**U.S. Forest Service**

**Eldorado National Forest Service**

**Fire Prevention Plan**

**2014**

****



# Table of Contents

[Table of Contents 2](#_Toc386485263)

[Eldorado National Forest Fire Prevention Plan, 2014 3](#_Toc386485264)

[Introduction 3](#_Toc386485265)

[Purpose 3](#_Toc386485266)

[Objectives 3](#_Toc386485267)

[Forest Description 3](#_Toc386485268)

[Planning 7](#_Toc386485269)

[Assessment 7](#_Toc386485270)

[Prevention Program 9](#_Toc386485271)

[Forest Order Implementation Plan: Fire Restrictions & Closures 17](#_Toc386485272)

[Objectives 17](#_Toc386485273)

[Restrictions 17](#_Toc386485274)

[Closure 17](#_Toc386485275)

[Administration 17](#_Toc386485276)

[2014 ENF Fire Prevention Patrol Plan 18](#_Toc386485277)

[Purpose 18](#_Toc386485278)

[Objectives 18](#_Toc386485279)

[Evaluating the Plan 22](#_Toc386485283)

[Table of Figures & Tables 23](#_Toc386485284)

[References 24](#_Toc386485285)

[Attachment A: 25](#_Toc386485286)

[ENF Cooperator Phone Contact List 25](#_Toc386485287)

[Attachment B: 26](#_Toc386485288)

[FSH 5109.18 – Wildland Fire Prevention Handbook: WO Amendment 5109.18-99-1, Chapter 10 – Wildland Fire Prevention Planning 26](#_Toc386485289)

# Eldorado National Forest Fire Prevention Plan, 2014

### Introduction

The Eldorado National Forest (ENF) Fire Prevention Program staff has recognized the need for a unified and coordinated approach to fire prevention. This realization has resulted in the development of a forest-wide Fire Prevention Plan. In 2012, the Pacific Southwest Region evaluated the fire prevention education program in California and also found a need for better coordination. The ENF Fire Prevention Plan is a tool which improves the consistency of the Prevention Program by providing standardized guidance and instruction to forest employees. Each year, the ENF Fire Prevention Plan is reviewed and revised to ensure it remains current and is relevant to local trends. The Region’s evaluation, *Fire Prevention Reinvention*, provides valuable information about regional gaps in knowledge, skills in staffing, as well as the current trends in climate change, California’s population and the wildland urban interface. The ENF Fire Prevention Plan has taken this information into account.

### Purpose

The main goal of this Prevention Plan is to provide Prevention staff with the information they need to be as safe, effective and efficient as possible. The information included is intended to increase awareness and educate forest employees. The Prevention Program outlined in this plan provides operational strategies and tactics to reduce the number of human-caused fires. Incoming off-forest prevention personnel may use the ENF Fire Prevention Plan as a pre-attack plan.

Future fire prevention activities should be both simple and practical, with efforts focused toward increasing trends of unwanted wildland fire causes. Fire prevention personnel need to be in tune with current trends and on the lookout for new threats. Continued development of the Prevention Plan in the future is vital to ensuring the fire prevention program is relevant, efficient, and effective.

### Objectives

1. Support a cohesive, united Forest Prevention organization.
	1. Provide an integrated, forest-wide operational plan with guidance and instructions for managing prevention activities on all Districts.
	2. Identify current public education messages.
2. Plan cost effective, efficient prevention activities focused on priority areas and issues.
	1. Identify problem areas, risk factors, and trends.
		1. Provide recent fire history by cause, type, acreage, and year.
	2. Identify management areas where fire occurrence poses a threat of large fires.
	3. Identify strategies and tactics for reducing human-caused fires in high-priority areas.
		1. Focus prevention efforts in areas with high risk, hazard and value.
		2. Minimize the ignition of unwanted human-caused fires in watersheds and other high-value areas, especially those identified as high-hazard.
3. Improve employee awareness of current and past wildland fire prevention problems.
	1. Encourage all forest employees to remember and act on their responsibility to support and participate in fire prevention (FSM 5110.4).
4. Provide incoming prevention teams /personnel with pre-attack information.

### Forest Description

The ENF lies just east of the Sacramento Valley in northern California, south of the Tahoe National Forest, west of Lake Tahoe Basin, and north of the Stanislaus National Forest. The forest encompasses 786,994 acres with 190,090 acres of other ownership. Two major transportation corridors bisect the Forest, Highway-88 and Highway-50 making it extremely accessible. Visitation surveys conducted in 2007 recorded 1,695,000 visitors to the ENF (United States Department of Agriculture, 2012). Current population estimates by the US Census Bureau show that over 10,600,000 people live in local counties combined with the greater Sacramento and San Francisco Bay areas; which are within a two- or three-hour drive of the ENF, (Table 1).

Table 1: 2012 Population Estimates Reported by the US Census Bureau for Counties near the ENF (United States Department of Commerce)

|  |  |
| --- | --- |
| County (State) | Population |
| Alameda (CA) | 1,554,720 |
| Alpine (CA) | 1,129 |
| Amador (CA) | 37,035 |
| Contra Costa (CA) | 1,079,597 |
| Douglas (NV) | 46,996 |
| El Dorado (CA) | 180,561 |
| Lyon (NV) | 51,327 |
| Marin (CA) | 256,069 |
| Napa (CA) | 139,045 |
| Nevada (CA) | 98,292 |
| Placer (CA) | 361,682 |
| Sacramento (CA) | 1,450,121 |
| San Francisco (CA) | 825,863 |
| San Joaquin (CA) | 702,612 |
| San Mateo (CA) | 739,311 |
| Santa Clara (CA) | 1,837,504 |
| Solano (CA) | 420,757 |
| Sonoma (CA) | 491,829 |
| Sutter (CA) | 95,022 |
| Yolo (CA) | 204,118 |
| Yuba (CA) | 72,926 |
| **Total** | **10,646,516** |

##### Fire Prevention Personnel

Table 2: ENF Fire Prevention Personnel

|  |  |  |  |
| --- | --- | --- | --- |
| Identifier | Name | District Title | Office |
| Patrol 15 | Eric Ferrell | Amador FPT | (209)-295-5977 |
| Patrol 64 | John Clanin | Placerville FPT | (530)-647-5391 |
| Patrol 65 | Denice Rice | Placerville FPT  | (530)-647-5346 |
| Patrol 53 | Ken Kumpe | Pacific FPT  | (530)-647-5459 |
| Patrol 54 | Brett Loomis | Pacific FPT  | (530)-647-5412 |
| Patrol 34 | Tonya Blasingame | Georgetown. FPT  | (530)-333-5578 |

##### Lookout Personnel

Table 3: ENF Lookout Personnel

|  |  |  |  |
| --- | --- | --- | --- |
| Lookout Station | Name | District | Phone |
| Bald Mountain | Jeanne Duhem | Georgetown | (530) 333-4700 |
| Alternate |  |  |  |
| Big Hill | James Hasemeire | Pacific | (530) 644-8554 |
| Leek Springs | Janice Brackett | Placerville | (209) 295-5605 |

##### Fire Personnel

All Forest Service employees have a responsibility toward fire prevention (For a full list of ENF Fire personnel, see the Forest Fire Personnel lists, not attached).

