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1 Chapter ~~1817~~

2 Prescribed Fire

3

4 Introduction

5 The Interagency Prescribed Fire Planning and Implementation Procedures  
6 Reference Guide (IA RX Fire Guide) was signed by the National Fire and  
7 Aviation Executive Board (NFAEB) on September 1, 2006. The IA RX Fire  
8 guide provides consistent interagency policy, establishes common terms and  
9 definitions, and identifies planning and implementation processes for prescribed  
10 fire. These procedures meet all policy requirements described in the 2003  
11 Interagency Strategy for the Implementation of Federal Wildland Fire  
12 Management Policy. The 2006 guide provides unified direction and guidance  
13 for prescribed fire planning and implementation for the Department of the  
14 Interior's Bureau of Indian Affairs (BIA), Bureau of Land Management (BLM),  
15 the National Park Service (NPS), the United States Fish and Wildlife Service  
16 (USFWS), and the United States Department of Agriculture Forest Service  
17 (USDA FS).

18

19 The guide can be obtained electronically at the National Fire and Aviation  
20 Executive Boards (NFAEB) website: [http://www.nifc.gov/fire\\_policy/](http://www.nifc.gov/fire_policy/) and at the  
21 National Interagency Fuels Management Website:  
22 <http://www.nifc.gov/fuels/index.html>. Access the 'Direction and Guidance'  
23 link.

24

25 The IA RX Fire Guide describes what is minimally acceptable for prescribed  
26 fire planning and implementation. All personnel involved in the prescribed fire  
27 planning and implementation process must ensure that specific agency  
28 additional standards and or supplemental guidance are followed.

29

30 Purpose

31 The purpose of this guide is to provide consistent interagency policy, establish  
32 common terms and definitions, and identify planning and implementation  
33 processes for prescribed fire.

34

35 The guide describes what is minimally acceptable for prescribed fire planning  
36 and implementation. Agencies may choose to provide more restrictive standards  
37 and policy direction, but must adhere to these minimums.

38

39 Scope

40 This guide provides policy and direction to implement existing federal policy  
41 and has been developed with tribal, state, county, and local cooperators in mind.  
42 While some of these guidelines will not fit all non-federal cooperators, the intent  
43 is to include everyone by establishing a planning and implementation guide that  
44 might result in that outcome.

45

46

1 Prescribed Fire Program Goals  
 2 Interagency Prescribed Fire Program goals are to:  
 3 Provide for firefighter and public safety as the first priority.  
 4 Ensure that risk management is incorporated into all prescribed fire planning  
 5 and implementation.  
 6 Use prescribed fire in a safe, carefully planned, and cost-efficient manner.  
 7 Reduce wildfire risk to communities, municipal watersheds and other values and  
 8 to benefit, protect, maintain, sustain, and enhance natural and cultural resources.  
 9 Utilize prescribed fire to restore natural ecological processes and functions, and  
 10 to achieve land management objectives.

11  
12 Authorities

13 All use of prescribed fire will be supported by a Land/Resource Management  
 14 Plan (L/RMP) and/or Fire Management Plan (FMP). Prescribed fire projects  
 15 can only be implemented through an approved Prescribed Fire Plan. Specific  
 16 authorities exist for each agency to utilize prescribed fire (See Appendix A of  
 17 the Interagency Prescribed Fire Planning and Implementation Procedures  
 18 Reference Guide). All project decisions to use prescribed fire are subject to the  
 19 agency’s analysis, documentation, and disclosure requirements for complying  
 20 with the National Environmental Policy Act (NEPA).

21  
22 During prescribed fire planning and operations, all federal agencies will accept  
 23 each other’s standards for qualifications. The minimum qualifications standard  
 24 is ~~the~~the National Wildland Fire Coordinating Group (NWCG) Wildland and  
 25 Prescribed Fire Qualifications System Guide, 2000 (PMS 310-1). State, local  
 26 cooperators, and contractors working on federal agency prescribed fires must  
 27 meet the NWCG PMS 310-1 standards unless local agreements specify  
 28 otherwise.

29  
30 The main reference glossary for this guide is the NWCG glossary, which is  
 31 updated periodically: <http://www.nwcg.gov/>.

32  
33 This guide is not intended to address interagency business rules. Reference  
 34 individual agency’s business rules for direction.

35  
36 Prescribed Fire Planning Process

37 Common planning documents to ensure quality prescribed fire plans include:  
 38 Land/Resource Management Plan (L/RMP)  
 39 Overall direction is provided to the Wildland Fire Management Program by  
 40 L/RMP. These plans serve as the document to initiate, analyze, and provide the  
 41 basis for using prescribed fire to meet resource management objectives.

42  
43  
44  
45 Fire Management Plan (FMP)

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1 All burnable acres will be covered by a Fire Management Plan (FMP). The FMP  
2 is the cornerstone plan for managing a Wildland Fire Management Program and  
3 should flow directly from the L/RMP. FMPs may be developed for a Fire  
4 Planning Unit (FPU) that crosses jurisdictional boundaries. Where the Wildland  
5 Fire Management Program crosses jurisdictional boundaries, or where program  
6 coordination is essential, the FMP will require interagency coordination. Most  
7 FMPs are anticipated to fall into this category.

8  
9 National Environmental Policy Act (NEPA)  
10 Resource and prescribed fire objectives for specific prescribed fire projects are  
11 derived from the NEPA analysis. The entire prescribed fire project area must be  
12 analyzed under NEPA. NEPA documents that identify and analyze the effects  
13 of using or not using prescribed fire treatment projects may include  
14 Environmental Impact Statements (EIS), Environmental Assessments (EA), and  
15 Categorical Exclusion (CE).

16  
17 Other authorities that may be utilized to guide analysis and determination of  
18 NEPA compliance are the Healthy Forest Restoration Act (HFRA), the Healthy  
19 Forest Initiative (HFI), and the Tribal Forest Protection Act (TFPA).

20  
21 Prescribed fire planning and related NEPA analysis should always occur at the  
22 largest possible spatial and temporal scales.

23  
24 Implementation Organization and Qualifications  
25 During prescribed fire planning and operations, all federal agencies will accept  
26 each other's standards for qualifications. The minimum qualifications standard  
27 is the National Wildland Fire Coordinating Group (NWCG) Wildland and  
28 Prescribed Fire Qualifications System Guide, 2000 (PMS 310-1). State, local  
29 cooperators, and contractors working on federal agency prescribed fires must  
30 meet the NWCG PMS 310-1 standards unless local agreements specify  
31 otherwise. No less than the organization described in the approved Prescribed  
32 Fire Plan may be used for implementation. The complexity of each prescribed  
33 fire or phase of fire(s) determines the organization(s) needed to safely achieve  
34 the objectives specified in the Prescribed Fire Plan.

35  
36 Minimum Supervisory Qualifications Determined By Prescribed Fire  
37 Complexity:

Position	Complexity		
	High	Moderate-low	Low
RXM1	Optional	Optional	Optional
RXM2	Not Allowed	Optional	Optional
RXB1	Required	Optional	Optional
RXB2	Not Allowed	Required	Optional
RXB3	Not Allowed	Not Allowed	Required
FIRB	Optional	Optional	Optional

38 Holding Specialist

1 Holding functions will be managed by personnel qualified at the appropriate ICS  
2 wildland fire operations position as required by complexity, assigned resources  
3 and operational span of control. For some projects, there may be no holding  
4 requirements or the holding duties are assumed by the Burn Boss.

5  
6 High, Moderate, and Low complexity prescribed fires are determined through  
7 the required NWCG Prescribed Fire Complexity Rating System Guide.

8  
9 Prescribed Fire Burn Boss Type 3 (RXB3)

10 Adoption of the RXB3 position is up to each agency. Non-federal RXB3s must  
11 meet the qualifications as listed in the table below unless local agreements  
12 specify otherwise.

13  
14 An RXB3 will only be allowed to implement low complexity prescribed fires  
15 where the possibility of spread or spotting outside the project area is negligible  
16 to non-existent; multiple fuel models are not involved; and aerial operations are  
17 not involved.

