chaparral communities and the loss of coastal sage to grassland in Cheeseboro Canyon. More accurate evaluation of the changes in the vegetation boundaries since the VTM data were collected should be determined by digitizing the

original VTM maps and overlaying them on our current vegetation maps. In addition to the maps, the original VTM plot data has been acquired for the park. Changes in community composition can be quantified by relocating and resampling the original VTM plots.

Impact of Competition from Invasive Exotics on the Post-Fire Herbaceous Flora

In conjunction with disturbance, non-native, Mediterranean annual weed species are known to have displaced or adversely impacted areas of coastal sage scrub and chaparral habitat. The potential exists for these weedy species to compete with, displace and eliminate the post-fire herbaceous flora that comprises a large part of the biodiversity of the Santa Monica Mountains' shrubland flora. The impact of invasive exotics on the post-fire herb flora should be investigated through a literature review, examination of existing fire monitoring plot data, and through experimental plots.

Wildfire Behavior and Fire Effects in Riparian Woodlands

Although the conventional wisdom is that wildfires "jump over or stop along riparian corridors", fire severity in riparian woodlands can vary from scorched or lightly burned to heavily burned. There are no data on the frequency, severity, and physical fire properties of fires in riparian woodlands in the Santa Monica Mountains. Data on the response of riparian species to fire in relation to fire intensity are also limited.

Floristic and Ecological Analysis of the Santa Monica Mountains Flora

One thousand plant taxa (species, subspecies and varieties) have been identified from the Santa Monica Mountains and Simi Hills (Barry Prigge and Carl Wishner, SAMO flora database, 2001). A database of ecological attributes of the individual species that comprise the flora is being compiled to do quantitative floristic and ecological analyses based on characteristics such as growth form, postfire regeneration mode, habitat and distribution. Species attributes of the database include: nativity (native/non-native); abundance (abundant, common, uncommon, rare); life cycle (annual/perennial); post-fire dominant (yes/no); growth form (trees, subshrubs, suffrutescents, herbaceous perennials, geophytes, annuals, succulents, vine); leaf traits (longevity) (evergreen, winter deciduous, summer deciduous); postfire regeneration mode (obligate seeder, facultative seeder, obligate sprouter); seed bank (yes, no-annual germination, mixed); seed germination requirements (none, heat stimulated, smoke stimulated, charate stimulated, scarification, inundation, winter stratification, summer stratification, photoperiod); seed dispersal (self, abiotic, vertebrate, invertebrate); flowering season (winter, spring, summer, fall); growing season (winter, spring, summer, fall); vegetation class (riparian woodland, coastal sage scrub, chaparral, oak woodland, coastal, grassland, savanna, rock outcrops and crevices), geographic distribution (high elevation peaks, throughout, away from coast, immediate coast, coastal slopes, streams, Malibu creek, Malibu creek westward, Point Dume, Point Dume east, Point Dume west, eastern mountains, disturbed, localized); elevation (high, mid, low, throughout); soils (shallow, deep, sandy, dry, moist); substrate (sandstone, volcanic, shale); topography (steep slopes, valley, bottom canyons); aspect (north, south, east, west); exposure (shade, open/sunny).

Burn Severity Mapping

Fire intensity and fire severity are known to exert significant effects on post-fire plant responses and ultimately on composition and structure in coastal sage and chaparral community. Burn severity from post-fire monitoring of individual plots has been shown to reduce total plant cover and seedling density in the first year after fire (Keeley, 1998) and fire intensity has been shown to affect regeneration in coastal sage scrub species that ultimately determines species composition and

abundance (O'Leary, 1990). The National Burn Severity Project is currently mapping burn severity and vegetation regrowth after fire (http://edc2.usgs.gov/fsp/severity/fire_main.asp). This program provides the park with the opportunity to acquire landscape level data on fire severity to integrate into the park's fire history database and the new vegetation and fuels map.

Fire and Habitat Fragmentation

The synergistic effect of wildfire on wildlife populations in a fragmented landscape is not understood. Research is needed to determine the effects of fire on wildlife under different fire sizes, shapes and intensities, including wildfire and prescribed fire; the influence of surrounding human-modified landscapes on post-fire wildlife recovery patterns; and the role and significance of fire as a potential extinction mechanism and edge effect facilitator in fragmented habitats.

Sensitive Species Database

Basic information on sensitive species' response to fire will be collected through literature review and field observation. Fire response information will be incorporated into the sensitive species database as part of the I. & M. program.

Effects of Fire-Derived Sediment Loads on Rocky Intertidal Habitats

Research and monitoring should be undertaken to understand the relationship between fire-derived sediments and rocky intertidal habitat. Are the suspended sediments observed in the water column off the Malibu Coast due to re-suspension of bottom sediments or to increased rates of terrestrial erosion? Is the pulse of sediments from post fire years with high rainfall a contributing factor to the fluctuation in kelp bed distribution and population size?

Fire History Prior to 1925

The park's GIS database begins in 1925. There are limited data on the nature, cause and frequency of fires prior to this date. All potential lines of evidence to extend the fire history should be pursued. Potential sources of data included soil phytoliths of Native American food plants, *Quercus* species tree ring and fire scar data, and wetland sediment cores of charcoal deposits.

Fire Database

The NPS will continue to build on and refine the GIS fire database. Information collected on individual fires and summarized in the database is necessary to answer basic questions about the regional fire regime, fire behavior and effectiveness of suppression operations, plant and animal responses to fire, and the social causes and costs of wildfires in the Santa Monica Mountains.

Optimization of Fuel Modification Zones

Defensible space created by mechanical fuel modification zones is one of the most effective residential fire protection strategies. However, fuel modification also has adverse environmental impacts on habitat and watershed quality. Optimizing the fuel modification zone for both fire protection and habitat conservation would provide for homeowner safety while reducing the cumulative impacts of development in the SMMNRA. Methods to quantify the amount of fuel modification required to protect structures from ignition due to radiant heat or from direct flame impingement are needed. The potential cumulative habitat impacts from fuel modification that exceeds the amount necessary to protect structures (e.g. 100' vs. 200') should be analyzed.

VIII. PUBLIC SAFETY

Managing a fire program is among the highest risk operations that any land management agency can undertake. The first priority consideration in any fire management action is firefighter and public safety. Safety of visitors, employees, residents and incident personnel will be the number one responsibility given to any supervisors acting on behalf of Fire Management.

An essential element in protecting human lives and property is creating defensible space in the urban interface and around structures. Creating defensible space requires careful planning along with prudent applications of mechanical fuel reduction and prescribed burn projects. All proposed actions on federal lands must undergo the National Environment Protection Act (NEPA) process, which includes evaluating the proposed project for potential long-term, irreversible environmental impacts and potentially public scoping. Emergency actions (threat to life is imminent) are not generally subject to this level of scrutiny prior to implementation. Post-emergency environmental damage is subject to rehabilitation; for further information, see Chapter 19 in RM18.

Issues and Concerns

- Conditions that pose an immediate threat to human life (including residents, employees and visitors) are flammable fuels around developed and visitor-use areas, easily ignitable structures, steep slopes that cause fires to move rapidly and narrow access roads that constrain evacuation and fire fighting.
- Management of wildland fires and prescribed fires is hazardous. Minimizing personnel exposure to hazards associated with suppression actions and other fire management operations requires training, on-site hazard analysis and mitigation measures followed by effective communications.

Mitigating Actions

The following program elements will be followed, with the intention of mitigating the issues and concerns:

- NPS and other federal fire personnel will comply with NWCG and NPS personal protective equipment standards while assigned to fire incidents. Mutual aid cooperators, responding to NPS fires under agreement, will meet their respective personal protective equipment and qualification standards during initial action and extended operations.
- All wildland fire incidents which result in entrapment, injuries or fatalities, or the potential for injury or fatality, will be reported and investigated and appropriate administrative follow up actions taken.
- Continue implementation of approved project plans designed to meet defensible space and public safety protection objectives in the park.
- A program of public education will be implemented to inform private property owners about defensible space, flammable vegetation, fire-safe construction standards, personal evacuation procedures, and other Firewise recommendations.
- All fire personnel shall meet appropriate qualifications, including physical fitness and medical requirements, for all fire assignments per NPS DO-18 and the companion RM18.
- All safety standards and guidelines identified within the Fireline Handbook and the Interagency Standards for Fire and Fire Aviation Operations will be followed; all wildland fire incidents will comply with interagency risk management standards.
- Interagency coordination will continue to assure an appropriate response to National Park Service incidents.

- Close cooperation with emerging Fire Safe Counsels and Emergency Preparedness groups will continue,
- Interagency training, especially in the areas of all-risk management, will be utilized to continue the development of National Park Service fire management personnel in non-traditional incident management and tactics.
- A risk assessment process will be utilized to evaluate methods for mitigating the number of human caused ignitions within the NRA.
- An interagency approach will be utilized to manage wildland fuels on NPS land and adjacent jurisdictional areas. The agencies will seek common ground to meet the fire safety needs of local residents and the visiting public, while protecting natural and cultural resources.

IX. FIRE PREVENTION, EDUCATION AND INFORMATION

The park is in the process of completing a Hazard and Risk Assessment and Fire Prevention Plan for the SMMNRA. These documents will define the fire prevention and education workload for the future.

Public Information Capabilities and Needs

Public education and prevention are cornerstones of a successful fire management program. An informed and supportive agency staff, local and visiting public, recreationists, partner organizations and neighbors will contribute greatly to the success of the fire program and the resources that it is designed to benefit.

The park's Fire Communication and Education Specialist, Prevention and Information Specialist (FCES) is tasked with coordinating many of these communication efforts. By utilizing existing methods (park publications, websites, and ranger-led presentations) and developing new programs that provide park neighbors, homeowners and developers with the crucial tools they need to protect their homes and property, many of the goals of this plan will be met. Close coordination with other park divisions, especially the Education Branch of the Division of Interpretation, is essential.

Goals: The goals of the fire prevention and education program is to:

- Inform the public and employees about NPS fire management concepts and practices, including our cooperation with the local fire departments and coordination with the other park agencies in the Santa Monica Mountains.
- Educate the public on homeowner safety and private property protection by describing the mission of the NPS, the purpose of National Environmental Policy Act, the goals of the National Fire Plan, and the responsibility of the residents in the Santa Monica Mountains.
- Educate the public on the Mediterranean ecosystem and the role of wildland fire within it, reinforcing the importance of fire prevention planning.
- Integrate fire prevention information and public education into other park programs (such as Interpretation and Education)

Objectives: In order to obtain these goals the park will:

- Provide critical information on the role of fire in ecosystems, the need for hazardous fuel reduction, and the resources available to individuals and communities to meet their responsibilities to reduce threats from wildland fire to human lives and homes.
- Provide increased opportunities for dialogue between the NPS and residents living in the wildland-urban interface.
- Provide tools for public contact personnel to explain to all audiences the purpose, findings and recommendations of the Fire Management Plan.
- Provide employees with regular, concise, informative and timely updates on fire program developments, information on fire education, reports on wildland and prescribed fires, and other such information deemed necessary to keep them current on fire management issues.

Actions: Joint strategies for the public information and education program include the following:

- Develop public information programs that promote the benefits of FireWise community planning, defensible space, and mechanical fuel reduction
- Develop and establish a proactive process that disseminates current and accurate fire information to a network of contacts in agency staffs, the local community, the general public and media outlets.

- Continue to incorporate the principles of fire's role in the Santa Monica Mountains ecosystem and the importance of fire as a resource management tool into park interpretive programs, exhibits, videos, periodicals, brochures and civic group presentations. The Comprehensive Interpretive Plan process will aid in this strategy.
- Establish a joint-agency website to promote prevention and wildland fire education objectives. Utilize similar broadcast methods, such as the Traveler's Information Station (TIS).
- Forward all fire-related press releases to the Fire Communication and Education Specialist/Information Specialist and/or the superintendent and keep members of the headquarters staff well informed of fire activity.
- Utilize both permanent and temporary roadside exhibits to transmit key messages.
- Establish rapport with local press and media representatives and accommodate all interview requests that will benefit the park by promoting the fire program.
- Inform all audiences that the NPS continues to stress that public and firefighter safety is the agency's number one priority.
- Continue to support the National Park Labs: Studies of Wildland Fire Ecology program, a curriculum-based education program for high school students.
- Develop prevention plans to reduce number of human-caused ignitions.

Audiences: An audience is any segment of the public (internal or external) that has an interest in or is affected by the activities or management actions of a unit of the NPS. Information should be appropriate to the particular audiences; for example, in languages other than English or tailored for school children. The following is a general listing of suggested audiences that should be considered in disseminating fire information. The list is not intended to be all inclusive.

- Internal
 - Park staff, at all levels and disciplines
 - Concessionaires, permittees and contractors
 - Park partners: cooperating associations, schools, friends groups, government agencies within the NRA boundary
- External
 - Park visitors/the general public
 - Inholders, neighbors
 - Adjacent government agencies, emergency services, etc.

“Step-Up” Public Information Activities and Capabilities

All times of the year:

- Include basic fire information on the park's website.
- Assist SMMNRA and California State Parks public contact personnel with fire management exhibits, educational bulletins and brochures and visitor program information.
- Coordinate requests from park neighbors who want fuel modification on NPS land to protect private property; conduct an evaluation meeting in spring of each year to plan for additional hazard fuel reduction projects, funding, and compliance.
- Continue outreach and educational activities which emphasize the importance of fire prevention planning

During annual fire season:

- Post/maintain appropriate signs, bulletins and other literature at trailheads, visitor use areas, visitor centers and ranger stations.

- Conduct wildfire prevention class for NPS staff, with occasional repeats for new employees/ volunteers and other public contact personnel.
- Fire prevention will be discussed at each park safety meeting during the fire season.
- The fire prevention plan and analysis are reviewed and/or updated as changes occur.
- Coordinate a fire awareness education program for local homeowners.

During extreme fire danger conditions:

- Include current fire information on the park's website and, stressing that additional precautions must be taken by visitors.
- Use local radio, TIC, public access channels and the park website for briefing and updating the public on fire information as needed ("High/Very High/"Extreme" adjective ratings)
- Prepare and distribute flyers with appropriate fire safe messages to neighbors and partners.
- Coordinate with the Chief Ranger and the Superintendent to curtail visitor activities, ranging from smoking or front-country fires bans to park site closures.

During an active fire:

- Include daily fire updates on the park's website.
- Forward to the superintendent all press releases/media information for review and approval.
- Consider holding a public information meeting to update the public on facts to date, suppression efforts for the future, and precautions they should take for their own safety. Coordinate efforts with any assigned Incident Management Team.
- Forward all media requests for information to the FCES and/or the superintendent.

Before/during a prescribed fire:

- Include the appropriate fire information related to the plan on the park's website.
- Assist NPS, Mountains Recreation Conservation Authority (MRCA) and California State Parks public contact personnel with fire management exhibits and visitor program information.
- Use local radio, public access channels and TIC for briefing and updating prescribed fire information as needed.
- Forward to the superintendent all press releases/media information for review and approval.
- Consider holding a public information meeting to update the public on safety and planning efforts, guidelines that regulate whether or not to ignite, and precautions they should take for their own safety.
- Forward all media requests for information to the Fire Communication and Education Specialist/Information Specialist and/or the superintendent.

X. PROTECTION OF SENSITIVE RESOURCES

Cultural resources in the Santa Monica Mountains on National Park Service lands fall into three main categories:

- Historic structures
- Prehistoric archaeological sites and features
- Curated museum objects.

Unique fire protection considerations apply to each respective category. These will be described and discussed in turn.

Historic Structures

Historic features and structures have for the most part been identified. The following is a list of structures that have potential historic significance, and are thus considered cultural resources:

- Circle X Ranch structures and associated features
- Diamond X Ranch structures
- Franklin Canyon houses and structures
- Morrison House and associated features
- Paramount Ranch complex
- Peter Strauss Ranch buildings and features
- Solstice Canyon structures, including the Keller House, TRW buildings, the ruins, remaining structures, and shrine at Tropical Terrace.
- Other historic features in Solstice Canyon such as the abandoned stone cabin in upper Solstice Canyon.
- Rancho Sierra Vista houses, barn and stables

The fire protection requirements of these buildings are significantly different from each other. Some of these buildings are along main highways, have unimpeded access and are highly visible. In contrast, some of the historic structures are relatively remote, otherwise hidden, and highly susceptible to damage and/or destruction by wildfire. In particular, the Morrison Ranch House is situated in an area of moderately dense natural vegetation and is located a considerable distance from the nearest paved road. Measures such as annual clearing of brush and grass immediately adjacent to the structures are required. The other structures, situated near paved roads either have fire-resistant landscaping or have vegetation removed by maintenance or fire staff.

Curated Museum Objects

SMMNRA maintains a significant collection of historical, archeological and natural history specimens. Presently, of the numerous objects found in the collection, the majority are archeological artifacts. These materials can contribute significantly to the understanding of prehistory in the Santa Monica Mountains, and offer an excellent opportunity for education and future research. Uncataloged items include archival materials associated with the cultural history of the Santa Monica Mountains, including natural and cultural resources management and research. In all likelihood, the SMMNRA collections will continue to grow as a result of current and future management and research related projects.

The present curation facility at Rocky Oaks meets National Park Service standards (36 CFR 79) in regard to environmental control, fire protection, and security. However, the facility has some unique considerations in terms of fire management and protection. A wooden lattice attaches the facility to

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a residence, which also has an attached wooden deck. The wood should be considered for removal and replaced with a more fire resistant material. Development of enhanced defensible space to meet County of Los Angeles brush clearance standards needs to be established.

In addition to the Museum Research building at Rocky Oaks, another area of concern is the other buildings and facilities that house or contain National Park Service museum objects. The following is a list of locations where museum or cultural objects are normally found:

- Visitor's Center at SMMNRA HQ
- Satwiwa Cultural Center
- Tack Room at Rancho Sierra Vista
- Wagon Storage Area at Rancho Sierra Vista

The Visitor's Center at SMMNRA headquarters is located in an urban area and thus is protected from wildland fire. However, no building is always safe from other kinds of fires, such as electrical, arson or otherwise. The Resource Management Plan notes the specific locations of such objects within the above facilities and prioritizes their removal or protection in the event of a fire or other emergency.