##### 8-year Fire History

Figure 1: The number of wildland fires within the Eldorado National Forest from 2006-2013, per year by cause.

### Planning

The National Fire Management Analysis System (NFMAS) is utilized to assess Fire Management Analysis Zones (FMAZ) to determine financing of prevention resources. With this analysis we can prioritize effectiveness of fire prevention programs. This prevention plan addresses what needs to be done within each Management Area (MA) based upon the types of activities and uses. It defines what actions will take place, when, and who is responsible. Wildland fire prevention activities generally fall within one of four broad categories. These categories are:

1. **Administration** - Those activities such as planning, budgeting, and training.
2. **Education *–*** Education, which is first and foremost, is aimed at changing people's behavior through awareness and knowledge. This can be done through printed materials, mass media (radio, TV, etc.), one-on-one contacts or group presentations. Information can also be delivered through signs, displays, fairs, parades, etc.
3. **Engineering *-*** Engineering assesses a potential fire or safety hazard and develops the means of eliminating that hazard. Engineering is an activity designed to shield an ignition source (e.g. Spark arrester screen) or remove the fuel which could ignite, such as clearance around homes. Engineering also includes construction and maintenance of prevention signs and posting posters to provide contemporary messages to increase public knowledge in fire safety. It is an activity designed to reduce or eliminate fire Risks.
4. **Enforcement *–*** Enforcement which is the last resort is used to gain compliance with fire regulations and ordinances. The effects of the restrictive actions must be weighed against the impact these actions will have on the public. Appropriate actions must be taken but actions should be no more restrictive than necessary.

The Prevention Plan recommends the most cost effective mix of activities to mitigate potential fire problems within each MA. It also identifies patrol levels which can be incorporated into the Fire Management Plan.

##### Patrol Levels

######  Guidelines for Assigned Rating:

* **High:** Patrol areas weekly making regular public contacts. High visibility signs changed to reflect current rating
* **Moderate:** Patrol bi-weekly; signing to reflect current rating
* **Low:** Infrequent to Patrol as needed; sign changes as needed

##### Staffing Levels

* **A staffing Level of 3 requires two patrols, one to cover the Georgetown/Pacific Districts and one to cover the Placerville/Amador Districts. This includes two patrols on for holiday staffing and extended staffing for red flag warnings/fire weather. Refer to the ENF Specific Staffing and Action Guide (not attached).**

### Assessment

Management Areas (MA) are assigned a relative rating of high, moderate or low for each of the following:

1. **Risks** are forest uses and other human activities which have the potential to ignite a wildland fire. Information about current and potential problems in each MA is used to assess risks. After assessing the risks within an MA, the fire history of that area is also reviewed. Historical fires alone, however, will not provide accurate reflection of the current risks. During the initial assessment, only the current risks should be examined.
2. The characteristics and complexity of fuels and topography in an area are used to determine the **hazard** rating**.** Suppressing a fire once it starts will be more difficult in MA’s with high hazard ratings than those with lower ratings. Therefore, an ignition in a MA with a high rating will more likely result in a large fire. It is important to examine hazards without regard to anything else.
3. **The value** rating attempts to rank the quality of natural and developed characteristics of a MA that could be damaged or lost in a wildland fire.

The following resources were used in the assessment:

* History of human-caused fire,
* The local fire suppression staffing both current and expected,
* Previous Fire Prevention Plans,
* Resource Specialist and Fire Management expertise,
* Previous Fire Management Plans.

##### Risk

Potential ignition sources such as concentrations of lightning and human activities are considered when assessing the risk rating for a MA. How the fire burns or if it would spread is not considered when assessing risk. Consideration is not given to how or if a fire would spread or burn once it is ignited.

###### Risks found adjacent to and within the forest boundary:

Industrial Operations

Timber Operations

Service Contracts

Maintenance Projects

Construction Projects

Power lines

Agricultural, Ranches

Power Equipment

Fuel wood cutting

Cultural activities

Drug labs/cultivation

Wildland urban interface (WUI)

Lightning

Not human caused

Recreation

Developed campgrounds

Dispersed recreation

Water-based recreation

Off-road vehicles (OHV/ORV)

Mountain bikes

Hunters/Recreational Shooting

Trails, hikers, rock climbers

Other Fire Risks

Transportation corridors

Fireworks

Shooting, target areas

Children, matches

Incendiary device, arson

Slash burning

##### Hazard

While the definition for the word “hazard” varies for other applications, in wildand fire suppression it is used to describe the relationship between fuels and topography. This use should not be confused with other definitions. Factors such as fuel type, (grass, brush, or timber/live dead ratio), the amount of fuel (heavy, medium, or light/), and terrain are evaluated when rating MA’s for hazard.

The hazard assessment considers:

* Expected fire behavior based on fuels and topography;
* Wildland urban interface;
* Overhanging branches, trash debris, fine fuels, ground fuels, fuel ladders;
* Vegetation clearances around campfire areas within the forest boundary, including leaf litter and duff,
* Trash, debris, wood piles against buildings;
* Dry, dead or overhanging vegetation around power lines and poles;
* Dry vegetation along roadsides where vehicles may stop;

##### Value

The value given characteristics and qualities of an area varies from person to person based on their perspective. Therefore, assessing value is a subjective process which needs to be approached from different perspectives. To accomplish this, an interdisciplinary approach was used to rate areas based on characteristics which would be affected by wildland fire, see list below. Areas were rated relative to other areas as high, moderate or low.