18  
19 Requirements for Prescribed Fire Burn Boss Type 3

Training	Required: S-290 Intermediate Wildland Fire Behavior Suggested: S-234 Ignition Operations
Prerequisite Experience	Incident Commander, Type 5 OR Advanced Firefighter/Squad Boss AND Satisfactory position performance as a Prescribed Fire Burn Boss Type 3
Physical Fitness	Moderate
Other Position Assignments that will Maintain Currency	Prescribed Fire Burn Boss Type 2 Prescribed Fire Burn Boss Type 1 Fire Use Manager Prescribed Fire Manager Type 1 Prescribed Fire Manager Type 2

20  
21 Responsibilities  
22 Prior to prescribed fire implementation, thorough planning and review processes  
23 must be conducted. All prescribed fire actions must be developed from  
24 resource/fire management objectives carried forward from FMP's and L/RMP's.  
25 A specific implementation plan for each prescribed fire must be completed,  
26 reviewed, and approved before ignition can begin.

27  
28 The agency administrator has final approval authority for all Prescribed Fire  
29 Plans, unless special circumstances warrant higher review and concurrence  
30 (such as may occur during higher Preparedness Levels or for extremely large,

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1 complex projects). Although the agency administrator has final approval  
2 authority for the Prescribed Fire Plan and the ~~agency administrator~~Agency  
3 Administrator Pre-Ignition Approval Checklist, the Prescribed Fire Burn Boss  
4 has the responsibility to make the on-site tactical "GO/NO-GO" decision. The  
5 Prescribed Fire Burn Boss ensures that all prescription, staffing, equipment, and  
6 other plan specifications are met before, during, and after the prescribed fire.

7  
8 Every Prescribed Fire Plan must receive a technical review. The Technical  
9 Reviewer and Prescribed Fire Plan Preparer must be qualified or have been  
10 previously qualified as a Prescribed Fire Burn Boss at an experience level equal  
11 to or higher than the complexity being reviewed. Either the Prescribed Fire Plan  
12 Preparer or Technical Reviewer must be currently qualified.

13  
14 Only a RXB1 can review plans at high complexity. An RXB2 can review plans  
15 of moderate to low complexity. An RXB3 is not allowed to function as a  
16 Prescribed Fire Plan Preparer (see Chapter 3, section C of the Interagency  
17 Prescribed Fire Planning and Implementation Procedures Reference Guide) or  
18 Technical Reviewer.

19  
20 Agency or individual unit policy may dictate additional reviews. Interagency  
21 Prescribed Fire Plans require approval from all appropriate agency  
22 administrators and a technical review. Listed below are the prescribed fire and  
23 implementation position roles and responsibilities.

#### 24 Agency Administrator

25 For the purposes of this document, the agency administrator is defined as the  
26 Line Officer (or designee) of the agency or jurisdiction that has responsibility  
27 for the prescribed fire. These usually include the: NPS Park Superintendent,  
28 BIA Agency Superintendent, USFS Forest Supervisor, BLM District/Field  
29 Office Manager, FWS Project Leader, State Forest Officer, and/or Fire Chief.

30  
31 The agency administrator is responsible to:

32 Approve Prescribed Fire Plans. When approving a plan, understand the risks  
33 associated with it. Ensure that the plan has been reviewed and recommended for  
34 approval by the Technical Reviewer who was not the primary preparer of the  
35 plan.

36 Ensure that only trained and qualified personnel participate in the  
37 implementation portion of the prescribed fire.

38 Ensure that projects are monitored, evaluated, and documented in the project  
39 file.

40 Sign, date, and provide an expiration date for the approval to burn on the agency  
41 administrator Pre-Ignition Approval Checklist (Reference Burn Plan Template,  
42 Appendix B of the Interagency Prescribed Fire Planning and Implementation  
43 Procedures Reference Guide).

44 Understand and approve the Complexity Analysis (PMS 424 January 2004).

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- 1 Ensure that all prescribed fires are conducted in accordance with the approved
- 2 implementation plan and established standards and guidelines.
- 3 Ensure that periodic reviews and inspections of the Prescribed Fire Program are
- 4 completed.
- 5 Determine if and when the agency administrator is to be notified that
- 6 contingency actions are being taken.
- 7 Report all wildfires resulting from prescribed fires through the chain of
- 8 command.
- 9 Declare an escaped prescribed fire a wildfire (if responsibility is assigned in the
- 10 plan).
- 11 Ensure that escaped prescribed fires are reviewed according to established
- 12 guidelines.

13  
14 Technical Reviewer

15 The Technical Reviewer is responsible for reviewing each Prescribed Fire Plan  
 16 element for content ~~as well as~~, evaluating the risk, and ~~completing a~~ Complexity  
 17 Analysis to ensure that the stated goals and objectives can be safely and  
 18 successfully achieved when properly implemented. The Technical Reviewer  
 19 shall be qualified or previously qualified as a Burn Boss at or above the level of  
 20 project complexity. At a minimum, NWCG qualifications will be accepted.  
 21 The Technical Reviewer should have local knowledge of the area, experience  
 22 burning in similar fuel types, and/or conduct an on-site review. The Technical  
 23 Reviewer must be someone other than the primary preparer of the plan. An off-  
 24 unit technical review is encouraged to provide an additional independent  
 25 perspective. It is acceptable for other specialists to review certain portions of  
 26 the plan however; a primary Technical Reviewer must be designated as  
 27 technical review signatory. For example, a fire behavior analyst may review the  
 28 fire behavior calculations; the aviation manager may review the air operations  
 29 plan; and/or a resource specialist may review impacts to their resource of  
 30 interests. It is recommended that at least once every year, each unit should send  
 31 a moderate or high complexity Prescribed Fire Plan off-unit for technical  
 32 review. The Technical Reviewer is responsible to:  
 33 Ensure that Prescribed Fire Plans meet agency policy and direction.  
 34 Ensure that the Complexity Analysis accurately represents the project, so the  
 35 agency administrator understands the identified risks and the mitigating  
 36 measures enacted. This may require on-site review in Wildland Urban Interface  
 37 (WUI) or high complexity situations by the Technical Reviewer.  
 38 Check the prescription parameters against the fuel types to ensure that the  
 39 project as planned has a reasonable chance of meeting the resource management  
 40 objectives.  
 41 Ensure that the fire behavior calculations and/or prescription parameters are  
 42 appropriate and within the acceptable range.  
 43 Ensure that the ignition, holding and contingency plans are consistent with the  
 44 predicted fire behavior.

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- 1 Complete and sign the Technical Review Checklist (See Burn Plan Template,
- 2 Appendix B of the Interagency Prescribed Fire Planning and Implementation
- 3 Procedures Reference Guide) and the Prescribed Fire Plan signature page.
- 4
- 5 Prescribed Fire Plan Preparer
- 6 For the purpose of this document, the Prescribed Fire Plan Preparer is defined as
- 7 the individual responsible for the preparation of the Prescribed Fire Plan.
- 8 Several people may be involved in the preparation of the Prescribed Fire Plan,
- 9 but the Prescribed Fire Plan Preparer is responsible for the final plan content.
- 10 The primary preparer of the Prescribed Fire Plan will sign the signature page.
- 11 The preparer is responsible to:
  - 12 Prepare the Prescribed Fire Plan in accordance with this guide's policy and
  - 13 direction.
  - 14 Coordinate with the resource management and/or technical specialists to ensure
  - 15 that the plan meets management and operational objectives.
  - 16 Interact with the Technical Reviewer to ensure that all plan elements are
  - 17 adequately addressed.
  - 18 Complete and sign the Complexity Analysis.
- 19
- 20 Prescribed Fire Burn Boss (RXB1/RXB2/RXB3)
- 21 The Prescribed Fire Burn Boss is responsible to the agency administrator,
- 22 Prescribed Fire Manager, or FMO/local fire management organization for
- 23 implementing the Prescribed Fire Plan. The Prescribed Fire Burn Boss is
- 24 responsible to:
  - 25 Review the Prescribed Fire Plan prior to implementation and ensure all required
  - 26 elements and objectives are addressed.
  - 27 Inspect the burn unit to validate Prescribed Fire Plan elements including areas of
  - 28 special concern as well ensuring that holding/contingency plans adequately
  - 29 address expected fire behavior outside the unit(s).
  - 30 Obtain current weather and smoke management forecasts, updates, and special
  - 31 advisories from a meteorologist.
  - 32 Maintain communication with the agency administrator, Prescribed Fire
  - 33 Manager, or FMO/local fire management organization.
  - 34 Ensure that the ~~agency administrator~~ **Agency Administrator** Pre-Ignition
  - 35 Approval Checklist is valid (See Burn Plan Template, Appendix B of the
  - 36 Interagency Prescribed Fire Planning and Implementation Procedures Reference
  - 37 Guide)
  - 38 Take to the field those portions of the Prescribed Fire Plan necessary for
  - 39 completing the briefing and safe project implementation.
  - 40 Complete and sign the Prescribed Fire GO/NO-GO Checklist (See Burn Plan
  - 41 Template, Appendix B of the Interagency Prescribed Fire Planning and
  - 42 Implementation Procedures Reference Guide).
  - 43 Ensure availability of any contingency resources and management of those
  - 44 resources if deployed.
  - 45 Ensure that all operations are conducted in a safe manner and in accordance with
  - 46 the approved plan and established standards and guidelines.

