

Section IV: Wildland Fire Management Program Components

This Fire Management Plan is the operational guide to implementation of fire management direction contained in the Roseburg BLM and Umpqua Resource Management Plans.

General Implementation Procedures

Implementation of the Fire Management Plan (FMP) must be consistent with fire management capabilities and consider current and predicted conditions affecting fire behavior. Preplanned suppression strategies based on historical fire behavior indices should be considered when making decisions regarding appropriate fire suppression responses.

Umpqua NF

(At this time the Umpqua NF does not utilize the Wildland Fire Implementation Plan, as Wildland Fire Use (WFU) Planning has yet to be developed. As planning progresses the process below will be incorporated into this FMP.)

A Wildland Fire Implementation Plan (WFIP) shall be initiated for all wildland fires. Operational management decisions and specific requirements are outlined in chapter four of the WFIP Implementation Guide³.

Stage I, the Initial Fire Assessment, provides the decision framework for selecting the appropriate suppression response. This stage analyzes and documents the current and predicted situation, all appropriate administrative information, and provides managers with information needed to make the initial decision whether to manage a fire for resource benefits or to take suppression action.

The Initial Fire Assessment includes the Fire Situation and the Decision Criteria Checklist. In FMU's where a full range of responses is available, identify other significant management criteria (in addition to the checklist) that should be considered in the decision process. In FMU's where fire suppression is the only appropriate response, the requirement for a decision checklist as part of Stage I analysis may be satisfied at the programmatic level via the FMP; refer to the Implementation Guide for further information.

Roseburg BLM

The Roseburg District BLM has no plans to implement wildland fire use at this time. Wildland Fire Suppression

Roseburg BLM Wildland Fire Situation Analysis Approval Authority

The Roseburg BLM utilizes the Western Oregon Fire Protection Contract for fire suppression. This contract with the State of Oregon provides all fire protection on BLM administered public lands, and is guided by annual Fire Operations Plans.

³ Wildland and Prescribed Fire Management Policy Implementation Procedures Reference Guide (FSM 5103, 5108, and 5132.32)

BLM policy includes the following; refer to the Standards for Fire and Fire Aviation Operations H-9213-1 (Red Book) for additional information.

- The Resource Area/BLM District FMO will "ensure a wildland fire situation analysis (WFSA) is completed and retained for all fires that escape initial attack." (Chapter 2, page 15, item # 19)
- All units will utilize the Extended Attack Complexity Analysis and the WFSA to determine the most appropriate suppression strategies and organization for a wildland fire that exceeds initial attack capabilities. (Chapter 10, page 12)
- "The WFSA is a decision making process in which the agency administrator or representative describes the situation, evaluates the expected effects, establishes objectives and constraints for the management of the incident, selects an appropriate alternative and documents that decision." (Chapter 10, page 13)

The Northwest Coordination Group (NWCG) defines initial attack as "the actions taken by the first resources to arrive at a wildfire to protect lives and property, and prevent further extension of the fire". Three indicators that a fire has escaped initial attack are:

- The fire has exceeded the acreage identified in the approved FMP or the escaped fire size set in the Interagency Initial Attack Assessment (IIAA) model for that Representative Location
- Additional resources need to be ordered to contain the fire in addition to the preplanned initial response resources. The preplanned resources include those resources initially alerted as well as supplementary mutual aid resources.
- The fire goes into the second burning period without being controlled, or control is anticipated during the second period, or the complexity analysis indicates a need for a higher level of management.

If a fire fits into any of one of these three categories, a complexity analysis must be completed, and a WFSA prepared, to document the management decision for that specific fire.

The WFSA should be completed by an inter-disciplinary team (IDT) that includes Line Officer involvement. WFSAs must be approved by the Field Office Manager (or Acting) who has been delegated the authority through the State Director's Delegation of Authority Internal Memo (IM). In areas where fires have historically escaped initial attack efforts, BLM offices should be able to prepare most portions of a WFSA or at least have most of the preliminary data entered into the software in advance.

Table 2: DOI Signing Authority - BLM

Cost and Complexity Level	Responsibility
Local Level - \$1,000,000	Field/District Manager
Mid-Level - \$1MM to 5MM	State Director
National Level - > \$5MM	BLM Director

Umpqua Wildland Fire Situation Analysis Approval Authority

The Umpqua National Forest is responsible for suppression actions on Forest administered public lands. At this time all wildland fires on National Forest lands within the Fire Planning Unit (FPU) will be suppressed using the full range of suppression options. Fire suppression responses will be based on firefighter and public safety, risk to cultural and other resources, resource objectives and benefits, and cost-effectiveness.

The table below describes Wildland Fire Situation Analysis (WFSA) approval and issuance of Delegations of Authority for fire suppression. The actions column defines the oversight role of the Line Officer. The WFSA is to be used as a decision making tool that supports the selected suppression alternative for fires that exceed initial attack.

Table 3: Umpqua National Forest Signing Authority

Cost and Complexity Level	Responsibility	Actions
Up to \$2 MM or Type 2 Incident Team Activated	District Ranger	Develop and Certify WFSA and Issues Delegation of Authority
\$2MM and up to \$10 MM, or Type I Team, or Area Command Activated	Forest Supervisor	Develop and Certify WFSA and Issues Delegation of Authority
\$10MM and up to \$50 MM, regardless of team assigned.	Regional Forester	Forest Supervisor to develop WFSA and Issue Delegation of Authority; Regional Forester to Certify WFSA within 12 hours.
Over \$50 MM	Chief	Forest Supervisor to develop WFSA and Issue Delegation of Authority; Regional Forester to provide WFSA to, and consult with Chief; Chief to Certify WFSA within 24 hours.

Range of Potential Fire Behavior

The Umpqua NF uses five representative remote automatic weather station (RAWS) sites and Roseburg BLM uses two RAWS sites that calculate Energy Release Component (ERC). The ERC is an estimate of the greatest potential amount of energy released per unit area at the head of a fire. This value integrates the effects of fuel models, fuel loadings, fuel moisture and amount of live fuels.

The Umpqua and Roseburg BLM also utilize Pocket Cards that shows the relationship of local seasonal trends to moderate through extreme fire behavior potential based on ERC. The Burning Index (BI), which utilizes the ERC and Spread Component (SC), is a measure that indicates the difficulty of containing a single fire. The BI is subject to daily fluctuations and is used to determine control issues in a given situation. For this reason the BI pocket card is not used, but this index, along with the ERC and SC, are used to guide daily fire management staffing levels.

The BLM Pocket Cards are developed by the Douglas Forest Protective Association and are a requirement of the Western Oregon Fire Protection Contract. The Roseburg BLM and Umpqua Pocket Cards are displayed below.