Characteristics used for the value assessment include, but are not limited to:

Air sheds

Aquatic/wildlife habitat

Backcountry by-ways

Commercial development

Cultural/historical

Forest products

Government property

Improvements

Life

Minerals

Plantations

Political

Private property

Recreation

Riparian zones

Scenic by-ways

Social

Soils

Threatened & Endangered Species

Timber

Visual resources, view sheds

Water storage

Watersheds

Wild and scenic rivers

Wilderness

### Prevention Program

The focus of the wildland fire prevention program is to prevent fires with the greatest potential to cause unacceptable damage or losses. By using the risk, hazard and value assessments, Management Areas (MA’s) are prioritized and appropriate patrol and prevention activities identified. Utilizing the results of MA assessments fire prevention technicians (FPTs) can make informed decisions about where, when and how to spend their time and efforts in the field. The elements of the prevention triangle, education, engineering and enforcement, are used as a framework for the prevention program.

##### Education

The Fire Prevention Program’s education element is multi-faceted and includes employee education, fire prevention awareness for children, public awareness programs, recreation activities, and homeowner fire safe awareness programs.These responsibilities are essential duties of all of the prevention staff and are an on-going effort throughout each year.

###### Employee Education

Actively engage, educate and encourage participation of forest employees in the fire prevention program. Topics may include:

* ENF Restriction/Closure Plan
* Spark arrestors
* Meaning of activity levels and adjective ratings
* Burning permit policies
* Campfire permit regulations
* Reporting and responding to a fire
	+ Protecting the origin of a fire
* Homeowner responsibility for required clearances (PRC 4291)
* Proper use of Smokey Bear (36 CFR 271)

###### Public Awareness Programs

Traditionally, most aspects of fire prevention education programs have been targeted toward children. The 2012 evaluation of fire prevention programs in California specifically identifies the need for adult fire prevention education with respect to adult responsibilities toward wildland fire (USDA Forest Service, Pacific Southwest Region, 2012). Adults must not only use fire responsibly, but engage neighbors and other stakeholders to create fire adapted communities, and collaborate on the restoration of fire resilient landscapes (USDA Forest Service, Pacific Southwest Region, 2012). Ways that FPTs engage in adult public awareness program include:

* Field fire education,
* School programs,
* Community events,
* Fire Safe Council meetings,
* Provide fire safe/prevention materials to Visitors Centers, local Chamber of Commerce(s), and local businesses,
* Participate in local and state fairs,
* Participate in local parades,
* Permit issuance,
* Local and non-local events as needed,
* Prescribed and managed fire program,
* Routine patrol as needed in high use areas,
* Signing problem areas,
* Check spark-arrestors on off-highway vehicle, chainsaws, dredges, etc.

###### Homeowner fire safe awareness programs:

In the Sierra Nevada, one-third of fire suppression costs are spent protecting homes and other structures (USDA Forest Service, Pacific Southwest Region, 2012). Numerous communities are located directly adjacent to and within the administrative boundaries of the ENF. While the high-cost of protecting homes may highlight the need for a reduced threat of wildfire around homes, it is neither the only nor the best reason. Ignitions are more likely wherever populations increase in flammable wildland environments, such as the wildland urban interface (USDA Forest Service, Pacific Southwest Region, 2012). Home/land owners who take action to create fire adapted space not only protect their property from the negative impacts of wildland fire burning onto their land, but reduce the chance they will start a fire that spreads onto neighboring land. Homeowner fire safe awareness programs should be considered for any opportunity where we work with the state foresters, the local communities or local Fire Safe Councils. Public involvement will create a drive needed to bring about the future success.

* Coordinate public informational programs on wildland fire risk factors,
* Attend home owner association meetings,
* Actively participate in local Fire Safe Councils,
* Home inspections on private land and special use within Forest protection areas.

###### Fire prevention awareness for children:

The need for adult fire prevention education does not diminish the importance of fire prevention awareness for children. Where children can access matches or lighters, there is always the potential for a fire. Children playing with fire have not, historically, been among the main causes of fires on the ENF, incidents have occurred and prevention programs should be ongoing, year-round. Older children have played a part in another problem area; teen-related abandon campfires. Regardless of age, the ENF Fire Prevention Program’s goal is zero occurrence of child-related fire through education programs such as the following:

* Continue co-op teaching in school programs,
* K-8th grades,
* Educate High School students of the effects of devastating fire (abandoned campfires, teen age partying etc.),
* Utilize high school students with prevention projects.

###### Recreation Activities:

Anywhere people gather for recreational activities, the risk of wildland fire ignitions increase. FPTs need to identify all of the recreation use areas on their District. They should especially know the high-use areas and be familiar with which areas have fire problems. Historically abandoned campfires from recreation activities have been a problem on the ENF. FPTs will strive to greatly reduce the number of abandoned campfires through increased patrols and educating the public.

* Routine patrol, as needed,
* Patrol weekends in high use areas,
* Public contacts for education,
* Extra patrols on holiday weekends,
* Signing problem areas,
* Check spark arresters on off-highway vehicles, chainsaws, dredges, etc.,
* Inform front desk personnel about current fire conditions, (all districts and the SO) ,
* Issue violation notices when necessary,
* Media releases,
* Reduce fire hazards in known dispersed areas,
* Assist the Recreation Department with home inspections for recreation residences within the Forest Protection area.

##### Engineering

Hazard reduction, inspections, permits, signage, and project activity level, are examples of actions that can be taken to increase fire prevention awareness in the general public and permit tee on NFS lands. These responsibilities are essential duties of all of the prevention staff and are an on-going effort throughout the fire season:

###### Hazard Reduction

* GPS and record any and all new structures on Districts (spring and fall updates),
* Meet fire hazard reduction compliance at all Forest Service facilities (June 1),
* Assist cooperators and meet fire hazard reductions at all recreation residences and organization sites (June 15),
* Coordinate with your supervisor to mitigate any fire hazards along maintained National Forest System (NFS) roads,
* Continue fire hazard inspections in developed campsites and other areas of concentrated public use, by coordinating with forest recreation officer and your supervisor,
* Respond to complaints of non-compliance of fire hazard reduction regulations, 1st by educating, 2nd warning and 3rd citation,
* Prioritize as **high**, **moderate** and **low** hazard areas,
* Develop community interest to be part of their own prevention programs,
* Educate the public instilling an attitude of "Defensible" landscaping, Fire Safety, Rx fire and managed natural fire.

