Utah/Intermountain Interagency Prescribed Fire Plan Template

The Utah and Intermountain Region Interagency Prescribed Fire Plan Template is designed to be user friendly and to provide a standard format throughout Utah for use by the Bureau of Land Management (BLM), National Park Service (NPS), US Fish and Wildlife Service (USFWS), Bureau of Indian Affairs (BIA), and Utah Forestry, Fire, and State Lands, and throughout the Intermountain Region of the USDA Forest Service (USFS). This template meets the requirements established in the Interagency Prescribed Fire Planning and Implementation Procedures Guide (Prescribed Fire Guide) (November 2013).

This Prescribed Fire Plan represents a standardized, electronic, reproducible template for the Prescribed Fire Plan development process editable in MS Word. General direction from the Prescribed Fire Guide is provided within the template. For detailed direction on each element, see the Prescribed Fire Guide. While the template provides for all elements of the burn plan, in several areas (these include the organization chart, radio communications plan, medical plan, mop-up & patrol plan), units may desire to use locally developed sections as long as they met standards developed in the Prescribed Fire Guide.

Within the template, grey boxes identify areas requiring input into the Prescribed Fire Plan. Wording in **red** are instructions to the preparer for each element. Upon completion of the plan the preparer should delete all items that appear in **red** and **should not be included in the final document**. Those items underlined in **blue** are hyperlinks that will take the preparer to the document referred to in the text or to an internet location. Items that appear in **green** are recommended text and should be used to assist in the development of the specifics for the prescribed fire plan, then converted to black text if utilized in the final burn plan. Original text in **black** is to remain as part of the plan. This page is for informational purposes and should be **deleted** prior to submitting plan for technical review and approval.

While the template is intended to be Interagency in scope, agencies have added national and regional supplemental direction to the Prescribed Fire Plan template. Specific direction by agency is identified by the following colors: Bureau of Land Management – **brown**, US Forest Service – **purple**, National Park Service - **orange**. When completing the template, one only needs to complete the additional requirements for their respective agency and can delete the non-applicable section or leave blank.

The Project Name and Unit Name should be entered in the document's header which will automatically appear on each following page of the plan. Project Name is the name of the prescribed fire and Unit Name is the name of the administrative unit.

To insert information into the document's header:

1. Double-click in the header region (upper region of each page displayed on the screen).
2. Type Project and Unit name.
3. Double-click *outside* the header region in the body of the document.

An automatic Table of Contents is included in the template. To update the page numbers, click anywhere within the Table of Contents topics section, then click on the "Update Table.." highlighted tab followed by "Update page numbers only" and finally hit "OK." The Table of Contents will also automatically update itself when you print the document.

Revised: 25 February 2014 - JBW

PRESCRIBED FIRE PLAN

ADMINISTRATIVE UNIT(S) _____

PRESCRIBED FIRE NAME _____

PREPARED BY	Signature of qualified burn boss at the complexity of the plan. Name - Qualification & Currency (Y/N)	**DATE**	
ADDITIONAL PREPARER	Name – Qualification	**DATE**	
FIRE MANAGEMENT OFFICER REVIEW	BLM/NPS Specific Name – Qualification	**DATE**	
TECHNICAL REVIEW	Name - Qualification & Currency (Y/N)	**DATE**	
RESOURCE MANAGEMENT	NPS Specific Name – Qualification	**DATE**	
FIRE ECOLOGIST	NPS Specific Name – Qualification	**DATE**	

The approved Prescribed Fire Plan constitutes the delegation of authority to burn. No one has the authority to burn without an approved plan or in a manner not in compliance with the approved plan. Actions taken in compliance with the approved Prescribed Fire Plan will be fully supported. Personnel will be held accountable for actions taken which are not in compliance with elements of the approved plan regarding execution of the objectives in a safe and cost-effective manner.

COMPLEXITY RATING _____ **MINIMUM BURN BOSS QUALIFICATION REQUIRED** _____

NEPA NUMBER _____ **PROJECT NUMBER** _____

APPROVED BY	Name - Agency Administrator	**DATE**	
APPROVED BY	Name - Agency Administrator	**DATE**	

Version – Feb. 2014

US FOREST SERVICE – BURN BOSS REQUIREMENTS

All elements of the Prescribed Burn Plan are as prescribed and are predicted to remain in prescription during the expected life of the burn (day of the burn go-no-go decision).

PRESCRIBED FIRE BURN BOSS USFS Specific **DATE TIME**

RXB1, RXB2, RXB3
(circle appropriate qualification)

The burn unit should be checked on a regular basis following active ignition until declared out. Documentation of conditions should be made in a Unit Log with the below filled out following each check of the burn unit.

Date/Time Lines Checked	Who Checked	Method (air/ground)

PRESCRIBED BURN DECLARED OUT USFS Specific **DATE TIME**

RXB1, RXB2, RXB3
(circle appropriate Qualification)

TABLE OF CONTENTS

Management Summary

The first paragraph of the Management Summary is intended as an overall project summary for internal and external use. The paragraph should be used on www.utahfireinfo.gov to summarize each burn project in Utah when scheduled for implementation. The (name of prescribed fire) Prescribed Fire project is located in XXX County, XXX miles (direction) of (name of community). Previous treatment on this project included XXX. The project consists of XXX acres located (geographical location). The primary objective of this burn is to reduce the existing wildland fire hazard and (include any other significant objectives), thus reducing potential negative effects from future wildland fire to both agency and adjacent private lands while restoring fire-adaptive ecosystems.