Figure 2: Umpqua National Forest Pocket Card

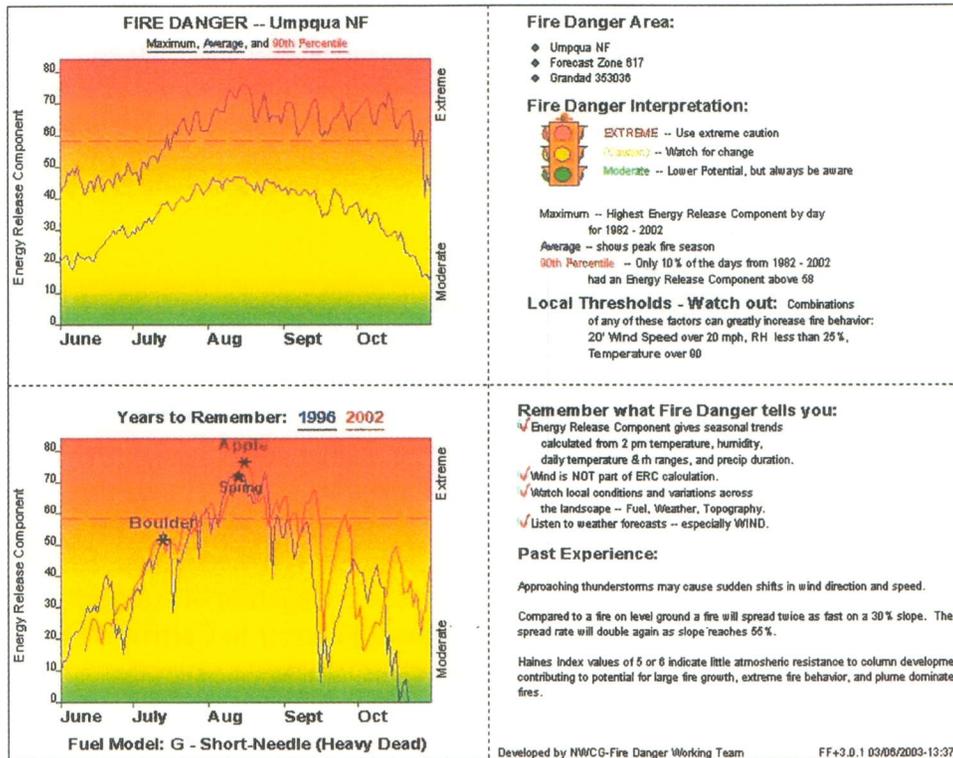


Figure 3: Douglas District/ODF Energy Release Component Pocket Card

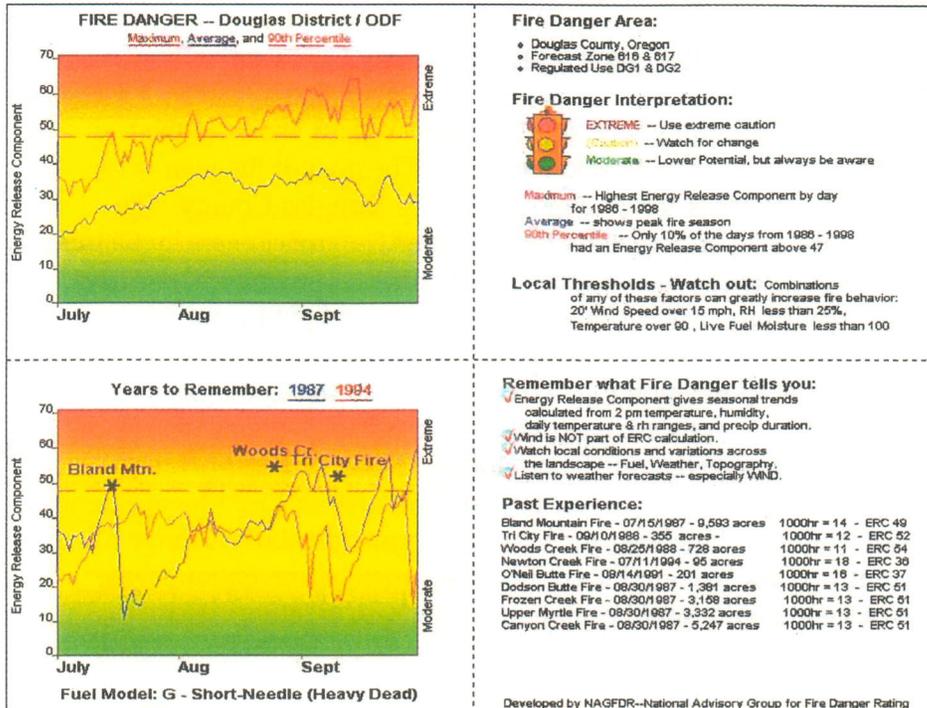
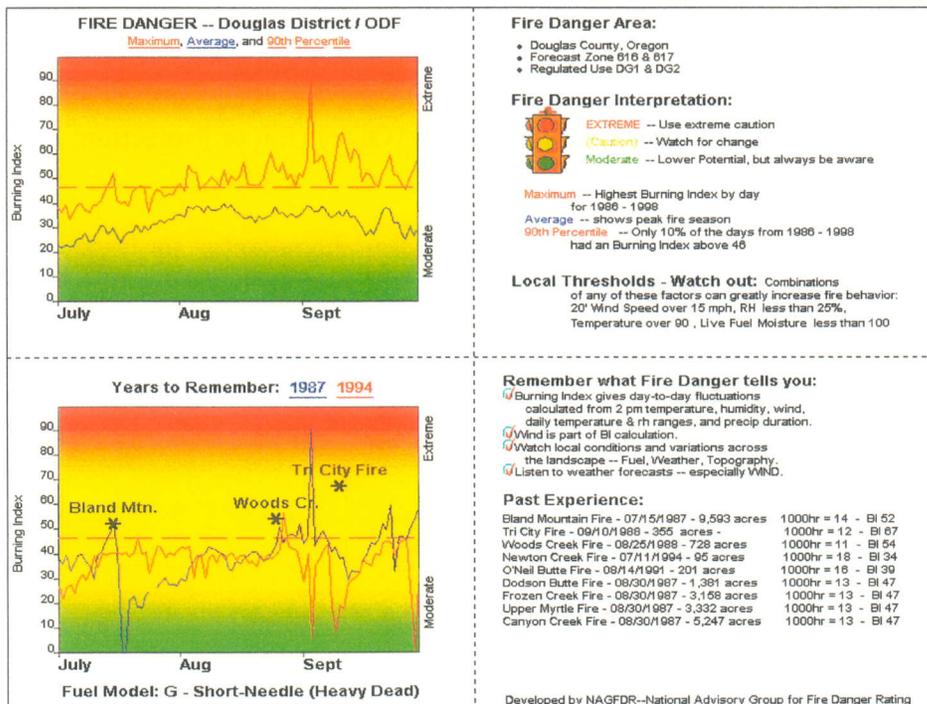


Figure 4: Douglas District/ODF Burning Index Pocket Card



Preparedness Actions

Fire Prevention, Community Education, Community Risk Assessment, and Other Community Assistance Activities

At this time, agencies are collaborating with DFPA and Douglas County in the development of a Community Wildfire Protection Plan⁴. The goal of the plan is to effectively mitigate wildfire hazards for 25 communities in Douglas County. The County's goal is to have the plan approved by the Board of Commissioners by October 1, 2004. Planning includes completing inventories, establishing community boundaries, collecting fuels data, establishing evacuation routes, training and public review.

The Umpqua's Wildland Fire Prevention Plan will be incorporated into this FMP, and is currently in the process of being updated. Districts supplement this plan with annual updates that are approved and signed at the District level. The Umpqua prevention program involves the Deputy Fire Staff, Forest Dispatcher, District Fire Management Officers (FMO's), prevention technicians, and visitor information staff. A range of program efforts is identified and accomplished including posting prevention signs, providing press releases and public service announcements, conducting educational programs for school children and visitors, and coordinating with local cooperators.

In recent years DFPA received over \$950,000 of Title IV (National Fire Plan) funds. This money was used for hazardous fuels reduction projects within Wildland Urban Interface (WUI) areas identified in Community Risk Assessments.

Annual Prevention Program

Wildland Fire Prevention Plans are incorporated into the annual Fire Operations Plans prepared each year by the Oregon Department of Forestry (ODF) Unit or Protection Association for Roseburg BLM managed lands.

Wildland fire prevention goals for this FPU focus on reducing the potential for large damaging fires. Prevention program objectives for the Umpqua are to:

- ▶ Limit number of human caused fires to no more than 10% above the 10-year average of 14.9 fires per year.
- ▶ Limit number of industrial caused fires to no more than 10% above the 10-year average nine fires per year.

Prevention program objectives for the Roseburg BLM are:

- ▶ Limit number of human caused fires to no more than 10% above the 14-year average of 5 fires per year.
- ▶ Limit number of industrial caused fires to no more than 10% above the 10-year average two fires per year.

⁴ <http://healthyforest.info/cwpp/>

- ✦ Minimize annual fire loss by using effective fire prevention methods, and appropriate suppression strategies. Roseburg BLM's goal is to control 94% of all fires before they exceed 10 acres in size, or within 24 hours after discovery.

Special Orders and Closures

Public Use Restrictions are put into effect as needed to meet pre-suppression and suppression needs. On National Forest lands the Regional Forester and Forest Supervisor have the authority to issue restrictions and closures. The ODF State Forester has that authority on BLM administered lands. The District Rangers and District Managers responsible for implementation and enforcement of the restrictions will be contacted to ensure that the proposed restrictions are coordinated across the FPU as appropriate. If the Industrial Fire Precaution Levels (IFPL's) exceed Level III (see below), public use restrictions on campfires, off road vehicle use, smoking, internal combustion engines and welding are put in place.

The Land Resource Specialist will prepare the order for public use restrictions for the Forest Supervisor's signature. The Land Resource Specialist will keep the original in the Special Orders Book. Copies should be distributed to the Supervisor's Office (SO) receptionist and all districts for proper posting. The Zone Law Enforcement Officers (LEO's) need to be informed of the closures and given a copy of the order also.

Industrial Operations and Fire Precautions

The Umpqua NF, Roseburg BLM and DFPA utilize the Industrial Fire Precaution Level (IFPL) process to establish guidelines for operations, equipment use and other activities conducted on lands within the FPU. As ERC values reach predetermined levels, IFPL's will take effect, and will be coordinated with adjoining federal land management agencies and Cooperators in order to be somewhat consistent across administrative borders.

Industrial Fire Precaution Levels are:

Level I - Closed Season

Fire precaution requirements are in effect. A fire watch/security is required at this and all higher levels unless otherwise waived.

Level II - Partial Hoot Owl

The following may operate between the hours of 8 PM and 1 PM local time:

- ✦ Power saws except at loading sites.
- ✦ Cable yarding
- ✦ Blasting
- ✦ Welding or cutting of metal

Level III - Partial Shutdown

The following are prohibited except as indicated:

- Cable yarding – except gravity operated logging systems employing non-motorized carriages may operate between 8 P.M. and 1 P.M., when all blocks and moving lines are suspended 10 feet above the ground except the line between the carriage and the chokers.
- Power saws – except power saws may be used at loading sites and on tractor/skidder operations between the hours of 8 P.M. and 1 P.M. local time.