###### Inspections and Permits

The following California Public Resource Codes (PRC s) and Code of Federal Regulations (CFRs) listed below provide specific direction for various inspections and permits:

Burn Permits

Door yard burning requires a burn permit from the state LE-62a for piles no larger than 4X4 and are required May 1. Piles larger than 4X4 require a LE-5. LE-63 is California Campfire Permit.

* Train forest front desk personnel/engine stations on issuance of LE-63.
* Inspections of areas where burning will occur with LE-62a is possible.
* PRC 4448 Permit required before burning
* PRC 4423 US Department of Agriculture Forest Service authorized to administer on Federal lands.
* PRC 4433 Campfires Administration
* PRC 4442 Spark Arrestors on equipment
* PRC 4291 Hazard clearance required (100 feet) or to property line
* PRC 4292 Power line Inspections
* PRC 4443 Small Combustible Engines
* Title 36 Code of Federal Regulations

Industrial Operation Inspections

The objective is toincrease the awareness of the operators on high hazard days. Review operations commensurate with the high hazard. Maintain existing practices and work towards a zero occurrence.

* Logging inspections will be made prior to the start of operations
* It will focus on the proper inspection procedures and techniques.
* Contracts for brush piling, road construction, etc. will be inspected at the start of the operation by the FPT's and the Contracting Officer (CO) or the Contracting Officers Representative (COR).
* Spot inspections will be done throughout the season.

Spark Arrester Inspections

* FPTs will routinely inspect equipment including chainsaws and off-highway vehicles for legal spark arresters while on patrol
* FPTs will routinely inspect FS equipment including chainsaws and off-highway vehicles for legal spark arresters
* FPTs will issue verbal or written warnings and/or terminate the activity with a violation notice if spark arresters do not pass
* All front desk personnel will be instructed on spark arresters
* Coordinate with Recreation to identify specific problem areas

Dispersed Camps Area Inspections

* Know where heavily used dispersed camping is on each District forest wide (see patrol plans)
* Map areas of high use using GIS (see patrol plans)
* Clean around existing campfire rings
* Remove any unsafe campfire rings (leave no trace)
* Update, repair all prevention signs as needed
* Greet visitors and check and/or issuance of campfire permits
* Document any Forest Service violations on Incident report form (FS-5300)

###### Signage

Forest signing represents the Agency in our absence. It is imperative that all prevention signs include current messages, look professional. Signs and sign posts must be clean, painted and free of weeds. Take the following actions:

* Develop and or use district sign plans,
* Maintain signs and sign posts,
	+ Construct new mounts, replace/repair mounts/backs as needed,
	+ Install new sign mounts as needed,
* Use high visibility areas to display fire prevention message,
* Keep messages current and relevant,
	+ Relay the correct information to the public,
* GPS all signs (see patrol plans or sign plans),
* Provide information to the forest prevention plan.

**Project Activity Level (PAL)**

What is PAL?

PAL is a precaution rating system for the danger of industrial operations igniting a fire on NFS lands in California. The system takes into account scientific information and uses a decision support process. PALs is a valuable tool for managing industrial operations. The goal is to reduce the risk of igniting wildfires while balancing the need to complete resource management activities (forest projects). The PAL ratings use the most recent 30-45 days of weather and the overall seasonality to estimate the danger of project activities causing a wildland fire. It is necessary to use 30-45 days of weather to reduce daily fluctuations. PAL ratings allow managers to make better decisions about when to limit project activities due to fire danger.

PAL is derived using the Energy Release Component (ERC) and Ignition Component (IC) outputs from the National Fire Danger Rating System (NFDRS) processor within the Weather Information Management System (WIMS). Weather observations from Remote Automated Weather Stations (RAWS) are received by WIMS and used to calculate the ERC and IC. ERC is represents large fuel moistures.

Table 4: Project Activity Level (PAL) Matrix

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  | **Ignition Component (IC)** |  |
|  |  | 0-10 | 11-20 | 21-30 | 31-40 | 51-60 | 61-70 | 71-80 | 81-90 | 91-100 | > 100 |  |
| **Energy Release Component (ERC)** | 0-10 | **A** | **A** | **A** | **B** | **C** | **C** | **C** | **C** | **C** | **C** |  |
| 11-20 | **A** | **A** | **B** | **B** | **C** | **C** | **C** | **C** | **C** | **C** |  |
| 21-30 | **A** | **B** | **B** | **B** | **C** | **C** | **C** | **C** | **C** | **C** |  |
| 31-40 | **A** | **B** | **C** | **C** | **C** | **D** | **D** | **D** | **D** | **D** |  |
| 41-50 | **B** | **B** | **C** | **C** | **D** | **D** | **D** | **D** | **D** | **D** |  |
| 51-60 | **B** | **B** | **C** | **C** | **D** | **EV** | **EV** | **EV** | **E** | **E** |  |
| 61-70 | **B** | **B** | **C** | **C** | **D** | **EV** | **EV** | **EV** | **E** | **E** |  |
| 71-80 | **B** | **B** | **C** | **C** | **D** | **EV** | **EV** | **EV** | **E** | **E** |  |
| 81-90 | **C** | **C** | **C** | **D** | **D** | **EV** | **EV** | **EV** | **E** | **E** |  |
| 91-100 | **C** | **C** | **C** | **D** | **D** | **E** | **E** | **E** | **E** | **E** |  |
| > 100 | **C** | **C** | **C** | **D** | **D** | **E** | **E** | **E** | **E** | **E** |  |

To follow the intent of reducing unwanted ignitions resulting from land management activities, Eldorado NF force account equipment will be allowed to operate high-speed rotary Xheads, mechanized slash disposal, and handcrew work including chainsaws and chipping in PAL: A,B,C and D without the 13:00 shutdown, with the implementation of the following precautions:

* All equipment and crews while in operation will have a Forest Service radio for immediate ECC notification of fire ignitions.
* Be equipped with charged, on-board self-actuated fire extinguishing system for each piece of subject equipment and one 10 pound 4A-60B: C fire extinguisher OR equivalent, OR two 10 pound 4A-60B: C fire extinguishers OR equivalent OR cat tanks OR engine on site.
* Stop work during PAL C,D, 1 hour prior to leaving the project area with re-inspection of that days previously treated areas before departing.