ELEMENT 2 - AGENCY ADMINISTRATOR IGNITION AUTHORIZATION (Prescribed Fire Plan, Element 2A)

Instructions: The Agency Administrator Ignition Authorization must be completed before a prescribed fire can be implemented. If ignition of the prescribed fire is not initiated prior to expiration date determined by the agency administrator, a new authorization will be required.

Prior to signature the agency administrator should discuss the following key items with the fire management officer (FMO), fuels specialist, or burn boss. Attach any additional instructions or discussion documentation (optional) to this document.

Key Discussion Items

A. Has anything changed since the Prescribed Fire Plan was approved or revalidated? *Such as drought or other climate indicators of increased risk, insect activity, new subdivisions/structures, smoke requirements, Complexity Analysis Rating.*
B. Have compliance requirements and pre-burn considerations been completed? *Such as preparation work, NEPA mitigation requirements, cultural, threatened and endangered species, smoke permits, state burn permits/authorizations.*
C. Can all of the elements and conditions specified in Prescribed Fire Plan be met? *Such as weather, scheduling, smoke management conditions, suitable prescription window, correct season, staffing and organization, safety considerations, etc.*
D. Are processes in place to ensure all internal and external notifications and media releases will be completed?
E. Have key agency staffs been fully briefed about the implementation of this prescribed fire?
F. Are there circumstances that could affect the successful implementation of the plan? *Such as preparedness level restrictions, resource availability, other prescribed fire or wildfire activity*
G. Have you communicated your expectations to the Burn Boss and FMO regarding if and when you are to be notified that contingency actions are being taken?
H. Have you communicated your expectations to the Burn Boss and FMO regarding decisions to declare the prescribed fire a wildfire?

Implementation Recommended by: FMO, Fuels Specialist, or Prescribed Fire Burn Boss Signature:_____ Date:_____

I am authorizing ignition of this prescribed fire between the dates of _____ and _____. It is my expectation that the project will be implemented within this time frame and as discussed and documented and attached to this plan. If the conditions we discussed change during this time frame, it is my expectation you will brief me on the circumstances and an updated authorization will be negotiated if necessary.

Additional Instructions or Discussion Documentation attached (Optional): Yes ☐ No☐

Ignition Authorized by:
Agency Administrator Signature and Title:_____ Date:_____

ELEMENT 2 - PRESCRIBED FIRE GO-NO-GO CHECKLIST
(Prescribed Fire Plan, Element 2B)

* Preliminary Questions	Circle YES or NO
A. Have conditions in or adjacent to the ignition unit changed, (for example: drought conditions or fuel loadings), which were not considered in the prescription development? If **NO** proceed with the Go/NO-GO Checklist below, if **YES** go to item B.	YES NO
B. Has the prescribed fire plan been reviewed and an amendment been approved; or has it been determined that no amendment is necessary? If **YES**, proceed with checklist below. If **NO, STOP: Implementation is not allowed. An amendment is needed.**	YES NO

GO/NO-GO Checklist	Circle YES or NO
* Have ALL permits and clearances been obtained?	YES NO
* Have ALL the required notifications been made?	YES NO
* Have ALL the pre-burn considerations and preparation work identified in the prescribed fire plan been completed or addressed and checked?	YES NO
* Have ALL required current and projected fire weather forecast been obtained and are they favorable?	YES NO
* Are ALL prescription parameters met?	YES NO
* Are ALL smoke management specifications met?	YES NO
* Are ALL planned operations personnel and equipment on-site, available and operational?	YES NO
* Has the availability of contingency resources applicable to today's implementation been checked and are they available?	YES NO
* Have ALL personnel been briefed on the project objectives, their assignment, safety hazards, escape routes, and safety zones?	YES NO
If all the questions were answered "**YES**" proceed with a test fire. Document the current conditions, location and results. If any questions were answered "**NO**", DO NOT proceed with the test fire: Implementation is not allowed.	
After evaluating the test fire, in your judgment can the prescribed fire be carried out according to the prescribed fire plan and will it meet the planned objective?	**Circle: YES or NO**

SIGNED _____ **DATE** _____
Prescribed Fire Burn Boss

CONCURRENCE _____ **DATE** _____
Ignition Specialist Function

CONCURRENCE _____ **DATE** _____
Holding Specialist Function

ELEMENT 3 - COMPLEXITY ANALYSIS SUMMARY

ELEMENT	RISK	POTENTIAL CONSEQUENCE	TECHNICAL DIFFICULTY
1. Potential for Escape			
2. The Number and Dependence of Activities			
3. Off-Site Values			
4. On-Site Values			
5. Fire Behavior			
6. Management Organization			
7. Public and Political Interest			
8. Fire Treatment Objectives			
9. Constraints			
10. Safety			
11. Ignition Procedures/Methods			
12. Interagency Coordination			
13. Project Logistics			
14. Smoke Management			

COMPLEXITY RATING SUMMARY	
	OVERALL RATING
RISK	
POTENTIAL CONSEQUENCES	
TECHNICAL DIFFICULTY	
SUMMARY COMPLEXITY DETERMINATION	
Rationale	
Copy final ratings from the Complexity Analysis located in Appendix C. Place short narrative on general rationale used in developing complexity analysis and explain final rating. All elements with a "High" rating and those elements that are higher than the summary rating in the complexity analysis will be discussed and will identify potential consequences and mitigating measures. If Complexity Rating Worksheets develop a lower complexity then selected, explain basis of higher final rating.	