Prehistoric Archaeological Resources

The other main category of cultural resources on National Park Service land is prehistoric archaeological sites and features. There are hundreds of documented and recorded prehistoric archaeological sites on NPS property in the Santa Monica Mountains. A baseline archaeological map denoting the location of sensitive resources is anticipated for completion in January 2004.

Archaeological sites are a truly unique and non-renewable resource. Once destroyed by whatever means, they can never be replaced or duplicated, and the cultural heritage and scientific data they represent is lost forever. With this in mind, the utmost effort must be expended in protecting archaeological resources from inadvertent destruction by fire-related activities.

Archaeological sites are also unique in the sense that they are more or less invisible to the casual observer. This invisibility is an advantage in that, during the normal course of events, most people are unaware of archaeological sites, and subsequently they largely remain undisturbed by human activity or vandalism. Their relative invisibility is a liability because it makes archaeological sites vulnerable to inadvertent and unintentional damage or destruction during the course of fire suppression efforts. The idea of "*out of sight, out of mind*" can unfortunately be one of the greatest liabilities to archaeological sites during a wildland fire.

Because vast regions of the Santa Monica Mountains have never been surveyed for cultural resources, it is certain that not all of the archaeological sites in the Santa Monica Mountains have been previously identified and recorded. Realizing this, it is important that a post fire survey be conducted after a wildfire. Shortly following a fire is one of the best times to conduct a pedestrian survey because ground visibility is generally very good after the vegetation has burned off. A post-fire surveying program will help to identify additional cultural resources and archaeological sites within National Park Service owned properties. Combined, the actions outlined above will further the mandate to preserve, protect, and manage cultural resources in the Santa Monica Mountains.

Mitigation: The Cultural Sites Inventory is intended to "describe and document the location, significance, threats, and management requirements for known park ethnographic and archeological

resources" (NPS 1992). The park has not completed this inventory, although it has some preliminary data.

A Level 1 Cultural Landscape Inventory was completed for the SMMNRA in 2001 and provides baseline information. The purpose of this inventory was to identify cultural landscapes, inventory them in a national database, record information about the resources relative to their location, description, characteristics, historical development and current management, and provide park staff with the information necessary to make informed decisions about their treatment. A GIS map of known site location is currently under preparation at the part. This data will be made available to National Park Service initial action Incident Commanders on order that information on the location of cultural resources will be available during the initial action phase a fire. This map does not replace the role of a Resource Advisor, who will work with the Command Staff during the course of an incident.

Table 10.1 summarizes the location of sensitive plant resources for all federally owned parcels, while Table 10.2 summaries the location of sensitive animal species. Many of the wildlife species are transitory in their utilization of the NRA and will move in and out of the park.

Table 10.1 Sensitive Plants

Name	Location (Parcel)
Braunton's milk vetch, <i>Astragalus brauntonii</i>	Simi Hills, Zuma Trancas
Malibu baccharis, <i>Baccharis malibuensis</i>	Agoura
California Walnut Woodland	Malibu-Topanga, Simi Hills
Plummers mariposa lily, <i>Calochortus plummerae</i>	Southwest units
Santa Susanna tarplant, <i>Dienandra minthornii</i>	Agoura-Westlake, Castro Crest, Simi Hills, Zuma-Trancas
Marcrescent dudleya, <i>Dudleya cymosa marcescens</i>	Agoura-Westlake, Circle X,
Santa Monica Mountains dudleya, <i>Dudleya cymosa ovatifolia</i>	Circle X
Large leaved erodium, <i>Erodium macrophyllum</i>	Agoura-Westlake, Castro Crest
Fragrant pitcher sage, <i>Lepechinia fragrans</i>	Circle X
Ocellated Humboldt lily, <i>Lilium humboldtii osellatum</i>	Circle X
California beargrass, <i>Nolina cismontana</i>	Simi Hills
Lyon's pentachaeta, <i>Pentachaeta lyonii</i>	Agoura-Westlake, Solstice Canyon
Wrinkled rush, <i>Juncus rugulosus</i>	Circle X, Simi Hills
Fish milkwort, <i>Polygala cornuta</i>	Malibu-Topanga
Dolores campion, <i>silene verecunda platyota</i>	Simi Hills
Southern live oak riparian forest	Circle X, Simi Hills, Southwest units.
Southern sycamore alder riparian woodland	Agoura-Westlake, Malibu-Topanga, Rancho Sierra Vista
Valley oak woodland	Circle X, Simi Hills

Mitigation for these sensitive resources should consist of avoiding the habitats where feasible during suppression actions. These resources are likely more at risk from the suppression actions themselves than from the actual fire. A Resource Advisor should be present at Incident Command

Post during suppression incidents with spatial data concerning the location of sensitive resources in order to advise alternate strategies in these areas.

Table 10.2 Sensitive Animals

Name	Location (Parcel)
Southwest pond turtle, <i>Clemmys marmorata pallida</i>	Agoura-Westlake, Malibu-Topanga, Zuma-Trancas
Monarch butterfly, <i>Danaus plexippus</i>	Southwest units
San Diego Mountain kingsnake, <i>Lampropeltis zonata pulchra</i>	Malibu-Topanga
Southern steelhead, <i>Onchorynchus mykiss irideus</i>	Circle X
San Diego horned lizard, <i>Phrynosoma coronatum blainvillei</i>	Agoura-Westlake, Castro Crest, Franklin-Fryman, Malibu-Topanga, Zuma-Trancas

Developments, Infrastructure, In-holdings, and Improvements

Park buildings requiring annual weed abatement or landscape maintenance for defensible space:

- Arroyo Sequit
- Castro Crest Repeater Site
- Cheeseboro
- Circle X Ranch
- Diamond X Ranch
- Franklin Canyon
- LA County Fire Camp 8
- Paramount Ranch
- Peter Strauss Ranch
- Rancho Sierra Vista/Satwiwa
- Rocky Oaks
- Saddle Peak Repeaters
- Solstice Canyon

XI. FIRE CRITIQUES AND FIRE MANAGEMENT PLAN REVIEW

The FMO will be responsible for completing an annual fire summary report. The report will contain the number of fires by ignition source, acres burned by fuel type, cost summary (prescribed burns and wildland fires) personnel utilized, and fire effects. This report is due annually to the Regional Office by the end of January.

The FMO will coordinate an annual review of the Fire Management Plan. The review will include an assessment of the ongoing implementation of the FMP, a review of proposed changes to the plan and evaluation of significant budgetary changes which could affect the validity of the FMP. The review will be conducted by February 1st and revisions to the FMP will be coordinated and implemented by May 1st of each year.

After Action Reviews (AAR) are required as part of the 30 Mile Fire Hazard Abatement Plan. It is the responsibility of the module leader assigned to the National Park Service resource to conduct the AAR, prior to the module disbanding. A format for conducting the review is available in the Incident Response Pocket Guide. The review will at a minimum utilize the outline presented in this guide. Documentation of the review is to remain on file with the module leader for a period not less than one year from the date of the incident.

The Fire Management Team, coordinated by the FMO, will conduct a critique of any large fire or any fire where significant resource damage occurred. This critique will confirm effective decisions or correct deficiencies, identify new or improved procedures improve or refine the fire management program and determine the cost-effectiveness of a fire operation. The Regional or National Office may choose to be part of the AIR dependent on the complexity of the issues associated with the fire.

Any fire may potentially include events that require the activation of an Interagency Investigation Team. As defined in the *Interagency Standards for Fire and Fire Aviation Operations*, three categories of events require the activation of a team. These events are:

- Entrapment
- Incident with potential and/or non-serious injury
- Wildland fire serious accident

Should one or more of these events occur while an incident is under National Park Service command or during Unified Command involving the National Park Service, an Interagency Investigation Team will be ordered by the park's FMO or their designated representative. Protocols for ordering an investigation team are outlined in the *Interagency Standards for Fire and Fire Aviation Operations*, Chapter 13 and RM18, Chapter 18. It is expected that the Superintendent will brief the incoming team, with the FMO assuming the role of Liaison Officer between the team and the Superintendent after the in-briefing.

XII. CONSULTATION AND COORDINATION

This plan was developed in coordination with the following state or federal agencies:

- US Department of the Interior, National Park Service
 - o Pacific West Region
 - o Santa Monica Mountains NRA
 - Division of Planning, Science and Resource Management
 - Division of Visitor Protection
 - Division of Maintenance
- US Fish and Wildlife Service
- US Department of Commerce, National Marine Fisheries Service
- US Environmental Protection Agency
- Santa Ynez Band of Mission Indians
- California Coastal Commission
- California Department of Parks & Recreation
- California Department of Forestry & Fire Protection
- Santa Monica Mountains Conservancy/Mountains Recreation & Conservation Authority
- Los Angeles Fire Department
- Los Angeles County Fire Department
- Ventura County Fire Department
- Resource Conservation District of the Santa Monica Mountains
- Mountains Restoration Trust
- South Coast Air Quality Management District
- Ventura County Air Pollution Control District

Santa Monica Mountains National Recreation Area staff consulted includes:

- | | |
|---------------------|------------------|
| • Gary Busteed | • Corrina Marote |
| • Brendon Clarke | • Marty O'Toole |
| • Ray Corbett | • Ray Sauvajot |
| • Phil Holmes | • Robert Taylor |
| • David Kerr | • John Tiszler |
| • Kathy Kirkpatrick | • Evan Jones |
| • Lena Lee | • Marti Witter |

Public Consultation

Suppression agencies, resource agencies, and academics were invited to a June 2001 fire management workshop to strategize how to accomplish the goals of the fire management plan. From this workshop, alternatives for the Environmental Impact Statement were developed. In April 2002, four public meetings were held in Beverly Hills, Calabasas, Malibu, and Thousand Oaks to present the four potential alternatives. Additional meetings were held in June 2002 in Thousand Oaks targeting land and fire management agencies.. Once the draft EIS was released, a sixty-day comment period was initiated, and the public and agencies were invited to submit their comments. In August, 2004, four public meeting were held in Los Angeles, Calabasas, Malibu and Thousand Oaks to provide more information to the public and encourage their participation. Their comments have been incorporated into the Final EIS. The Record of Decision for the FEIS was signed on February 16, 2006 by the Regional Director, Pacific West Region.

The background of the page features a large, semi-transparent arrowhead logo of the National Park Service. The logo is orange and contains a green sequoia tree on the left, a white mountain peak in the center, and a bison silhouette at the bottom. The words "NATIONAL PARK SERVICE" are written in white across the middle of the arrowhead.

Appendix A

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Santa Monica Mountains National Recreation Area

Fire Management Plan

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Appendix B

Definitions



Santa Monica Mountains National Recreation Area

Fire Management Plan

Appropriate Management Strategy – *A plan or direction selected by an agency administrator to guide wildland fire management actions and meet protection and fire use objectives.*

Contain – *To surround a fire, and any spot fires therefrom, with control line as needed, which can reasonably be expected to check the fire's spread under prevailing and predicted conditions.*

Confine – *To limit fire spread within a predetermined area principally by use of natural and pre-constructed barriers or environmental conditions. Suppression action may be minimal and limited to surveillance or monitoring under appropriate conditions.*

Control – *To complete a control line around a fire, any spot fires therefrom, and any interior islands to be saved and cool down all hot spots that are immediate threats to the control line.*

Disputed Fire Management Responsibility – *Any wildland fire where responsibility for management is not agreed upon due to lack of agreements or different interpretations, etc.*

Disputed fire policy – *Differing fire policies between suppression agencies when the fire involves multiple ownership is an example.*

Energy Release Component – *A number that expresses the rate of heat release (in BTUs / sec) per unit area (in square feet) within the flaming zone of the fire.*

Expected Weather Conditions – *Weather conditions indicated as common, likely, or highly probable based on current and expected trends and their comparison to historical weather records. These are the most probable weather conditions for this location and time.*

Experienced Severe Weather Conditions *Weather conditions that occur infrequently, but have been experienced during the period of weather records. For example, rare weather conditions that significantly influence fires may have occurred only once, but their record can be used to establish a baseline for worst case scenario.*

Extended Exposure to Unusually Hazardous Line Conditions – *Extended burnout or backfire situations, rock slides, cliffs, extremely steep terrain, abnormal fuel situations such as frost-killed foliage, etc.*

Fire Frequency – *The historic return interval of fire in a defined environment.*

Fire Management Area (FMA) – *A geographic area within a Fire Management Unit that represents a pre-defined ultimate acceptable management area for a fire managed for resource benefits. This pre-define area can constitute a Maximum Manageable Area (MMA)n and is useful for those units having light fuel types conducive to rapid fire spread rates.*

Fire Management Plan (FMP) – *A strategic plan that defines a program to manage wildland and prescribed fires and documents the Fire Management Program in the approved land use plan. The plan is supplemented by operational plans such as preparedness plans, preplanned dispatch plans, prescribed fire plans and prevention plans.*

Fire Management Unit (FMU) – *Any land management area definable by objectives, topographic features, access, values to be protected, political boundaries, fuel types, major fire regimes, etc., that*

sets it apart from the management characteristics of an adjacent section. FMU's are delineated in Fire Management Plans.

Holding Actions – *Planned actions required to achieve wildland and prescribed fire management objectives.*

Initial Action – *An aggressive suppression consistent with firefighter and public safety and values to be protected.*

Management Action Points – *(also called “Trigger Points”)-Either geographic points on the ground or specific points in time where an escalation or alteration of management actions is necessitated. These points are defined and the management actions taken are clearly described in WFDSS decision documentation or Prescribed Fire Plan. Timely implementation of the actions when the fire reached the action point is generally critical to successful accomplishment of the objectives.*

Maximum Manageable Area (MMA) – *The firm limits of management capability to accommodate the social, political, and resource impacts of a wildland fire. Once established as part of an approved plan, the general impact area is fixed and not subject to change.*

Mitigation Actions – *On-the-ground activities that will serve to increase the defensibility of the Maximum Manageable Area, check, direct, or delay the spread of fire, and minimize threats to life, property, and resources. They can include mechanical and physical non-fire tasks, specific fire applications and limited suppression actions. These actions will be used to construct firelines, reduce excessive fuel concentrations, reduce vertical fuel continuity, create fuel breaks or barriers around critical or sensitive sites or resources, create “blacklines” through controlled burnouts, and to limit fire spread and behavior.*

Potential for Blow-up Conditions – *Any combination of fuels, weather and topography excessively endangering personnel.*

Preparedness – *Activities that lead to a safe, effective, and cost effective fire management program in support of land and resource management objectives through appropriate planning and coordination. This term replaces pre-suppression.*

Pre-existing controversies – *These may or may not be fire management related. Any controversy drawing public attention to an area may present unusual problems to the fire overhead and local management.*

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

Prescribed Fire Plan – *A plan required for each fire ignited by managers. It must be prepared by qualified personnel and approved by appropriate Agency Administrator prior to implementation.*

Prescription – *Measurable criteria which guide the selection of appropriate management responses and actions. Prescription criteria may include safety, economic, public health, environmental, geographic, administrative, social or legal considerations.*

Smoke Management – *Any situation which creates a significant public response, such as smoke in a metropolitan area or visual pollution in high-use scenic areas.*

Threatened and Endangered Species – *Threat to habitat of such species, or in the case of flora, threat to the species itself.*

Wildfire – *An unwanted wildland fire.*

Wildland Fire – *Any non-structure fire, that occurs in the wildland. This term encompasses fires previously called wildfires, prescribed fire and prescribed natural fires.*

Wildland Fire Management Program – *The full range of activities and functions necessary for planning, preparedness, emergency suppression operations, and emergency rehabilitation of wildland fires, and prescribed fire operations including non-activity fuels management to reduce risks to public safety and restore and sustain ecosystem health.*

Use of Wildland Fire– Management of either wildfire or prescribed fire to meet objectives specified in Land/Resource Management Plans

Appendix C

Sensitive Species

**NATIONAL
PARK
SERVICE**

Santa Monica Mountains National Recreation Area

Fire Management Plan

Sensitive Plant Species of the Santa Monica Mountains

Acronyms

E - Endangered	SS – State Sensitive
T - Threatened	FE – Federally Endangered
R – Rare	FPE – Federally Protected and Endangered
S – Sensitive	SCT - Special Concern/Threatened
SC – Special Concern	

Plants: Species Name	Federal	State
<i>Cordylanthus maritimus</i> ssp. <i>maritimus</i> salt marsh bird's-beak	E	E
<i>Pentachaeta lyonii</i> Lyon's pentachaeta	E	E
<i>Astragalus brauntonii</i> Braunton's milk-vetch	E	-
<i>Dudleya cymosa</i> ssp. <i>marcescens</i> marcescent dudleya	T	R
<i>Dudleya cymosa</i> ssp. <i>ovatifolia</i> Santa Monica Mtns. dudleya	T	-
<i>Dudleya abramsii</i> ssp. <i>parva</i> Conejo dudleya	T	-
<i>Dudleya verityi</i> Verity's dudleya	T	-
<i>Eriogonum crocatum</i> Conejo buckwheat	SC	R
<i>Hemizonia minthornii</i> Santa Susana tarplant	SC	R
<i>Calochortus plummerae</i> Plummer's mariposa lily	SC	-
<i>Delphinium parryi</i> ssp. <i>blochmaniae</i> dune larkspur	SC	-
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i> Blochman's dudleya	SC	-
<i>Dudleya multicaulis</i> many-stemmed dudleya	SC	-
<i>Lasthenia glabrata</i> var. <i>coulteri</i> Coulter's goldfields	SC	-
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's Spineflower	SC	-
<i>Nolina cismontana</i> California beargrass	SC	-