At the EV level authorization to operate high-speed rotary heads, mechanized slash disposal, and handcrew work including chainsaws, and chipping until 1:00 p.m. will include the above precautions along with approval / concurrence from the District Duty Officer and District Ranger. Approval criteria will consider availability of suppression resources, site-specific environmental factors, and proximity to residential development.

At the E level all mechanized equipment operations are prohibited except: equipment at landings may be serviced, and road dust abatement or rock / aggregate installation can occur.

**No woodcutting on an PAL of Ev or E.**

##### Enforcement

After education and engineering fail, a means of resort is included in the prevention triangle, enforcement. Elements important to enforcement include but are not limited to:

* Signing
* Extra patrols
* Warning and violation notices
* Investigations
* Inspections
* Restrictions and/or closures

###### Emergency Fire Closure and Restriction Plan

In some cases, it may be necessary to implement emergency fire closures or restrictions. This action should not be taken lightly. Prior to implementing an emergency closure or restriction, the effects of the restrictive action(s) must be weighed against how the limitations impact the public. Closures and restrictions should not be more restrictive than necessary, and must be appropriate to each situation. The following summarizes information available in the ENF Fire Restriction and Emergency Closure Plan. Review the full document for complete information.

Definition

An emergency fire restriction or closure is defined as a temporary restriction on activity or entry to an area due to unusual (high/extreme) fire hazard. The emergency fire closures are implemented when wildfire prevention or control would not be within the capabilities of suppression resources.

Specific weather and fuel conditions must be reached before restrictions will be implemented. Fire suppression capabilities are also considered in implementing restrictions. These conditions may vary from area to area but certain factors are used in determining whether to implement restrictions. When the Forest goes into fire restrictions it affects all districts.

Criteria for Implementation

* Red flag warnings in effect
* Critical burning conditions experienced or predicted multiple fires
* Available fire suppression resources are not sufficient to prevent new fires from becoming large fires due to current conditions and/or commitment to multiple existing incidents.
* For high hazard, lower elevations:
	+ Fire restrictions:
		- NFDR Burning Index (BI) of 60 or more for 3 consecutive days with a predicted stable or upward trend, AND
		- Live fuel moisture less than:
			* 80 percent in chemise, or
			* 100 percent in manzanita.
		- Dead fuel moisture less than 14 percent in 1,000-hour fuels.
	+ Emergency closure:
		- NFDR BI of 80 or more, AND
		- Live fuel moisture less than:
			* 60 percent in chemise, or
			* 80 percent in manzanita
		- Dead fuel moisture less than 10 percent in 1,000-hour fuels.
* For moderate hazard, higher elevations:
	+ Fire restrictions:
		- NFDR Burning Index (BI) of 80 or more for 3 consecutive days with a predicted stable or upward trend, AND
		- Live fuel moisture less than:
			* 80 percent in chemise, or
			* 100 percent in manzanita.
		- Dead fuel moisture less than 13 percent in 1,000-hour fuels.
	+ Emergency closure:
		- NFDR BI of 100 or more, AND
		- Live fuel moisture less than:
			* 60 percent in chemise, or
			* 80 percent in manzanita
		- Dead fuel moisture less than 10 percent in 1,000-hour fuels.

Criteria for Cancellation

* Red flag warning cancelled / Significant weather event
* Critical burning conditions return to moderate
* Adequate resources are again available for initial attack

Types of Restrictions:

*Regional-General*

Regional General Fire Restrictions are issued as a Regional manual supplement (R5 FSM 5112, exhibit 01). They remain in effect year round and are not influenced by minor daily weather fluctuations.

Fire

Fire restrictions are imposed by Forest Orders pursuant to R5 FSM 5112, exhibit 01. They are implemented when specific criteria are met and after consultation with the districts as well as their cooperators. .

* Orders shall not allow open fires, BBQs outside of a developed campsite or designated area. They will not restrict the use of lanterns or portable stoves using gas, jelled petroleum or pressurized liquid fuel.
* Orders shall not allow smoking, except within an enclosed vehicle or building, or at a developed recreation site or other designated area.
* Orders shall not allow operation of internal combustion engines, except on roads or designate trails.

Emergency Fire Closures

Emergency fire closures are imposed by a special order (Attachment B, FSH 5109.18). This is a temporary order prohibiting entry to specific areas of the National Forest due to fire hazards (extreme) and/or burning conditions. Use of the Closure is a last resort measure enacted when no other option is available to protect the forest resources and provide public safety.

* Dispatch will notify districts when conditions indicate restrictions are to be implemented
* FPTs will keep all signs posted and updated with current conditions
	+ Signs will be placed at all ranger stations, information kiosks, and the SO
	+ Current fire danger rating and PAL will be displayed
* Public Affairs Office will notify the media
* FPTs will contact contractors working in the field
* FPTs will increase patrols.
	+ Extra patrols may be used with extended/staggered hours
* National Prevention Teams may be ordered

The Forest Fire Management Officer (FFMO) is accountable for the effectiveness of the Fire Restriction and Closure Plan and the prevention program.

# Forest Order Implementation Plan: Fire Restrictions & Closures

### Objectives

To have a system that will allow immediate implementation of the Forest Emergency Fire Restriction and Closure Plan. Have designated areas on the forest for placement of Electronic signage if necessary ie: MET, Wentworth Springs Road, Ice House Road, Hwy 88.

The District Prevention Technicians (FPT) will be responsible for all segments of this plan. Each District FPT is responsible to see that a complete inventory of restriction and closure signs are on hand at all times, and will do updated inventory by October 31 and June 1 of each year.

### Restrictions

* District FPT is to see that all signs are posted at designated locations according to sign plan. That all signs are kept updated and look professional.
* Forest Duty Officer notifies all Forest personnel are notified of restrictions.
* Forest Duty Officer notifies all contractors and cooperators are notified.
* Forest Duty Officer decides whether to staff more patrols and stagger hours for best coverage.

### Closure

* District FPT sees that Steps are followed as in restrictions.
* The District will be divided into specific patrol units.
* Purpose is to contact all recreationists the areas affected by the closure.
* Check Station locations will be decided by the District Duty Officer, Law Enforcement and Fire Management to insure all visitors will be notified.