ELEMENT 4 - DESCRIPTION OF PRESCRIBED FIRE AREA

A. Physical Description

Legal description:	T		R		S	
	T		R		S	
Latitude			Longitude			
Project Acres			County			
Primary Unit Acres			Drainage			
Low elevation			Average aspect			
High elevation			Average slope			

Project Boundary

The project boundary defines that area where fire will be ignited and may be allowed to burn. Describe the physical, natural and/or human made boundaries including primary unit (area to be ignited) and area fire is allowed to burn along with discussion on multiple compartments if applicable) of the prescribed fire project. This will be done through maps and a narrative. The entire prescribed fire project area must be analyzed under NEPA. Interagency agreements, memorandums of understanding (MOU) or private landowner agreements that outline responsibilities are required to implement prescribed fire on multiple ownerships. Rows can be added or deleted in the legal description based on project area.

The project area includes (narrative description of project area and boundary). The primary unit(s), where active ignition will occur, includes (narrative description of primary unit and boundary). An amendment to the burn plan is not required for minor changes in burn unit boundaries to facilitate holding and/or ignition, as long as the area in question has been identified in the NEPA document, requires no change in holding or ignition resources and is within the project boundaries. Changes to project area boundaries resulting in either an increase or decrease in area requires an amendment to the burn plan.

B. Vegetation/Fuels Description

On-Site Fuels Data				Adjacent Fuels Data		
FBPS Fuel Model(s)				FBPS Fuel Model(s)		
NFDRS Fuel Model(s)				NFDRS Fuel Model(s)		
Fire Regime(s)				Fire Regime(s)		
Fire Condition Class(es)				Fire Condition Class(es)		
Percent of Area				Percent of Area		
Fuel Loading	1 hour tlf			General Description of Adjacent Fuels		
	10 hour tlf			Describe the fuels outside of the primary burn unit with consideration of this used in developing minimum workforce and equipment needs.		
	100 hour tlf					
	1000 hour tlf					
	Litter depth					
	Duff depth					
	Live woody					
	Live herbaceous					
	Total fuel loading					

Comments

Include narrative description of fuels within the burn unit including percent of the unit composed of each vegetative type and corresponding fuel model(s). State how the above loading was determined (i.e. inventory, photo series, estimation, fuel tables, etc.). Within the qualitative description include known information such as stand age, past fire history, presence of exotics, grazing and logging history, etc. Identify conditions in and adjacent to boundaries that may be a potential threat for escaped fire. Space is provided above under "On-Site Fuels Data" for two fuel models. If additional fuel models are required, the columns should be split. Columns should be added or deleted to reflect the number of fuel models within fuels descriptions.

C. Description of Unique Features

List and discuss special features, natural resources, values, hazards, issues and constraints including those identified in NEPA. Examples may include: Wildland Urban Interface (WUI) areas, fences power poles, historical sites, cultural sites, threatened and endangered species, or habitat to protect, etc.

ELEMENT 5 - OBJECTIVES

1. Resource Objectives
Describe in clear, concise statements the specific measurable resource and prescribed fire objectives. Objectives are well-defined statements describing how a treatment accomplishes project goals as described through the NEPA process and documented in the decision document. Objectives should be specific, measurable, attainable, realistic and time sensitive (SMART) and used as a measure of project success, as determined through methods described in the monitoring element. Objectives need to be measurable and quantifiable so prescription elements can be developed to meet them.
2. Prescribed Fire Objectives

ELEMENT 6 – FUNDING ESTIMATE

Funding Source(s)							
Phase	Fuels	Wildlife	Range	Timber	UPCD	Other	Subtotal
Planning & Clearances							
Burn Plan Preparation							
Site & Line Preparation							
Ignition & Holding							
Mop-up & Patrol							
Subtotal							
Grand Total		These estimated costs are for the entire burn implementation and could be from one or more funding sources.					

ELEMENT 7 – PRESCRIPTION

A. Prescription Narrative:

1. Describe how fire behavior will meet objectives
Include a short narrative that describes the desired fire behavior identified in the prescription and discuss how it will achieve the desired treatment objectives.