<i>Nama stenocarpum</i>	-	S
mud nama		
<i>Senecio aphanactis</i>	-	S
rayless ragwort		
<i>Thelypteris puberula</i> var. <i>sonorensis</i>	-	S
Sonoran maiden fern		
<i>Camissonia lewisii</i>	-	S
Lewis's evening-primrose		
<i>Hordeum intercedens</i>	-	S
vernal barley		
<i>Abronia maritima</i>	-	S
red sand-verbena		
<i>Baccharis plummerae</i> ssp. <i>plummerae</i>	-	S
Plummer's baccharis		
<i>Boykinia rotundifolia</i>	-	S
round-leaved boykinia		
<i>Calandrinia maritima</i>	-	S
Seaside calandrinia		
<i>Cercocarpus betuloides</i> var. <i>blancheae</i>	-	S
island mountain-mahogany		
<i>Chamaebatia australis</i>	-	S
southern mountain misery		
<i>Dichondra occidentalis</i>	-	S
western dichondra		
<i>Erysimum insulare</i> ssp. <i>suffrutescens</i>	-	S
suffretescent wallflower		
<i>Galium cliftonsmithii</i>	-	S
Santa Barbara bedstraw		
<i>Juncus acutus</i> ssp. <i>leopoldii</i>	-	S
southwestern spiny rush		
<i>Lepechinia fragrans</i>	-	S
fragrant pitcher sage		
<i>Polygala cornuta</i> var. <i>fishiae</i>	-	S
Fish's milkwort		
<i>Suaeda esteroa</i>	-	S
estuary seablite		
<i>Baccharis malibuensis</i>	-	S
Malibu baccharis		

Sensitive Wildlife Species of the Santa Monica Mountains

Mammals:	Federal	State
<i>Euderma maculatum</i> Spotted Bat	SC	S
<i>Eumops perotis californicus</i> Greater Western Mastiff Bat	SC	S
<i>Macrotus californicus</i> California Leaf-nosed Bat	SC	S
<i>Myotis lucifugus occultus</i> Occult Little Brown Bat	SC	S
<i>Plecotus townsendii townsendii</i> Pacific Western Big-eared Bat	SC	S
<i>Sorex ornatus salicornicus</i> Salt Marsh Ornate Shrew	SC	S
<i>Taxidea taxus</i> American Badger	--	SS
Birds:		
<i>Pelecanus occidentalis californicus</i> Brown Pelican	FE	SE
<i>Gymnogyps californianus</i> California Condor	FE	SE
<i>Haliaeetus leucocephalus</i> Bald Eagle	FT	SE
<i>Buteo swainsoni</i> Swainson's Hawk	--	ST
<i>Falco peregrinus anatum</i> Peregrine Falcon	FE	SE
<i>Rallus longirostris levipes</i> Light-footed Clapper Rail	FE	SE
<i>Charadrius alexandrinus nivosus</i> Western Snowy Plover	FT	S
<i>Sterna antillarum browni</i> California Least Tern	FE	SE
<i>Brachyramphus marmoratus</i> Marbled Murrelet	FT	SE
<i>Empidonax traillii extimus</i> Southwestern Willow Flycatcher	FE	SE
<i>Riparia riparia</i> Bank Swallow	--	ST
<i>Polioptila californica</i> California Gnatcatcher	FT	S
<i>Vireo belli pusillus</i> Least Bell's Vireo	FE	SE

<i>Ixobrychus exilis hesperis</i>	SC	S
Western Least Bittern		
<i>Pelecanus erythrohynchos</i>	--	S
American White Pelican		
<i>Histrionicus histrionicus</i>	SC	S
Harlequin Duck		
<i>Aquila chrysaetos</i>	--	S
Golden Eagle		
<i>Accipiter cooperii</i>	--	S
Cooper's Hawk		
<i>Circus cyaneus</i>	--	S
Northern Harrier		
<i>Pandion haliaetus</i>	--	S
Osprey		
<i>Falco columbarius</i>	--	S
Merlin		
<i>Falco mexicanus</i>	--	S
Prairie Falcon		
<i>Oreortyx pictus</i>	SC	--
Mountain Quail		
<i>Numenius americanus</i>	S	
Long-billed Curlew		
<i>Sterna elegans</i>	SC	S
Elegant Tern		
<i>Asio otus</i>	--	S
Long-eared Owl		
<i>Athene cunicularia</i>	--	S
Burrowing Owl		
<i>Eremophila alpestris actia</i>	SC	S
California Horned Lark		
<i>Campylorhynchus brunneicapillus couesi</i>	SC	S
San Diego (Coastal) Cactus Wren		
<i>Lanius ludovicianus</i>	SC	S
Loggerhead Shrike		
<i>Agelaius tricolor</i>	SC	S
Tri-colored Blackbird		
<i>Aimophila ruficeps canescens</i>	SC	S
Southern California Rufous-crowned Sparrow		
<i>Dendroica petechia</i>	--	S
Yellow Warbler		

Reptiles:

<i>Clemmys marmorata pallida</i>	SC	S
Southwestern Pond Turtle		
<i>Phrynosoma coronatum blainvillei</i>	SC	S
San Diego Horned Lizard		
<i>Phrynosoma coronatum frontale</i>	--	S
California Horned Lizard		

<i>Anniella pulchra pulchra</i> Silvery Legless Lizard	--	S
<i>Diadophis punctatus modestus</i> San Bernardino Ringneck Snake	SC	--
<i>Lampropeltus zonata pulchra</i> San Diego Mountain King Snake	SC	S
<i>Lichanura trivirgata roseofusca</i> Coastal Rosy Boa	SC	--
<i>Salvadora hexalepis virgultea</i> Coast Patch-nosed Snake	SC	S
<i>Thamnophis hammondi</i> Two-striped Garter Snake	SC	--
Amphibians:		
<i>Bufo microscaphus californicus</i> Arroyo Southwestern Toad	FE	S
<i>Rana aurora draytoni</i> California Red-legged Frog	FT	S
<i>Taricha torosa torosa</i> Coast Range Newt	--	S
Fishes:		
<i>Eucyclogobius newberryi</i> Tidewater Goby	FE	SCT
<i>Oncorhynchus mykiss</i> S. California Steelhead Trout	FE	--
Invertebrates:		
<i>Euphydryas editha quino</i> Wright's Checkerspot Butterfly	FE	--
<i>Speyeria callippe callippe</i> Callippe Silverspot Butterfly	FPE	--
<i>Lycaena arota nubila</i> Clouded Tailed Copper Butterfly	SC	--
<i>Panoquina errans</i> Salt Marsh Skipper	SC	--
<i>Satyrium auretorum fumosum</i> Santa Monica Mountains Hairstreak	SC	--
<i>Brennania belkini</i> Belkins Dune Tabanid Fly	SC	--
<i>Neduba longipennis</i> Santa Monica Shieldback Katydid	SC	--
<i>Proceratium californicum</i> Valley Oak Ant	SC	--

The background of the title page features a large, semi-transparent arrowhead logo of the National Park Service. The logo is orange and contains a green sequoia tree on the left, a white mountain peak in the center, and a bison silhouette at the bottom. The words "NATIONAL PARK SERVICE" are written in white across the middle of the arrowhead.

Appendix D

Delegation of Authority

Santa Monica Mountains National Recreation Area

Fire Management Plan

United States Department of the Interior

NATIONAL PARK SERVICE

Santa Monica Mountains National Recreation Area
401 West Hillcrest Drive
Thousand Oaks, California 91360-4223

IN REPLY REFER TO:

Y14 (SAMO)

Date:

Delegation of Authority for the _____ Incident

_____, Incident Commander

You have been assigned as the Incident Commander for the _____ Fire, SMP# _____, on the Santa Monica Mountains National Recreation Area. You have full authority for managing incident operations within the framework of legal statute, current policy, and the direction provided in both your oral and written briefing materials. You are expected to do a complete and efficient job, while providing for SAFETY first. Firefighter and public safety is my primary concern on this incident. Make sure you comply with the 10 Standard Orders and 18 Situations that Shout Watch-out and implement LCES in all your planning processes and suppression efforts. I expect you to follow the *30-Mile Fire Accident Prevention Plan*.

You are to provide the necessary suppression capability to control this wildfire at a reasonable cost, to meet the objectives specified, and to protect on and off-park values. You are personally accountable to me. A formal evaluation may require follow up within sixty days after your departure once my staff has had the opportunity to review accountability, claims and documentation, financial matters and protection of resource values. You have the authority to enter into a Unified Command to assure all jurisdictional issues are addressed.

Wildland Fire Decision Support documentation has been prepared for this incident; it provides direction for the **control strategy**. Review the WFDSS decision documentation each operating period and work with the Chief Ranger and Fire Staff to revise as needed.

Work closely with: _____, Chief Ranger, to understand complex local issues, including jurisdictional questions. Keep my staff informed and work close in proactively dealing with controversial issues. A **Resource Advisor** will be assigned to your team and this individual will be available to you at all times. I expect the Resource Advisor to participate in your “preplanning strategy and briefing meetings”, to assure you have key/local information prior to “team briefings”. Our primary fire cooperator(s) are Los Angeles and Ventura County Fire, both contract counties to CDF, Los Angeles City Fire Department. Cooperative Agreements and Operating Plans are in place for all of our fire cooperators and we need to follow them.

Sensitive resource and land management issues are many. Work closely with the Resource Advisor in regard to possible fire suppression rehabilitation and impacts to threatened and endangered species/habitat and cultural resources. In regards to fire suppression actions and T&E species protection, keep in mind “Fire Fighter and public safety” is my # 1 priority. The Resource Advisor can help you address the protection of these important features.

March, 2006

Sensitive political issues require you to have an aggressive information organization in place. Incident information is your responsibility, but I expect you to keep our Public Affairs Officer _____ apprised of your progress and any emerging issues. Provide for safety, but cooperate closely with the local media. Be responsive to their needs. This fire may also cause adverse air quality impacts in some low-lying urban areas. Representatives from my fire staff will help you coordinate any issues with Ventura County Air Pollution Control District and South Coast Air Quality Management District.

Sensitive personnel issues include a proactive response from the Training Specialist and the Human Resource Specialist assigned to this incident. Ensure that equitable and safe facilities exist for personnel assigned to this incident.

_____ will serve as your Incident Base. Special orders can be prepared to give you the latitude to control entry and egress from incident facilities for unwelcome persons, and prohibit the possession of alcohol or other intoxicants. There is however, no “closed camp” as far as incident personnel are concerned. Please keep the Chief Ranger and Fire Staff informed on issues and concerns as they develop. Santa Monica Mountains NRA is not a bargaining unit, regarding labor issues. As the number of federal firefighters assigned to the incident increase, you have the authority to include an appropriate union representative onto the incident.

Cost apportionment will be an important issue for you to manage during this assignment. Berkeley Yoshida is the designated Pacific West Region’s point of contact for cost apportionment. I urge you to include him your operations. Be sure to follow guidelines for the safe handling and transport of hazardous materials. Be concerned about property accountability (especially Cache equipment/supplies) and potential damage claims. Be efficient in your operations; work close with park Fire Staff before initiating large orders for resources or implementing costly and mission tasking aviation actions.

Kathryn Kirkpatrick, Fire Management Officer or Evan Jones, Chief Ranger, will be visiting you frequently. Keep them informed of your decisions, issues and concerns. They will work closely with the park staff and Operations Southern California (OSC) to help resolve any problems you may have. If there are policies or documents that you are unfamiliar with, they can explain or secure them for you.

Team Transition for the fire will be _____ at _____ hours.

If you have any problems or concerns, please contact me. I am available to discuss your needs and or revisit this delegation. I can be reached at:

Office: (805) 370-2342
Home: (805) 529-2330
Cell: (805) 659-97833
ANF Forest Dispatch: (661) 723-2704

Woody Smeck
Superintendent



Appendix E

Federally Owned Parcels

Santa Monica Mountains National Recreation Area

Fire Management Plan

Parcel Name	Fire Mgt. Objectives	Fire History	Control Problems	Values at Risk	Mitigation
1. Zuma/Trancas	Contain 100% of unwanted wildland fires during initial action; protect urban interface and private property in-holdings.	1978	Steep slopes, minimal access, narrow and winding roads and older homes in the urban interface.	Extensive urban interface with multi-million dollar homes in the Point Dume area of Malibu; Sensitive species/habitats: <i>Taricha tarosa</i> , <i>Astragalus brauntonii</i> , <i>Clemmys marmorata pallida</i> , <i>Phrynosomus coronatum blainvillei</i> , <i>Hyla regilla</i> , <i>Hyla cadaverina</i> .	Mechanical brush clearance is done at Trancas; LA County plowing at Zuma. A few properties do not have enough to maintain 200' b/w structure and wildland. Consulted with Station 71; access is major issue. Use MIST tactics, if possible, in sensitive habitats.
2. Cheeseboro /Palo Comado	Contain 100% of unwanted wildland fire during initial action phase; protect urban interface; Restoration of grasslands to native species using prescribed fire to meet fire prevention goal: reduce opportunities of accidental ignitions early in the season.	Several prescribed burns in the grass-lands from 1990 to 2005. Topanga fire (2005) burned 4506 acres.	Flashy fuels, ingress and egress are one way; homes are primarily new construction with good clearance.	Expensive homes; historic ranch house; Sensitive species/habitats: <i>Astragalus brauntonii</i> , CA walnut woodland, <i>Deinandra minthornii</i> , <i>Juncus rugulosus</i> , <i>Nolina cismontana</i> , <i>Silene verecunda platyota</i> , southern live oak woodland, and valley oak woodland.	Mechanical brush clearance is done on the southwest side (parking lot side) and around historic ranch site. Use MIST tactics where possible during suppression actions.
3. Circle X	Contain 100% of unwanted wildland fires during initial action phase; protect structures	1993	Remote; narrow mountain roads, steep terrain; downstream habitat for <i>Taricha tarosa</i> (species of special concern) in lower portions of streams.	Low-density houses; owners generally take care of own brush clearance. Sensitive species/habitats: <i>Dudleya cymosa marcescens</i> , <i>Dudleya cymosa ovatifolia</i> , <i>Juncus rugulosus</i> , <i>Lepechinia fragrans</i> , <i>Lilium humboldtii ocellatum</i> , <i>Onchorynchus mykiss irideus</i> , <i>Hyla regilla</i> , <i>Hyla cadaverina</i> , <i>Taricha tarosa</i> , southern live oak riparian forest, and valley oak woodlands.	Brush clearance around NPS structures. Use appropriate suppression tactics to minimize impacts on sensitive habitat area.
4. Malibu Springs	Contain 100% of unwanted wildland fires during initial action phase; protect structures	1993, 1985, 1956	Remote; narrow mountain roads, steep terrain.	Low-density houses; owners generally take care of own brush clearance. See Circle X for sensitive species.	Investigate encroachment issues; determine planning requirements with VC Planning Dept.
5. Malibu Springs Satellite	Contain 100% of unwanted wildland fires.	1956	Tiny unit; Mullholland Dr. on west side.	No houses or structures immediately adjacent.	None necessary for structure protection.

Parcel Name	Fire Mgt. Objectives	Fire History	Control Problems	Values at Risk	Mitigation
6. Nicholas	Contain 100% of unwanted wildland fires.	1956 (60%) 1985 (50%)	Potential for illegal campfires due to large parking area	No structures immediately adjacent	Either gate or rehab road to prevent illegal campfires or use as emergency access.
7. Arroyo Sequit	Contain 100% of unwanted wildland fires; restore grassland potential	1985 (80%) 1956 (20%)	Exotic grasses (flashy fuels), adjacent wildlands.	Satellite dish farm adjacent; structure with weed abatement on southeast side. park structures; Sensitive species/habitats: <i>Taricha tarosa</i> , southern live oak riparian forest.	Weed abatement for park structures.
8. Decker School	Contain 100% of unwanted wildland fires.	1985	Small park unit among other wildland fuels and scattered homes.	Homes with good weed abatement; Sensitive habitats: southern live oak riparian forest.	Potential encroachment on southwest side of unit. LA County plowing.
9. Little Sycamore	Contain 100% of unwanted wildland fires.	1993	Continuous wildland fuel bed from Hwy 101 to the north. Paved road through southwest side of unit.	No homes within weed abatement zone (200 feet).	None necessary.
10. Triunfo	Contain 100% of unwanted wildland fires.	1985	Tiny unit within continuous fuel bed.	One home (compound) on southwest side of unit.	Potential encroachment issue on southwest side of unit.
11. Etz Meloy	Contain 100% of unwanted wildland fires.	1985	Tiny unit within continuous fuel bed.	Private property with structures adjacent to property	Extensive weed abatement around compound; potential encroachment issues, especially on southeast side.
12. Carlisle	Contain 100% of unwanted wildland fires.	No record	Small unit within continuous fuel bed.	None.	None.
13. Decker Canyon/ Lechusa	Contain 100% of unwanted wildland fires.	1985; 3 acres in 2003	Steep; on roadside.	Up to 5 homes within 200 feet of wildland vegetation; riparian area; Sensitive species/habitat: <i>Calochortus plummerae</i> .	Paved roads between wildland fuels and homes. Use appropriate suppression tactics to minimize impacts on sensitive habitat area.
14. Yellow Hill	Contain 100% of unwanted wildland fires.	1993	Steep; not easily accessible.	1 home on north side of unit.	Property owner has done weed abatement on their own property; home is on upwind side.
15. Deer Creek	Contain 100% of unwanted wildland fires.	1993, 1989		2 homes on north side of unit. Sensitive habitat: Southern coast live oak riparian woodland.	Have own brush clearance. Sensitive habitat is downwind from homes; use appropriate suppression tactics to minimize impacts on sensitive habitat area.
16. Pacific View	Contain 100% of unwanted wildland fires.	1993, 1989	Steep; not easily accessible.	None	None.
17. Serrano Valley	Contain 100% of unwanted wildland fires.	1993		Edge of State Park land with wilderness area.	Use appropriate suppression tactics to minimize impacts on sensitive habitat area.
18. Rancho Sierra Vista	Contain 100% of unwanted wildland fires; potential restoration area using prescribed fire.	1993	Campground down canyon at coast.	Housing development on north side of unit, across paved road. Park development.	Weed abatement around park developments. Big Sycamore Canyon Road could potentially be used as control line.
19. Westlake	Contain 100% of unwanted wildland fires.	1978	No access.	Southeast side of Westlake Village.	None.