In addition, the following are permitted to operate between the hours of 8 P.M. and 1 P.M. local time:

- Tractor, skidder, feller-buncher, forwarder, or shovel logging operations where tractors, skidders or other equipment with a blade capable of constructing fire line are immediately available to quickly reach and effectively attack a fire start
- Mechanized loading or hauling of any product or material
- Blasting
- Welding or cutting of metal
- Any other spark emitting operation not specifically mentioned

Level IV - General Shutdown

All operations are prohibited.

NOTE: Where hauling involves transit through more than one shutdown or regulated use area, the precaution level at the woods loading site shall govern the level of haul restriction, unless otherwise prohibited by other than the industrial precaution level system.

The following definitions shall apply to the above Industrial Fire Precaution Levels (IFPL's):

- Loading sites – a place where any product or material (including, but not limited to logs, firewood, slash, soil, rock, poles, etc.) is placed in or upon a truck or other vehicle.
- Cable yarding systems – a yarding system employing cables and winches in a fixed position.
- Low hazard area – any area where the responsible agency representative (BLM, Oregon Department of Forestry (ODF) or Forest Service) determines that a combination of elements reduces the probability of fire starting or spreading.
- Closed season (fire precautionary period) – that season of the year when fire hazard exists as declared by the responsible agency official.

Waivers, written in advance, may be used for any and all activities. Activities for which waivers may be issued include, but are not limited to:

- ✦ Mechanized loading and hauling
- ✦ Road maintenance such as sprinkling, graveling, grading, and paving
- ✦ Cable yarding using gravity systems or suspended lines and blocks, or other yarding systems where extra prevention measures will significantly reduce the risk of fire
- ✦ Power saws at loading sites or in felling and bucking where extra prevention measures will significantly reduce the risk of fire
- ✦ Maintenance of equipment (other than metal cutting and welding) or improvements such as structures, fences and power lines.

For the Roseburg BLM, the ODF Forest Practices Officers are responsible for completing fire prevention inspections of all BLM operations. They also approve waiver requests with the concurrence of a BLM Line Officer or Authorized Representative.

On the Umpqua NF, the Timber Sale Administrator (TSA) is responsible for completing fire prevention inspections of the timber sale contractor's equipment and sale area. The Forest Service Representative or sale administrator will enforce all requirements of the contract related to fire precautionary measures. All internal combustion engines that operate on the Umpqua must have properly working spark arrestors. Agency personnel conduct spark-arrestor inspections. The inspection procedures are listed in the Spark Arrestor Guide⁵.

In the case of special use permits related to activities outside of the responsibility of the TSA, compliance inspections are completed in accordance with contract requirements or per manual direction.

Annual Fire Training Activities

Agency Administrators will ensure employees are trained, certified and available to participate in the wildland fire program locally, regionally and nationally, as described in the Interagency Standards for Fire and Fire Aviation Resources Operations.

All agency and Administratively Determined (AD) personnel sponsored by the Umpqua or Roseburg BLM that have wildland fire qualifications and agency red cards are required to attend an annual fire refresher session. This refresher includes fire shelter deployment and safety topics such as Standards for Survival, Look Up, Look Down, Look Around, and similar safety oriented training. Abatement item requirements from recent tragedy fires are also included in refresher training. Basic Firefighter training, offered annually to new employees, addresses the foundations of wildland fire operations and support, and also includes the components of the annual fire refresher.

⁵ Spark Arrestor Guide – General Purpose and Locomotives, Volume 1 PMS 430-2 and Spark Arrestor Guide – Multipurpose Small Engine, Volume 2, PMS 430-2

All Line Officers are required to attend annual refresher training and to participate by stating their expectations at these refresher trainings. Annual refresher requirements are outlined in agency manuals and handbooks⁶; refresher training shall be a minimum of eight hours for Umpqua employees and a minimum of four hours for Roseburg BLM employees.

Red cards will be issued upon successful completion of the annual refresher and the appropriate work capacity physical fitness test. The Six Minutes for Safety program is included in the daily morning briefing for all fire operations personnel.

Umpqua NF

An annual Incident Commander (IC) refresher is conducted on the Umpqua prior to fire season. Each year this eight hour refresher for Extended Attack (IC Type 3), Initial Attack (IC Type 4) and Initial Attack (IC Type 5) Incident Commanders covers Agency Administrator expectations for performance, current safety issues related to any abatement items, IC responsibilities for complexity analysis and reporting, use of the approved Forest IC packet, pocket cards, leadership qualities, resource tracking, dispatch requirements, limits of authority at the various levels of IC responsibility and After Action Reviews. A new requirement, effective in 2004, is that Forest Service ICT3's must successfully complete an agency-specific simulation performed by a trained cadre.

Along with the required annual training, each Ranger District tailors an annual training program for their personnel based on their specific needs.

Training needs for employees from other resource areas or support functions are coordinated through the District Fire Management Officers (FMO's). The Umpqua NF has a Forest Training Officer that serves as the technical expert for training requirements and needs analysis Forest-wide. Copies of training and experience records for all AD's and Umpqua employees are kept in the Supervisor's Office. The Forest hosts an array of meetings and courses in preparation for fire season, as well as to maintain the currency requirements of some positions. This information can be obtained from the Forest Training Officer or Forest Dispatcher.

Roseburg BLM

Resource Area Fuels Specialists and the District Fire Management Officer coordinate firefighter training for all BLM employees. The fire managers provide fire training course information, check individual qualifications and provide guidance to employees seeking to advance in the fire organization. All employees are encouraged to participate in local prescribed fire and fuels treatment projects, as well as to help meet commitments to the Northwest Coordination Center by taking wildfire assignments during fire season.

Qualifications and Needs Assessment

The FPU has shortages within the aviation functional area; there are only three Forest Service Helicopter Managers. Single Resource Bosses are also in short supply as employees move into more highly qualified positions or transfer to other units. As these

⁶ Forest Service Manual 5109.17, BLM Red Book

positions become vacant, fully qualified applicants are difficult to find. Shortages have also been identified in the finance section. Other contributing factors include increased daily workloads of agency personnel, and lack of interest in participating in fire suppression activities.

Umpqua NF

The Umpqua's Training, Qualification and Certification Committee consists of the Fire Staff (with delegation to the Deputy Fire Staff as needed), the Forest Training Officer, a Forest Line Officer, District FMO's, District Training Specialists, and a Union Representative. The Forest Dispatcher, also a committee member, is responsible for entering data into the red card tracking system. The committee offers a formalized process for the review and approval of all task books. This consolidated approach allows for trainees to be prioritized and helps assure employees throughout the Forest receive opportunities for training and experience. In addition to reviewing each individual's training, experience and qualifications, the committee evaluates overall training needs of employees and the Forest as a whole to identify deficiencies and fill voids in positions needed at the local, regional and national levels. The Charter and Delegation letter are available from the Deputy Fire Staff.

Roseburg BLM

The Roseburg BLM utilizes a Red Card Committee to assess training assignments and approve fire qualifications and certifications. The committee is comprised of a Line Officer, the District FMO and a representative of the District safety committee.

Fire Season Readiness

Annual Preparedness Reviews

Annual preparedness reviews serve as an integral part of the overall goal of providing for firefighter safety. Conducting training and drills before and during fire season enables fire personnel to perform their duties across district boundaries and build crew cohesion with resources that will eventually work together. The format for the annual reviews of both the Umpqua and Roseburg BLM will include a review of the previous year's documentation and utilization of the Wildland Fire Preparedness checklists provided by Regional and Washington Offices.

Umpqua NF

On the Umpqua, the Deputy Fire Staff, District Ranger and District Fire Management Officer, conduct annual readiness inspections for all suppression modules. The target dates will be late June, but no later than the first week in July. The modules need to be fully staffed and training completed prior to the review. Areas that will be covered include safety and readiness drills, knowledge of pocket cards, the 10 Standard Firefighting Orders and 18 Situations the Shout Watch Out, hose-lay and fire line construction, station and equipment maintenance, training records and any existing abatement items. Readiness activities are documented by each unit District FMO or delegate. The overall goal is to accomplish training and drills early in the season, prior to engaging in project work and suppression activities.

Roseburg BLM

Wildland fire and aviation preparedness reviews are conducted annually prior to the fire season to help the field unit prepare for the fire season, identify operational, procedural, personnel or equipment deficiencies, and to recommend corrective actions. Standards for preparedness reviews are based on the Interagency Standards Fire and Fire Aviation Operations (Red Book).

Season Start and Stop Criteria with Typical Dates

The FPU's fire season historically begins around mid June and continues through mid-October. A typical season lasts approximately 130 days.

Administrative Unit or District-Level Fire Cache Considerations, Including Appropriate Stocking Levels and Management

The Umpqua National Forest, Roseburg BLM, State Protection Units and Protection Associations maintain initial and extended attack fire caches located at Roseburg and on each Ranger District. These caches will be used to outfit firefighters and provide supplies needed for day-to-day fire activities. For large and multiple fire situations that exceed the normal cache stocking levels, the Redmond Regional Fire Cache will be utilized for restocking and supporting ongoing fires. It normally takes 12 hours turn around time to get equipment and supplies from Redmond. All resource orders for items from the Redmond Cache will be placed through normal dispatch channels. All equipment and supply replacement orders should be submitted within 30 days after the project is complete or the fire is out.