### Administration

Those activities such as planning, budget, and training:

* Yearly review and update of prevention plans-forest and District.
* Attend semi / annual forest wide prevention meetings
* Ensure that FPTs & FPOs have the following training:
	+ Wildland Fire Prevention P-101 / P-301
	+ Wildland Fire Investigation
	+ Forest Protection Officer / yearly refresher
	+ Basic 32 / mandatory fire refresher updates
	+ ICS-200
* Annual Forest wide Inventory of Prevention Material and Signs
* Forest Order for material and signs

The above responsibilities are essential duties of all of the prevention staff based on recommendation from the Division Chief and are an on-going effort throughout the year.

##### District Prevention Plan/Patrol Binder

Each FPT will develop and upkeep a binder for their unit which will contain but not limited to:

* Sign Plan
* Regional and Forest special Orders
* Patrol Procedures and schedules
* High use areas, hunter areas (patrol units)
* Emergency notification list
* Radio use and call numbers
* Active sales and locations
* Hazard map (power lines, fuel storage etc.)
* Water sources, access roads, helispots
* Truck inventory
* Prevention / Lookout JHAs
* Quick Reference Guide

The above responsibilities are essential duties of all prevention staff which is evaluated annually in the spring.

##### Interagency

All prevention units:

* Will work closely with cooperators
* Will be familiar with LE agencies, fire agencies and Fish and Game in their area of patrol
* Will have basic understanding of local fire policies
* Will ensure that our cooperators are aware of our present wildland fire prevention policies, restrictions
* Will keep open communication with all other agencies
* Will wear Forest Service uniform shirt with nomex pants, belt, boots with lug soles, name tag, badge and appropriate collar brass when attending cooperative meetings, community events, and making public contacts.

The above responsibilities are essential duties of all of the prevention staff and are an on-going effort throughout the year.

# 2014 ENF Fire Prevention Patrol Plan

### Purpose

This Fire Prevention Patrol Plan is designed to provide operational strategies and tactics aimed at reducing the number of human-caused fires. It may also serve as a pre-attack plan for incoming prevention personnel. Wildland fire prevention programs will focus on threats and areas with the greatest potential to cause unacceptable damage or losses. Current and potential problems must be identified for prevention efforts to be effective and efficient.

This plans primary objectives are to:

### Objectives

1. Maximize prevention efforts to minimize the ignition of human caused fires in watersheds and high value areas identified as high hazard
2. Identify problem areas
	1. Implement measures aimed at reducing human-caused fires in these areas
3. Protection of high value resources from wildland fires
4. Focus cost effective prevention activities in priority areas
5. Assist incoming prevention personnel with pre-attack information

Fire Prevention Techs (FPTs) should be able to identify the use areas of their District. They should know the high use areas and be familiar with areas that have fire problems.

The objective is to greatly reduce the number of abandoned campfires through increased patrols and educating the public.

##### Patrol frequency in relation to fire danger:

* **High:**  Patrol areas weekly making regular public contacts. High visibility signs changed to reflect current rating
* **Moderate:**  Patrol bi-weekly; signing to reflect current rating
* **Low:** Patrol as needed; sign changes as needed

##### Patrol Schedule by Patrol Area ~Reference ENF Patrol Area Maps at: <http://fsweb.eldorado.r5.fs.fed.us/gis/maps/PreventionPatrolSouthZone.pdf>

***Reserved for ENF Patrol Area Map for North end of Forest***

Patrol areas must be discussed and coordinated between the on duty Fire Prevention Techs (FPT’s) and Battalion Chiefs or District Duty Officer daily. Each FPT will go in and out of service with Camino ECC daily and notify of which identified area is to be patrolled. There may be instances where deviation from this schedule is required due to higher use, another patrol being off Forest or other unforeseen problems which give higher priority to one area over another. In any case these deviations will be coordinated with the District Duty Officer. High use roads dispersed camp locations and area hazards must be known and identified to all patrols.

There are a total of 16 Patrol areas: Bear River/ Mokelumne Canyon, Gold Note/ Pipi/Middle Fork, Grizzly Flat/Elkins Flat/Plummer Ridge, Up Country/Blue Lakes area, Sly Park/MET, Pack Saddle Pass/Silverfork, HWY 50 Corridor, Cable/Forebay, Ralston, Hell Hole/Nevada Point, Mosquito, Bald Mountain/Poho, Big Hill, Wrights Lake, Loon Lake, and Bunker.

Table 5: ENF Patrol Areas with Patrol Needs

| Patrol Area | District | Patrol Visibility | Tasks and Concerns |
| --- | --- | --- | --- |
| Bear River/Mokelumne Canyon | Amador | High | High frequency of recreational use, educating visitors of new fire restriction policies, general forest visitors, identified shooting areas, fuel wood cutting and natural fire ignition detection and monitoring of identified resource benefit fires. |
| Gold Note/ Pipi/ Middle Fork | Amador | High | High frequency of recreation use identified shooting areas and fuel wood cutting. |
| Grizzly Flat/Elkins Flat/Plummer Ridge | Amador/Placerville | High | High frequency of OHV and other recreational use. This area also has the small subdivision of Grizzly Park on the district boundary, which is a main access point for fuel wood cutting and general forest visitors as well as Leoni Meadows Camp. |
| Up Country/ Blue Lakes | Amador | Moderate | Recreational use, educating visitors of new fire restriction policies and fuel wood cutting. |
| Sly Park/ MET | Amador/Placerville | Highto Moderate | Fuel wood cutting, recreational use, which includes identified shooting areas, camping and OHV use and the main route of travel between the Placerville and Amador Districts. |
| Cable Forebay | Placerville | LowToModerate | This area is outside of the National Forest Direct Protection Area, (DPA), however, there is a significant amount of Federal property within the patrol area. This area has numerous residences throughout. It does see recreational use, camping, woodcutting and OHV use. |
| Highway 50 Corridor | Placerville | Highto Moderate | Camping, recreational use, summer homes and the highway, this area is extremely congested on the weekends, but cannot be ignored. This area has high potential for large fire activity due to the location of the highway, river use and the residences throughout the corridor from Pollock Pines to Echo Summit. |
| Packsaddle Pass/ Silver Fork | Placerville | High | High frequency of recreational use, educating visitors of new fire restriction policies, general forest visitors, natural fire ignition detection and monitoring of identified resource benefit fires. |
| Ralston | Georgetown | Moderate toHigh | High frequency of recreational use, general forest visitors, identified shooting areas, fuel wood cutting. |
| Hell Hole/ Nevada Point | Georgetown | Lowto Moderate | This area has moderate recreational use, camping, woodcutting and OHV use. Tends to increase when fall hunting season arrives. |
| Mosquito | Georgetown | High | High frequency of recreation, OHV and camping. |
| Bald Mountain/ Poho | Georgetown | High | High frequency of OHV and other recreational use. This also includes the Volcanoville area and numerous private land holdings. |
| Big Hill | Pacific | Highto Moderate | Camping and recreational use in this area. This area also includes the Mountain summer children’s camp, Icehouse and Union Valley reservoirs and the White Meadows area. Numerous private land holdings are located in this area. There is also a high frequency of fuel woodcutting and target shooting. |
| Wrights Lake | Pacific | High | High frequency of recreational use, educating visitors of fire restriction policies, and general forest visitors. This area also has Wrights lake summer home tract that gets inspected on a yearly basis for Fire clearances. |
| Loon Lake | Pacific | Highto Moderate | This area has the Rubicon Jeep Trail. Heavy use all summer in this area due to events held out on the Jeep Trail. Camping, Fishing and High OHV use area. This area also includes the homes of Gerle creek summer tract. These are inspected on a yearly basis for Fire clearances. |
| Bunker | Pacific | Moderate | This area has primarily recreational use. Hunting, Fishing, and Camping in this area. Heavy use in the Fall Hunting season. |