Environmental Prescription	Acceptable Prescription Range			Outside area at critical holding point
	Low Fire Intensity	Desired Fire Intensity	High Fire Intensity	
Temperature (°F)				**Minimum Acceptable Moisture**
Relative humidity (%)				
Mid-flame wind speed				
Wind direction (azimuth°)				
1-hr fuel moisture (%)				
10-hr fuel moisture (%)				
100-hr fuel moisture (%)				
1000-hr fuel moisture (%)				
Live fuel moisture (%)				
Duff moisture (%)				
Soil moisture (%)				

Additional Information
Columns should be added if necessary to reflect the number of fuel models within the Acceptable Prescription Range. If a weather or fuel element is not a consideration as an environmental prescription, place N/A in the blank and do not leave empty. Fuel moistures should be collected from the burn site, identifying vegetation species and timing for collecting. If computed fuel moisture is used in determining guidance parameter verses actual sample, then such should be indicated as parameter. Separate Environmental and Fire Behavior Prescriptions may be needed for multiple fuel model conditions to address seasonal differences and/or types of ignition (black lining, aerial ignition, etc). Separate prescriptions may result in multiple complexity ratings and burn organizations. For example, a separate prescription is needed for black-lining operations if conditions will be significantly different from the primary prescription. Separate prescriptions may result in the need to identify multiple levels of management, organizational structures, implementation measures, and pre-burn considerations.

Fire Behavior Prescription	Acceptable Fire Behavior Range			Outside area at critical holding points
	Low Fire Intensity	Desired Fire Intensity	High Fire Intensity	
Fuel Model(s)				
Rate of Spread (chains/hour)				
Flame Length (in feet)				
Scorch Height (in feet)				
Probability of Ignition (%)				
Spotting Distance (in miles)				

Prescription is defined as the measurable criteria that define a range of conditions during which a prescribed fire may be ignited and held as a prescribed fire. Parameters are quantitative variables expressed as a range that result in acceptable fire behavior and smoke management. The plan prescription will describe a range of low to high limits for the environmental (weather, topography, fuels, etc.) and fire behavior (flame lengths, rate of spread, spotting distance, etc.) parameters required to meet Prescribed Fire Plan objectives while meeting smoke management and control objectives. If the prescription limits are exceeded, the Prescribed Fire Burn Boss must evaluate fire controllability and whether fire effects will meet objectives. The Prescribed Fire Burn Boss must take action to ensure objectives are being met, or take appropriate actions to maintain control of or secure the fire.

Fire Modeling or empirical documentation (or both)

Attach BehavePlus Worksheets

Columns should be added if necessary to reflect the number of fuel models within the Acceptable Fire Behavior Range. Fire behavior calculations must be developed using an appropriate fire behavior modeling program. The level of fire behavior modeling and the tools used should be commensurate with the scale and complexity of the fuel beds within the ignition units and landscape. Depending on objectives and conditions, spatial fire models, such as FlamMap and FARSITE, may need to be used in addition to non-spatial modeling to establish the prescription window. Include modeling and/or empirical evidence documentation as an appendix or in the fire behavior narrative.

ELEMENT 8 - SCHEDULING

A. Ignition Time Frames/Season(s)	
B. Projected Duration	

C. Constraints

These constraints and considerations are specific to burn scheduling (i.e. cannot burn from 1 May to 31 July due to nesting birds, local event occurs on the first weekend of a specific month and burning will not occur, a spring burn is preferred to a fall burn to reduce the impact to the residual vegetation).

For multi-unit projects or long-duration prescribed fires, identify any special sequencing requirements, for example, Unit 5 must be completed before implementing Unit 12. Additionally, the agency administrator's ignition authorization may identify additional scheduling constraints.

When implementing prescribed fires at National Preparedness Levels IV and V, see National Interagency Mobilization Guide for additional requirements.

ELEMENT 9 - PRE-BURN CONSIDERATIONS & WEATHER

A. Considerations

1. On Site

Describe on- and off-site actions and consideration, including mitigation and design features identified in the NEPA decision, to be conducted and any other considerations to be addressed prior to implementation. Examples include clearances, mitigation actions generated by the complexity analysis, line to be built, preparation of critical holding points, snags to be felled or protected, equipment to be pre-positioned, special features to be protected, warning signs to be placed, weather recording, fuels condition sampling, monitoring needs, responsibilities, and timeframes. Describe any fuel sampling and weather data that may need to be obtained.

2. Off Site

Describe off-site actions and considerations that need to be conducted prior to implementation. Examples include informational signs to be posted, smoke signs to be placed, briefings to occur, Incident Action Plans to be developed, burn plans to be distributed, etc.

Prior to implementing the prescribed fire, the responsible dispatch office **will** be provided a complete copy (printed or electronic version) of the Prescribed Fire Plan.

B. Method and Frequency for Obtaining Weather and Smoke Management Forecast(s)

Proximity to nearest RAWS	Identify nearest RAWS with distance/direction/elevation			
Need for on-site RAWS		Yes		No
Additional Information				

Describe any fuel sampling and weather data that may need to be obtained. This data should be taken at the project site. If this is not possible, use the closest representative site. Identify requirements for a spot weather forecast and associated National Weather Service Forecast Office.

A Spot Weather Forecast from the National Weather Service is required prior to ignition, for each day active ignition is occurring on the burn, and any days the fire is actively spreading. The National Weather Service (Salt Lake City/Grand Junction/Pocatello/Boise/Elko/Las Vegas/Reno) Forecast Office can be reached at (801-524-5066 (SLC)/970-256-9463 (GJT)/208-232-9316 or 9357 (PIH)/208-334-9862 or 9060 (BOI)/775-778-6720 or 6716 (LKN)/702-263-9750 (VEF)/775-673-8109 or 8105 (REV)) or a spot weather forecast can be requested online at (http://spot.nws.noaa.gov/cgi-bin/spot/spotmon?site=slc / http://spot.nws.noaa.gov/cgi-bin/spot/spotmon?site=gjt / http://spot.nws.noaa.gov/cgi-bin/spot/spotmon?site=pih / http://spot.nws.noaa.gov/cgi-bin/spot/spotmon?site=boi / http://spot.nws.noaa.gov/cgi-bin/spot/spotmon?site=lkn / http://spot.nws.noaa.gov/cgi-bin/spot/spotmon?site=vef / http://spot.nws.noaa.gov/cgi-bin/spot/spotmon?site=rev).