Parcel Name	Fire Mgt. Objectives	Fire History	Control Problems	Values at Risk	Mitigation
20. Rocky Oaks	Contain 100% of unwanted wildland fires. Potential restoration site using prescribed fire.	1978	In Kanan-Dume fire corridor.	Private property to west and south plus a park residence and museum building. Sensitive species: <i>Pentachaeta lyonii</i> , <i>Deinandra minthornii</i> .	Paved road between park and homes to the south. Landscape design should meet fire safety standards. Use appropriate suppression tactics to minimize impacts on sensitive habitat area.
21. Lower Brewster	Contain 100% of unwanted wildland fires.	1978	Fairly inaccessible by vehicle (dirt road); unit is in middle of privately owned wildlands.	Structures to the southwest. Sensitive species: <i>Phrynosoma coronatum blainvillei</i> .	Structures beyond 200' from boundary; responsible for own brush clearance. Use appropriate suppression tactics to minimize impacts on sensitive habitat area.
22. Seminole Hot Springs	Contain 100% of unwanted wildland fires.	1978	Unit is adjacent to other private wildlands.	Scattered homes to the north and east of unit. Sensitive species: <i>Dudleya cymosa marcescens</i> .	Structures beyond 200' from boundary; responsible for own brush clearance.
23. Malibu Lake	Contain 100% of unwanted wildland fires.	1978 (40%) 1958 (10%) pre-1925 (50%)	Steep, heavily-vegetated terrain with no vehicle access.	State Park facility adjacent to southeast boundary. Sensitive species: <i>Clemmys marmorata pallida</i> .	Use appropriate suppression tactics to minimize impacts on sensitive habitat area.
24. Peter Strauss	Contain 100% of unwanted wildland fires.	1978	No vehicle accesses from the south and east.	Park structures and private property on northwest boundary. Sensitive habitat: Southern sycamore alder riparian woodland.	Park structures: irrigated lawn, sparse oak understory. Use appropriate suppression tactics to minimize impacts on sensitive habitat area.
25. Paramount Ranch	Contain 100% of unwanted wildland fires; potential restoration of grassland using prescribed fire.	1982, 1978	Paved roads on two sides (Mulholland and Kanan); inaccessible most of unit. Private wildland fuels between unit and Kanan Rd.	Structures built up to boundary on north, west and south sides. Historic movie site. Sensitive species: <i>Clemmys marmorata pallida</i> .	Weed abatement around park structures and on east side. Use appropriate suppression tactics to minimize impacts on sensitive habitat area.
26. Castro Crest	Contain 100% of unwanted wildland fires.	1982; 10 acres in 2006	Continuous fuel bed from Hwy 101 to coast. Road along much of crest may be used as control line.	Scattered homes around unit; repeater site; Sensitive species: <i>Deinandra minthornii</i> , <i>Erodium macrophyllum</i> , <i>Phrynosoma coronatum blainvillei</i> .	Potential encroachments. Weed abatement around repeater site.
27. Ramirez	Contain 100% of unwanted wildland fires.	1978 (95%) 1982 (5%)	Continuous fuel bed. Paved road from PCH to Latigo Canyon Road.	Private property (wildland) adjacent. Sensitive species: <i>Phrynosoma coronatum blainvillei</i> .	Use appropriate suppression tactics to minimize impacts on sensitive habitat area.
28. Malibu Vista	Contain 100% of unwanted wildland fires.	1982	Continuous fuel bed adjacent (private property)	None.	None.
29. Malibu Bowl	Contain 100% of unwanted wildland fires.	1982	Surrounded by private wildland fuels; park lands to north.	Private home to east of unit.	LA County discs a small section.
30. El Nido	Contain 100% of unwanted wildland fires.	1996 (80%) 1970 (15%) 1982 (5%)	Surrounded by private wildland fuels.	Community to southwest. Other wildland fuels in between.	None.

Parcel Name	Fire Mgt. Objectives	Fire History	Control Problems	Values at Risk	Mitigation
31. Solstice	Contain 100% of unwanted wildland fires.	1996, 1982	Other wildland fuels adjacent to unit.	Scattered homes surrounding unit; new B&B proposed down canyon; park facilities and resident; sensitive species: <i>Pentachaeta lyonii</i> , <i>Onchorynchus mykiss irideus</i> , riparian habitat.	Burying power lines in public parking area. Use appropriate suppression tactics to minimize impacts on sensitive habitat area.
32. Gillette & Diamond X ranches	Contain 100% of unwanted wildland fires.	1996, 1970	Multiple old structures, one way access/egress.	Park structures, historic buildings to west; small cluster of homes (mobile home park) to southeast. Sensitive species <i>Baccharis malibuensis</i> .	Irrigated fields, mowing. MH Park maintains buffer (mow line) between structures and park unit. Encroachments from neighbors
33. Monte Nido	Contain 100% of unwanted wildland fires.	No record	Small unit surrounded by other wildland vegetation.	Small cluster of homes to south; other wildland fuels between.	None.
34. Piuma	Contain 100% of unwanted wildland fires.	1993 (80%) 1996 (20%)	Structure on property appears to be well surrounded by weed abatement zone.	Major encroachment – house and weed abatement.	Potential encroachments.
35. Saddle Peak	Contain 100% of unwanted wildland fires.	1993	Wildland fuels to north and south.	Urban intermix nearby; Sensitive species: <i>Lampropeltis zonata pulchra</i> , <i>Phrynosoma coronatum blainvillei</i> .	Use appropriate suppression tactics to minimize impacts on sensitive habitat area.
36. Saddle Peak/ Hepatic Gulch	Contain 100% of unwanted wildland fires	1993		Urban intermix nearby	
37. Las Flores/ Camp 8	Contain 100% of unwanted wildland fires.	1993 (95%)	Steep terrain.	Community to north; scattered homes to south.	None. LA County Fire facility.
38. Liberty Canyon	Contain 100% of unwanted wildland fires. Potential restoration site using prescribed fire.	1993, 1982, 1984, 1931	Continuous vein of wildland fuels through this corridor to south side of Hwy 101.	Community to west, across paved road. Sensitive habitat: California Walnut woodland.	Weed abatement on park side of road to buffer homes; use appropriate suppression tactics to minimize impacts on sensitive habitat area.
39. BC's Speck	Contain 100% of unwanted wildland fires.	No record	No access; continuous vein of fuels from Hwy 101 to PCH.	None.	None.
40. Hondo Canyon	Contain 100% of unwanted wildland fires.	1993	Continuous vein of fuel from north.	One home on south.	Homeowner does own weed abatement; potential encroachment.
41. Topanga Oaks	Contain 100% of unwanted wildland fires.	1993	Continuous vein of fuel with little access.	Scattered homes nearby. Sensitive species: <i>Clemmys marmorata pallida</i> .	Use appropriate suppression tactics to minimize impacts on sensitive habitat area.
42. Tuna Canyon	Contain 100% of unwanted wildland fires.	1993	Continuous fuel bed with scattered homes.	Home to northwest that is within 200'.	Homeowner does weed abatement without encroachment.
43. Topanga NW (square)	Contain 100% of unwanted wildland fires.	1961	Middle of wildland fuel unit. Access to north via Dirt Mulholland.	Homes within 1000' to west; Sensitive habitats: Southern sycamore-alder riparian and California walnut woodlands; fossil site along western ridge.	Use appropriate suppression tactics to minimize impacts on sensitive habitat area.
44. Fishhead	Contain 100% of unwanted wildland fires.	Pre-1925	Reported to be frequently used by homeless individuals.	Mobile home park to southwest; Sensitive habitat: Southern live oak riparian woodland.	None.

Parcel Name	Fire Mgt. Objectives	Fire History	Control Problems	Values at Risk	Mitigation
45. Franklin Canyon	Contain 100% of unwanted wildland fires; potential seedbank study site.	Pre-1925	Expensive old homes on all sides; private (DWP) wildland to north.	Expensive homes on west side in drainage; Sensitive species: <i>Phrynosoma coronatum blainvillei</i> .	Weed abatement to buffer homes on west side.
46. Fryman	Contain 100% of unwanted wildland fires.	Pre-1925	Limited access.	High density homes, particularly on the southwest uphill side.	Weed abatement along Mulholland Dr.

Appendix F

**Fire Complexity Guide and
Transition Checklist**

Santa Monica Mountains National Recreation Area

Fire Management Plan

Santa Monica Mountains National Recreation Area

FIRE TRANSITION GUIDE

Objectives

- All firefighters shall be under the control and direction of supervisors who do not have other duties that distract them from providing adequate oversight for the safety of all the people under their supervision.
- The fire organization increases in both size and qualifications to match the complexity of the evolving fire situation.

Establishing Fire Complexity

- Dispatches to reported wildfire within the initial action zone will include a minimum of one Type 3 or 6 NPS engine and a Duty Officer or Agency Representative from the park. The primary fire cooperators with jurisdictional authority in the area of the reported fire will be notified by the Angeles National Forest EOC.
- Upon initial action, the Complexity Analysis and Transition Guide shall be used to determine the appropriate management level of the incident and the Incident Commander's qualifications.

Type 5 Incident

- Santa Monica Mountains NRA does not use Type 5 Incident Commanders. All fires shall be staffed by at a minimum by a qualified ICT4

Type 4 Incident

- A Type 4 incident is one that can be commanded by a Single Resource Boss (SRB) who is qualified as ICT4 and can conduct both the ICT4 and the SRB duties simultaneously, maintaining communications and command and control of the people under his/her direction at all times.
- Type 4 fires are typically described as small, slow moving fires that require only one or two fire suppression modules and will be contained and placed in patrol status by the beginning of the next burning period. Aircraft may be used on the fire for delivery of firefighters and/or limited aerial tactical support. Aircraft types are normally not mixed. The potential for significant fire growth is low.

Type 3 Incident

- A fire must be rated Type 3 at any point the ICT4/SRB or Duty Officer determines that he/she cannot conduct both the duties of the Incident Commander while maintaining communications and command and control of the people assigned to the incident.
- Once the ICT4 or Duty Officer identifies the fire complexity has transitioned to the next level of management; one of the following actions will be implemented.
 - A dedicated ICT3 will be assigned or the responding Duty Officer must assume command.
 - The initial action ICT4/SRB may, if qualified, assume the ICT3 duties if:
 - His/her module can be assigned to another module leader and safe oversight of the people on both modules can be assured.

OR

- The module must stand down and be placed in a safe area away from the incident until qualified overhead arrives to fill the required incident management position.
- The Duty Officer, if not yet on scene, may approve the SRB to only perform work as a module to protect structures or take action that can be safely accomplished by the module until the arrival of a qualified Incident Commander.

Required Complexity Analysis for Type 3 and Above Fires

Once an incident has been determined to be a Type 3 incident, the Incident Complexity Analysis must be completed to evaluate the current and potential complexity of the fire. This analysis may be completed by any of the following personnel:

- ICT3
- Duty Officer
- Agency Administrator

Santa Monica Mountains National Recreation Area INCIDENT COMPLEXITY ANALYSIS

	DEFINTION	YES	NO
1.	Fuels extremely dry and susceptible to long-range spotting or you are currently experiencing extreme fire behavior.		
2.	Weather forecast indicating no significant relief or worsening conditions.		
3.	Current or predicted fire behavior dictates indirect control strategy with large amounts of fuel within planned perimeter.		
4.	Performance of firefighting resources affected by cumulative fatigue.		
5.	Overhead overextended mentally and/or physically.		
6.	Communication ineffective with tactical resources or dispatch.		
7.	150 or more personnel assigned to incident or more than three divisions.		
8.	Incident action plans, briefings, etc. missing or poorly prepared.		
9.	Variety of specialized operations, support personnel or equipment.		
10.	Unable to properly staff air operations/multiple aircraft are involved or anticipated		
11.	Limited local resources available for initial action.		
12.	Heavy commitment of local resources to logistical support		
13.	Existing forces have worked 24 hours without success		
14.	Resources unfamiliar with local conditions and tactics.		
15.	Urban interface: Structures, development, recreational facilities, or potential for evacuation.		
16.	Fire burning or threatening more than one jurisdiction and potential for unified command with different or conflicting management objectives.		
17.	Unique natural resources, special-designation areas, critical municipal watershed, T&E species habitat, cultural value sites.		
18.	Sensitive political concerns, media involvement, or controversial fire policy.		
19.	Exposure of personnel to unusually hazardous conditions.		
20.	Terrain adversely affects tactical capability – limits safety zones.		
	TOTAL NUMBER OF ELEMENTS CHECKED "YES"		

Complexity Analysis Rating:

1-6 Elements checked "yes". Complexity level suggests a Type 3 Incident.

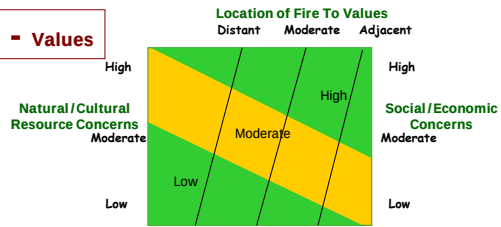
7 + Elements checked "yes". Complexity level suggests a Type 2 or Type 1 Incident. Once the incident is upgraded to Type 2 or Type 1, WFDSS decision documentation is required.

PREPARED BY: _____

TITLE: _____

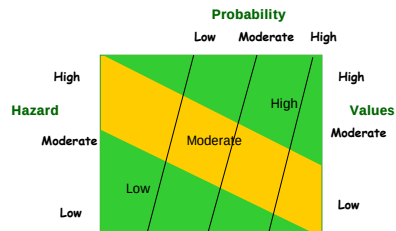
DATE: _____

1 - Values

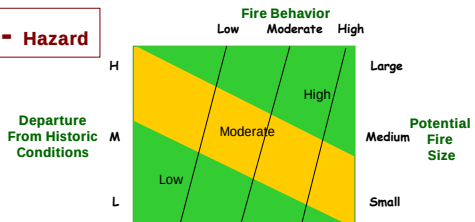


Wildland Fire Relative Risk Assessment

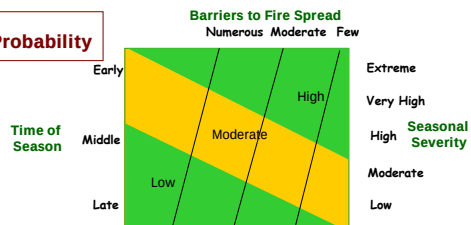
4 - Relative Risk



2 - Hazard



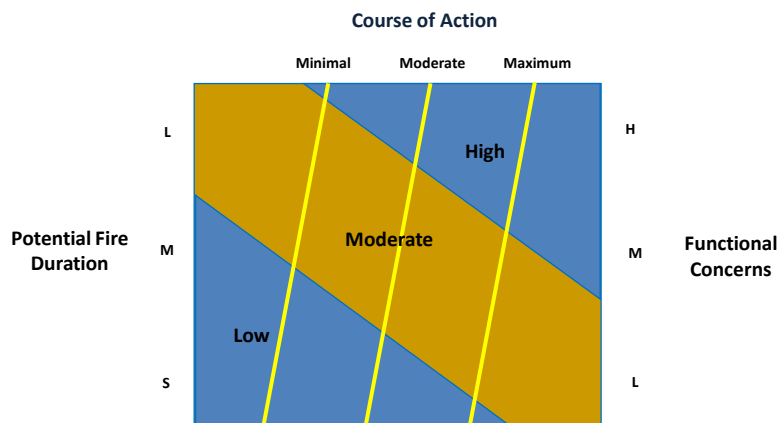
3 - Probability



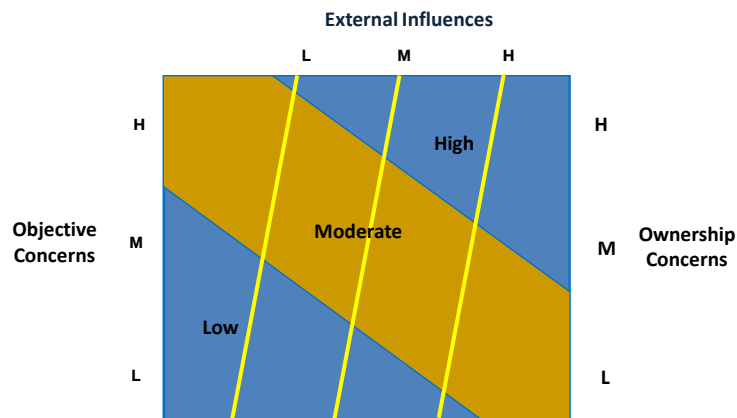
Complete Steps 1 - 3: Connect the left and right variables with a line. At the top of the chart, select the appropriate value; follow the line beneath this value down to its intersection with the line connecting the left and right variables. Take results as inputs to Step 4.

Complete Step 4: Read the relative risk from the background area where the intersection occurs.