- 1 Verify qualifications of all assigned personnel. Conduct the personnel /safety
- 2 briefing to ensure a safe operation.
- 3 Conduct the test fire and document the results.
- 4 Supervise assigned personnel and direct the ignition, holding and monitoring
- 5 operations. The Prescribed Fire Burn Boss will be responsible for
- 6 implementation including mop-up and patrol unless otherwise assigned to other
- 7 qualified personnel.
- 8 Declare the prescribed fire out unless the responsibility for it is formally passed
- 9 to another Prescribed Fire Burn Boss, Prescribed Fire Manager or the local fire
- 10 management organization.
- 11 Determine when the prescribed fire is not within prescription parameters (both
- 12 short and long term) or is not meeting objectives.
- 13 Declare an escaped prescribed fire a wildfire (if responsibility is assigned in the
- 14 plan).
- 15 Manage the incident or oversee the transition to another Incident Commander if
- 16 an escape occurs.
- 17 Ensure that reports are completed.
- 18 Coordinate with adjacent landowners, cooperators and permittees as designated
- 19 in the Prescribed Fire Plan.
- 20
- 21 Fire Management Officer (FMO)/ Fire Program Manager
- 22 The Fire Management Officer (FMO)/Fire Program Manager is responsible to
- 23 the agency administrator for planning, implementing and monitoring of the
- 24 Prescribed Fire Program in accordance with policy and direction. The
- 25 FMO/Fire Program Manager is responsible to:
- 26 Ensure compliance with national, regional, tribal and local fire policy and
- 27 direction, as well as applicable state and local laws.
- 28 Ensure that Preparedness Level Restrictions are adhered to. At National
- 29 Preparedness Levels Four and Five, prescribed fire implementation is restricted.
- 30 See the National Interagency Mobilization Guide for details.
- 31 Ensure that both the Prescribed Fire Plan Preparer and the Technical Reviewer
- 32 are qualified or qualified less currency at the level of complexity or higher.
- 33 Ensure that trained and qualified personnel are available to participate in the
- 34 Prescribed Fire Program.
- 35 Assign the Prescribed Fire Burn Boss.
- 36 Ensure a Prescribed Fire Plan with written approval exists for each prescribed
- 37 fire project.
- 38 Review the Prescribed Fire Plan to assess the impact of the project on the unit's
- 39 workload; include the project in the unit's Annual Work Plan; assess the unit's
- 40 ability to implement the project; and assess the need for additional
- 41 implementation resources.
- 42 Ensure that all prescribed fires are conducted in accordance with the approved
- 43 Prescribed Fire Plan and established standards and guidelines.
- 44 Declare an escaped prescribed fire a wildfire (if responsibility is assigned in the
- 45 plan).

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- 1 Act as liaison/coordinator to the agency administrator, Prescribed Fire Manager
- 2 and/or Prescribed Fire Burn Boss, local dispatch office, other units, other
- 3 agencies, air quality authorities, news media, transportation agencies, and safety
- 4 officials.
- 5 Ensure that projects are reported through the local office and comply with
- 6 national reporting guidelines.
- 7 Ensure that fuels management projects and interagency support actions are
- 8 reported through the proper reporting systems.
- 9 Ensure that periodic reviews and inspections of the Prescribed Fire Program are
- 10 completed.
- 11 Update agency administrator on the progress of the prescribed fire (as
- 12 necessary).
- 13 Ensure that projects are monitored, evaluated and documented as a part of the
- 14 project file.

15  
16 **Prescribed Fire Manager (RXM1/RXM2)**

17 The Prescribed Fire Manager is responsible for implementing and coordinating  
18 assigned prescribed fire activities. A Prescribed Fire Manager may be assigned  
19 during periods when multiple simultaneous prescribed fires are being conducted;  
20 when multiple prescribed fires will be conducted within a short time frame; or  
21 where there is complex interagency involvement. The Prescribed Fire Manager  
22 is responsible to:

- 23 Review Prescribed Fire Plans prior to implementation.
- 24 Monitor all prescribed fire operations.
- 25 Ensure that all operations are conducted in a safe manner and in accordance with
- 26 the approved plan(s) and established standards and guidelines.
- 27 Act as coordinator/liaison between the burn organization(s) and other offices,
- 28 agencies, air quality authorities, news media, transportation agencies, safety
- 29 officials, and interested public.
- 30 Declare an escaped prescribed fire a wildfire (if responsibility is assigned in the
- 31 plan).
- 32 Obtain and interpret long-term weather information.
- 33 Brief the Burn Bosses and direct operational assignments according to policies,
- 34 priorities, and standards.
- 35 Set priorities for allocation of resources.
- 36 Ensure the completion of all required documentation including the evaluation
- 37 and documentation of accomplishments, fire behavior and fire effects, operation
- 38 procedures, and cost summaries.

39  
40  
41 **Firing Boss (FIRB)**

42 The Firing Boss reports to the Prescribed Fire Burn Boss and is responsible for  
43 supervising and directing ground and/or aerial ignition operations according to  
44 established standards in the Prescribed Fire Plan. The Firing Boss is responsible  
45 to:

- 46 Review the Prescribed Fire Plan and the burn unit prior to implementation.

- 1 Brief personnel on project objectives and ignition operations.
- 2 Complete the test fire according to the ignition plan at the direction of the
- 3 Prescribed Fire Burn Boss.
- 4 Conduct ignition operations in a safe manner according to the ignition plan.
- 5 Identify the impacts of ignition on the control and desired fire effects.
- 6 Coordinate ignition operations with the Holding Specialist.
- 7
- 8 Holding Specialist
- 9 The supervisory position in charge of the holding forces reports to the
- 10 Prescribed Fire Burn Boss. There is no specific NWCG approved prescribed
- 11 fire position for this function. This position is assigned by name and title using
- 12 PMS 310-1 mnemonics. Holding functions will be managed by personnel
- 13 qualified at the appropriate Incident Command System (ICS) wildland fire
- 14 operations standard and as required by the prescribed fire complexity, assigned
- 15 resources, and operational span of control. The Holding Specialist is
- 16 responsible to:
- 17 Review the Prescribed Fire Plan and the burn unit prior to implementation.
- 18 Brief holding personnel on project objectives and holding operations.
- 19 Conduct holding operations in a safe manner according to the holding plan.
- 20 Coordinate holding operations with the Firing Boss.
- 21 Confine the fire to a predetermined area, mop up, and patrol.
- 22 Maintain communication with Burn Boss on holding progress and/or problems.
- 23 For some prescribed fires, there may be no holding requirements or the holding
- 24 duties are assumed by the Prescribed Fire Burn Boss.
- 25
- 26 Fire Effects Monitor (FEMO)
- 27 The Fire Effects Monitor (FEMO) is responsible for collecting the onsite
- 28 weather, fire behavior, and fire effects information needed to assess whether the
- 29 fire is achieving established resource management objectives. The FEMO is
- 30 responsible to:
- 31 Review the monitoring plan prior to implementation.
- 32 Monitor, obtain, and record weather data.
- 33 Monitor and record fire behavior data throughout the burn operations.
- 34 Recon the burn unit/area assigned.
- 35 Plot the burn area and perimeter on a map.
- 36 Monitor and record smoke management information.
- 37 Monitor first order fire effects.
- 38 Provide monitoring summary of the fire.
- 39 Provide fire behavior and weather information to burn personnel as appropriate.
- 40
- 41 Helitorch Manager (HTMG)
- 42 The Helitorch Manager is responsible to manage the helitorch operation,
- 43 supervise the mixing operation, and provide technical assistance to the
- 44 Prescribed Fire Burn Boss/Ignition Specialist. The HTMG may also serve as
- 45 Helicopter Manager and Helitorch Manager or Helicopter Parking Tender (but
- 46 not both).