Detection

Roseburg BLM

The Roseburg District BLM fire detection program is accomplished through the State Protection Contract and is detailed in the annual Fire Operations Plan located at the Roseburg Fire Dispatch Office. The DFPA maintains eight fire lookouts that are utilized during periods of high fire danger. Aerial detection flights are scheduled during and after lightning occurrences.

Umpqua NF

On the Umpqua Forest the majority of fires are detected by staffed lookouts. Other reporting sources include aerial detection aircraft and reports by the public, cooperators and agency personnel.

Both agencies utilize an automatic detection system (Lightning Tracker) to determine flight routes following lightning activity.

The Umpqua Forest Detection Plan outlines the guidelines used to manage the Forest Detection program; the Detection Plan is available from the Unit Aviation Officer. These guidelines are intended to promote a detection program that is safe, effective and efficient. The plan encompasses both aerial and fixed detection to ensure rapid discovery and initial attack of wildfire, and provides input to managing and monitoring prescribed fire.

Fixed Detection Points and Communication Sites

Refer to Appendix F for maps and tables depicting these sites.

Aerial Detection

The primary duty of the aerial observer is the detection and reporting of human and lightning caused fires. Forest flights are flown at approximately 2000 ft. above ground level (AGL) and lasts approximately 2 hours. Flight times and occurrence are dictated by the Forest's staffing guides and are coordinated through Centralized Dispatch. Copies of the staffing guides are found in the Forest Mobilization Guide. The flight route has been designed for maximum coverage of Umpqua Forest lands. In situations where extra coverage is required the flight route may be modified by centralized dispatch.

Table 4: Flight Schedule

Action Class ⁷	Ignition Component	Full Forest Flight (ETD*)
3 Low	21-31	1400
3 High	21-30	1400
3 High	31-100	1000 & 1500
4	31-100	1000 & 1500
5	31-100	1000 & 1500

*Estimated Time of Departure from Airport

A different flight schedule may be required for the wide range of situations encountered during the season. Changes to the above basic schedule will be determined by the Assistant Fire Staff, Fire Management Officers or Project Aviation Officer, and will be coordinated by Central Dispatch, Project Aviation Officer and Aerial Observer. Districts may request supplemental flights to monitor slash-burning activities as needed.

Additional flights may be ordered at any time. Generally, it takes about one hour to launch a flight without advanced notice, providing the contractor has a plane and pilot immediately available. The Project Aviation Officer should be notified as soon as a need for such a flight is indicated.

Fire Weather and Fire Danger

Roseburg BLM Weather Stations

The Roseburg BLM and DFPA utilize the following three Remote Automated Weather Stations (RAWS). The BLM Fire Dispatch Center staff manages RAWS data and inputs the key dates that initiate seasonal data collection and termination.

⁷ The "ACTION CLASS" is used to determine staffing levels and specific actions to be taken give the fire danger rating. Further information can be found in Chapter 20 of the Umpqua Mobilization Guide.

Table 5: Roseburg BLM Weather Stations

Name	NWS ID*	NESS ID**	Elevation (ft.)	Latitude	Longitude
Calvert	352919	32678308	3,822	42.46.44	123.43.58
Mt. Yoncalla	353043	324BC070	2,000	43.38.20	123.19.33
Silver Butte	353041	324BD306	3,973	42.54.07	123.18.38

*National Weather Service Station Identifier

**National Environmental Information Service Station Identifier

Umpqua NF Weather Stations

The following five weather stations are located on the Umpqua Forest:

Table 6: Umpqua NF Weather Stations

Name	NWS ID	NESS ID	Elevation	Latitude	Longitude
Buckeye	353040	323640AE	2400	43:02:16	122:38:16
Cinnamon Butte	353031	3236F1DA	4636	43:15:14	122:09:07
Granddad	353036	326116A4	2900	43:24:55	122:34:37
Pickett Butte	353016	Manual	3292	42:56:37	122:51:17
Sugarloaf	352546	323653D8	3550	43:40:33	122:37:01
Tokatee	353038	3261233E	3360	43:14:00	122:23:55

National Fire Danger Rating System (NFDRS)

All RAWs stations use National Fire Danger Rating System⁸ (NFDRS) fuel model G and the Energy Release Component (ERC) to determine daily fire danger ratings. The long, consistent records of these stations have proven valuable in fire management planning on the Umpqua. The Forest also utilizes data from stations cataloged by the Douglas Fire Protective Association (DFPA). The most consistent data are used to establish break points for critical fire weather and fire danger. These break points are used to determine the potential for fire spread and severity. Breakpoints most commonly used are shown in percentile groups of the average worst-case fire weather. Following are the class limits by Fire Intensity Level and Action Class determined in a "G" Fuel Model as computed in NFDRS.

Table 7: Action Class Limits

Action Class	ERC
1	0-11
2	12-22
3L	23-33
3H	34-44
4	45-55
5	56+

On the Umpqua NF, the 85th, 90th, and 97th percentile groups are used to track environmental conditions that contribute to average worst-case fire behavior.

⁸ Deeming, John E. et al. 1978. The National Fire Danger Rating System. USDA Forest Service. GTR-INT-39. Intermountain Forest and Range Experiment Station. Ogden, Utah.

The Forest uses the break points in the NFDRS indices to:

- ✦ Establish preparedness levels
- ✦ Determine prescription parameters for prescribed fire or fire use,
- ✦ Make daily preparedness (staffing and extended staffing) plans,
- ✦ Evaluate the need for (or modification of) fire restrictions/closures,
- ✦ Prepare severity requests, and
- ✦ Inform firefighters of daily conditions in morning safety briefings.

Fuel Models

There are nine of the thirteen original fire behavior fuel models within the FPU. A detailed description of each may be found in the guide, "Aids to Determining Fuel Models for Estimating Fire Behavior"⁹. Each FMU description defines fuels in terms of the NFDRS¹⁰ models, however, as they are the basis for many existing weather and fire behavior models. Table 11 in Appendix C provides a cross reference between the NFDRS and Fire Behavior fuel models. Detailed descriptions may be found in the guides.

Policy and Forest Service Manual and Handbook Direction

As mentioned in previous sections, the Umpqua and BLM follow BLM, USFS manual and handbook direction in fire management. Other references include:

- ✦ FSH 6509 (from which Job Hazard Analyses are developed),
- ✦ NWCG Handbook 3 (Fireline Hand Book),
- ✦ DIO-BLM H-9213-1 Standards for Fire Operations (Red Book),
- ✦ BLM Hand Book 1112-2 (safety),
- ✦ DOI 620 Departmental Memo #1, and
- ✦ Fish and Wildlife Service (FWS) Fire Management Handbook, and
- ✦ Interagency Helicopter Operations Guide (IHOG), Office of Aircraft Services (OAS) policy, and other directives.

All policy and direction documents referenced in Appendix B provide the Umpqua and Roseburg BLM the sideboards needed to manage their respective fire programs. The agencies have developed standard operating procedures (SOP's) to integrate their efforts and accomplish the overall fire management task. The following are examples of these efforts:

Plans

Preparedness, Lightning Detection and Aviation plans are consistent and interactive. These plans incorporate the multiple agencies, cooperators and other entities and provide a mechanism to follow, especially during high fire activity.

⁹ Anderson, Hal E. 1982. Aids to determining fuel models for estimating fire behavior. USDA Forest Service. GTR-INT-122. Intermountain Forest and Range Experiment Station. Ogden, UT

¹⁰ Deeming, John E. et al. 1978. The National Fire Danger Rating System. USDA Forest Service. GTR-INT-39. Intermountain Forest and Range Experiment Station. Ogden, Utah.

Dispatch Center Mobilization Guide

This guide defines the mission, objectives and SOP's of the Dispatch Center in relation to the Forest and its cooperators.

Delegations of Authority

Granting authorities and accountability for response actions in daily function to the Fire Program's FMO are consistent with Red Book and Umpqua Forest Briefing Packet direction.

Daily Briefings

During fire season, incoming resources will receive a daily briefing at the local unit. The briefing will include current fire status, weather, predicted fire behavior, resource assignments, resource availability (including aviation resources), and a Six Minutes for Safety topic. In addition to these briefings, fire management staff will conduct a weekly conference call with all Fire Management Officers (FMO's), Assistant FMO's (AFMO's), District Rangers and other interested parties. Discussions will include staffing, projected needs, current issues, a dispatch update and other daily business that arises.

During times of high fire activity or when Expanded Dispatch is in place, the Umpqua Dispatch Coordinator or Fire Staff will send email updates to all FMO's and AFMO's that may include current fire activity, weather, resource availability and Expanded Dispatch status. Central Dispatch will conduct conference calls as needed with Districts affected by fire activity on the Umpqua; discussions will include current fire activity, staffing, projected needs, and other issues and concerns.

Out-of-Area Resources

During periods of heavy fire activity, the FPU agencies host a wide variety of non-local resources. Orientation will be provided to them via informational briefings that will include a brief history of the fire incident and other necessary background information. The local fire management staff will conduct these formal briefings prior to deploying the resources to an incident. Refer to the Red Book for more information.