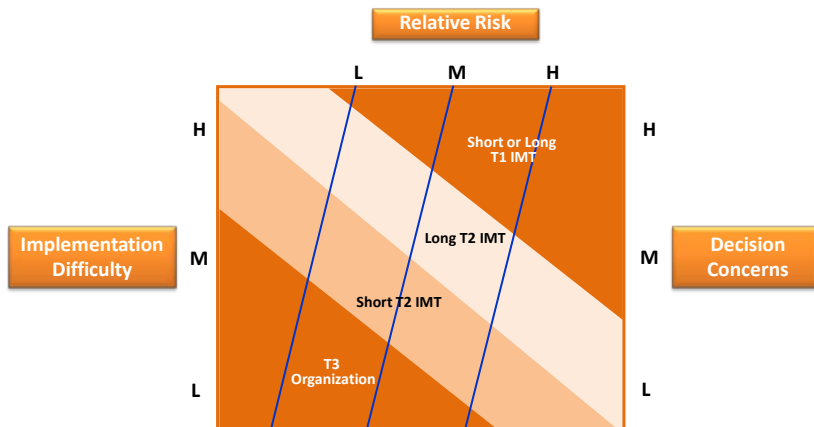
Implementation Difficulty



Decision Concerns



Organizational Needs Assessment





Appendix G

Fire Danger Step-Up Plan

Santa Monica Mountains National Recreation Area

Fire Management Plan

Step-Up Plan & Closures

1) Fire management preparedness activities are based upon the range of burning indices predicted by the National Fire Danger Rating System. As the burning index (BI) increases with extreme fire danger, fire preparedness activities undertaken by National Park Service fire personnel will concurrently increase. These increases in preparedness activities are defined in the "step-up plan" as increases in "Staffing Class" as predicated by the following levels of the Burning Index:

<u>Burning Index (BI)</u>	<u>Staffing Class/Fire Danger</u>
0 - 39	I Low
40 - 75	II Moderate
76 - 125	III High
126 - 170	IV Very High
Above 170	V Extreme

Santa Ana winds and Red Flag Warnings will automatically increase the staffing class to the next higher level based upon the historical record of extreme wildfires occurring in Southern California under these weather conditions.

Staffing Class I: (Fire Danger Rating: Low) - Additional fire personnel are not required other than the parks normal daily complement of firefighters. Initial action personnel will be assigned normal tours of duty and assigned to project work.

Staffing Class II: (Fire Danger Rating: Moderate) - Additional fire personnel are not required other than the parks normal daily complement of firefighters. Initial action personnel will be assigned normal tours of duty and assigned to project work. Daily fire weather observations will be taken and entered into the National Fire Danger Rating System for computation of predicted fire danger (BI).

Staffing Class III (Fire Danger Rating: High) - Additional fire personnel are normally not required other than the park normal complement of firefighters. Initial action personnel will work normal tours of duty, in teams of two while maintaining a get-away time of five minutes. Daily fire weather observations will be entered into the National Fire Danger Rating System as well as daily fire situation reports.

Staffing Class IV: (Fire Danger Rating: Very High) - Initial action forces will be scheduled for a six-day work week to provide a minimum daily complement of six firefighters. All fire personnel will maintain a getaway time of four minutes.

In addition to those actions and activities to be accomplished during Staffing Class III, twice-daily extended patrols of all public-use areas will be conducted. Extended daily tours of duty will occur during the times of day the Burning Index remains above 125. Additional payments for extended coverage and tours of duty will be charged to emergency preparedness funds.

Staffing Class V: (Fire Danger Rating: Extreme) - Initial action forces will be scheduled for a seven-day work week to provide a minimum daily complement of ten firefighters. Initial action forces and overhead will be pre-positioned in heavily visited public-use areas. All fire personnel will maintain a get-away time of three minutes.

In addition to those actions and activities to be accomplished during Staffing Class IV, public-use area closures or other public-use restrictions will be considered and implemented on a case-by-case basis by the Chief Park Ranger or his/her acting designee. Additional payments for extended coverage and tours of duty will be charged to emergency preparedness funds.

Assistance by County fire agencies may be contracted for by the Chief Park Ranger or his/her designee.



Appendix H

Interagency Fire Agreements

**Los Angeles City Fire Department
Los Angeles County Fire Department
Ventura County Fire Protection District
Angeles National Forest**

Santa Monica Mountains National Recreation Area

Fire Management Plan

Agreement No. RFPA _____

RECIPROCAL FIRE PROTECTION AGREEMENT

BETWEEN

THE NATIONAL PARK SERVICE
SANTA MONICA MOUNTAINS NATIONAL RECREATION AREA

AND

THE LOS ANGELES CITY FIRE DEPARTMENT
CITY OF LOS ANGELES COUNTY

THIS AGREEMENT, made and entered into this _____ day of _____, 1999, by and between the National Park Service, Santa Monica Mountains National Recreation Area, hereinafter referred to as "SMMNRA," and the Los Angeles City Fire Department, hereinafter referred to as "LAFD."

Article I
Background and Objectives

WHEREAS, the SMMNRA is mandated and responsible to provide for fire suppression, fire prevention, and protection of life, property and resources on lands administered by the SMMNRA; and

WHEREAS, the LAFD is mandated and responsible for providing fire suppression, fire prevention, and protection of life, property, and resources within LAFD jurisdiction; and

WHEREAS, the Director of the National Park Service (or his/her delegate) is authorized to enter this Agreement pursuant to 16 USC 460KK (j), 42 U.S.C. 1856 a, and to enter into this Agreement and has mutual aid authority under 16 USC 1b1; and

WHEREAS, it is in the best interest of the citizens of the CFPD to provide the most expeditious response to suppress fires; and

WHEREAS, both the SMMNRA and the LAFD desire to cooperate to the maximum extent possible to achieve objectives of common interest and concern with respect to fire suppression, fire prevention, and protection of life, property, and resources within their respective jurisdictions.

NOW, THEREFORE, both parties do mutually understand and agree as follows:

Article II Statement of Work

This Agreement herein made is subject to the following terms and conditions:

(1) The LAFD shall provide fire protection and suppression services within the boundaries of the SMMNRA, which area is within the boundaries of the LAFD.

(2) The SMMNRA shall assist the LAFD in fire suppression activities with available equipment and manpower.

(3) The nature, scope, and extent of service provided by the CFPD shall be determined in a Fire Operations Plan mutually agreed upon by the SMMNRA and the LAFD.

(4) The Fire Operations Plan may be amended as mutually agreed upon by both parties.

(5) The LAFD shall be reimbursed by SMMNRA for direct expenses, which are additional firefighting costs above normal operation costs, and losses incurred while fighting fires under this Agreement as determined by the LAFD. If an incident involves multiple jurisdictions, then a cost-share agreement shall be developed and signed by all applicable jurisdictions by the close of the incident. Said reimbursement shall be based upon a Billing Rate Schedule for contracted wildland and structural services approved by the City of Los Angeles, Chief Administrative Office. The Billing Rate Schedule shall be attached to and be a part of the Fire Operations Plan.

(6) The LAFD, through its Fire Chief, may annually update the Billing Rate Schedule to reflect current billing rates of the LAFD as approved by the City of Los Angeles, Chief Administrative Office. The Fire Operations Plan shall be amended to reflect this annual update of the billing rate schedule.

(7) This Agreement does not affect or limit the LAFD's rights or remedies to seek reimbursement from any other sources other than SMMNRA for expenses or losses incurred while performing fire suppression services under this Agreement.

(8) This Agreement is made upon the express condition that each party to this Agreement, its agents and employees, shall be held harmless and free from all liabilities and claims for damages and/or suits from the other party for or by reason of any injury, injuries, or death to any person or persons or property of any kind whatsoever. Each party hereby covenants and agrees to assume responsibility for its respective liabilities, charges, expenses, and costs on account of or by reason of any injuries, deaths, liabilities, claims, suits, or losses however occurring or damages growing out of its activities under this Agreement. This does not preclude the CFPD from obtaining reimbursement for expenses as stated in the Fire Operations Plan.

Article III

Term of Agreement

This Agreement hereby made shall terminate five (5) years from the effective date hereof, at noon California time, unless prior thereto it is relinquished, abandoned, or otherwise terminated pursuant to the provisions of this Agreement or of any applicable Federal or State law or regulation. This Agreement may be renewed or otherwise amended by the mutual written Agreement of the parties. The effective date of this Agreement shall be the date of its execution by the SMMNRA and the LAFD.

Article IV

Termination of the Agreement

This Agreement may be terminated upon 30 days written notice by either party.

Article V
Required Clause

During the performance of this Agreement, the participants agree to abide by the terms of Executive Order 11246 on nondiscrimination and will not discriminate against any person because of race, color, religion, sex, or national origin. The participants will take affirmative action to ensure that applicants are employed without regard to their race, color, religion, sex, or national origin.

WITNESS WHEREOF, this Agreement has been executed on the day and year first above written and is effective and operative as to each of the parties as herein provided.

NATIONAL PARK SERVICE
SANTA MONICA MOUNTAINS
NATIONAL RECREATION AREA

CITY OF LOS ANGELES
LOS ANGELES FIRE DEPARTMENT

By _____
Superintendent

By _____

ATTEST:

ATTEST:

By _____
Deputy Superintendent

By _____

APPROVED AS TO FORM:

APPROVED AS TO FORM:

By _____
Chief Park Ranger
Santa Monica Mountains NRA

By _____

Agreement No. RFPA _____

RECIPROCAL FIRE PROTECTION AGREEMENT
BETWEEN
THE NATIONAL PARK SERVICE
SANTA MONICA MOUNTAINS NATIONAL RECREATION AREA
AND
THE CONSOLIDATED FIRE PROTECTION DISTRICT
OF LOS ANGELES COUNTY

THIS AGREEMENT, made and entered into this _____ day of _____, 1999, by and between the National Park Service, Santa Monica Mountains National Recreation Area, hereinafter referred to as "SMMNRA," and the Consolidated Fire Protection District of Los Angeles County, hereinafter referred to as "CFPD."

Article I
Background and Objectives

WHEREAS, the SMMNRA is mandated and responsible to provide for fire suppression, fire prevention, and protection of life, property and resources on lands administered by the SMMNRA; and

WHEREAS, the CFPD is mandated and responsible for providing fire suppression, fire prevention, and protection of life, property, and resources within CFPD jurisdiction; and

WHEREAS, the Director of the National Park Service (or his/her delegate) is authorized to enter this Agreement pursuant to 16 USC 460KK (j), 42 U.S.C. 1856 a, and to enter into this Agreement and has mutual aid authority under 16 USC 1b1; and

WHEREAS, it is in the best interest of the citizens of the CFPD to provide the most expeditious response to suppress fires; and

WHEREAS, both the SMMNRA and the CFPD desire to cooperate to the maximum extent possible to achieve objectives of common interest and concern with respect to fire

suppression, fire prevention, and protection of life, property, and resources within their respective jurisdictions.

NOW, THEREFORE, both parties do mutually understand and agree as follows:

Article II Statement of Work

This Agreement herein made is subject to the following terms and conditions:

(1) The CFPD shall provide fire protection and suppression services within the boundaries of the SMMNRA, which area is within the boundaries of the CFPD.

(2) The SMMNRA shall assist the CFPD in fire suppression activities with available equipment and manpower.

(3) The nature, scope, and extent of service provided by the CFPD shall be determined in a Fire Operations Plan mutually agreed upon by the SMMNRA and the CFPD.

(4) The Fire Operations Plan may be amended as mutually agreed upon by both parties.

(5) The CFPD shall be reimbursed by SMMNRA for direct expenses, which are additional firefighting costs above normal operation costs, and losses incurred while fighting fires under this Agreement as determined by the CFPD. If an incident involves the CFPD and SMMNRA a cost-share agreement shall be developed and signed by all applicable jurisdictions by the close of the incident or as soon as reasonable. Said reimbursement shall be based upon a Billing Rate Schedule for contracted wildland and structural services approved by the Los Angeles County Auditor-Controller. The Billing Rate Schedule shall be attached to and be a part of the Fire Operations Plan.

(6) The CFPD, through its Fire Chief, may annually update the Billing Rate Schedule to reflect current billing rates of the CFPD as approved by the Los Angeles County Auditor-Controller. The Fire Operations Plan shall be amended to reflect this annual update of the billing rate schedule.

(7) This Agreement does not affect or limit the CFPD's rights or remedies to seek reimbursement from any other sources other than SMMNRA for expenses or losses incurred while performing fire suppression services under this Agreement.

(8) This Agreement is made upon the express condition that each party to this Agreement, its agents and employees, shall be held harmless and free from all liabilities and claims for damages and/or suits from the other party for or by reason of any injury, injuries, or death to any person or persons or property of any kind whatsoever. Each party hereby covenants and agrees to assume responsibility for its respective liabilities, charges, expenses, and costs on account of or by reason of any injuries, deaths, liabilities, claims, suits, or losses however occurring or damages growing out of its activities under this Agreement. This does not preclude the CFPD from obtaining reimbursement for expenses as stated in the Fire Operations Plan.

Article III Term of Agreement

This Agreement hereby made shall terminate five (5) years from the effective date hereof, at noon California time, unless prior thereto it is relinquished, abandoned, or otherwise terminated pursuant to the provisions of this Agreement or of any applicable Federal or State law or regulation. This Agreement may be renewed or otherwise amended by the mutual written Agreement of the parties. The effective date of this Agreement shall be the date of its execution by the SMMNRA and the CFPD.

Article IV Termination of the Agreement

This Agreement may be terminated upon 30 days written notice by either party.

Article V Required Clause

During the performance of this Agreement, the participants agree to abide by the terms of Executive Order 11246 on nondiscrimination and will not discriminate against any person because of race, color, religion, sex, or national origin. The participants will take affirmative action to ensure that applicants are employed without regard to their race, color, religion, sex, or national origin.

IN WITNESS WHEREOF, this Agreement has been executed on the day and year first above written and is effective and operative as to each of the parties as herein provided.

NATIONAL PARK SERVICE
SANTA MONICA MOUNTAINS
NATIONAL RECREATION AREA

CONSOLIDATED FIRE PROTECTION
DISTRICT OF LOS ANGELES COUNTY

By _____
Superintendent

By _____
Chairperson, Board of Supervisors

ATTEST:

ATTEST:
JOANNE STURGES, Executive Officer
Clerk of the Board of Supervisors

By _____
Deputy Superintendent

By _____
Deputy

APPROVED AS TO FORM:

APPROVED AS TO FORM:

LLOYD W. PELLMAN
COUNTY COUNSEL

By _____
Chief Park Ranger

By _____
Deputy

Signatures on File

Agreement No. RFPA _____

RECIPROCAL FIRE PROTECTION AGREEMENT
BETWEEN
THE NATIONAL PARK SERVICE
SANTA MONICA MOUNTAINS NATIONAL RECREATION AREA
AND
THE VENTURA COUNTY FIRE PROTECTION DISTRICT

THIS AGREEMENT, made and entered into this _____ day of _____, 1999, by and between the National Park Service, Santa Monica Mountains National Recreation Area, hereinafter referred to as ASMMNRA,≡ and the Ventura County Fire Protection District, hereinafter referred to as AVCFPD.≡

Article I
Background and Objectives

WHEREAS, the SMMNRA is mandated and responsible to provide for fire suppression, fire prevention, and protection of life, property and resources on lands administered by the SMMNRA; and

WHEREAS, the VCFPD is mandated and responsible for providing fire suppression, fire prevention, and protection of life, property, and resources within VCFPD jurisdiction; and

WHEREAS, the Director of the National Park Service (or his/her delegate) is authorized to enter this Agreement pursuant to 16 USC 460KK (j), 42 U.S.C. 1856 a, and to enter into this Agreement and has mutual aid authority under 16 USC 1b1; and

WHEREAS, it is in the best interest of the citizens of the VCFPD to provide the most expeditious response to suppress fires; and

WHEREAS, both the SMMNRA and the VCFPD desire to cooperate to the maximum extent possible to achieve objectives of common interest and concern with respect to fire

suppression, fire prevention, and protection of life, property, and resources within their respective jurisdictions.

NOW, THEREFORE, both parties do mutually understand and agree as follows:

Article II Statement of Work

This Agreement herein made is subject to the following terms and conditions:

- (1) The VCFPD shall provide fire protection and suppression services within the boundaries of the SMMNRA, which are within the boundaries of the VCFPD.
- (2) The SMMNRA shall assist the VCFPD in fire suppression activities with available equipment and staffing.
- (3) The nature, scope, and extent of service provided by the VCFPD shall be determined in a separate Fire Operations Plan mutually agreed upon by the SMMNRA and the VCFPD.
- (4) The Fire Operations Plan may be amended as mutually agreed upon by both parties.
- (5) The SMMNRA shall reimburse VCFPD for resources used on NPS land as agreed upon between the VCFPD and the SMMNRA. All losses of equipment or repairs necessitated as a result of the incident shall be reimbursed by SMMNRA.

If an incident involves multiple jurisdictions, then a cost-share agreement shall be developed and signed by all applicable jurisdictions by the close of the incident. Reimbursement shall be made according to the VCFPD's annual Board of Directors' Rate and Fee Schedule, which is adjusted annually. VCFPD shall forward the annual rates to SMMNRA upon adoption. The Rates and Fees Schedule is attached as Exhibit A.
- (6) This Agreement does not affect or limit the VCFPD's rights or remedies to seek reimbursement from any other sources other than SMMNRA for expenses or losses incurred while performing fire suppression services under this Agreement.
- (7) Each party shall indemnify, defend, and hold the other party, its officers and employees, harmless from any and all cost, expense, and liability for injury or damage to persons or property arising out of or caused by its acts or omissions or the acts or omissions of

its officers and employees in the performance of this Agreement. This does not preclude the VCFPD from obtaining reimbursement for expenses as stated in the Fire Operations Plan.

Article III

Term of Agreement

This Agreement hereby made shall terminate five (5) years from the effective date hereof, at noon California time, unless prior thereto it is relinquished, abandoned, or otherwise terminated pursuant to the provisions of this Agreement or of any applicable Federal or State law or regulation. This Agreement may be renewed or otherwise amended by the mutual written Agreement of the parties. The effective date of this Agreement shall be the date of its execution by the SMMNRA and the VCFPD.

Article IV

Termination of the Agreement

This Agreement may be terminated and/or renegotiated upon 60 days written notice by either party.

Article V

Required Clause

During the performance of this Agreement, the participants agree to abide by the terms of Executive Order 11246 on nondiscrimination and will not discriminate against any person because of race, color, religion, sex, or national origin. The participants will take affirmative action to ensure that applicants are employed without regard to their race, color, religion, sex, or national origin.

IN WITNESS WHEREOF, this Agreement has been executed on the day and year first above written and is effective and operative as to each of the parties as herein provided.