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1  
2 Plastic Sphere Dispenser Operator (PLDO)  
3 The Plastic Sphere Dispenser Operator (PLDO) is responsible for the  
4 preparation, operation, maintenance, and care of the dispenser. The PLDO  
5 reports to the Ignition Specialist.  
6  
7 Helitorch Mixmaster (HTMM)  
8 The Helitorch Mixmaster (HTMM) is responsible for supervising the  
9 mixing/filling operations. The HTMM may also serve as Helitorch Manager or  
10 Helicopter Manager.  
11  
12 Resource Specialist or Resource Advisor (READ)  
13 The Resource Specialist/READ is responsible for ensuring the prescribed fire  
14 project is planned and implemented in a manner supporting the unit's resource  
15 management goals and objectives. The Resource Specialist/READ is  
16 responsible to the agency administrator. The Resource Specialist/READ is  
17 responsible to:  
18 Ensure resource management representation in the preparation of the Prescribed  
19 Fire Plan.  
20 Ensure a review of Prescribed Fire Plans is conducted before each plan is  
21 submitted for approval.  
22 Evaluate the prescribed fire project in terms of meeting objectives.  
23 Provide resource information and direction to the Prescribed Fire Burn Boss.  
24 Present information at briefings on resources, priorities, and issues of concern.  
25 Coordinate with adjacent landowners, cooperators and permittees as designated  
26 in the Prescribed Fire plan or by the Burn Boss.  
27  
28  
29 Amendments  
30 There may be a need to make amendments to the Prescribed Fire Plan. These  
31 are changes to the Prescribed Fire Plan that require an agency administrator  
32 signature. When changes are necessary, plans must be amended to identify the  
33 affected sections; the reason for the change(s); and have the changes clearly  
34 identified. For amendments, the same standards for Prescribed Fire Plan  
35 preparation, review, and approval apply.  
36 Common reasons for amending the Prescribed Fire Plan may include:  
37 Changes to objectives.  
38 Changes to complexity.  
39 Changes to fire behavior prescription parameters.  
40 Changes to project area boundaries resulting in either an increase or decrease in  
41 area.  
42 Reduction in resource capabilities identified as required in the plan.  
43 Major changes to ignition methods including ground ignition to aerial ignition;  
44 aerial ignition to hand ignition; hand drip torch ignition to use of terra torch  
45 ignition (includes ATV mounted ignition devices); and/or hand ignition from  
46 roadways to hand ignition from boats or other watercraft.

1  
2 To avoid having to amend the Prescribed Fire Plan, flexibility should be built  
3 into the plan that will allow for a range of adjustments during the prescribed fire.  
4 When building flexibility, the range of identified options must remain within the  
5 scope of the Complexity Analysis. Examples of flexibility that can be built into  
6 a prescribed fire plan:

7 The Prescribed Fire Plan may state that on burn day and subsequent days of the  
8 prescribed fire, a mix of the number and kinds of hand crews and engines may  
9 be modified as long as stated production capabilities are not compromised.

10 As the prescribed fire progresses from ignition to holding to mop up and patrol,  
11 specified capabilities and/or types of resources may be adjusted. If these  
12 flexibilities are built into the Prescribed Fire Plan, there must be a clear  
13 statement as to the work capability requirements of the resources at the various  
14 stages of the prescribed fire.

15 Minor changes in burn unit boundaries to facilitate holding and/or ignition, as  
16 long as the area in question has been in the NEPA document, requires no change  
17 in holding or ignition resources and is within the project boundaries.

18 Additional resources may be assigned to the project without amending the burn  
19 plan if the addition of these resources does not change the complexity of the  
20 burn or require additional supervisory positions. These changes must be  
21 documented in the daily briefing.

#### 22 23 Safety

24 The Federal Wildland Fire Policy states that firefighter and public safety is first  
25 priority. Prescribed Fire Plans and activities must reflect this commitment.

26 Every person involved in a prescribed fire is responsible for identifying safety  
27 issues and concerns. It is the responsibility of each individual participating in  
28 prescribed fire activities to notify immediate supervisor of any possible  
29 misunderstanding of assigned tasks or safety concerns related to the assignment.

30  
31 NWCG established Work/Rest Guidelines and span of control apply equally to  
32 wildland and prescribed fire operations. The management of crew, overhead,  
33 and support personnel rest to assure safe, productive fire operations is the  
34 responsibility of all supervisory fire management personnel (refer to NWCG  
35 Interagency Incident Business Management Handbook, PMS 902, NFES 3139).

36  
37 Exposure to smoke during prescribed fire operations can be a significant safety  
38 concern. Research has shown that exposure to smoke on prescribed fires,  
39 especially in holding and ignition positions, often exceeds that on wildfire. At a  
40 minimum, smoke exposure must be addressed in the Job Hazard Analysis (JHA)  
41 and smoke management element. Public safety impacts from smoke should be  
42 addressed in the Smoke Management and Air Quality Element as well as the  
43 Public, Personnel Safety, and Medical Element.

44  
45 Transportation and use of any product containing chemicals (drip torch fuel,  
46 aviation gas, sphere dispensers, fusees, fuel thickener, etc.) must be in

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1 compliance with the Occupational Safety and Health Administration’s (OSHA)  
2 Hazard Communication Standard (29 CFR 1910.1200) and Department of  
3 Transportation Regulations (49 CFR Part 171), and agency specific guidance.  
4 Material Safety Data Sheets (MSDS) for hazardous materials used on projects  
5 should be consulted in developing the JHA.  
6  
7 The SAFENET form and process is designed for reporting and correcting unsafe  
8 situations and is applicable to prescribed fire applications.  
9  
10 The risk management process identified in the NWCG Incident Response Pocket  
11 Guide (IRPG, PMS 410-1) helps ensure that critical factors and risks associated  
12 with prescribed fire operations are considered during decision making. This  
13 process should be applied to all prescribed fire planning and operations.  
14  
15 Consider using a Safety Officer on high complexity prescribed fires and others  
16 where the complexity analysis shows the need or indicates a higher than normal  
17 hazard.  
18  
19 A qualified Safety Officer is defined as a currently qualified Safety Officer, at  
20 any Type level (Types 1, 2 or ~~3~~Line), as defined by the NWCG, Wildland and  
21 Prescribed Fire Qualification System Guide (PMS 310-1).  
22  
23 Prescribed Fire Plan  
24 The Prescribed Fire Plan is the site-specific implementation document. It is a  
25 legal document that provides the agency administrator the information needed to  
26 approve the plan and the Prescribed Fire Burn Boss with all the information  
27 needed to implement the prescribed fire. Prescribed fire projects must be  
28 implemented in compliance with the written plan.  
29  
30 Prescribed Fire Plans will vary in their degree of detail. The size and  
31 complexity of the prescribed fire project will determine the level of detail  
32 required. The Prescribed Fire Plan Template (Appendix B of the Interagency  
33 Prescribed Fire Planning and Implementation Procedures Reference Guide) must  
34 be utilized. Each element must be addressed and then assembled in the  
35 sequence identified in the template. Should an element not apply to a specific  
36 prescribed fire plan, not applicable (N/A) may be utilized. Programmatic plans  
37 for multiple units under like conditions may be appropriate. Additional  
38 information may be added as appendices.  
39  
40 If an interagency mixed ownership Prescribed Fire Plan is being prepared, the  
41 development of all appropriate elements within the plan will be conducted in an  
42 interagency setting. Interagency agreements and Memorandums of  
43 Understanding (MOU) and/or private land owner agreements are required to  
44 implement prescribed fire on multiple ownerships.  
45

1 Listed below are the planning explanations of each individual element required  
2 as part of a complete Prescribed Fire Plan and implementation policy related to  
3 the element.