##### Routine patrol activities:

* Public contacts for education
* Extra patrol on holiday weekends as directed
* Signing problem areas
* Check spark arresters on off-highway vehicles, chainsaws, etc.
* Issue violation notices when necessary
* Reduce fire hazards in known dispersed areas
* GPS and log all structures in divisions
* Inspect fire hazard reduction compliance at all Forest Service facilities.
* Assist cooperators and meet fire hazard reductions at all recreation residences and organization sites (August 1)
* Coordinate fire hazard inspections in developed campsites and other areas of concentrated public use with District Recreation Officer
* Respond to complaints of non-compliance of fire hazard reduction regulations
* Update, repair all prevention signs as needed
* Greet visitors and check and/or issuance of campfire permits

For additional patrol specifics, please reference the Districts’ Patrol Plans.

# Evaluating the Plan

The Fire Prevention Plan should be evaluated annually to ensure the planned actions have been effective on the ground and are still appropriate for each MA.

The following questions are provided to assist in the evaluation process:

1. Have the priority areas or actions changed? If so, the Plan must be amended to address changes in priority areas and/or the redefinition of the Prevention Tasks.
2. Are the task actions funded? If so, was the action completed? If not, the responsibilities and completion dates must be reevaluated and redefined.
3. Have the task actions been successful? If not, the actions, responsibilities, and completion dates must be reevaluated and redefined as appropriate.

In addition to evaluating the Fire Prevention Plan, the effectiveness of the overall Prevention Program should also be considered. This will require asking different questions and should consider longer timeframes.

# Table of Figures & Tables

[Figure 1: The number of wildland fires within the Eldorado National Forest from 2006-2013, per year by cause. 6](#_Toc353896812)

[Table 1: 2012 Population Estimates Reported by the US Census Bureau for Counties near the ENF (United States Department of Commerce) 4](#_Toc355243105)

[Table 2: ENF Fire Prevention Personnel 5](#_Toc355243106)

[Table 3: ENF Lookout Personnel 5](#_Toc355243107)

[Table 4: Project Activity Level (PAL) Matrix 14](#_Toc355243108)

[Table 5: ENF Patrol Areas with Patrol Needs 19](#_Toc355243109)0

# References

United States Department of Agriculture, Forest Service. (2012). Visitor Use Report: Eldorado National Forest: USDA Forest Service, Region 5: National Visitor Use Monitoring Data collected FY2007, last updated May 23, 2012. *Natural Resource Manager, National Visitor Use Monitoring Program website*. Accessed 4/22/2013. From http://apps.fs.fed.us/nrm/nvum/results/ReportCache/Rnd2\_A05003\_Master\_Report.pdf.

United States Department of Agriculture, Forest Service, Pacific Southwest Region . (2012) *Fire Prevention Reinvention*. Evaluation Report. Recreation Solutions Enterprise Team: Prescott, AZ. September 2012.

United States Department of Commerce, United States Census Bureau. State and County Quick Facts*.* *Census Bureau website*. Accessed 4/22/2013. From <http://quickfacts.census.gov>.

# Attachment A:

### ENF Cooperator Phone Contact List

**Water Districts**

 Placer County Water Agency-Auburn (530) 823-4850

 SMUD (emergency) (916) 264-5011

 El Dorado Irrigation District (530) 622-4513

 El Dorado Co. water agency (530) 621-5392

 Water Works / Amador (209) 223-1646

**Utilities**

 PG&E (916) 477-3236

 Georgetown Public Utility District (530) 333-4356

 SMUD

**Air Pollution Control District**

 Nevada County (530) 889-7130

 El Dorado County (530) 621-5804

 Amador County (209) 223-6391

 Placer County

**Burn Day Information**

El Dorado County (530)-621-5897

Amador County (209)-223-6246

Great Basin (Alpine County/ (916)-445-0745

Daily PAL (530)-644-6048

**Sierra Pacific Industry**

 Camino (530) 644-2311

 Amador (209) 223-7170

**Blodgett Forest**

 Bob Heald (530) 333-4475

**Fire Safe Councils**

 El Dorado (530) 647-1098

 Amador (209) 296-6220 (fax)

 Grizzly Flat/Mark Almer (530) 559-3774 (pc)

**Fire Districts**

 CDF / Mt. Danaher (530) 644-2345

 El Dorado County Fire (530) 644-9630

 Georgetown Fire (530) 333-4111

 Garden Valley Fire (530) 333-1240

 Mosquito Fire (530) 626-9017

 Pioneer Fire (530) 620-4444

 Diamond Springs Fire (530) 626-3190

# Attachment B:

### FSH 5109.18 – Wildland Fire Prevention Handbook: WO Amendment 5109.18-99-1, Chapter 10 – Wildland Fire Prevention Planning

EFFECTIVE 06/10/1999

10.2 - Objective. To develop effective and efficient plans of action for wildland fire prevention and education activities.