NATIONAL PARK SERVICE
SANTA MONICA MOUNTAINS
NATIONAL RECREATION AREA

VENTURA COUNTY FIRE PROTECTION
DISTRICT

Arthur E. Eck Date
Superintendent

Susan Lacey, Chair Date
Board of Directors

ATTEST:

ATTEST: RICHARD D. DEAN,
County Clerk, County of Ventura,
State of California, and ex-officio
Clerk of the Board of Directors of the Ventura
County Fire Protection District thereof.

By _____
Woodrow Smeck
Acting Deputy Superintendent

By _____
Deputy County Clerk

APPROVED AS TO FORM:

By _____
Jon Dick
Chief Ranger

Signatures on File

UNITED STATES DEPARTMENT OF THE INTERIOR INTER/INTRA-AGENCY AGREEMENT (IAA)			1. Period of Performance	
			START	END
			10/1/2011	9/30/2016
Buyer has work performed for them by the Seller named in item 6b.			Seller to perform work as described herein for the agency named in item 6a.	
SEE INSTRUCTIONS ON PAGE 2				
2. Common Document Number (Agreement Number)			3. Check appropriate box	
			☒ Original ☐ Modification No.	
4. Under the authority of (Cite authorities):				
☐ 43 U.S.C. 1701 et seq., (FLPMA)			☐ Working Capital Fund (WCF)	
☐ Department of the Interior Appropriation Act for FY			☒ Other: <u>Reciprocal Fire: Interagency Agreement for Fire Management between the BLM, BIA, NPS USFWS of the DOI and the USFS of the Dept of Agriculture</u>	
☐ 31 U.S.C. 1535 (the Economy Act)				
5. Description of Work (If more space is needed, attach additional sheets): See attached Statement of Work			PROJECT TITLE: Emergency Communications Center Support	
Buyer			Seller	
6a. National Park Service Agency: Address: Santa Monica Mountains National Recreation Area Address: 401 West Hillcrest Drive Thousand Oaks, CA 91360 (805) 370-2300 Administrative POC: Yvonne Morales Contracting Specialist Email: yvonne_morales@nps.gov Phone 415 464-5221 Fax Technical Point of Contact: Kathryn Kirkpatrick FMO Email: kathryn_kirkpatrick@nps.gov Phone 805 501-9444 Fax 805 370-1850			6b. Agency: US Forest Service Address: Angeles National Forest Address: 701 N Santa Anita Avenue Arcadia, CA 91006-2799 Administrative POC: Bonnie Harris Agreements Specialist Email: bharris@fs.fed.us Phone 626 574-5246 Fax 626 574-5363 Technical Point of Contact: Kris Armstrong Fire Planner Email: kmarmstrong@fs.fed.us Phone 661-723-2714 Fax 661 723-2710	
ACCOUNT DATA			BUYER	
7. Agency Location Code			7a. 14-10-0099	
8. BPN Number (DUNS #) FSN			8a.	
9. Treasury Account Symbol (TAS)			9a. 1431036	
10. Standard General Ledger			10a.	
11. Cost Structure/Account			11a. 8546-1213-P11 = \$26,000 & 8544-1004-HZS = \$46,000	
12. Business Event Type Code			12a.	
13. Requisition Number for Buyer/Project Account for Seller			13a. R8546 12 0001	
14. Contract Line Number for Buyer/Proposal Number or other data for Seller			14a.	
15. Buyer provide Expiration of Funding Source (Date or indefinite)			15a. /30/2016	
			7b. 12-40-1100	
			8b. 92-933-2484	
			9b. 12X1115	
			10b.	
			11b. 1110501 BOC 2510	
			12b. COLL	
			13b.	
			14b.	
			15b. NOTE: Seller, ensure project completion by the date (Seller must not incur additional costs) See Block 15a	

16. Amount Obligated by Buyer		17. Bill To (Name and Address, including zip code of Finance Office):	
a. Initial or current obligation:	\$ 72,000	Name: NPS Accounting Operations Center (AOC)	
b. Modification Amount (check one)	\$ 0	Address : P.O.Box 100000	
☐ Increase ☐ Decrease		Address : Herndon, VA 20171	
c. Total obligation:	\$ 72,000	Attn/Ref Agree #/R85461200001	
18. Billing for Federal Agencies and DOD will be processed via IPAC. (billing will be done ☐ bi-weekly ☐ monthly ☐ quarterly ☐ annually ☒ in advance)			
Upon Approval, this agreement constitutes an obligation against Buyer requesting the work; or authority to proceed with work by Seller for the herein named agency in anticipation of reimbursement.			
19. Approved for Buyer:		20. Approved by Seller:	
(Contracting Officer or other Authorized Signature) *other only for WCF		_____	
		(Seller's Authorizing Signature)	
19a. Name (Type): Yvonne Morales		20a. Name (Type):	
19b. Title: Contract Specialist	19c. Date:	20b. Title: Forest Supervisor	20c. Date:

**UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE**

INTERAGENCY ACQUISITION AGREEMENT

Attachment A
Description of Work *Item 5*

A. The USFS shall:

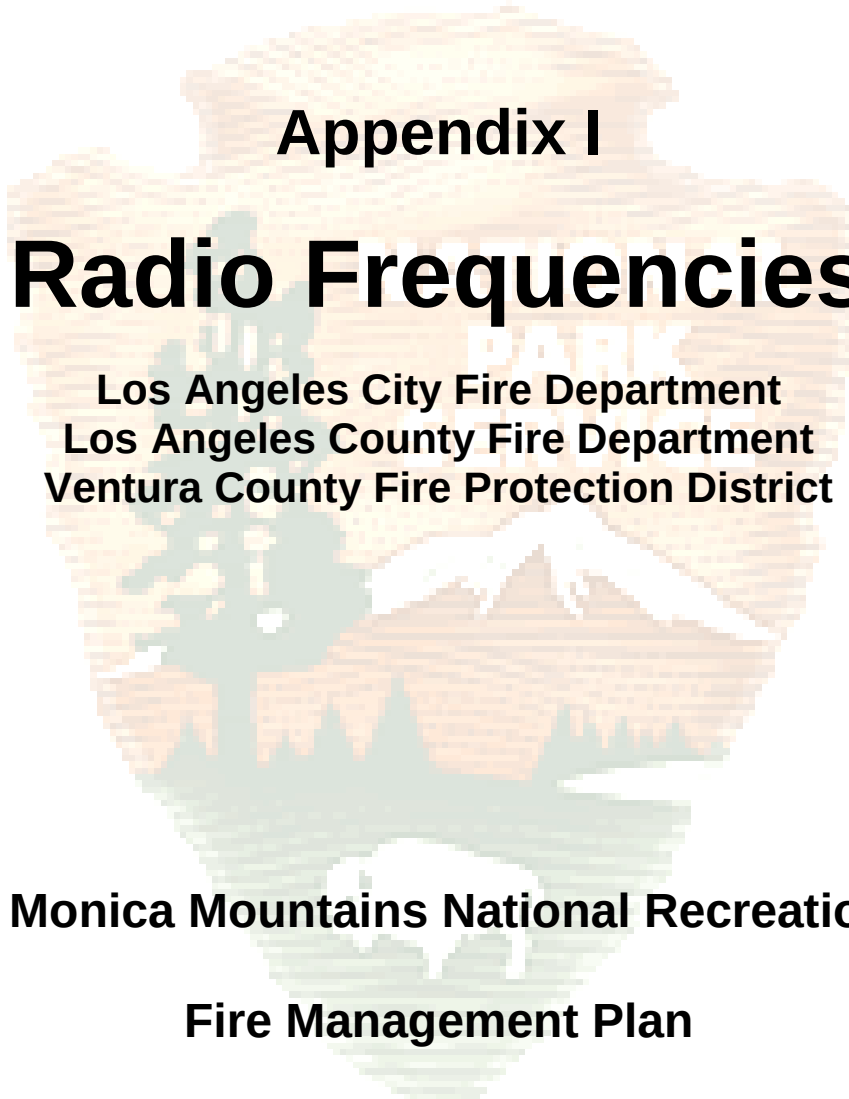
1. Provide aid and assistance for fire, law enforcement, training and other similar disciplines, as requested and as agency resources permit.
2. Provide the NPS with a 24-hour Interagency Communications Center for administrative and emergency operations including incident management, resource orders and law enforcement.
3. Develop a Communication Operating Plan for review by NPS that will outline the communication center organization and operating procedures. Agree to allow NPS to utilize USFS frequencies during cooperative assignments.
4. Issue and maintain NPS Case Incident Log for the NPS.
5. Advise, consult with and obtain the permission of the Superintendent of Santa Monica Mountains National Recreation Area, before any changes are made to the communication-operating plan that may affect the NPS.

B. The NPS shall:

1. Provide aid and assistance for fire, law enforcement, training and other similar disciplines, as requested and as agency resources permit.
2. Provide Angeles Communication Center NPS Radio Protocols, Location Maps and Radio Call Numbers, Duty Officer Status and pertinent Park personnel phone numbers.
3. Provide direct financial support funding in the amount of \$72,000 annually to the USFS for support operations of the ANF ECC 24-hour dispatch center for the remaining duration of this agreement.
4. Shall initiate the annual modification for USFS signatures May 1 of each calendar year.

The term of this Agreement is from October 1, 2011 to September 30, 2016.

Signatures on File



Appendix I

Radio Frequencies

**Los Angeles City Fire Department
Los Angeles County Fire Department
Ventura County Fire Protection District**

Santa Monica Mountains National Recreation Area

Fire Management Plan

Los Angeles County Fire Department Radio Frequency Assignments

Tac 17	Tac 21	Blue 1	Blue 5	Blue 9
154.430	154.070	470.562	470.662	470.637
Tac 18	Tac 22	Blue 2	Blue 6	Blue 10
154.340	159.090	470.437	470.412	470.362
Tac 19	Tac 23	Blue 3	Blue 7	Blue 11
154.400	154.415	470.612	470.462	470.587
Tac 20	Tac 24	Blue 4	Blue 8	Blue 12
153.830	158.970	470.512	470.537	470.487

Battalion	Blue	Tac	Area of coverage
1	3	21	Universal City, West Hollywood, La Dera Heights, Windsor Hills, View Park, Angeles Mesa, Marina Del Rey
2	6	17	Claremont, Glendora, San Dimas
3	3	17	Bell Gardens, Commerce, East Los Angeles, Pico Rivera
4	6	21	Altadena, La Canada Flintridge, La Crescenta, Kinneloa Canyon, Kagel Canyon
5	3	17	Agoura, Calabasas, Malibu, Topanga, Westlake Village
6	12	18	Canyon Country, Castaic, Chatsworth, Gorman, Newhall, Santa Clarita, Valencia, Stephenson Ranch
7	1	21	Carson and unincorporated areas surrounding Carson
8	1	21	La Mirada, Norwalk, Whittier
9	1	18	Bellflower, Cerritos, Hawaiian Gardens, Lakewood, Paramount
10	6	18	El Monte, Rosemead, San Gabriel(unincorporated), South El Monte, Temple City
11	12	17	Green Valley, Lake Hughes, Lancaster, Leona Valley, Quartz Hill
12	6	17	Hacienda Heights, Industry, La Puente, Rowland Heights
13	3	18	Bell, Firestone Park, Huntington Park, Lynwood, South Gate, Walnut Park, Willowbrook
14	1	17	Catalina Island, Lomita, Palos Verdes Estates, Rancho Palos Verdes, Rolling Hills, Two Harbors
15	6	18	Pomona
16	6	21	Azusa, Baldwin Park, Covina, Duarte, Irwindale
17	12	21	Acton, Agua Dolce, Littlerock, Pearblossom, Palmdale
18	1	17	Gardena, Hawthorne, Lawndale
19	6	21	Diamond Bar, Pomona, Walnut
20	1	24	Athens, Inglewood, Lennox, Westmont
	8		[Dispatch]

As of 6/7/2001:
 Battalion 3 TAC17 (154.4300)
 Battalion 9 TAC18 (154.3400)
 Battalion 12 TAC17 (154.4300)
 Battalion 14 TAC17 (154.4300)
 Battalion 15 TAC18 (154.3400)

VENTURA COUNTY OPERATIONAL AREA Radio Channel/Frequency Matrix							Ventura County Fire Operations				
CH	GR P	Agency	Receive Frequency	Receive Tone	Transmit Frequency	Transmit Tone	Repeat or Direct Toggle	Description	Use	Display	L P
1	1	VNC	154.0100	100.0	154.0100	100.0		DISPATCH 1	DISPATCH	VNC 1	
2	1	VNC	154.3250	100.0	154.3250	100.0		COMMAND 2	EAST CO COMMAND	CMND 2	
3	1	VNC	153.9500	127.3	153.9500	127.3		TAC 3	EAST CO TACTICAL	TAC 3	
4	1	VNC	154.1000	100.0	155.1000	123.0	X	COMMAND 4	NORTH CO COMMAND	CMND 4	
5	1	VNC	154.0250	100.0	154.0250	100.0		TAC 5	NORTH CO TACTICAL	TAC 5	
6	1	VNC	155.8350	100.0	155.8350	100.0		COMMAND 6	WEST CO COMMAND	CMND 6	
7	1	VNC	153.8300	100.0	153.8300	100.0		TAC 7	WEST CO TACTICAL	TAC 7	
8	1	OES	154.2800	CSQ	154.2800	CSQ		WHITE 1	MUTUAL AID COMMAND	WHITE1	
9	1	OES	154.2650	CSQ	154.2650	CSQ		VFIRE 22 [WHITE 2]	MUTUAL AID TACTICAL	VFRE22	
10	1	OES	154.2950	CSQ	154.2950	CSQ		VFIRE 23 [WHITE 3]	MUTUAL AID TACTICAL	VFRE23	
11	1	LAC	154.4300	CSQ	154.4300	151.4		LAC TAC-17	LAC B5 TACTICAL	LACT17	
12	1	LAC	154.3400	CSQ	154.3400	151.4		LAC TAC-18	LAC B6 TACTICAL	LACT18	
13	1	OXD	154.1450	141.3	156.2100	141.3	X	OXNARD CH. 1	OXNARD DISPATCH	OXD 1	
14	1	OXD	154.0700	123.0	156.0300	123.0	X	OXNARD CH. 3	OXNARD COMMAND	OXD 3	
15	1	VNC	155.8650	100.0	155.8650	100.0		TAC 15	COASTAL TACTICAL	TAC15	
16	1	VNC	155.0400	100.0	154.3700	100.0		COMMAND 16	COASTAL COMMAND	CMND16	

Anacapa Island BASE 458.100

Anacapa Island MOBILE 453.100

NOTES:

Ventura County Fire Department radios are broken down into six modes or banks selectable with a switch. All units are dispatched on channel 1 and then confirm response on their Command channel. Each area Tac channel is used as a fireground frequency (dispatch can not contact units on these channels).

Starting February 6th, 2002 the county started dispatching for the City of Ventura.

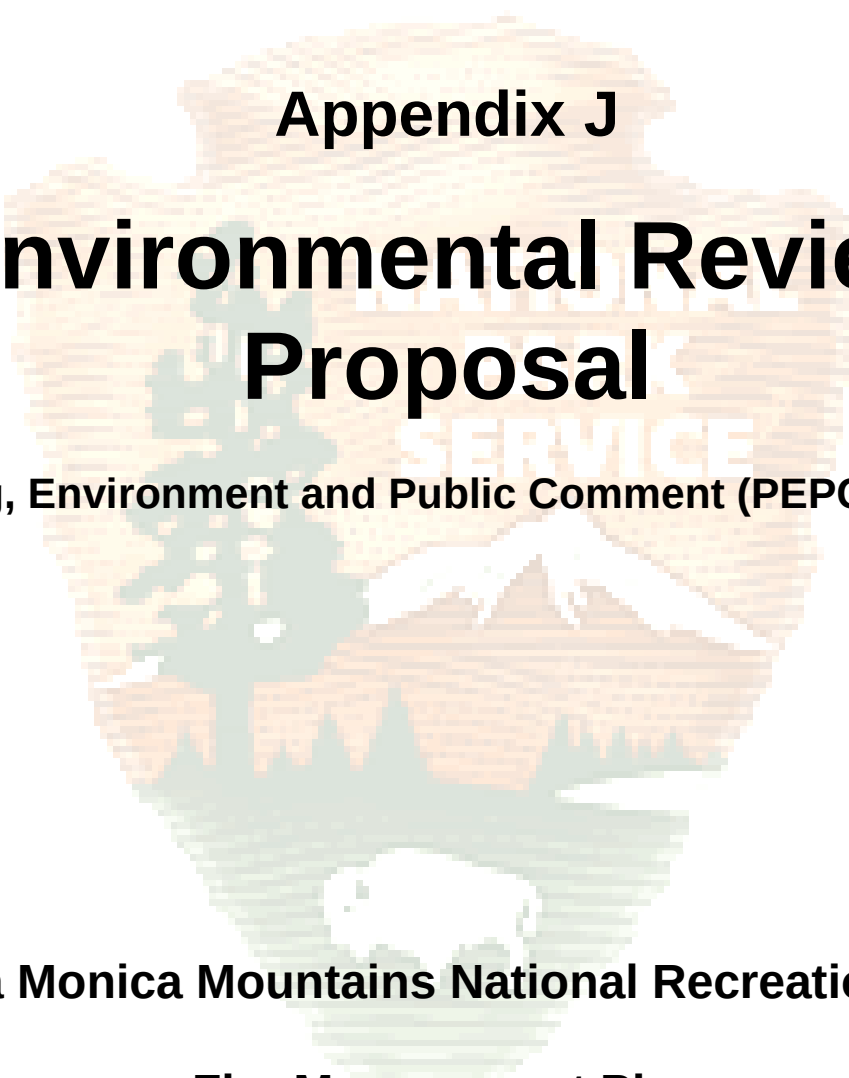
EAST - Stations 30-46 (Simi Valley/Thousand Oaks)

WEST - Stations 50-59 (Camarillo/Oxnard plain)

NORTH - Stations 20-28 (Ojai)

City of Los Angeles Fire Department
Radio Frequencies
August 16, 2003

Channel	Description	Frequency	Tone
1	Operations Division 1 (Central/East/West)	860.9375	85.4
2	Operations Division 2 (South/Harbor)	859.9375	88.5
3	Operations Division 3 (San Fernando Valley)	858.9375	91.5
4	Dispatch/EMS (South of Mulholland)	857.9375	94.8
5	Fire Prevention Bureau	856.9375	97.4
6	Administration	860.4379	186.2
7	Dispatch/Fire (South of Mulholland)	859.4379	192.8
8	Dispatch Fire and EMS (North of Mulholland)	858.4379	103.5
9	Dispatch (Alternate)	857.4379	107.2
10	Operations/EMS (Citywide)	856.4379	123.0
11	Command	860.7625	127.3
12	Tactical	858.2375	131.8
13	Tactical	857.4375	141.3
14	Tactical	856.4375	146.2
15	Tactical	859.7625	151.4
16	Tactical	858.7625	162.2
17	Tactical	857.7625	167.9
18	Tactical	856.7625	173.8
19	Fire Ground Mutual Aid (I-CALL)	866.0125	*
20	Fire Ground Mutual Aid (I-TAC1)	867.5125	*
21	Fire Ground Mutual Aid (I-TAC2)	868.0125	*
22	Fire Ground Mutual Aid (I-TAC3)	867.5125	*
23	Fire Ground Mutual Aid (I-TAC4)	868.0125	*
24	Fire Ground Mutual Aid (CLEMARS)	868.5125	*



Appendix J

Environmental Review Proposal

Planning, Environment and Public Comment (PEPC) Program

**Santa Monica Mountains National Recreation Area
Fire Management Plan**

PEPC - Home - Microsoft Internet Explorer provided by the National Park Service

File Edit View Favorites Tools Help

Back Forward Search Favorites

Address <https://pepc.nps.gov/userHome.cfm>

Go Links

PEPC
Planning, Environment and Public Comment

Home | Parks | Projects/Search | Reports | Tools | Admin | Logout

Welcome Melanie Beck

[Create Project](#) [Instructions for this page](#)

PEPC News

March 1, 2005 - PEPC is SERVICEWIDE
Welcome New Users!