#### 4 Prescribed Fire Plan Elements

##### 5 1. Signature Page

6 The following information must be included on the signature page:

7 Administrative unit name.

8 Prescribed Fire Unit (burn unit)/Project name.

9 At a minimum, three dated signatures are required: a Prescribed Fire Plan

10 Preparer, a Technical Reviewer, and an agency administrator. Additional

11 signatures may be included as required by the individual unit.

12 Final determined complexity rating(s).

13 If the plan needs to be amended, the signed and dated amendments must be  
14 attached to the Prescribed Fire Plan (see Chapter 4 of the Interagency Prescribed  
15 Fire Planning and Implementation Procedures Reference Guide).

##### 16 2. GO/NO-GO Checklists

17 Agency Administrator Pre-Ignition Approval Checklist

18 The Agency Administrator's Pre-Ignition Approval Checklist (Burn Plan

19 Template, Appendix B of the Interagency Prescribed Fire Planning and

20 Implementation Procedures Reference Guide) is required to be completed. The

21 Agency Administrator's Pre-Ignition Approval Checklist evaluates whether

22 compliance requirements, Prescribed Fire Plan's elements, and internal and

23 external notification(s) have been completed and expresses the agency

24 administrator's intent to implement the Prescribed Fire Plan. The checklist

25 establishes the expiration date for the implementation of the Prescribed Fire

26 Plan. If ignition of the prescribed fire is not initiated prior to expiration date

27 determined by the agency administrator, a new approval is required. An 'acting'

28 agency administrator may sign the Agency Administrator Pre-Ignition Approval

29 Checklist if authority to do so has been delegated. If the Prescribed Fire Plan is

30 amended, a review and re-validation of the Agency Administrator Pre-Ignition

31 Approval Checklist would be required and included in the Project File.

32 Prescribed Fire GO/NO-GO Checklist

33 Prior to all ignition operations, the assigned Prescribed Fire Burn Boss will

34 complete and sign the Prescribed Fire GO/NO-GO Checklist (Burn Plan

35 Template, Appendix B of the Interagency Prescribed Fire Planning and

36 Implementation Procedures Reference Guide). This checklist is a minimum

37 standard and agencies may elect to add questions and/or approval signatures.

38 For each day of active ignition on a prescribed fire, a separate daily GO/NO-GO

39 Checklist is required.

##### 40 3. Complexity Analysis

41 Risk management is a foundation for all prescribed fire activities. Risks and

42 uncertainties relating to prescribed fire activities must be understood, analyzed,

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1 communicated, and managed as they relate to the cost of either doing or not  
2 doing an activity. At a minimum, those risks from the Complexity Analysis that  
3 are rated high and can not be mitigated will be identified with a discussion of the  
4 risks associated in the Summary Complexity Rating Rationale. This discussion  
5 will also be included in the Complexity Analysis Summary page (Burn Plan  
6 Template, Appendix B of the Interagency Prescribed Fire Planning and  
7 Implementation Procedures Reference Guide).

8  
9 The Prescribed Fire Complexity Rating must be completed utilizing the  
10 Prescribed Fire Complexity Rating System Guide, NWCG, January, 2004 (or  
11 current version). The purpose of the complexity rating process is to provide:  
12 Assignment of a complexity rating of high, moderate, or low to the prescribed  
13 fire.

14 Management and implementation personnel a relative ranking as to the overall  
15 complexity of a specific prescribed fire project.

16 A process that can be used to identify Prescribed Fire Plan elements or  
17 characteristics that may pose special problems or concerns.

18 A process that identifies mitigation activities needed to reduce the risk/hazard to  
19 the implementation personnel and public as well as mitigating potential resource  
20 damage.

21 A preliminary rating will be completed early in the Prescribed Fire Plan  
22 development stage. This will identify potential concerns that may be mitigated  
23 during the plan preparation process. Once the Prescribed Fire Plan is near  
24 completion, the final complexity rating is made. The final complexity rating  
25 will be used as a basis for determining prescribed fire organization, Prescribed  
26 Fire Burn Boss level, and mitigation measures.

27  
28 The Summary Complexity Rating Rationale will clearly justify the summary  
29 rating for prescribed fire organization and Prescribed Fire Burn Boss level. It  
30 must also identify those risks from the Complexity Analysis that are rated high  
31 and can not be mitigated and will provide a discussion of the risks associated.

32 The Complexity Analysis must be signed by the Prescribed Fire Plan Preparer  
33 and the agency administrator and attached as an appendix to the Prescribed Fire  
34 Plan. The Complexity Analysis Summary will be attached to the Prescribed Fire  
35 Plan following the GO/NO-GO Checklists.

36  
37 Separate prescriptions and/or burn organizations for different stages of  
38 implementation may result in multiple Complexity Analyses and ratings. For  
39 example, a plan may have separate prescriptions for spring and fall burning  
40 which may require different organizations and constitute the need for additional  
41 complexity analyses.

42  
43 If a prescribed fire complexity changes which results in different Prescribed Fire  
44 Burn Boss qualifications, a separate complexity analysis is required. For  
45 example, for certain prescribed fires conducted over time, progressive or  
46 sequential actions may reduce complexity, organization, and Prescribed Fire

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1 Burn Boss qualifications (e.g. a large scale, high complexity prescribed fire has  
2 been black-lined, portions burned and operations suspended for a period of time  
3 then resumed to continue or finish the prescribed fire). In this case, a separate  
4 Complexity Analysis will be developed to reflect the reduced complexity rating  
5 and will be included in the appendix of the Prescribed Fire Plan.

#### 6 7 4. Description of the Prescribed Fire Area

##### 8 9 Physical Description

10 This section of the plan will describe the physical features of the prescribed fire  
11 area.

12 Location - Narrative description of the location of the prescribed fire project  
13 including a legal description, UTM and/or latitude/longitude (decimal degrees;  
14 NAD83 preferred), county, and state.

15 Size - Area, in acres, of the prescribed fire project with a breakdown by  
16 prescribed fire unit and/or ownership if applicable.

17 Topography - Identify the upper and lower range of elevation, slope(s) –  
18 maximum/minimum and average, and aspect(s) of the prescribed fire project.

19 Project Boundary - The project boundary defines that area where fire will be  
20 ignited and may be allowed to burn (some agencies previously called this  
21 Maximum Management Area or Allowable Area). Describe the physical,  
22 natural and/or human made boundaries (including multiple units) of the  
23 prescribed fire project. This will be done through maps and may include  
24 narratives. The entire prescribed fire project area must be analyzed under  
25 NEPA.

##### 26 27 28 Vegetation/Fuels Description

29 This is a description of current vegetation and fuels in the project area and  
30 should discuss history including past environmental effects or land management  
31 practices and how they have impacted the fuel characteristics. Identify any  
32 reference material used.

33 Describe the structure and composition of the vegetation type(s) and fuel  
34 characteristics. This description may include natural or activity fuels, total fuel  
35 load (both live and dead) in tons/acre, dead fuel load by time-lag size classes,  
36 live fuel load (woody/herbaceous), fuel bed depth, and vertical and horizontal  
37 arrangement within the project boundary.

38 Describe the percent of the unit composed of each vegetative type and the  
39 corresponding fuel model(s).

40 Identify conditions (fuels, slope, and aspect) in and adjacent to boundaries that  
41 may be a potential threat for escaped fire.

42 Identify any abiotic conditions like airshed, climate, soils, etc. as appropriate.

##### 43 44 Description of Unique Features and Resources

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- 1 List and discuss special features, hazards, regulations, issues, constraints, etc.
- 2 Examples may include: fences to protect, power poles, historical/cultural sites,
- 3 threatened and endangered species or habitat, etc.

4

5 **Maps**

6 Maps will be developed and included in the Prescribed Fire Plan. At a  
7 minimum, the plan will include a vicinity and project map. The number of  
8 maps, map size and scale, legend and level of detail should be appropriate for  
9 the complexity of the project. All maps will include the standard mapping  
10 elements: title, name of preparer(s), date, north arrow, scale, and legend.

11 Vicinity Map - Shows prominent features including roads, streams, water  
12 sources, towns, structures, and the proximity of the burn unit(s) to these features.