Within the remarks section of the Spot Weather Request form, a point of contact cellular phone number should be included in addition to data requested on the form. Requestors of the Spot Weather Forecast should insure data is correct as the form self populates with the contact information of the previous requester. When requesting a spot forecast from the Grand Junction Forecast Office, requester must call office to inform forecaster that a spot weather forecast has been requested.

Projected weather beyond the ignition operation and need for additional spot weather forecasts should be taken into account in order to minimize the risk of a later escape. The Prescribed Fire Burn Boss or other person in charge of mop-up and patrol will also obtain and review the spot weather or general fire weather forecast to determine if mop up and patrol resources are adequate. A copy of the forecast will be included in the Project File. Local weather phenomena and considerations include (entered local weather information).

Within Utah, a Clearing Index must be obtained from the National Weather Service to determine if smoke management requirements will be met.

C. Notifications

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

Who	When[1]	Phone Number and/or e-mail	Responsibility	Date	Contact Type[2]
J. Bradley Washa – Utah BLM State Fuels Specialist	B, A	801-539-4246 (o) 801-558-6998 (c)	Burn Boss		
Dan Washington – Interagency Smoke Management Specialist	B, A	801-539-4151 (o) 801-440-1350 (c)	Burn Boss		
www.utahfireinfo.gov Chad Douglas	B	(801) 539-4089 cdouglas@blm.gov	Fire Education and Mitigation Specialist		

[1] When to Notify	Before **(B)**: The day prior to burn day. Day of **(D)**: Prior to ignition on burn day. After **(A)**: After burn is completed.	[2] Contact Type	Phone Contact (PC) Phone Message (PM) Direct Contact (DC) E-mail (EM)

ELEMENT 10 - BRIEFING

Operational Briefing (Responsibility – Prescribed Fire Burn Boss)

- ❑ Burn Organization and Assignments
- ❑ Prescribed Fire Objectives and Prescription
- ❑ Description of Prescribed Fire Project Area and Provide Maps
    - o Special Considerations and Sensitive Features
- ❑ Expected Weather and Fire Behavior
    - o Make Weather Observer Assignment and Set Collection Schedule
- ❑ Communications
- ❑ Ignition Plan and Possible Problems
- ❑ Aerial Ignition Plan and appropriate safety procedures (if applicable)
- ❑ Holding Plan and Possible Problems
- ❑ Contingency Plan and Assignments
- ❑ Wildfire Declaration
    - o Identify High Value and Areas of Special Concern
    - o Identify Mitigation Measures, Procedures, Project Boundary, Etc.
- ❑ Safety and Medical Plan along with Risk Assessment/JHA
    - o Identify On-Site Personnel with Medical and Helitack Qualifications

Crew Briefing (Responsibility - Ignition Specialist and Holding Specialist Functions)

- ❑ Make Crew Assignments, Record Names, and Review Chain of Command
- ❑ Make Equipment Assignments and Physically Test Equipment Prior to Ignition
- ❑ Assign Radio Frequencies and Physically Test All Radios Prior to Ignition
- ❑ Review Contingency Plan, Wildfire Conversion, Procedures, and Mitigation
- ❑ Review Everyone's Personal Protective Equipment
- ❑ Discuss Probable Starting and Ending Times
- ❑ Assure Everyone Knows Position, Responsibility, and Procedures