NOTICE

ALL USERS: PEPC now checks to see if you want to SAVE your work!
When you navigate away from an edit page, PEPC now prompts you to save your work,
so you won't lose any data you entered or modified.

For questions or concerns with the PEPC system please contact
your Park or Region PEPC Administrator:

[Administrator Contacts](#)

To check out the PEPC System enhancements please click the link [PEPC Fixes](#) - updated 02/21/2006

My Projects (found total 83)

Project ID	Project Title	Park Code	Project Type	Project Status	NEPA Type	NHPA Determination	NHPA Doc.Meth	Compliance Status	Target Start
14893	Paramount Strategic Fuel Treatment	SAMO	MFR	Proposed				Proposed	05/01/2007
14873	Mountain Recreation &	SAMO	MFR	Proposed				Proposed	12/01/2007

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11:59 AM

Appendix K

**Fire Management Branch
Organization Chart**

Santa Monica Mountains National Recreation Area

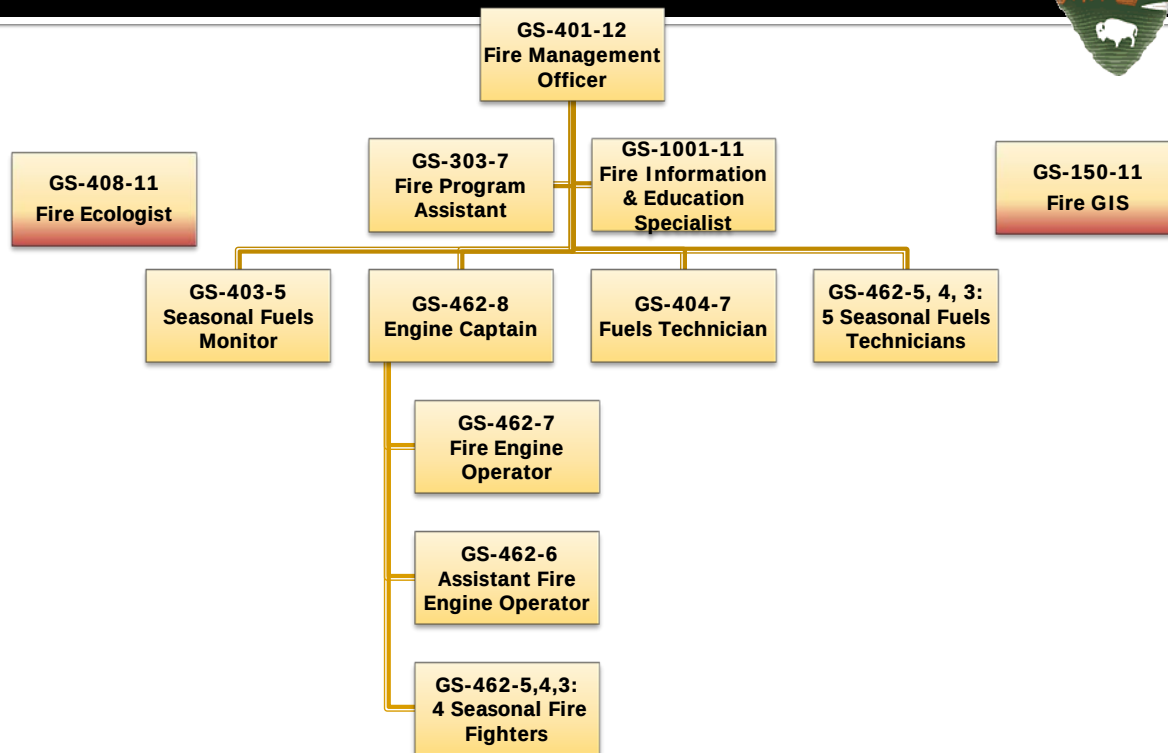
Fire Management Plan

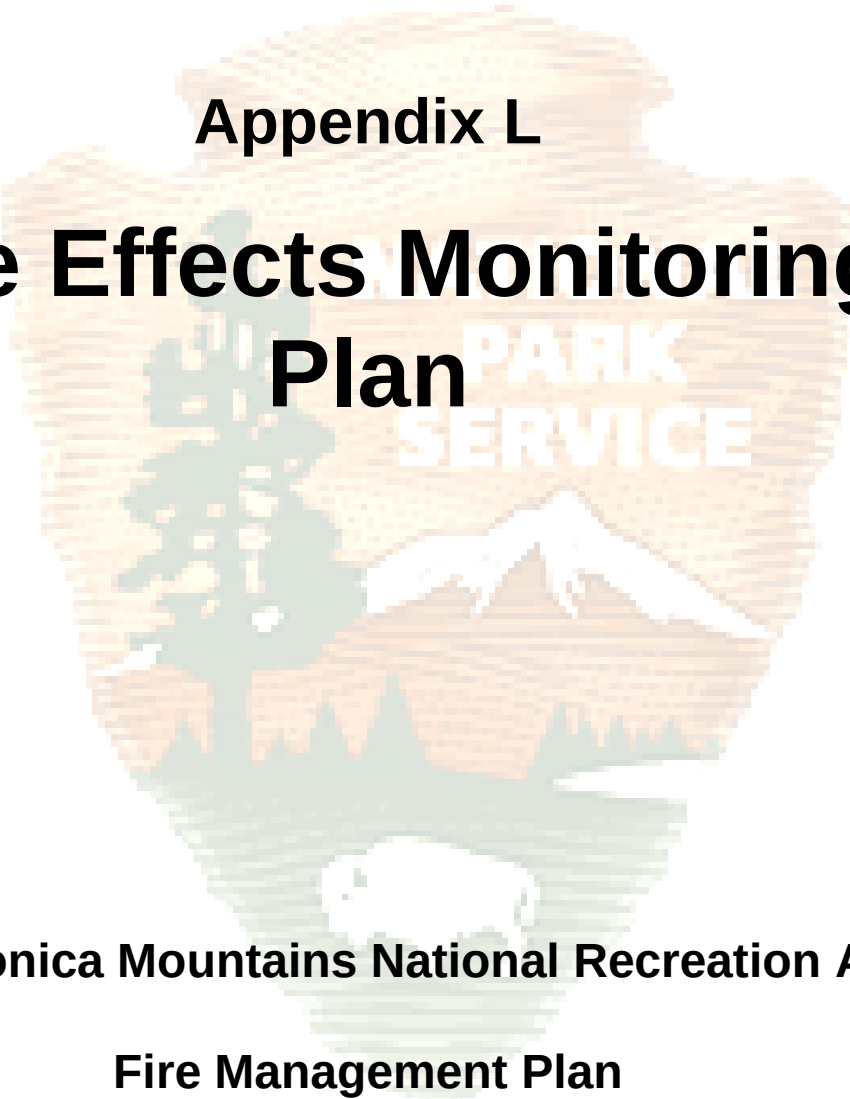
Branch of Fire Management

Santa Monica Mountains NRA
Organizational Chart-Division of Visitor Protection
October, 2010

FTE Total	9.25
FTE Permanent	5.0
FTE Perm Seasonal	1.25
FTE Temporary	3.0

National Park Service Santa Monica Mountains National Recreation Area Branch of Fire Management 2012





Appendix L

Fire Effects Monitoring Plan

Santa Monica Mountains National Recreation Area

Fire Management Plan

FIRE MONITORING PLAN

1. Introduction (General)

- A. Need for study or management program
- B. Species (plant associations, flora, fauna) that will be monitored.

2. Description of the Ecological Model

- A. Life History
- B. Phenology
- C. Reproductive Biology
- D. Distribution, Range and Influences
- E. Habitat Characteristics
- F. Management Conflicts
- G. Effects of other resource uses on species (e.g. herbivory of flower heads by elk).

3. Management Objectives

Description of clear, concise, and measurable objectives, using best available information. Focus on creating knowledge-based measurable objectives.

4. Monitoring Design

A. Monitoring Objectives

- A monitoring objective must contain the level of accuracy and power to reflect a minimum amount of change from the preferred variable (80% is suitable for power and accuracy in most monitoring situations).
- The “80% sure” reflects a willingness for the monitoring program to miss a change occurring on the landscape.
- The “20% accuracy) reflects a willingness in the program to show change when there is no change.

B. Sampling Design

- Description of sampling design and any changes to a referenced sampling design.
- Description of sampling units, including definitions of vegetation-fuel complex, placement of sampling units in the field. FMH recommends using restricted random sampling for sample size of less than 30.
- Pilot sampling (e.g. 10 plots) to test a sampling design.
- Document number of sampling units installed per vegetation association-treatment.

C. Field Measurements

- Discuss any deviations to FMH protocol, or any additional protocols.

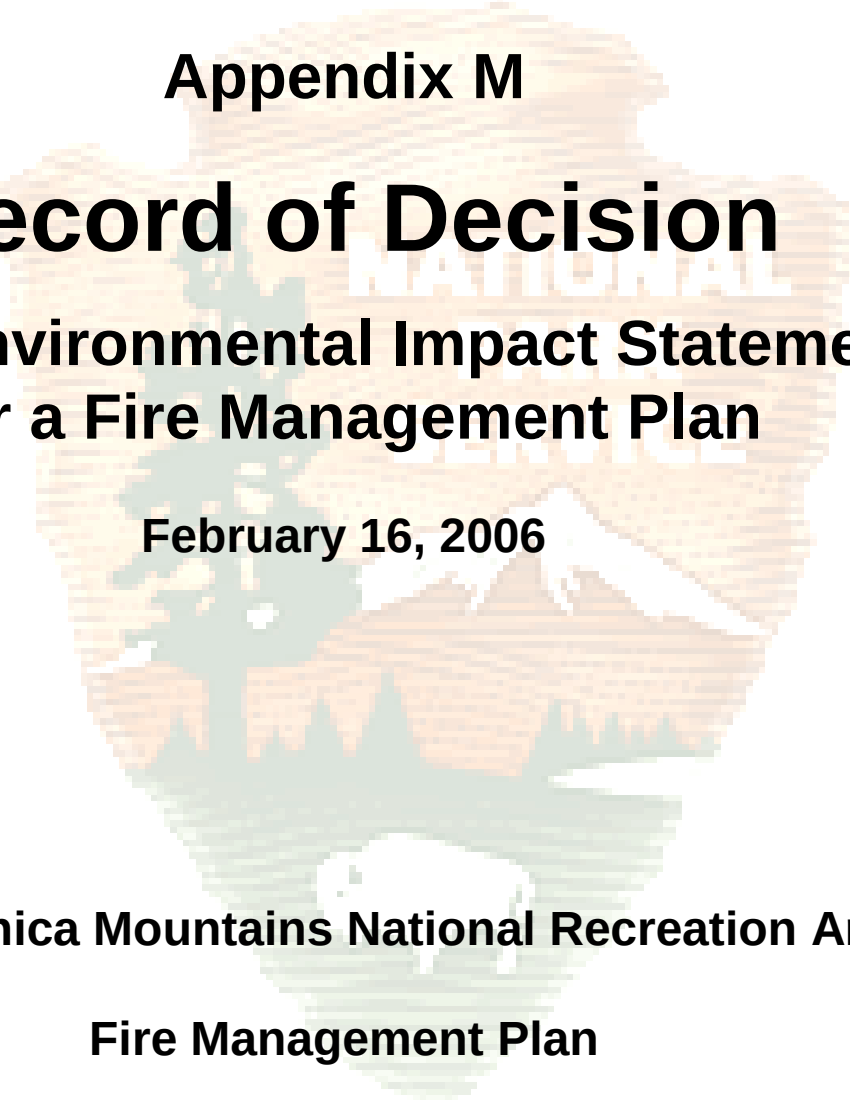
D. Timing of Monitoring

- Describe time of year and phonologically when plots will be monitored.
 - Frequency of monitoring.
- E. Monitoring Plot Relocation
- Describe any relocation of plots; attach clear directions, maps, aerial photographs, and Plot Location Data Sheets (FMH-5).
- F. Data Analysis Approach
- Describe approach to data analysis, including statistical tests that will be used.
- G. Data Sheet Examples
- Include examples of data sheets if they are different from FMH, otherwise reference FMH.
- H. Information Management
- Estimate personnel time for data management, including data entry and error checking.
 - Designate who will be responsible for managing data and location of archives.
- I. Quality Control
- Describe how data quality and data quality checks will be performed, including frequency and responsible person.
 - Describe the protocol for program evaluation.
- J. Sources of Data Errors
- Describe how errors in recording, transcription errors, incorrect species identification, overlooked species, data collection at wrong time of year, incomplete or uncollected data, misinterpretation of monitoring design, impacts of monitoring, including voucher specimen collection and trampling will be minimized.
- K. Responsible Parties
- Authors of this monitoring plan.
 - Review process to correct design or statistical problems.
 - Administration of the monitoring program.
- L. Funding
- Identify the funding source and long-term funding protection.
- M. Management Implications of Monitoring Results
- Describe how the monitoring program results will be presented and how management will use the data.
 - Define the potential trigger points that will cause a reexamination of the monitoring program and/or the management activity that is being monitored.

N. References

- Include gray literature and personal communications.

O. Reviewers



Appendix M

Record of Decision

Final Environmental Impact Statement for a Fire Management Plan

February 16, 2006

Santa Monica Mountains National Recreation Area

Fire Management Plan

U.S. DEPARTMENT OF THE INTERIOR
National Park Service
Final Environmental Impact Statement
Fire Management Plan
Santa Monica Mountains National Recreation Area
Ventura and Los Angeles Counties, California

Record of Decision

The U.S. Department of Interior, National Park Service has prepared this Record of Decision on the Final Environmental Impact Statement for a Fire Management Plan for the Santa Monica Mountains National Recreation Area. This Record of Decision includes a description of the background for the project, a statement of the decision made, synopses of other alternatives considered, the basis for the decision, findings on impairment of park resources and values, a description of the environmentally preferable alternative, a listing of measures to minimize environmental harm, and an overview of public and agency involvement in the decision-making process.

BACKGROUND OF THE PROJECT: The purpose of the environmental impact statement (EIS) is to consider the impacts of implementing various fire management alternatives in the Santa Monica Mountains National Recreation Area (SMMNRA). In addition to providing information required by law and the 2001 Federal Fire Policy, the Draft and Final EISs responded to the primary issues of concern raised during a series of internal and public scoping sessions. The assessments completed during scoping carefully considered seven alternatives developed through an interdisciplinary planning team. Following an initial evaluation, it became clear that three alternatives could not be reasonably implemented in a way that would meet program objectives given other constraints and laws. Consequently these three alternatives were

not carried forward to full and complete analysis in the environmental impact statement (the Draft and Final EISs focused on the remaining four alternatives).

The park's previous Fire Management Plan (1994) was based on a strategy of landscape level prescribed burning to create a landscape mosaic of different age classes in shrubland communities with the objective of reducing fire hazard and maintaining ecological health. This was Alternative 1, the no action alternative, against which the other three alternatives were evaluated. The remaining three alternatives varied a hierarchical combination of the fire management actions that capable of meeting the goals of the National Park Service (NPS) fire management program. The range of fire management actions included mechanical fuel reduction, ecological prescribed fire, and strategic fuels treatment. Alternative 4 included mechanical fuel reduction only, Alternative 3 included mechanical fuel reduction and ecological prescribed fire, and Alternative 2 included mechanical fuel reduction, ecological prescribed fire, and strategic fuels treatment. Wildland fire suppression and public education and support were actions common to all four alternatives.

Alternative 2 was deemed to be the "environmentally preferred" alternative. It provides the maximum potential environmental benefits and minimizes the adverse impacts of fire management actions. Alternative 2 is the most flexible alternative, utilizing all available fire management strategies identified to be appropriate in the Santa Monica Mountains.

Under the NPS's Organic Act and the General Authorities Act, as amended, the NPS may not allow the impairment of park resources and values except as authorized specifically by Congress (NPS Director's Order 55 or DO-55). Impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. Park managers have examined each potential impact of the preferred alternative and determined

that the combination of actions provided for in Alternative 2 would not result in the impairment of any park resources and values.