Aviation Management

Purpose and Objectives

The Umpqua and Roseburg BLM aviation management programs are designed to provide safe, efficient and economic use of aircraft in conjunction with land management and fire suppression work. The success of these programs is contingent upon thorough assessment of risk, and focused planning and management efforts. Central Dispatch and incident assigned aviation personnel have the responsibility and authority to manage aviation resources, they must maintain vigilance and hold to the standards established in this and other plans in order to assure safety in all aspects of aviation operations.

Program Overview

Roseburg BLM

Aircraft are used in carrying out the district's prescribed fire and resource management programs. The organization for the aviation program consists of a Unit Aviation Manager and an Aviation Manger in each of the two field offices. The District's Aviation Plan is on file at the District's dispatch office.

Umpqua NF

The Umpqua National Forest aviation activity utilizes approximately 13 aircraft and averages about 620 flying hours per year. The three primary uses of aviation assets are detection (averaging 288 hours), fire suppression (averaging 280 hours for initial attack and incident transportation), and job contracts (averaging 62 hours). Most aviation activity occurs between June 15 and October 15. The Forest Aviation Plan is reviewed annually and is updated as needed. A copy of the Aviation Plan is available at the Umpqua Forest Supervisor's Office or any Ranger District office.

Initial Attack

Each agency within the FPU dispatches their suppression resources to incidents within their jurisdiction. An interagency dispatch proposal is being developed and analyzed at this time, with the goal of securing a truly centralized, interagency dispatch in the future.

Roseburg BLM

Suppression actions on all wildfires on Roseburg BLM managed lands will be consistent with preplanned dispatch protocols and will conform to resource management objectives identified in this FMP. Tactics and strategies will be based on current and predicted weather and fire behavior. Firefighter and public safety is always the first priority. Detailed initial attack plans are included in each Protection Association and the Oregon Department of Forestry (ODF) District's Annual Fire Operations Plan. The Douglas Forest Protective Association (DFPA) protects most of the Roseburg BLM District lands. Refer to the DFPA Fire Operations Plan for more information. The initial attack plan is located in section three of the Operations Plan, and is updated annually as required by the Western Oregon Fire Protection Contract.

The DFPA employs approximately 170 people during fire season, has a fleet of over 46 vehicles, and has specialized types of equipment that are strategically positioned throughout the Roseburg BLM District for immediate and efficient fire suppression. The District's goal is to control 94% of all fires before they exceed ten acres in size or within 24 hours after discovery.

High Risk Performance Period

The period identified when the average ERC exceeds the 50th percentile ERC value of 27% for at least three consecutive days, with no precipitation forecasted, as determined by Oregon Department of Forestry (ODF) for each Protection District.

Low Risk Performance Period

The period identified as being outside of any determined high-risk period.

During high severity periods, increased initial attack resources are provided by enacting a Severity Action Plan, which is part of the Protection district's Fire Operations Plan. The Severity Action Plan is enacted when the average 90% percentile for 1000-hour fuel moistures exceeds 49% and the Energy Release Component (ERC) falls below 13%.

Umpqua National Forest

Umpqua Fire Management is staffed as an Initial Attack (IA) organization per National Fire Management Analysis System (NFMAS) funding (Ref. [Chapter 5](#)). Priorities for Initial Attack (IA) staffing are set by the Forest as outlined in the Umpqua National Forest Mobilization Guide, Chapter 29 - Specific Action and Readiness Guide.

Initial attack consists of aggressive suppression actions consistent with firefighter and public safety and values to be protected. The Specific Action and Readiness Guidelines are used by Centralized Dispatch to determine appropriate resources to send to a fire. The FMU's described in [Appendix E](#) of this document also dictate specific areas of concern that may require extra protection efforts by initial attack forces. Standard operating procedures, roles and responsibilities and specific direction need to be clearly defined prior to engagement, whether the activity is for pre-positioning or is an actual response to an incident, and communicated to all fire personnel during briefings.

Confinement as IA Strategy

In the appropriate situation, confinement may be considered as an alternative to the control strategy. This is the only limited response strategy supported by the Federal Fire Management Policy (2000). This strategy can be used on the Umpqua in areas that have natural boundaries and compliment to firefighter safety.

Response Times

Response times are currently based on those identified in the latest NFMAS analysis and in the Specific Action and Readiness Guide. The Umpqua Dispatch Center (UPC) uses the closest forces concept, and maintains coverage throughout the Fire Program Area. The Specific Action and Readiness Guide identifies some predetermined response times for the Umpqua's Fire Duty Officers (FDO's), but does not yet include response times for IA resources. The Umpqua has a short-term goal (within 1-2 years) of developing and implementing Dispatch "Block Cards" to improve the effectiveness and efficiency if IA dispatching. The Block Cards will, for specific fire danger conditions, identify all resources required to respond to incidents, and any special concerns within each pre-identified Dispatch Block.

Restrictions and Special Concerns

Some areas of the Umpqua have policy driven restrictions to operations, such as motorized vehicles in the Wilderness. Other special concerns include Threatened, Endangered and Sensitive species habitat, noxious weed concentrations and archeological sites. These pre-identified areas have operational restrictions as well. Each administrative unit identifies restrictions, issues or concerns as well as the action(s) needed to prevent adverse effects to these sites. These restrictions and concerns will be addressed in the Umpqua's Dispatch Block Cards.

Social and Political Concerns

Public lands managed by the Umpqua and Roseburg BLM cover a diverse area of Oregon. Roseburg's urban development is increasing at a fast pace. The north end of the Forest is within the vicinity of one of the larger cities within the state (Eugene), and within two hours of the larger cities of Portland and Salem.

Primary concerns of the public include:

Smoke related issues (air quality and visual impacts),
Mixed reactions and concerns related to prescribed burning,
Public and Firefighter Safety
Economics (loss of timber revenues to the local economy),
Environmental issues

These concerns will be addressed specifically on each incident and may include public meetings, press releases, individual contacts and through mitigation measures included in incident action plans.

Specific Initial Attack Items of Concern

- ✦ Initial attack forces are made up of the first suppression personnel to arrive at the scene.
- ✦ The initial attack Incident Commander (IAIC) or more highly qualified individual on scene will take control of the incident and identify themselves to dispatch and firefighters as the Incident Commander (IC).
- ✦ The IC on every Type 3, 4 and 5 fire is responsible for documenting their actions, completing an initial attack size-up, developing an incident management plan and carrying out other duties as identified in the Umpqua Incident Commander Packet (IC Packet). The IC Packet is available from any Umpqua office.
- ✦ All IC's should be provided a copy of the Incident Response Pocket Guide, and the Interagency Standards for Fire and Fire Aviation Operations, 2003, commonly known as the Red Book.
- ✦ Should the fire complexity approach a point that appears to exceed the qualifications and capability of the Initial Attack IC, that individual will advise Dispatch that a more qualified Incident Commander is required, along with recommendations for additional resources and overhead positions. The IC will utilize the complexity analysis in the Red Book, IC Packet or Incident Response Pocket Guide to make these determinations. To the extent possible, line officers may be involved in or provide oversight for the development of the complexity analysis, especially if an incident has the potential to become a Type 3¹¹ incident or will be responsible for the oversight of all fire activity and actions on their unit.

¹¹ Ref. Red Book or Umpqua Mobilization Guide

Spot weather forecasts may be obtained through Central Dispatch or requested via the Internet at http://207.173.99.100/cgi-bin/ifps_spot/spotform?site=mfr.

Extended Attack and Large Fire Suppression

A wildland fire is considered to be in extended attack status when an escape from IA is declared. This can occur within a few hours, or over several days as defined in the Red Book. A complexity analysis determines when the decision should be made to go from IA to extended attack, or from a small local incident command structure to a management organization designed to handle larger and more complex incidents. Forest Service and BLM direction for extended attack and large fire suppression is outlined in the Interagency Standards for Fire and Fire Aviation Operations (pages 11-1 through 11-9).

Wildland Fire Situation Analysis

Alternatives developed through the Wildland Fire Situation Analysis (WFSA) process must be consistent with the goals of current Land and Resource Management Plans and must:

- ✦ Address firefighter and public safety,
- ✦ Be able to be implemented,
- ✦ Be accompanied by a strategic plan of action,
- ✦ Assess and display the probabilities of success and consequences of failure, and
- ✦ Display the estimated numbers of acres burned, times for containment and control, and estimates of suppression costs and resource damage. (The official letter addressing Line Officer WFSA Signing Authority¹², the WFSA Charts and the Umpqua Dispatch Center (UPC) WFSA Delegation for 2003 is available upon request.

The WFSA must also contain at least one alternative that addresses cost containment, and include a short narrative by the responsible line officer that discusses the rationale used to decide which suppression strategy to use.

When multiple fires occur within a Fire Management Unit (FMU), the agencies will coordinate suppression responses as the situation dictates. The Umpqua Multi-agency Coordination Group (UMAC) may be formed. Prioritization of suppression responses will be based on need for assistance as well as the criteria specific to each FMU. Priorities for suppression will be based on risks to life, property and natural resources. The UMAC Charter is available upon request.