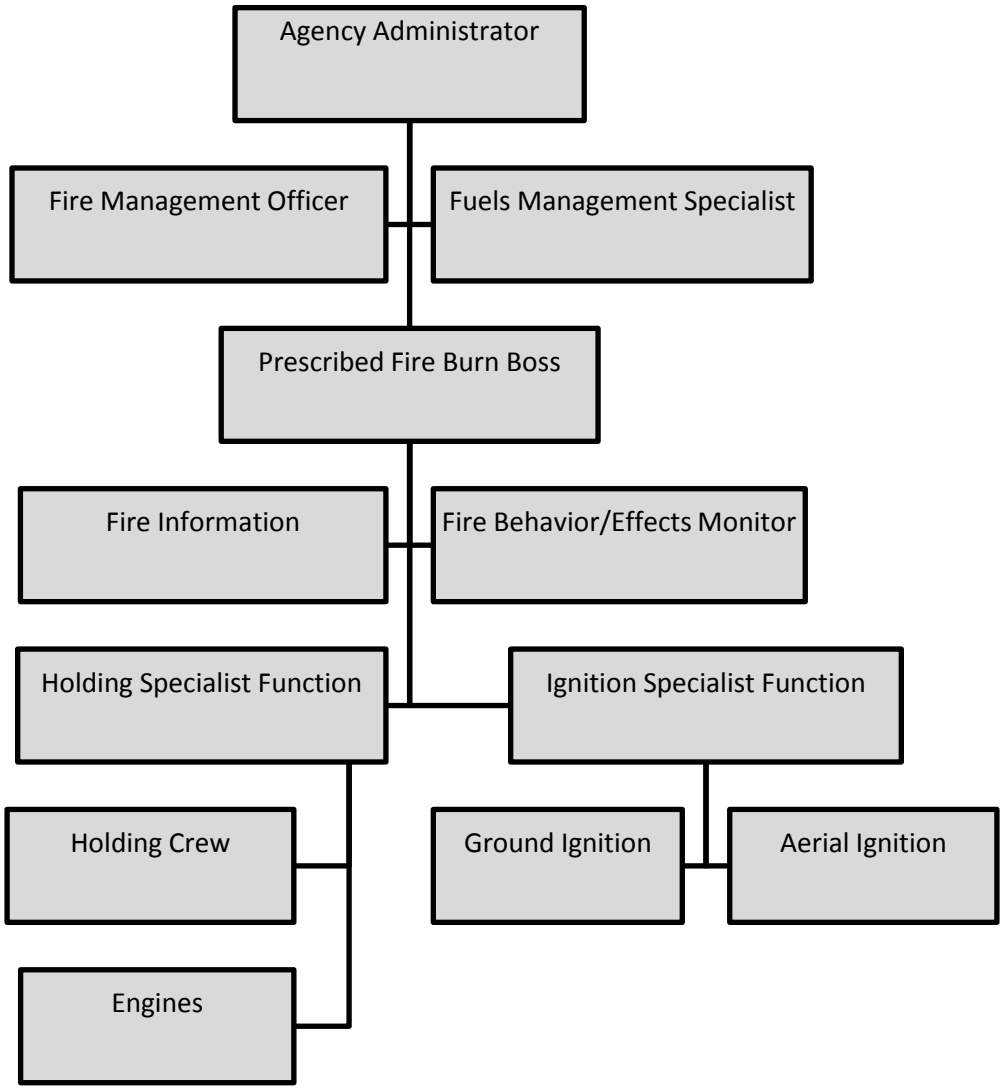
ELEMENT 11 - ORGANIZATION AND EQUIPMENT

Minimum Workforce & Equipment Needed to Conduct Burn							
A. Positions							
		Low		**Desired**		**High**	
Position	**ICS Code or Unit of Measure**	**Total Amount**	**Line Building Rate**	**Total Amount**	**Line Building Rate**	**Total Amount**	**Line Building Rate**
Prescribed Fire Burn Boss	RXBX		0				
Ignition Specialist Function	Specify Qual.						
Holding Specialist Function	Specify Qual.						
Fire Effects Monitor	FEMO						
Lookout	Specify Qual.						
Engine Boss, Operator, and Crew	ENGB/ENOP						
Ignition Crew	FFT2						
Holding Crew	FFT2						
B. Equipment							
Engine (Type)							
Engine (Type)							
Dozer (Type)							
Helicopter							
Helitorch							
Plastic Sphere Dispenser							
C. Supplies							
Drip Torches							
Chain Saws							
Hand Tools							
Fuel							
Portable Water Tanks							
Total Line Production Rate			**0**		**0**		**0**

Line production rates from personnel should not be duplicated for equipment (i.e. holding crew members that are assigned to an engine should not be included in personnel total). MS Word will perform production rate calculations by right clicking on each numeric field at bottom of table and selecting "update field." For MS Word to do the calculations, all boxes need to have a number in them (i.e. place a zero "0" if there no rate of production). Place any assumptions made when identifying production rates. Fireline Handbook production rates and/or documented empirical evidence to justify minimum holding resources required. Line production rates should be compared to fire behavior outputs when identifying resource needs.

No less than the minimum implementation organization described in the approved Prescribed Fire Plan may be used for implementation. The complexity of each prescribed fire or phase of fire(s) determines the organization(s) needed to safely achieve the objectives specified in the prescribed fire plan. Calculations were taken from the Fireline Handbook Appendix A based on fuel model xx.

Organization Chart



This is an example organization chart; locally developed organization chart can be used in place of this chart. Add boxes as needed for additional personnel assigned for each operational period. Organization chart may be completed on the day of the burn and must be completed for each operational period. Aerial Ignition operations will require an additional organization chart within the air operations plan in accordance with the Interagency Aerial Ignition Guide. If aerial ignition is not planned, remove box from organization chart. When multiple units are identified, allocation of resources needs to be addressed when burning multiple units simultaneously or in succession.

Additional resources may be assigned to the project without amending the burn plan if the addition of these resources does not change the complexity of the burn or require additional supervisory positions. These changes must be documented in the Unit Log. Reduction in resource capabilities identified as required in the plan requires an amendment. As the prescribed fire progresses from ignition to holding to mop up and patrol, specified capabilities and/or types of resources may be adjusted.