DECISION (SELECTED PLAN): Alternative 2 has been selected for implementation as SMMNRA's new fire management program. The selected action is unchanged from that identified and analyzed in the Draft and Final Environmental Impact Statements. It provides the maximum potential environmental benefits and minimizes the adverse impacts of fire management actions. It is the most flexible alternative, utilizing all available fire management strategies identified to be appropriate in the Santa Monica Mountains. The selected action provides the most comprehensive and effective method among the alternatives considered for meeting the NPS purposes, goals, and criteria for managing fire and fire risks in the SMMNRA and for meeting national environmental and fire policy goals. The selection of Alternative 2, as detailed in the Final EIS, will not result in the impairment of park resources nor violate the Organic Act of 1916, and will allow the park to most effectively conserve park resources and provide for the long term enjoyment of visitors.

OTHER ALTERNATIVES CONSIDERED: Alternative 1 (No Action Alternative) - Continue the current NPS fire and vegetation management program to create a landscape mosaic of varying aged chaparral stands through the application of prescribed fire in separate watersheds; minimize brush clearance. Considered in the light of new environmental information detailed in the Draft and Final EIS, Alternative 1 is inappropriate and could lead to the most resource damage in the fire climate of the Santa Monica Mountains. This alternative has the potential to be ecologically damaging to native plant communities by increasing the probability of shrubland type-conversion from a too-short fire return interval in the high fire frequency fire environment of the Santa Monica Mountains. It does not provide direct protection for residences by reducing fuel loads at the wildland urban interface because treatments are often remote from residential development because of the danger of prescribed fire escape. Prescribed fire in dense vegetation has the potential to escape and become a hazard itself. Alternative 1 does not provide effective

control of wildfire spread under severe weather conditions because ecologically viable vegetation can not be maintained in the age class that might be effective in limiting wildfire spread under extreme wildfire conditions. Finally, large scale burning has not been feasible to implement in accordance with the goals of the previous Fire Management Plan because of regulatory constraints on prescribed fire, especially those relating to air quality standards.

Alternative 3 - Prescribed burning is used exclusively to provide resource enhancement including control of exotic species and restoration of natural communities. Mosaic burning is eliminated. Fuel reduction is concentrated at the wildland urban interface to protect existing development and emphasizes mechanical or biomechanical fuel modification. This alternative provides effective protection of homes by focusing mechanical fuel reduction at the interface between homes and wildland vegetation, and provides ecological benefits from resource prescribed burning. It lacks the potential risk reduction benefits from strategic fuel modification. This alternative would not provide the potential benefits from strategic fuels reduction. Although strategic fuels reduction has the potential for both impacts and benefits in most of the impact areas analyzed, individual strategic fuels reduction projects would be evaluated for their potential risk: benefit ratio.

Alternative 4 - Vegetation management is limited to mechanical or biomechanical fuel modification at the wildland urban interface. Prescribed fire is eliminated. Alternative 4 effectively addresses structure protection at the wildland urban interface, but does not provide any of the ecological benefits from the ecological prescribed burning included in Alternatives 2 and 3. This alternative provides effective protection of homes by focusing mechanical fuel reduction at the interface between homes and wildland vegetation, but lacks the ecological benefits of resource prescribed burning, and the potential risk reduction benefits from strategic fuel modification.

BASIS FOR DECISION: The alternative selected best accomplishes National Park Service and Federal fire management policy, the legislated purpose of Santa Monica Mountains National

Recreation Area, and the statutory mission of the National Park Service to provide long-term protection of Santa Monica Mountains National Recreation Area's resources. The selected action also best accomplishes the stated purposes of the SMMNRA Fire Management Plan (as described in the Introduction of the Draft and Final Environmental Impact Statement) and the criteria derived from these purposes. Moreover, the selected action will promote the most extensive cooperation between the NPS and governmental/non-governmental partners within the SMMNRA.

The Draft and Final Environmental Impact Statements provide for a programmatic level of environmental impact analysis. The proposed action and alternatives each consist of a basic management framework for future decision making. Consequently, the Draft and Final EIS presents an overview of potential impacts relating to the proposed program for each alternative. In the future, implementation of specific actions not addressed in detail in the approved final plan would require the preparation of more detailed environmental assessments.

FINDINGS ON IMPAIRMENT OF PARK RESOURCES AND VALUES: The National Park Service has determined that the potential effects of implementation of Alternative 2 will not constitute an impairment to Santa Monica Mountains National Recreation Area's resources and values. This conclusion is based on a thorough analysis of the environmental impacts described in the Final EIS, the public comments received, relevant scientific studies, and the professional judgment of the decision-maker guided by the direction in NPS Management Policies. While the selected FMP may initially have some negative impacts, in all cases these adverse impacts are the result of actions to preserve and restore park resources and values. Overall, implementing the FMP will result in major benefits to park resources and values, and it does not result in their impairment.

In determining whether impairment may occur, park managers consider the duration, severity, and magnitude of the impact; the resources and values affected; and direct, indirect, and

cumulative effects of the action. According to NPS policy, an impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant National Park Service planning documents. (NPS Management Policies 2001, Part 1.4.5.)

The non-impairment policy does not prohibit impacts to park resources and values. The National Park Service has the discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, so long as the impacts do not constitute impairment. Moreover, an impact is less likely to constitute impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values.

ENVIRONMENTALLY PREFERRED ALTERNATIVE: Environmentally preferred is defined as *“the alternative that will promote the national environmental policy as expressed in the National Environmental Policy Act’s Section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources”* (Forty Most Asked Questions, Concerning Council of Environmental Quality’s National Environmental Policy Act Regulations, 1981).

The goals characterizing the environmentally preferable condition are described in §101 of the National Environmental Policy Act (NEPA), which states that *“it is the continuing responsibility of the Federal Government to: (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations; (2) assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings; (3) attain the widest range of beneficial*

uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences; (4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice; (5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources”.

Based on the national environmental policy goals stated above, the “environmentally preferred” alternative is Alternative 2 (Mechanical Fuel Reduction/Ecological Prescribed Fire/Strategic Fuels Treatment). Alternative 2 best meets the full range of national goals; as the selected FMP, it preserves important aspects of our natural, historic and cultural heritage by committing to land acquisition, research and preservation actions needed for the long-term protection of the park.

While some specific actions under other alternatives may achieve similar levels of protection for certain natural resource values than under Alternative 2, in aggregate, this FMP best achieves the six conditions prescribed under Section 101 of NEPA. While many of the actions in other alternatives may be similar to Alternative 2 in their effect and consequence, Alternative 2 achieves the greatest balance between the critically important ecosystem process of wildland fire and protecting life, property, cultural resources, and natural aspects of our national heritage from unwanted wildland fire.

MEASURES TO MINIMIZE ENVIRONMENTAL HARM: The National Park Service has investigated all practical means to avoid or minimize environmental impacts that could result from implementation of the selected action or future actions that are guided by the approved plan. The measures have been incorporated into Alternative 2, and were presented in detail in the Draft and Final EIS. A consistent set of mitigation measures would be applied to any suppression or fire management actions that result from this plan (see Table 2-6 of the Final

EIS). Fire monitoring by the fire management and resource management programs will be implemented to detect and assess any deleterious or beneficial effects resulting from the new plan. These resulting monitoring data will guide and assure continually improving biological and cultural resource protection; noxious weed control; visitor safety and fire education; endangered, threatened and special status species protection.

In addition, the National Park Service will prepare appropriate compliance reviews (i.e., National Environmental Policy Act, National Historic Preservation Act and other relevant legislation) for future actions not covered under the Draft or Final FEIS. These will be completed in consultation with the California state historical preservation officer, U.S. Fish and Wildlife Service, National Marine Fisheries Service, Army Corps of Engineers, the California Coastal Commission, or/and the California Department of Fish and Game, and will include opportunity for public review as appropriate.

PUBLIC AND INTERAGENCY PARTICIPATION: An initial fire management workshop was held in the summer of 2001 with a variety of fire management and land management agencies as well as resource management and fire ecology professionals (approximately 30 participants attended). The objective was to garner ideas, thoughts and concerns on what a fire management program could look like in the Santa Monica Mountains from fire professionals and scientists, and current environmental information pertinent to the pending conservation planning and impact analysis. From this meeting, seven options encompassing workshop's findings for fire management were initially drafted.

The NPS published a notice of scoping to initiate preparation of the fire management plan/environmental impact statement in the March 26, 2002 Federal Register (Volume 67, #58). A number of opportunities were subsequently provided for the public to participate in the conservation planning and environmental impact analysis process. The fire plan team primarily used newsletters and meetings to solicit public comments and suggestions for the plan. Four

public meetings were held in the spring of 2002 in the cities of Beverly Hills/Los Angeles, Calabasas/Agoura Hills, Malibu, and Thousand Oaks to provide background information on the project to and encourage the public to submit their comments and concerns. Additional meetings targeting key partner agencies were also conducted in the June, 2002. Approximately 35 citizens attended the 6 meetings. In addition, fifteen requests were sent in that same month to citizens with Native American affiliations soliciting their comments.

Four alternatives were developed and carried forward for full analysis. The EPA issued its notice of filing of the draft environmental impact statement in the June 10th, 2004, Federal Register (Volume 69, #185); the NPS notice of availability of the Draft EIS for a 90-day public review opportunity was published June 16th, 2004. About 500 letters announcing the availability of the draft plan were distributed. Over 250 copies of the draft plan in both paper and compact disc form were distributed. The draft plan was also placed on the internet and made available at approximately 75 libraries throughout the region.

The planning team held four public meetings on the draft environmental impact statement and fire plan from August 13-18, 2004 in Agoura Hills/Calabasas, Los Angeles, Malibu, and Thousand Oaks. Approximately 45 citizens attended these meetings. They were presented with the facts and information that led to the formulation of the preferred alternative. Time was allowed for questions, and the participants were encouraged to submit their comments in writing by letter, fax, or e-mail. Approximately 25 written responses to the draft fire plan were received from the public, agencies, and organizations during the comment period (all letters are maintained in the administrative record). Overall no new public issues or concerns nor substantive new information not already addressed in the Draft EIS were received.

The EPA's notice of filing of the Final EIS was published in the December 23rd, 2005 edition of the Federal Register (Volume 70, #246); the NPS notice of availability was published on December 28th, 2005. The Final EIS was mailed out, placed in local libraries, posted on the

Internet, and otherwise distributed in keeping with the issuance of the Draft EIS. The requisite 30-days No Action waiting period concluded January 23, 2006. Both during that period and subsequently, no letters or other comments responding to the Final EIS were received. On February 7th 2006 the Environmental Protection Agency published a “no need for comment” notice in the Federal Register.

CONCLUSION: Among the alternatives considered, the preferred alternative best protects national recreation area resources while also providing a range of quality recreational and educational experiences, meets NPS goals for managing Santa Monica Mountains National Recreation Area, and meets national environmental policy goals. The preferred alternative will not result in the impairment of national recreation area resources and values. The officials responsible for implementing the selected plan are the Regional Director, Pacific West Region, and the Superintendent, Santa Monica Mountains National Recreation Area.

Approved:

<u>Signature on file</u>	
Jonathan B. Jarvis, Regional Director	Date
Pacific West Region, National Park Service	

Appendix N

Staffing and Action Guide

Santa Monica Mountains National Recreation Area

Fire Management Plan

Santa Monica Mountains National Recreation Area
SPECIFIC STAFFING and ACTION GUIDE

FIRE MANAGEMENT:

ACTIVITY:

XX Prevention
 ___ Detection
 ___ Suppression
 ___ Reinforcements
 ___ Facilitating

RATING:

NFDRS: All
 Fuel Model: All

ACTION CODE:

AR – Action Require
AA – Action Authorized

REGION:

GACC: PWR
PARK: OSC
DIVISION: SMP
 Protection

DATE: 2004

ACTION DESCRIPTION					
	STAFFING LEVELS				
	1	2	3	4	5
1. Regular scheduled tours of all fire management personnel.	AA	AA	AA	AR	AR
2. Sixth day work week permitted for Prevention/Education Specialist			AA	AA	AA
3. Holidays, weekends, and other periods of high risk or increased visitor use					
a. Fire Management/LE personnel should review prevention effort scheduled for the day and determine best method of contacting users in high hazard areas.			AA	AR	AR
b. FMO will provide the Chief Ranger with a copy of fire mgmt staffing plan and schedule.	AR	AR	AR	AR	AR

Table 1 of 6

Santa Monica Mountains National Recreation Area
SPECIFIC STAFFING and ACTION GUIDE

FIRE MANAGEMENT:

ACTIVITY:

___ Prevention
XX Detection
 ___ Suppression
 ___ Reinforcements
 ___ Facilitating

RATING:

NFDRS: All
 Fuel Model: All

ACTION CODE:

AR – Action Require
AA – Action Authorized

REGION:

GACC: PWR
Park: OSC
DIVISION: SMP
 Protection

DATE: 2004

ACTION DESCRIPTION					
	STAFFING LEVELS				
	1	2	3	4	5
1. In season – May 15 to December 15 or until sufficient rains occur to abate fire hazard, monitor Ventura County Fire radio traffic for reports for wildland fires. (Angeles EOC monitors LACo Fire)	AA	AA	AA	AR	AR
2. During thunderstorm activity, coordinate with LE to assure monitoring of storm track and activity.	AA	AA	AA	AA	AA
3. Aerial Detection					
a. Arson, holidays, weekends and other periods of high risk		AA	AA	AA	AA
b. During and several days after thunderstorms and adverse weather conditions.		AA	AA	AA	AR
4. NWS Red Flag Weather Conditions.					
a. Fire Staff					
(1) Activate type VI engine patrol.			AA	AA	AA
(2) Extend coverage to 12 hours.			AA	AA	AA
b. Aerial Detection					
(1) Infrared and regular fixed-wing and helicopter patrol of key hazard and risk areas.			AA	AA	AA

Santa Monica Mountains National Recreation Area

SPECIFIC STAFFING and ACTION GUIDE**FIRE MANAGEMENT:****ACTIVITY:**

☐ Prevention
☐ Detection
☒ Suppression
☐ Reinforcements
☐ Facilitating

RATING:

NFDRS: All
 Fuel Model: All

ACTION CODE:

AR – Action Require
 AA – Action Authorized

REGION:

PWR

GACC:

OSC

PARK:

SMP

DIVISION:

Protection

DATE: 2004

ACTION DESCRIPTION					
	STAFFING LEVELS				
	1	2	3	4	5
1. Initial action modules on regular scheduled tours during the budgeted fire season.					
a. Minimum Staffing – meeting module criteria.	AA	AA			
b. Full Staffing – meeting module criteria.			AR	AR	AR
2. Initial action modules prepared to meet get away standards during the budgeted fire season or when severity is authorized	AR	AR	AR	AR	AR
3. Sixth or seventh work day.			AA	AA	AA
4. Extended staffing hours.			AA	AA	AA
5. Augment suppression capabilities by staffing the type VI engine				AA	AA

Santa Monica Mountains National Recreation Area

SPECIFIC STAFFING and ACTION GUIDE

FIRE MANAGEMENT:

ACTIVITY:

☐ Prevention
☐ Detection
☐ Suppression
☒ Reinforcements
☐ Facilitating

RATING:

NFDRS: All
Fuel Model: All

ACTION CODE:

AR – Action Require
AA – Action Authorized

REGION:

GACC: South
PARK: SMP
DIVISION: Protection

DATE: 2004

[illegible]

Table 4 of 6

Santa Monica Mountains National Recreation Area
SPECIFIC STAFFING and ACTION GUIDE

FIRE MANAGEMENT:

ACTIVITY:

☐ Prevention
☐ Detection
☐ Attack
☐ Reinforcements
☒ Facilitating

RATING:

NFDRS: All
 Fuel Model: All

ACTION CODE:

AR – Action Require
 AA – Action Authorized

REGION:

GACC: South
 PARK: SMP
 DIVISION: Protection

DATE: 2004

ACTION DESCRIPTION					
	STAFFING LEVELS				
	1	2	3	4	5
1. SUPERVISION and FACILITATION:					
a. Fire Management Officer or qualified Duty Officer,					
(1) On regular scheduled tours.	AR	AR	AR	AR	AR
(2) 6 th or 7 th day.			AA	AA	AR
b. Extend staffing to comply when active wildland fire is occurring on or adjacent to the park	AR	AR	AR	AR	AR
c. Maintain qualified fire suppression module leader in park				AA	AR
d. Preposition IMT when large fire activity involves or threatens federal property	AA	AA	AA	AA	AA
e. Staff CWN helicopter module during times of Southern California Preparedness Level 4 or 5				AA	AA

Table 5 of 6

Santa Monica Mountains National Recreation Area
SPECIFIC STAFFING and ACTION GUIDE

FIRE MANAGEMENT:

ACTIVITY:

RATING:

ACTION CODE:

REGION:

PWR

XX Prevention

NFDRS: All

AR – Action Require

GACC:

OSC

XX Detection

Fuel Model: All

AA – Action Authorized

FOREST:

SMP

XX Suppression

DIVISION:

Protection

XX Reinforcements

DATE: 2004

XX Facilitating

ACTION DESCRIPTION					
	STAFFING LEVELS				
	1	2	3	4	5
1. FEDERAL HOLIDAYS and HOLIDAY WEEKEND STAFFING					
a. All Fire Management personnel authorized to work on Independence Day, Labor Day Columbus Day holidays.	AA	AA	AA	AA	AA
b. Fire Management Officer approves staffing for all holidays not described in 1.a.	AA	AA	AA	AA	AA
2. AUTHORIZED HOURS FOR EXTENDED EVENING STAFFING					
a. Time extensions will be within the following table:					
<u>Period</u> <u>Extended Hours</u>					
Daylight Savings Time Up to 2				AA	AA
Standard Time Up to 1				AA	AA
b. Extended hours will not go beyond times shown unless special conditions exist.					