Complexity Decision Process for Incident Management Transition

This process is outlined in the Red Book.

Example of Delegation of Authority for the Incident Commander

Refer to the Red Book.

¹² WFSA Signing Authority. Washington Office. May 30, 2003.

Exceeding the Existing WFSAs– Selecting a New Strategy

A new WFSAs is required when the objectives of the existing WFSAs have been, or are expected to be, compromised. The revised WFSAs will include a new set of objectives and a range of alternatives and associated fallback strategies and worst-case outcomes. All Umpqua National Forest WFSAs will have a least one cost alternative. Given the inherent inaccuracies in developing estimated costs associated with each alternative, exceeding the cost estimate for the selected alternative will not in and of itself generate a need to revise the existing WFSAs.

Minimum Impact Suppression Tactics

The intent of Minimum Impact Suppression Tactics (MIST) is to suppress a wildfire with the least impact to the land. Fire conditions and good judgment dictate the actions taken. Consider what is necessary to halt fire spread and contain it within the fire line or other designated boundary. Implementation of the appropriate suppression response for all wildland fires within this Fire Planning Unit (FPU) will utilize tactics that minimize ground-disturbing activities. Firefighter and public safety will take priority over use of minimum impact suppression tactics in all cases, however. A detailed list of MIST guidelines can be found in the Red Book.

Other Fire Suppression Considerations

Operational Role of Federal Agencies in Wildland Urban Interface

The operational roles of federal agencies in the wildland/urban interface are wildland firefighting, hazardous fuels reduction, cooperative prevention and education, and technical assistance. Structural fire suppression is the responsibility of the tribal, State, or local governments, as described in the Interagency Standards for Fire and Fire Aviation Resources Operations.

Type I or Type II Incident Management Team

When a situation exceeds local capabilities, the Forest Supervisor or District Manager may request an Incident Management Team (IMT) to manage the incident. The type of team (Type I or II) ordered depends on the complexity and severity of the situation. Refer to the Incident Complexity Analysis checklist in the Red Book to make this determination. Prior to the arrival of the incoming team, the requesting agency needs to complete the items as outlined in their Line Briefing Package for the Umpqua.

Dispatching Resources

Initial Attack is a Central Dispatch Center responsibility. When an IMT has been ordered, the Dispatch Center Manager will activate Expanded Dispatch to support the incident management team. The Umpqua National Forest's dispatch procedures are outlined in chapter 20 of the Forest's Mobilization Guide.

Demobilization

Refer to the Red Book.

Release of Interagency Incident Team

All releases of Incident Teams will follow guidance found in the Red Book.

Debriefing

Refer to the Red Book.

Safety

Safety is the number one priority for all personnel engaged in, or supporting, fire management activities on this FPU. The program goal is to provide protection and enhancement of resources through effective fire management activities that are free from employee harm. Measures consistent with reaching the goals include eliminating employee exposure to hazards or potential hazards through the use of pre-planning, established guidelines, training, monitoring and enforcement. These methods enhance an approach of safety through leadership.

Authorities

Executive Order 12196 requires the head of each agency to, "Furnish to employees places and conditions of employment that are free from recognized hazards that are causing or are likely to cause death or serious physical harm." Further, the Order requires the head of the agency to "Assure that periodic inspections of all agency workplaces are performed by personnel with equipment and competence to recognize hazards."

29 CFR 1960 designates the responsibilities of agencies and supervisors. It also addresses rights and responsibilities of employees. Specifically, the agency is to furnish to each employee employment and a place of employment, "free from recognized hazards that are causing or are likely to cause death or serious physical harm" and mirrors the requirements of the Executive Order 12196.

The regulations of 29 CFR 1960.9 indicate that supervisors shall "comply with the occupational safety and health standards applicable to their agency and with all rules, regulations and orders issued by the head of the agency with respect to the agency occupational safety and health program."

29 CFR 1960.55 states that supervisors are to have training in supervisory responsibilities, the regulations noted, and agency procedures for reporting and correcting workplace hazards.

Employee responsibilities and rights are listed in 29 CFR 1960.10 and requires employees to "comply with the standards, rules and regulations and orders issued by his/her agency," to "use safety equipment, personal protective equipment, and other devices and procedures provided or directed by the agency," and in paragraph C of the regulation, that "employees shall have the right to report unsafe and unhealthful working conditions to appropriate officials."

In addition to those mentioned on page 30, other applicable direction and authorities included by reference include:

- FSM 6700 – Safety and Health
- 29 CFR 1910 – Labor
- 29 CFR 1926 – Labor
- 49 CFR - Transportation
- NWCG handbook 2 – Fireline Handbook

USFS regional direction exists for Work/Rest measures to prevent undue exhaustion of employees. These guidelines are intended to cover employees from point of dispatch until their safe return.

Forest Service Region Six direction provides for the use of local Safety and Health managers for assistance in the identification of hazards and trends. The requirement is to be documented in the hosting unit's Delegation of Authority to an Incident Management Team upon arrival.

Federal Occupational Safety and Health Administration (OSHA) requires the Forest Service to follow the Thirtymile Hazard Abatement Plan.

Unit Aviation Officers are established to provide for safety management when aircraft is involved.

Readiness reviews are held on each Forest to verify preparedness

Wildland Fire Use Plan

The Umpqua does not have a Fire Use Plan at this time, but is in the development phase. Due to the checkerboard ownership patterns, the BLM will not be developing a Fire Use Plan.

Prescribed Fire

Planning and Documentation

Roseburg BLM

The Roseburg BLM's prescribed fire program primarily supports timber harvest and silvicultural operations through the reduction of activity fuels. Project level Environmental Assessments (EA's) include an analysis of the fuels situation, and recommends fuels reduction treatments where needed. Where prescribed fire treatments are recommended, the timber sale contracts incorporate requirements for purchasers to assist in slash disposal under BLM supervision. Contractors are required to provide crews, engines and equipment to accomplish prescribed broadcast burning, hand piling and burning, or machine piling and burning. The District fire cache maintains two Type 6, one Type 4, and one Type 3 engines and a large supply of fire equipment to support the prescribed fire program.

Prescribed burning of natural fuels, with an emphasis on Wildland Urban Interface (WUI) areas are accomplished annually. Broadcast burning is used on the North Bank Habitat Management Area to improve deer habitat. Prescribed fire projects are accomplished on other areas to improve threatened and endangered (T&E) species habitat or to reduce hazardous fuels.

Guidance for planning and implementing the prescribed fire program is included in the Red Book (Ch. 18) and in the BLM's Prescribed Fire Handbook H9214-1.

Number of Projects Implemented through Local Contractors

Most prescribed fire projects utilize local contractors for some portion of the workload. The numbers of projects vary from year to year due to fluctuations in harvest activity and National Fire Plan (NFP) funding. In Fiscal Year (FY) 2003, four units totaling 641 acres were accomplished.

Total Acres Treated in Conditions Class 2 Moved to Condition Class 1

All prescribed burning results in improvement in Condition Class (CC). In the case of activity fuels, prescribed burning results in changes from CC 3 or CC 2, to CC 1. Projects where natural fuels are burned for habitat improvement or fuel reduction modify the condition class from CC 2 to CC 1. The annual acreage varies, as timber harvest levels drive it.

Burn windows for the FPU generally occur in the spring, though some burning is also accomplished in summer and fall months. Pile burning is planned and implemented in the winter. Prescribed burn bosses are required to evaluate prescribed burns upon completion of each day's burning to assess results and effectiveness of the burn as implemented. These evaluations are maintained as part of the project file. The fuels specialist accomplishes long-term effectiveness monitoring.

Maps displaying prescribed fire treatments since 1990 are maintained in Roseburg BLM's Geographical Information System (GIS). Future fuels treatments will also be listed in the GIS database.

Umpqua National Forest

Annual preparation and implementation activities that occur in relation to the Umpqua's prescribed fire program include the following:

- ▶ Review the project's National Environmental Policy Act (NEPA) documentation.
- ▶ In the fiscal year prior to the planned year of project initiation:
 - ❖ Submit project into the program of work for Executive Team (ET) approval. If the project is not approved it is tabled for another year.
 - ❖ Input approved projects into National Fire Program Operating Reporting System (NFORS).
 - ❖ Input project (if contracted) into the acquisition plan for contracts by September 30th.

Contract Preparation

- ✦ Develop contracts for the project and submit to contracting.
- ✦ Obligate funds through Financial Management.
- ✦ Review bids from contractors and make recommendations to the Contracting Officer.
- ✦ Establish Contracting Officer's Representative and date for contract pre-work meeting.
- ✦ Establish monitoring plots prior to treatment and document with photographs.
- ✦ Conduct pre-work meeting and issue Notice to Proceed letter.
- ✦ Project Inspector or COR inspects and administers contract.
- ✦ Update the project in NFPORS to reflect changes in activities, planned start dates, condition classes, obligation dates and completion dates.
- ✦ End contract with final payments.
- ✦ Photograph monitoring plots at project completion.