ELEMENT 12 – COMMUNICATION

A. Radio Frequencies

Channel	Function	Frequency		Band Width	Assignment	Remarks
COMMAND						
		TX: RX: Tone:				
		TX: RX: Tone:				
TACTICAL						
		TX: RX:				
		TX: RX:				
		TX: RX:				
AIR OPERATIONS						
		TX: RX:				
		TX: RX:				
OTHER						
		TX: RX:				
		TX: RX:				
REMARKS						
If aerial ignition is used, assign a specific radio frequency for use between aircraft and Prescribed Fire Burn Boss and/or Ignition Specialist Function. Also include any required telephone numbers in the remarks section. Positive communications with a dispatch center is required via radio, cellular phone, and/or satellite phone, prior to implementing burn project. Required telephone numbers should be included in the Notification Plan.						

ELEMENT 13 - PUBLIC AND PERSONNEL SAFETY AND MEDICAL

A. Safety Hazards

Firefighter
Identify and analyze the safety hazards unique to the individual prescribed fire project and potential impacts to personnel safety. Include safety hazards (including smoke exposure and impacts) as identified in the Risk Assessment/Job Hazard Analysis. All personnel who are within the active prescribed fire area are required to wear personal protective equipment.
Public
Identify and analyze the safety hazards unique to the individual prescribed fire project and potential impacts to public safety. Identify procedures for non-operational personnel (i.e. media, researchers, cooperators, agency administrators, dignitaries, other agency personnel, etc.) visiting prescribed fire project.

B. Measures Taken to Reduce the Hazards

Identify mitigating measures taken to reduce safety hazards identified above. Describe provisions to be made for public safety (include closure of area, signs placed on roads, etc.). A job hazard analysis (JHA) or other agency-specific risk analysis is required for each prescribed fire. The BLM Risk Management Process will be used in place of the Job Hazard Analysis. The Risk Assessment worksheets will be attached as 'Appendix D' to the prescribed fire plan.

C. Emergency Medical Procedures

In the event of serious accidents or injuries, the burn boss shall be notified immediately. Individuals with medical qualifications (i.e. First Responder, EMT, Paramedic) and helitack qualified should be identified at the pre-burn briefing. The burn boss will initiate on-site response (if not already in progress) and coordinate additional response needs (listed below) through:
EMS will be activated through contacting dispatch (or from on-site personnel through 911). In the event of a medical emergency provide the following information to the Prescribed Fire Burn Boss. 1. Declare the nature of the emergency. a. Medical injury/illness? If injury/illness is it Life Threatening? 2. If Life Threatening, then request that the designated frequency be cleared for emergency traffic. 3. Identify the on-scene Point of Contact (POC) by Resource and Last name (i.e. POC is TFLD Smith), 4. Identify nature of incident, number injured, patient assessment(s) and location (geographic and GPS coordinates), 5. Identify on-scene medical personnel by position and name (i.e. EMT Jones), 6. Identify preferred method of patient transport, 7. Request any additional resources and/or equipment needed, 8. Document all information received and transmitted on the radio or phone, 9. Identify any changes in the on-scene Point of Contact or medical personnel as they occur. For burn injuries, after on-site medical response, initial medical stabilization, and evaluation at a primary care facility are completed, District Managers will ensure that any employee whose injuries meet burn injury criteria is immediately referred to the nearest regional burn center.

D. Emergency Evacuation Methods

The first option is to transport the injured person(s) via on-site vehicles to (identify medical facilities and describe directions to emergency facilities).
For minor injuries, individuals who are ambulatory will be transported to (identify nearest and preferred medical facility). Directions from the burn unit to the medical facility are as follows: (described directions to medical facility). Medical facility will be contacted and advised of injuries and eta for transport of injured individual.
The second option is to transport the injured person(s) to meet an ambulance at (describe a location known to both project personnel and emergency services).
The third option is to transport the injured person(s) to the nearest helispot to be evacuated via air ambulance.
The helispot location is (describe the location relative to the project area and for the air ambulance including a Latitude/Longitude).
The fourth option is to care for and protect the injured person(s) while emergency services respond on-site to extract and transport the injured. Send personnel to meet and lead emergency services to the site.
The project area location is (describe directions for responding emergency services and include a Lat/Long). Individual from the burn project will be sent to (described location) to lead EMS to injured personnel.

E. Emergency Facilities

EMERGENCY TRANSPORTATION				
NAME	TELEPHONE	LOCATION	PARAMEDICS	
			YES	NO
At least one air ambulance				
must be identified				
HELISPOT CLOSEST TO PROJECT	LAT.		LONG.	

HOSPITALS & MEDICAL FACILITIES								
NAME	ADDRESS AND LATITUDE AND LONGITUDE	TRAVEL TIME (MIN)		PHONE	HELIPAD		BURN CENTER	
		AIR	GROUND		YES	NO	YES	NO
University of Utah Medical Center	50 North Medical Drive Salt Lake City, Utah 40°46.01 N x 111°50.19			801-581-2121	X		X	
St Mary's Hospital	2635 N. 7th Street Grand Junction, CO 39° 05.42 X 108° 33.74			970-244-2273	X			X
Lion's Burn Center University Medical Center	1800 W. Charleston, Las Vegas, NV			702-383-2268	X		X	

ELEMENT 14 - TEST FIRE

A. Test Fire Provisions and Planned Location

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

B. Test Fire Documentation

Location:	

Date and Time:	

Weather/Fuels Conditions	
Cloud Cover %	
Temperature	
Relative Humidity	
Fine Dead Fuel Moisture	
Wind Speed	
Fuels	