13 Transportation route(s) will be identified. Map scale will be such that the burn  
14 units can be located on the ground and in sufficient detail to guide  
15 implementation.

16 Project Map(s) - The project map(s) identify features in sufficient detail to guide  
17 and assist in operational implementation of the prescribed fire. Topographic,  
18 vegetative, or aerial photo maps should be used as the base map. ICS map  
19 display symbols, identified in the Fireline Handbook PMS 410-1 will be used as  
20 appropriate. Examples of features that should be included on the project map(s)  
21 are: project boundary, individual unit boundaries, ownership, fireline locations,  
22 natural barriers, fuel model locations, proposed ignition patterns and sequence,  
23 critical holding points, hazards, safety zones, escape routes, helispots, areas of  
24 special concern, smoke management issues (predicted plume dispersion,  
25 sensitive receptors, etc), escaped fire contingency actions (primary and  
26 secondary control lines, trigger points, etc), water sources, location of treatment  
27 monitoring plots, etc., if these are significant in communicating project  
28 implementation.

29 **5. Goals and Objectives**

30 A short summary description will be developed that identifies the purpose of the  
31 prescribed fire and the resource management goals from the supporting L/RMPs  
32 and/or NEPA documents. The summary will identify desired future conditions  
33 of the prescribed fire project. This should be consistent with the appropriate  
34 land management goals. Include a discussion of future Fire Regime Condition  
35 Class (FRCC) post-treatment conditions if applicable.

36

37 Describe in clear, concise statements the specific measurable resource and fire  
38 objectives for this prescribed fire. Objectives will be measurable and  
39 quantifiable so prescription elements can be developed to meet those objectives  
40 and the success of the project can be determined following implementation.

41

42 **6. Funding**

43 Identify the funding source(s) and estimated cost(s) of the prescribed fire.  
44 Itemize by phase if desired.

45

46 **7. Prescription**

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1 Prescription is defined as the measurable criteria that define a range of  
2 conditions during which a prescribed fire may be ignited and held as a  
3 prescribed fire.

4  
5 The plan prescription will describe a range of low to high limits for the  
6 environmental (weather, topography, fuels, etc.) and fire behavior (flame  
7 lengths, rate of spread, spotting distance, etc.) parameters required to meet  
8 Prescribed Fire Plan objectives while meeting smoke management and control  
9 objectives. Parameters are quantitative variables expressed as a range that result  
10 in acceptable fire behavior and smoke management.

11  
12 The range of prescribed fire behavior characteristics (outputs such as: flame  
13 lengths, rates of spread, scorch heights, mortality, spotting, etc.) identified in the  
14 plan will help determine the acceptable combination of environmental  
15 parameters (inputs such as: weather, topography and fuels) under which the  
16 prescribed fire can be conducted. In many cases, burning under the extremes of  
17 all prescriptive parameters would not meet or possibly exceed the desired  
18 prescribed fire behavior characteristics and are therefore out of prescription.  
19 The Prescribed Fire Burn Boss must ensure that the prescriptive parameters and  
20 fire behavior characteristics as identified in the Prescribed Fire Plan are not  
21 exceeded. Empirical evidence (historical evidence or researched data) and  
22 judgment may be utilized to identify or calibrate prescriptions. Weaknesses in  
23 modeling can be overridden, but must be justified with empirical evidence  
24 and/or verified actual fire behavior.

25  
26 Separate prescriptions may be needed for multiple fuel model conditions to  
27 address seasonal differences and/or types of ignition (black lining, aerial  
28 ignition, etc). Separate prescriptions may result in multiple complexity ratings  
29 and burn organizations. For example, a separate prescription is needed for  
30 black-lining operations if conditions will be significantly different from the  
31 primary prescription or if the holding resources differ from those identified for  
32 ignition and holding phases. Separate prescriptions may result in the need to  
33 identify multiple levels of management, organizational structures,  
34 implementation measures, and pre-burn considerations.

35  
36 Holding and contingency plans must be developed with the consideration of the  
37 predicted fire behavior outside the project boundary(s). Fire behavior  
38 characteristics for fuel models within the maximum spotting distance and/or  
39 adjacent to the project boundaries must be considered and modeled using worst-  
40 case fire behavior predictions. These predictions will be identified from fire  
41 behavior model runs or empirical evidence of the hottest, driest, and windiest  
42 prescription limits identified in the Prescribed Fire Plan, along with the most  
43 extreme environmental conditions (slope, aspect) identified.

44

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1 A short fire behavior narrative that summarizes the fire behavior identified in the  
2 prescription and discusses how it will achieve the desired treatment objectives  
3 may be included.

4  
5 When used, fire behavior calculations must be developed using an appropriate  
6 fire behavior modeling program. Include modeling and/or empirical evidence  
7 documentation as an appendix or in the fire behavior narrative.

8  
9 **8. Scheduling**

10 Identify the general ignition time frame(s) (i.e. time of day, duration of ignition)  
11 or season(s) and note any dates when the project may not be conducted. For  
12 prescribed fires with multiple ignitions or burn days, list projected duration.

13  
14 At National Preparedness Levels Four and Five, prescribed fire implementation  
15 is restricted. See National Interagency Mobilization Guide for details.

16  
17 **9. Pre-burn Considerations**

18 Describe on and off-site actions and considerations that need to be conducted  
19 prior to implementation. Examples include clearances; line to be built;  
20 preparation of critical holding points; snags to be felled or protected; equipment  
21 to be pre-positioned; special features to be protected; warning signs to be placed;  
22 weather recording; fuels condition sampling; monitoring needs; responsibility;  
23 and timeframes.

24  
25 Describe any fuel sampling and weather data that may need to be obtained (See  
26 Element 14: Test Fire). This data should be taken at the project site. If this is  
27 not possible, use the closest representative site.

28  
29 The plan will include a list of organizations (including media) and individuals  
30 that are to be notified prior to ignition, with information necessary to make the  
31 contacts. Reasonable efforts will be made to notify adjacent land owners (or  
32 their agents) and other potentially impacted publics. Attempts and/or actual  
33 notifications will be documented with date and method and placed in the Project  
34 File.

35  
36 Identify in the burn plan the method and frequency for obtaining weather and  
37 smoke management forecast(s).

38  
39 Spot weather or local area forecasts are required prior to ignition, on all ignition  
40 days and any days the fire is actively spreading. A copy of the forecast will be  
41 included in the Project File. The Prescribed Fire Burn Boss or other person in  
42 charge of mop-up and patrol will also obtain and review the spot weather or area  
43 forecast to determine if mop up and patrol resources are adequate.

44  
45 **10. Briefing**

- 1 All assigned personnel must be briefed at the beginning of each operational
- 2 period to ensure personnel safety considerations (including the JHA) and
- 3 prescribed fire objectives and operations are clearly defined and understood.
- 4 Briefing checklists are required to be included in the Prescribed Fire Plan and
- 5 will include the following elements:
- 6 Burn Organization and Assignments
- 7 Burn Objectives and Prescription
- 8 Description of the Prescribed Fire Area
- 9 Expected Weather & Fire Behavior
- 10 Communications
- 11 Ignition Plan
- 12 Holding Plan
- 13 Contingency Plan and Assignments
- 14 Wildfire Conversion
- 15 Safety and Medical Plan

16 The briefing checklist should list briefing topics only, not re-state what is listed  
 17 in the Prescribed Fire Plan for that element.

18  
 19  
 20 The Prescribed Fire Burn Boss will ensure that any new personnel arriving to  
 21 the prescribed fire receives a briefing prior to assignment.

22  
 23 An Incident Action Plan (IAP) is optional, it is recommended for large multi-  
 24 day or high complexity prescribed fires.

25  
 26 If aerial ignition devices will be used, include an Aerial Ignition Briefing.

27  
 28 **11. Organization & Equipment**

29 The complexity of each prescribed fire determines the organization capabilities  
 30 needed to safely achieve the objectives specified in the Prescribed Fire Plan.  
 31 Specify the minimum required implementation organization to meet the  
 32 capabilities (line production rates, etc.) by position, equipment, and the supplies  
 33 needed for all phases of the prescribed fire until declared out. At a minimum, a  
 34 Prescribed Fire Burn Boss will be assigned to every prescribed fire. Positions  
 35 that may not be filled as collateral duty will be identified in the organization  
 36 chart of the Prescribed Fire Plan.