Implementation

- ✦ Lay out the project for prescribed burning.
- ✦ Write burn plan and have it approved.
- ✦ Input burn projects into Fastracs (an accomplishment reporting system) for smoke management reporting purposes.
- ✦ Photograph monitoring plots prior to burning.
- ✦ On the day of the burn, update Fastracs and consult the Smoke Management Forecast.
- ✦ Assure burn bosses and other personnel used for burning are qualified.
- ✦ Burn the project and document as required in the prescribed burn plan.
- ✦ Input accomplishment data into Fastracs.
- ✦ Update NFPORS to reflect burn accomplishment.

Long-term prescribed fire strategy

Much of the long-term prescribed fire strategy has already been established within the Umpqua's integrated Watershed Restoration Business Plan (2000), several Watershed Analyses and the Updated (2003) Restoration Business Plan. These plans, along with other guiding documents such as the Northwest Forest Plan, National Fire Plan, Healthy Forests Initiative and Healthy Forests Restoration Act, will continue to provide a strong basis for the Forest's Five-Year Integrated Fuels and Vegetation Treatment Strategy. The Umpqua's Wildfire Evaluation Effects Project (2002), Hazardous Fuels Strategy (2000) and forest health protection and restoration strategies also contribute to the Forest's long-term strategy.

At present, mapping of individual projects within a given Fire Management Unit by fire regime and condition class is unavailable. Condition class mapping has been on hold in the past due to conflicts in national direction, lack of available space in Fire Regime Condition Class (FRCC) training sessions, and the processes involved in data collection. Now that condition class training is available via the Internet, and once fire management personnel complete the course, condition class mapping and strategy planning will proceed.

Prescribed Fire Organizational Requirements.

The organization required varies with the complexity of each prescribed burn; however, either a Prescribed Fire Manager or a Prescribed Fire Burn Boss must be assigned. Also, for all prescribed fires a prescribed fire burn plan must be reviewed and approved by a line officer. The approved burn plan identifies most prescribed fire positions required; the need for a Prescribed Fire Manager is determined by the approving line officer. This position may be assigned to manage multiple prescribed fires or a single prescribed fire of high complexity.

Monitoring

Monitoring is the systematic process for collecting and recording fuels, topography, weather, fire behavior, smoke and immediate post-fire effects information. This information provides a basis for evaluating and adjusting prescribed fire programs. Three primary goals of monitoring are to:

- ▶ Verify that fire weather, fuel moisture and fire behavior are within prescription
- ▶ Quantitatively document immediate post-fire effects and compare with burn plan objectives.
- ▶ Ensure that fire and resource management objectives are being met.

Many different resources are monitored during the implementation of a prescribed fire to ensure the project is implemented as designed and that the implementation strategies are effective in meeting the objectives. Monitoring elements include weather readings, fuel moistures, rainfall measurements, meteorological observations and predictions. Together, these elements are used to determine when and if the project area is within the prescription parameters.

Meteorological observations and predictions are also used to ensure the project will meet the State of Oregon Smoke Management Implementation Plan (SIP) guidelines. On-the-ground observations and photographs of project activities and fire behavior during project implementation can be used to verify compliance with regulations, water quality standards, and fuel and vegetation goals and objectives. Weather readings, fuel moisture measurements and meteorological observations are also monitored throughout implementation. The direction and effectiveness of smoke dispersal is also observed and documented on-site.

At least one permanent monitoring plot should be established in each project area. Monitoring plots provide a means of determining whether the prescribed fire project accomplished its intended objectives. Plot locations should be recorded using a Global Position System (GPS) device. One hundred foot transects, located in areas that are representative of the area being burned, will be utilized. A series of panoramic photos should be taken from each plot center before, immediately after burning and one year later. Additional photos should be taken three, five and ten years after the burn, or on a timeframe determined by the District or Forest Fuels Specialist.

The general Umpqua National Forest monitoring requirements are outlined in the Umpqua RMP¹³ and the Northwest Forest Plan¹⁴. Fire management personnel participate in some of the monitoring outlined in these plans; the fire/fuels generated data is combined with data collected by other resource specialists and submitted to the Regional Office on a yearly basis.

Format for Critiques of Prescribed Fire Projects

Other than the monitoring efforts described above, at this time there is no formal format to critique prescribed fire treatments. Refer to Forest Service Handbook (FSH) 5109.19 Fire Management Planning, Chapter 50, Monitoring and Evaluation for guidance.

Historic Fuels Treatment Map of Post-Burn Activities that Affect Planned Actions

At this time, historic fuels treatment maps are not available, but will be developed in the near future.

Future Work

Future works that will enhance short and long term opportunities for upcoming projects within the FPU are as follows:

- ✦ Active monitoring and mapping of past activities, potential activities and long term monitoring of areas adjacent to WUI areas.
- ✦ Modeling and risk assessment of forest conditions on a landscape scale to ascertain priorities within the project area.
- ✦ Procurement of funding through out-year budget requests, Payments to Counties (PAYCO), grants and stewardships, to treat and maintain fuels treatment areas.
- ✦ Practice adaptive management on the landscape to restore ponderosa pine, sugar pine and white pine ecosystems.
- ✦ Evaluate risk management options as well as the no action alternative for environmental documents.

Burn Plan Requirements

Local prescribed fire burn plans for the Umpqua National Forest meet the national requirements set forth in Chapter 4 of the Implementation Procedures Reference Guide, as outlined in FSM 5100. In Fiscal year 2005 the Pacific Northwest Region will use a regional burn plan template.

Roseburg BLM burn plans meet the national requirements set forth in the Prescribed Fire Management Handbook (Chapter 3, H-9214-1).

Each prescribed burn plan must be developed in accordance with National Environmental Policy Act (NEPA) procedures. The results of the environmental analysis, including alternatives to the proposed action, anticipated environmental effects and mitigation measures are documented in an Environmental Assessment (EA), Environmental Impact

¹³ Umpqua National Forest Land and Resource Management Plan (Chapter Five)

¹⁴ Record of Decision for Amendments to the Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl (Standards and Guidelines E-3).

Statement (EIS), or are categorically excluded from documentation in an EA or EIS. The decision to burn must be documented in a Decision Memo (DM), Decision Notice (DN), or Record of Decision (ROD).

Exceeding Existing Prescribed Fire Burn Plan

In situations where the implemented prescribed fire is unsuccessful, a wildland fire situation analysis is initiated as described on Page 35 of this document. Develop the WFSA using the elements listed in that section. (Refer to chapter four of the Implementation Procedures Reference Guide for special provisions applicable to wildland fire.)

Escaped Prescribed or Wildland Fires.

Report escaped fires consistent with direction provided in Forest Service Manual (FSM) 5140. In the event a prescribed fire project exceeds planned parameters, use personnel qualified under the Wildland Fire Qualification Subsystem Guide¹⁵, and the Wildland Fire Qualifications Handbook¹⁶ to accomplish the appropriate suppression response. Refer to FSM 5130.3 Wildland Fire Suppression for appropriate use of personnel on escaped prescribed or wildland fires¹⁷.

Smoke Management

The Umpqua National Forest and Roseburg BLM comply with the federal Clean Air Act (http://www.epa.gov/oar/oaq_caa.html/). Prescribed burns comply with the State of Oregon Smoke Management Plan (SMP), Oregon Administrative Rule (OAR) 629-43-043. Refer to <http://www.deq.state.or.us/aq/> for further information.

The objectives of that plan are to:

- Prevent smoke resulting from burning on forest lands from being carried to or accumulating in designated areas (See map in Appendix G) or other areas sensitive to smoke,
- Provide maximum opportunity for essential forestland burning while minimizing emissions,
- Coordinate with other state smoke management programs,
- Conform to state and federal air quality and visibility requirements,
- Protect public health, and
- Encourage the reduction of emissions.

Generally, short-term degradation of air quality is associated with prescribed fire activity. No known record of adverse impact to air quality has been filed due to prescribed fire activity in the FPU. The general wind patterns in this area fluctuate on a diurnal and seasonal pattern. Nighttime winds are generally light and downslope/down valley, causing particulates to move down the drainages, and allowing for the potential to affect populated areas.

¹⁵ Wildland Fire Qualification Subsystem Guide, Northwest Coordinating Group, PMS 310-1

¹⁶ Wildland Fire Qualifications Forest Service Handbook (FSH) 5109.17

¹⁷ Escaped fires are defined in FSM 5140.31

Prescribed fires conducted by federal land management agencies within this FPU will not exceed regional air quality standards for total particulate load. If the recommendations for smoke mitigation outlined in the smoke management plan are followed, impacts resulting from proposed prescribed burning projects will be of short duration (less than 8 hours) and will affect only areas directly adjacent to the burn area. All burn prescriptions contain a section detailing smoke management concerns and mitigation. On the day of the burn a call or electronic correspondence will be made with the Salem smoke management office, (541) 945-7401.