10.3 - Policy. Ensure that every Region, Forest, and District, and the Area implement and update annually a wildland fire prevention action plan consistent with fire and ecosystem management objectives of the unit's land management plan.

10.5 - Definitions. Following are definitions of terms as used specifically in assessments for wildland fire prevention plans:

Assessment. A scientific planning tool of the National Fire Management Analysis System (NFMAS) (FSH 5109.19; FSM 5102 and 5190). The assessment also provides a workload analysis that determines the most efficient staffing needed to accomplish wildland fire prevention programs.

Hazard. The degree of resistance of an area to control of wildland fire. Assessment of hazards usually incorporates models of topography and fuels but does not consider weather factors.

Risk. The level of possibility that a wildland fire may be ignited in an area by human carelessness or activity; for example, a higher level of risk may be indicated in an area of concentrated public use with a history of human-caused fires and a lack of fire prevention education efforts.

Value. Human improvements or natural resources that are affected positively or negatively by a wildland fire. Value assessments include consideration of the benefits or detriments of fire for the entire ecosystem.

10.6 - References. The publications and training courses listed in sections 10.61 and 10.62 can assist in wildland fire prevention assessments and planning.

10.61 - Publications and Other Materials.

1. The National Interagency Coordination Center (NICC), National Wildfire Coordinating Group (NWCG), 3905 Vista Avenue, Boise, ID 83705, 208-387-5104, operates the Publication Management Section (PMS) as a source of interagency materials in fire management, including wildland fire prevention planning.

a. Wildfire Cause Determination Handbook, NWCG Handbook 1, NFES 1874, PMS 412-1; this Handbook has been incorporated in the Forest Service directive system as FSH 5109.31.

b. Web Site - www.nwcg.gov

2. Publications and fire prevention materials are available from the Symbols Center of Excellence Cache, 402 11th Street SE, Grand Rapids, MN 55744 (218-327-4282). All materials are listed in a published catalog available in all Regional and Area offices.

3. Internet sources are available on official web sites, including *www.fs.fed.gov* *and www.firewise.org.*

10.62 - Training. Introduction to Fire Prevention (P-101) and Wildfire Prevention Analysis and Planning (P-301) courses are developed through the National Wildfire Coordinating Group (NWCG). Further direction on wildland fire training is in

FSH 5109.17.

11 - FRAMEWORK. Includethewildland fire prevention action plan as a component of the unit's fire management action plan (FSH 5109.19) and integrate these activities with other fire management activities (suppression, presuppression, detection, and fuels management).

The major focus of wildland fire prevention action plans is to:

1. Demonstrate the need for actions to prevent unwanted wildland fires through education programs aimed at the general public and/or specific target audiences.

2. Communicate with the public and specific stakeholders, such as landowners, homeowners, and users, about the role of fire and their fire protection responsibilities.

3. Assess fire occurrence, risk, hazards, and values in selected geographic landscapes, and then target the wildland fire prevention program of education, engineering, and enforcement for areas identified by the assessment. Aim these programs at a specific wildland fire cause and target audience, and implement activities for a finite period of time. Prioritize the fires which present the greatest potential for value loss.

12 - DEVELOPMENT.

1. Use the fire assessment process and objectives in fire and land management plans to develop fire prevention action plans for specific geographic areas. Assessments should include an evaluation of the risk, hazard, and value for the landscape being assessed; these terms are defined in section 10.5.

Assessments are the basis for determining the level of need in individual landscapes for the inclusion or exclusion of fire as a management tool.

2. Design the wildland fire prevention programs at two levels of activity.

a. The first level of activity is usually long-term and on-going, with messages about individual responsibility in the prevention of wildland fires. This level should provide contacts, materials, and educational programs to individuals; schools; civic and youth organizations; and other established community groups. This level would often provide fire prevention information at parades, fairs, and other public venues and events.

b. The second level of activity is usually short-term, with messages targeting specific fire causes and addressing a specific audience in a specific geographic location. The second level would be implemented prior to and during wildfire incidents.

3. Identify the most efficient staffing levels for the actions in the plan based on a workload analysis. In the National Fire Management Assessment System (NFMAS), this workload analysis, which has been based on the fire assessment is incorporated into a mathematical formula along with other values to determine the most efficient funding level for a unit's fire management program (FSH 5109.19).

13 - WILDLAND FIRE PREVENTION ACTION PLAN OUTLINE. The following format is a guide for developing or updating unit wildland fire prevention plans:

1. Identification.

a. Unit identification.

b. Dates the plan covers.

c. Signature blocks for preparation, review, and approval.

2. Assessments.

a. Assessment of the current fire situation, including maps and documentation.

b. Determination of the unit's fire prevention and fire communications needs, based on an analysis of geographic areas with ratings for risk, hazard, and value.

c. Needs identified in the unit's fire management plans and the land and resource management plan.

3. Identification of the unit's fire prevention needs linked to the assessment, the fire management plan, and the land and resource management plan.

4. Identification of opportunities available for addressing the needs.

5. Identification of realistic, measurable fire prevention program objectives.

6. Prevention activities. (Level one and level two activities are further described in sec. 12).

a. Level One. Those actions, or activities that serve to reinforce the fire prevention message to the general public; for example, parades, fairs, school programs, civic groups, cooperator inspection, and media releases of a general nature.

b. Level Two. Those actions or activities aimed at a concentration of fires (based on the assessment categorization), from the same specific fire cause, aimed at a specific target audience, and planned for a finite time line.

7. Implementation. Delineation of which staff positions are responsible for completing level-one and -two activities, description of actions, and timing for accomplishment.

8. Prevention budget.

9. Evaluation criteria and procedures.

a. When actions are to be accomplished.

b. What determines success or failure and to what extent.

c. When to initiate modifications or adjustments.

10. Listing of related and contingency plans that are affected by or must be coordinated with wildfire prevention plans.

a. Restriction and closure plans.

b. Sign plans.

c. Fire prevention materials required.

d. Contingency fire prevention actions planned for extreme fire conditions.

e. Disaster or crisis communications plans.

f. Evacuation plans of urban interface areas.

g. Hazard inspection plans.

h. Fuel treatment and land management plans.