37  
 38 Standard ICS fire management principles for span of control and length of  
 39 assignments will be adhered to when developing burn implementation  
 40 organization(s) and used in managing prescribed fires. On prescribed fires with  
 41 large organizations, use the ICS organization and staffing commensurate with  
 42 the level of complexity. Consider the use of a Prescribed Fire Manager in  
 43 conducting multiple prescribed fires.

44  
 45 Before implementation (all phases) of the prescribed fire, documentation in the  
 46 form of an organization chart must be completed. Any changes to the

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1 organization during implementation must be documented. Any changes that  
2 reflect modification of the capabilities, equipment or supplies will require an  
3 amendment. Different organizations may be identified for different phases of  
4 implementation (i.e. holding v. mop-up and patrol, different ignition operations,  
5 different prescriptions).

6  
7 Multiple prescriptions for one Prescribed Fire Plan are permissible and in some  
8 cases required (Element 7). Multiple prescriptions may require identifying and  
9 developing multiple organizations.

10  
11 The Prescribed Fire Burn Boss is responsible for implementation including mop-  
12 up and patrol until the responsibility is formally passed to a Prescribed Fire Burn  
13 Boss, Prescribed Fire Manager or the local fire management organization.

14  
15 **12. Communication**

16 Develop communications plan specific to the project's implementation to  
17 address safety and tactical resource management needs. Identify and assign  
18 command, tactical, and air operations frequencies as needed. Also include any  
19 required telephone numbers. Cover under an Incident Action Plan, if utilized.

20  
21 **13. Public & Personnel Safety, Medical**

22 Describe provisions to be made for public and personnel safety. All personnel  
23 who are within the active burn area are required to wear personal protective  
24 equipment. Identify and analyze the safety hazards unique to the individual  
25 prescribed fire project and specify personnel safety and emergency procedures.  
26 Include safety hazards (including smoke exposure and impacts) and measures  
27 taken to reduce those hazards. Specify emergency medical procedures,  
28 evacuation methods, and emergency facilities to be used. A **Job Hazard**  
29 **Analysis (JHA)** is required for each prescribed fire project and will be attached  
30 to the Prescribed Fire Plan as an appendix.

31  
32 **14. Test Fire**

33 Provisions for a test fire are required and results must be recorded. The test fire  
34 must be ignited in a representative location and in an area that can be easily  
35 controlled. The purpose of the test fire is to verify that the prescribed fire  
36 behavior characteristics will meet management objectives and to verify  
37 predicted smoke dispersion. In many applications, analysis of the initial  
38 ignitions may provide adequate test fire results. On multiple-day projects,  
39 evaluation of current active fire behavior, in lieu of a test fire, may provide a  
40 comparative basis for continuing and must be documented. If in doubt however,  
41 initiate a separate test fire and evaluate results.

42  
43 Prior to ignition of both the test fire and ignition operations, compare the  
44 Prescribed Fire Plan prescription elements, both individually and collectively,  
45 against local area or spot weather forecasts, other predicted conditions, and the  
46 actual conditions onsite (See element 9: Pre-Burn Considerations) to ensure that

1 predicted fire behavior will take place and/or weather parameters will not  
2 change to the point of the burn going out of prescription.

#### 3 4 15. Ignition Plan

5 Describe planned ignition operations including firing methods, devices,  
6 techniques, sequences, patterns, and ignition staffing for single or multiple unit  
7 operations. Maps showing proposed firing patterns may be included. If aerial  
8 ignition (or other aerial operations) is planned, cover aviation operations,  
9 organization, and safety within the Prescribed Fire Plan, Aerial Ignition Plan, or  
10 in an agency specific Aviation Operating Plan (Refer to the Interagency  
11 Helicopter Operations Guide, {NFES #1885} and the Interagency Aerial  
12 Ignition Guide {NFES #1080} for more detailed information on this topic).  
13 Multiple prescriptions and ignition operations (blackline, primary, aerial, etc.)  
14 may require identifying and developing multiple ignition organizations.

#### 15 16 16. Holding Plan

17 Describe general procedures to be used for operations to maintain the fire within  
18 the project area and meet project objectives until the fire is declared out. This  
19 may include mop-up and/or patrol procedures. Describe critical holding points  
20 (if any) and mitigation actions. Critical holding points will be identified on the  
21 project map. Describe minimum capabilities needed for all phases of  
22 implementation (see Element 11: Organization and Equipment). If used, attach  
23 or reference modeling outputs or worksheets (i.e. Fireline Handbook production  
24 rates, BEHAVE, etc.) and/or documented empirical evidence to justify  
25 minimum holding resources required.

26  
27 Different organizations may be identified for different phases of implementation  
28 (i.e. holding, mop-up and patrol, different ignition operations, different  
29 prescriptions). Multiple prescriptions may require identifying multiple  
30 complexity ratings and developing multiple holding organizations.

31  
32 If onsite resources are insufficient to meet the prescribed fire plan objectives,  
33 then the Burn Boss should implement the Contingency Plan or Wildfire  
34 Conversion.

#### 35 36 17. Contingency Plan

37 "...If the objectives are not being met the Contingency Plan, a required  
38 component of the Prescribed Fire Burn Plan, is implemented. If the  
39 Contingency Plan is successful at bringing the project back within the scope of  
40 the Prescribed Fire Burn Plan the project continues. If contingency objectives  
41 are not met the prescribed fire is converted to a wildfire and Extended Attack is  
42 undertaken."

43  
44 Interagency Strategy for the Implementation of Federal Wildland Fire  
45 Management Policy, June 20, 2003, page 12.

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1 Contingency planning is intended for more than just a response to an escaped  
2 fire. The contingency plan is the portion of the Prescribed Fire Plan that  
3 considers possible but unlikely events and the contingency resources and actions  
4 needed to mitigate those events.

5  
6 Contingency planning is the determination of initial actions and additional  
7 resources needed if the prescribed fire is not meeting, exceeds, or threatens to  
8 exceed:

- 9 Project or unit boundary
- 10 Objectives
- 11 Prescription parameters
- 12 Minimum implementation organization
- 13 Smoke impacts
- 14 Other Prescribed Fire Plan elements

15  
16 The contingency plan will establish trigger points or limits that indicate when  
17 additional holding resources and actions are needed.

18  
19 Contingency planning includes the additional resources required, and the  
20 maximum acceptable response time for those resources. Resource needs should  
21 be based on fire behavior outputs tied to the worst case fire behavior scenario (as  
22 modeled in Element 7: Prescription). Separate contingency plans may be  
23 necessary and appropriate to address seasonal differences, types of ignitions or  
24 phases of the burn implementation as described in the prescriptions and ignition  
25 and holding plans developed for the burn.

26  
27 Verify and document availability of identified contingency resources and  
28 response time on day of implementation. If contingency resources availability  
29 falls below plan levels, actions must be taken to secure operations until  
30 identified contingency resources are replaced.

31  
32 The same contingency resource can be identified for multiple prescribed fire  
33 projects. When specific contingency resources are identified for more than one  
34 prescribed fire, the local fire management organization(s) must evaluate and  
35 document adequacy of all contingency resources within the area. This evaluation  
36 must consider:

- 37 Local, current, and predicted fire danger
- 38 Local and regional wildland fire activities.

39  
40 Once a contingency resource is committed to a specific wildland fire action  
41 (wildfire, wildland fire use or prescribed fire), it can no longer be considered a  
42 contingency resource for another prescribed fire project and a suitable  
43 replacement contingency resource must be identified or the ignition halted.

44  
45 The agency administrator will determine if and when they are to be notified that  
46 contingency actions are being taken.

1  
2 If the contingency actions are successful at bringing the project back within the  
3 scope of the Prescribed Fire Plan, the project may continue. If contingency  
4 actions are not successful by the end of the next burning period, then the  
5 prescribed fire will be converted to a wildfire.