The Oregon SMP identifies several areas as “high population centers of air quality concern.” The designated areas within the zone of influence of this FMP include:

Class I Airsheds

Crater Lake National Park
Diamond Peak Wilderness Area

Designated Areas

City of Roseburg
Willamette Valley

Special Protection Zone

City of Oakridge

Prescribed fire plans will describe actions that may be used to keep the fire within prescription for air quality objectives, particularly when smoke dispersion is deteriorating to the point that it is possible that smoke and air quality objectives will no longer be achieved. Examples of these actions include:

- Using firing crews to ignite fuels so that the fuels burn within the flaming rather than with smoldering combustion.
- Constructing firelines to halt fire spread.
- Mopping up smoldering heavy fuels until conditions improve for smoke dispersion, at which time the fire may be re-ignited.
- Using hose lays and pumps to extinguish all or a portion of the fire front, then re-igniting the area when again within prescription for smoke dispersal.

Some principles that may be used to guide smoke management planning are:

- Obtain and use weather forecasts.
- Burn when conditions are good for rapid dispersion.
- Determine the preferred direction and volume of smoke.
- Notify local fire dispatch offices, nearby residents and adjacent landowners.
- Use test fires to confirm smoke behavior.
- Timely mop-up
- Burn when duff and soil moistures are high to prevent smoldering ground fires.
- Anticipate down-drainage flows, particularly at night.

Non-Fire Fuel Applications

Roseburg BLM

Approximately eight projects totaling about 1,260 acres are planned for treatment each year on the BLM District. Of this total, approximately 95% of the acres per year will be treated mechanically (i.e. by pruning, pre-commercial thinning, roadside brushing, or commercial thinning). Fuels reduction in noxious weed areas, utilizing a combination of chemical and mechanical treatments, will account for approximately 5% of the yearly acreage.

Umpqua National Forest

The Umpqua is in the process of developing a five-year strategy for integrating and accelerating fuels and vegetation treatments to reduce hazardous fuels and improve condition classes. The initial strategy has been completed and is available upon request. An Integration Team, representing a blend of disciplines, is established to help accelerate the integration of our vegetation management programs. Our next step is to describe our landscape goals for the next five years. The team will develop a five-year action plan that includes proposed hazardous fuels targets and a plan for accomplishment; each fiscal year the target will increase. The action plan will also describe how other vegetation treatments will be coordinated and increased to improve condition class from 2005 to 2009.

The strategy will identify and map fire regimes, condition classes and Wildland Urban Interface (WUI) areas. Other layers of this strategy will incorporate the areas identified in the ten-year timber sale plan, pre-commercial thinning opportunities, fire restoration areas, stewardship project areas, roadside areas, and priority watersheds for aquatic and terrestrial restoration projects. The plan will emphasize collaboration, cooperation and communication. Overlaying these areas may reveal new priority treatment areas as well as highlight opportunities to integrate other projects.

Mechanical Treatment and Other Applications

Restrictions

Seasonal use restrictions due to weather, species sensitivity and other concerns that may effect equipment use are recommended by the U.S. Fish and Wildlife Service (USFWS), Standard and Guidelines for soil productivity in the Umpqua LRMP (Chapter IV-67) and provisions in contracts.

- ▶ Minimize felling of snags, and leave felled trees or snags in the largest pieces possible.
- ▶ Minimize disturbance of riparian and aquatic habitats by working outside of these areas to the maximum extent possible.
- ▶ Minimize the use of heavy equipment (dozers, etc.) in riparian and aquatic habitats, within spotted owl cores, and on ridges where listed plants are known to exist.

- ✦ Minimize felling and bucking of trees within riparian areas and aquatic habitats, spotted owl core areas, and within ¼ mile of any bald eagle nesting sites.
- ✦ Locate equipment servicing and storage areas away from riparian areas and aquatic habitats, and at least one mile away from stands occupied by spotted owls, bald eagles and marbled murrelets.
- ✦ Conduct refueling operations away from streams (at least 150 feet from water bodies). Place pumps and other machinery on pads; protect adjacent streams from chemical contamination to maximum extent possible.
- ✦ Retain at least one half of the original stream flow volume below pump sites.
- ✦ Between January 1st and August 30th, minimize noise disturbance within one mile of bald eagle nest sites. Minimize repetitive aircraft flights that are less than 1,500 feet Above Ground Level (AGL). Do not fly directly over nest sites with buckets (except to protect nests).
- ✦ Between March 1st and June 30th, minimize noise disturbance within stands occupied by spotted owls, and within 120 yards of the edge of these stands. Minimize repeated aircraft flights that are less than 1500 ft. AGL.
- ✦ Between April 1st and August 5th, minimize noise disturbance within stands occupied by marbled murrelets and within 120 yards of the edge of these stands. Minimize repetitive aircraft flights that are less than 1500 ft. AGL.
- ✦ Minimize the use of explosives within one air mile of occupied stands during the protection period for bald eagles, spotted owls and marbled murrelets.
- ✦ Whenever possible, protect known nest sites of any listed species.

Monitoring

The general Umpqua National Forest monitoring requirements are outlined in the Umpqua RMP¹⁸ and the Northwest Forest Plan¹⁹. Refer to Forest Service Handbook (FSH) 5109.19 Fire Management Planning, Chapter 50, Monitoring and Evaluation for further guidance.

Critique

At this time there is no formal format for critiques of mechanical treatments outside the monitoring stated in the above section. Some units have adopted a post sale review critique, which is an informal discussion of what went on within the project site, what the outcome was, and whether the treatment met the objectives laid out in the NEPA document.

Cost Accounting, Reporting and Documentation

On the Forest, cost accounting is done using Work Chunking, Work Plans, Executive Team (ET) review and by reviewing program managers' statements. After the ET has approved the work chunk and work plans are finished, the project may be forwarded to Contracting and Financial Management for obligation and awarding. Bids are turned in and targets are adjusted; form 2020 is used for upward reporting of change in targets. Projects are loaded into NFPORS and SMOKETRACS (FACTS will utilized soon as

¹⁸ Umpqua National Forest Land and Resource Management Plan (Chapter Five)

¹⁹ Record of Decision for Amendments to the Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl (Standards and Guidelines E-3).

well) computer programs with costs, acres, wildland urban interface (WUI) status and funding sources. Units have two weeks from the time of accomplishment to complete these reports. Documentation through the use of daily diaries, burn plans and monitoring fulfill the documentation requirement.

Annual Planned Project List

Annually planned projects are approved by the Executive Team (ET); the list changes due to fluctuations in the budget. Project lists for hazardous fuels may not be finalized until May of the fiscal year the project planned. A priority list for hazardous fuels, the ten-year timber strategy, and the five-year strategy for integrated fuels and vegetation treatments is pending.

Emergency Rehabilitation and Restoration

Umpqua

Wildfire-caused damage on National Forest lands is addressed in different ways, depending on the purpose and urgency of the action. Forest Service Manual (FSM) 2523.05 Emergency Stabilization – Burned Area Emergency Response (BAER) establishes policy for stabilization, rehabilitation and restoration. This section does not deal with suppression-damaged areas (FSM 2523.4). Those areas are the responsibility of and paid by the fire incident.

Emergency stabilization, or BAER actions, stabilize or prevent unacceptable damage to resources and minimizes threats to life or property resulting from the effects of a fire. Forest Service Handbook FSH 2509.13 describes specific methods for burned area assessments immediately after containment of the fire, and emergency treatments within the first year following the fire. Non-emergency rehabilitation efforts within three years of a wildland fire, and restoration activities beyond three years, are financed using non-emergency funding.

Roseburg BLM

BLM policy and procedures for implementing the emergency stabilization and rehabilitation program utilizes the following four key steps:

- ✦ Assess burned lands to determine whether treatments should be taken to stabilize or rehabilitate them,
- ✦ Identify treatments when actions are considered necessary,
- ✦ Approve and fund necessary treatments, and
- ✦ Implement treatments once funding is available.

Local managers are responsible for having fire-affected lands assessed to determine whether stabilization or rehabilitation is needed. The Department of Interior (DOI) recommends managers begin the process before a fire is contained. This allows managers to identify emerging issues, conduct a preliminary risk analysis and ensure a smooth transition from fire suppression to emergency stabilization and rehabilitation. Local managers decide whether an intensive assessment of the burned lands is warranted. In most cases, these managers decide that no such assessment is needed because they believe that the burned lands pose no risk and that the lands will recover on their own within a relatively short period.

If local managers decide an intensive assessment is warranted, they assemble an interdisciplinary team (IDT) from the local unit to assess affected lands and where appropriate, propose treatment. The IDT's composition varies according to the complexity of the fire and the availability of personnel with different skills and backgrounds. In general, DOI's interagency guidance recommends that teams may be comprised of staff specializing in disciplines such as wildlife, ecology, rangeland, soils and hydrology. The guidance also suggests that managers include expertise from cooperating agencies, especially when needed skills are not available within the local office. The BLM may also request assistance from state or regional staff, or from other individuals, including those from local communities.

In some instances, wildland fires may encompass lands managed by multiple agencies, place valued resources at risk, and result in conditions that are beyond the capability of the local staff to assess. In these situations, the local land unit manager may request the DOI to deploy one of two interagency teams qualified to assess large, multi-jurisdictional wildland fires. DOI's national wildland fire management office must approve any request for assistance. These teams include specialists from each of the affected agencies and represent a wide variety of skills. In 2000 and 2001, these multi-agency teams were deployed eight times.