#### 6 7 18. Wildfire Conversion

8 The Prescribed Fire Plan will specify who has the authority to declare a wildfire.  
9 A prescribed fire must be declared a wildfire by those identified in the plan  
10 when that person(s) determines that the contingency actions have failed or are  
11 likely to fail and cannot be mitigated by the end of the next burning period by  
12 on-site holding forces and any listed contingency resources. In addition, an  
13 escaped prescribed fire must be declared a wildfire when the fire has spread  
14 outside the project boundary, or is likely to do so, and cannot be contained by  
15 the end of the next burning period. A prescribed fire can be converted to a  
16 wildfire for reasons other than an escape.

17  
18 Describe the actions to be taken when a prescribed fire is declared a wildfire  
19 (refer to Wildland Fire and Aviation Program Management and Operations  
20 Guide {BIA--Blue Book} and Interagency Standards for Fire and Fire Aviation  
21 {Red Book}). Description will include:

22 Wildfire declaration (by whom)

23 IC assignment

24 Notifications: dispatch, agency administrator, adjacent land owners, etc.

25 Extended attack actions and opportunities to aid in suppression efforts.

26 After a wildfire declaration, an escaped prescribed fire cannot be returned to  
27 prescribed fire status. A WFSA will define appropriate future management  
28 actions.

29

30

31

#### 32 19. Smoke Management & Air Quality

33 Describe how the project will comply with local community, county, state,  
34 tribal, and federal air quality regulations. Identify what permits, if any, need to  
35 be obtained. Identify smoke sensitive areas including population centers,  
36 recreation areas, hospitals, airports, transportation corridors, schools, non-  
37 attainment areas, Class I air sheds, and restricted areas that may be impacted.

38 Include modeling outputs and mitigation strategies and techniques to reduce the  
39 impacts of smoke production, if required by State Implementation Plans (SIPs)  
40 and/or State or local regulations. Reference the Smoke Management Guide for  
41 Prescribed and Wildland Fire 2001 Edition for other smoke management  
42 planning suggestions and smoke management techniques for reducing or  
43 redistributing emissions.

44

45 Special considerations must be taken to address smoke when the project is in a  
46 non-attainment area for a National Ambient Air Quality Standards including

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1 insuring compliance with SIP/TIP provisions and addressing Conformity.  
2 Projects which will potentially impact Class I areas should address any efforts to  
3 minimize smoke impacts on visibility. Comply with all local, state, tribal and  
4 federal pre-burn and post-burn data reporting requirements.  
5

6 **20. Monitoring**

7 Prescribed fire monitoring is defined as the collection and analysis of repeated  
8 observations or measurements to evaluate changes in condition and progress  
9 toward meeting a management objective. Describe the monitoring that will be  
10 required to ensure that Prescribed Fire Plan objectives are met. For the  
11 prescribed fire, at a minimum specify the weather, fire behavior and fuels  
12 information (forecast and observed) and smoke dispersal monitoring required  
13 during all phases of the project and the procedures for acquiring it, including  
14 who and when.  
15

16 **21. Post-burn Activities**

17 Describe the post-burn activities that must be completed. This may include a  
18 post-burn report, safety mitigation measures, and rehabilitation needs including  
19 those as a result of pre-burn activities undertaken.  
20

21 **Appendices**

22 Include all the required appendices.

23 **Maps**

24 Technical Review Checklist

25 Complexity Analysis

26 Job Hazard Analysis

27 Fire Behavior Modeling Documentation or Empirical Documentation  
28  
29  
30  
31

32 **Project file**

33 All prescribed fire ~~Project Files~~ **project files** will contain the following  
34 information. Agencies and/or administrative units may require additional  
35 information.

36 **Prescribed Fire Plan**

37 Monitoring data including weather, fire behavior, fire effects and smoke  
38 dispersal observations

39 Weather forecasts

40 Notifications

41 Documented prescribed fire organization(s)

42 Any agreements related to implementation

43 Multiple day GO/NO-GO checklist(s), if applicable

44 Re-validation of the Agency Administrator Pre-Ignition Approval Checklist  
45

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1 Depending on the scope and complexity of the prescribed fire, optional  
 2 information and/or further documentation that may be included in the Project  
 3 File include:  
 4 After Action Review (see Chapter 8 of the Interagency Prescribed Fire Planning  
 5 and Implementation Procedures Reference Guide)  
 6 Incident Action Plans, Unit Logs  
 7 Press releases, etc  
 8 Implementation costs  
 9 Actual ignition patterns and sequences used  
 10 Smoke management information  
 11 Agency individual fire occurrence form  
 12 Detailed Post Burn Report  
 13 NEPA documentation  
 14 Permits  
 15  
 16 After Action Review (AAR)  
 17 Each operational shift on a prescribed fire should have an informal After Action  
 18 Review (AAR). Certain events or a culmination of events that may affect future  
 19 prescribed fire implementation and/or policy should be submitted via the Roll-  
 20 up documentation (Found at <http://www.wildfirelessons.net>). The questions to  
 21 answer in conducting an AAR are:  
 22 What did we set out to do (what was planned)?  
 23 What actually happened?  
 24 Why did it happen that way?  
 25 What should be sustained? What can be improved?  
 26  
 27 Escaped Fire Reviews  
 28 The agency administrator will be notified of an escaped fire. The agency  
 29 administrator is required to make the proper notifications. All prescribed fires  
 30 declared a wildfire will have an investigative review initiated by the agency  
 31 administrator. The level and scope of the review will be determined by policy  
 32 and procedures in Wildland Fire and Aviation Program Management and  
 33 Operations Guide (BIA--Blue Book) or Interagency Standards for Fire and Fire  
 34 Aviation (Red Book).  
 35 The goal of the escaped prescribed fire review process is to guide future  
 36 program actions by minimizing future resource damage and/or preventing future  
 37 escapes from occurring by gathering knowledge and insight for incorporation  
 38 into future resource management and prescribed fire planning. The objectives of  
 39 the review are to:  
 40 Determine if the Prescribed Fire Plan was adequate for the project and complied  
 41 with policy and guidance related to prescribe fire planning and implementation.  
 42 Determine if the prescription, actions, and procedures set forth in the Prescribed  
 43 Fire Plan were followed.  
 44 Describe and document factual information pertaining to the review.  
 45 Determine if overall policy, guidance, and procedures relating to prescribed fire  
 46 operations are adequate.

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- 1 Determine the level of awareness and the understanding of the personnel
- 2 involved, in regard to procedures and guidance.
- 3
- 4 At a minimum, the escaped fire review report will include the following
- 5 elements:
- 6 An analysis of seasonal severity, weather events, and on-site conditions leading
- 7 up to the wildfire declaration.
- 8 An analysis of the actions taken leading up to the wildfire declaration for
- 9 consistency with the Prescribed Fire Plan.
- 10 An analysis of the Prescribed Fire Plan for consistency with policy.
- 11 An analysis of the prescribed fire prescription and associated environmental
- 12 parameters.
- 13 A review of the approving line officer's qualifications, experience, and
- 14 involvement.
- 15 A review of the qualifications and experience of key personnel involved.
- 16 A summary of causal agents contributing to the wildfire declaration.
- 17
- 18 Document the incident, including all actions prior to and after the escape. Set up
- 19 a file that includes all pertinent information, i.e., the Prescribed Fire Plan; a
- 20 chronology of events including the prescribed fire report; unit logs and
- 21 individual statements; weather forecasts including any spot forecasts; weather
- 22 information taken on site and Remote Automated Weather Station (RAWS) and
- 23 National Fire Danger Rating System (NFDRS) data for the day of the escape
- 24 from the nearest station(s); photos; and all other pertinent information. Since all
- 25 prescribed fires are planned management actions, an escape may lead to a Tort
- 26 Claim and liability issues. Special attention to documentation is critical.
- 27
- 28 An independent review team is recommended for conducting escaped fire
- 29 reviews. The number of individuals assigned to the team and their functional
- 30 expertise should be commensurate with the scope and focus of the review.
- 31 Interagency participation is highly recommended for all prescribed fire reviews.
- 32
- 33 Use of Pay Plan for Hazardous Fuel Reduction
- 34 Refer to the Department of the Interior (DOI) Pay Plan for Emergency Workers
- 35 for information regarding the use of emergency workers for hazardous fuel
- 36 reduction projects on Departmental lands. Refer to the Forest Service Pay Plan
- 37 for Emergency Workers for information regarding the use of emergency workers
- 38 for hazardous fuel reduction projects on Forest Service Lands.

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