Test Fire Results	
Flame Length	
Rate of Spread	
Smoke Dispersion	
Other	

The test fire meets the prescription parameters	**Yes**		**No**	

ELEMENT 15 - IGNITION PLAN

A. Firing Methods & Devices

The means by which a fire is ignited, such as hand-held drip torch, fusee, hand held launchers, ATV mounted ignition devices, helitorch, and/or terra torch. If aerial ignition is specified in the Prescribed Fire Plan, an Air Operations Plan will be included as Appendix I to the Prescribed Fire Plan. For additional details related to aerial ignition reference the *Interagency Helicopter Operations Guide and Interagency Aerial Ignition Guide*. The aerial ignition organization will be included with the implementation organization chart (Element 11). Major changes to ignition methods including ground ignition to aerial ignition; aerial ignition to hand ignition; hand drip torch ignition to use of terra torch ignition (includes ATV mounted ignition devices) require an amendment to the burn plan.

B. Ignition Techniques, Patterns, & Sequences

Ignition technique is any method of igniting a wildland area to consume the fuel in a prescribed pattern (e.g., head, backing, or flanking fire).
Patterns and Sequences are the overall progression of ignition events to apply fire to a given area and the manner in which a prescribed fire is ignited. The distance between ignition lines or points and the sequence of igniting them is determined by weather, fuel, topography, ignition technique, and other factors which influence fire behavior and fire effects should be discussed. If multiple compartments within the project are to be ignited, this should be further discussed on the preferred sequence of igniting the compartments.

The Ignition Specialist and Holding Specialist functions are expected to work closely together to see that the ignition pattern and sequence do not present concern for control of the burn. The (wind or slope and aspect) should be the dominant influence for fire behavior and the primary factor in establishing the ignition pattern and sequence for the unit. Flame length and intensity will dictate ignition technique and strip width. The ignition pattern and sequence found below and on the attached map are suggested and can be modified to better suit the current conditions experienced on the day of the burn

Ideally, the test fire would be ignited (location). Overall, strip head firing or dot firing will be utilized to bring fire down through the unit. This may need to be in a general backing fashion to minimize impacts to the residual stand. Following the test fire, ignition can continue along (location). Once a sufficient blackline (headstrip) is established as an anchor, flanking fire can be taken initially down the (location) fireline and flank. This would then be followed with igniting off the (location) flank of the compartment. As the flanks become secure, fire should be backed down the interior of the unit towards (location). To conclude the ignition, the (location) flank should be tied off and secured.

C. Minimum Ignition Staffing

Identify positions within the ignition organization to be utilized. Relationship to holding organization should be further identified including use of holding crew for transporting fuel and use of ignition crew for holding activities, if required. If aerial ignition is occurring, a brief discussion on staffing should occur in this section along with full details within the Air Operations Plan found in Appendix I.

Minimum capabilities needed for ignition are identified under Element 11 - Organization and Equipment. The qualifications for the ignition specialist functions should be commensurate with the complexity of the project and at a minimum be qualified at the Firing Boss (FIRB) level. The Ignition Specialist function will be held at the (ICS position) level.

ELEMENT 16 - HOLDING PLAN

A. General Procedures for Holding

Describe general procedures to be used for operations to maintain the fire within the primary unit and project area and meet project objectives until the fire is declared out. Identify closest water source(s).

B. Critical Holding Points and Actions

Describe critical holding points (if any) and mitigation actions. Critical holding points should be identified on the project map. If line building production rates of on-site resources, identified in Element 11, do not exceed expected perimeter increase (i.e. light flashy fuels), justification and/or mitigation actions need to be identified.

C. Minimum Organization or Capabilities Needed

Different organizations may be identified for different phases of implementation (i.e. holding v. mop-up and patrol, different ignition operations, different prescriptions). If flexibilities are built into the Prescribed Fire Plan, there must be a clear statement as to the work capability requirements of the resources at the various stages of the prescribed fire. Multiple prescriptions may require identifying multiple complexity ratings and developing multiple holding organizations.

Minimum capabilities needed for holding are identified under Element 11 - Organization and Equipment. The qualifications for the Holding Specialist function should be commensurate with the complexity of the project. The Holding Specialist function will be held at the (ICS position) level. On burn day and subsequent days of the prescribed fire, a mix of the number and kinds of hand crews and engines may be modified as long as stated production capabilities are not compromised. As the prescribed fire progresses from ignition to holding to mop up and patrol, specified capabilities and/or types of resources may be adjusted.

D. Mop-up and Patrol

The Mop-up and Patrol portion of the Holding Plan will provide a description of the procedures to be implemented between the time of ignition and the time the prescribed fire is declared out. The prescribed fire burn boss will determine resource needs for mop up based on current and expected fire behavior and weather. Identify within this section who is responsible and actions to be taken during mop-up. Conditions for leaving burn unstaffed prior to being declared out should be identified. A separate Mop-up and Patrol Plan can be added as an appendix if desired.

This section should contain a specific description of what the standards are for mop-up (see mop-up categories R4 FSM 5142.2) and what type/kind of equipment will be assigned to patrol, who will be in charge and duration and the standards for when the burn will be declared out and by whom. Documentation needs to be completed on a daily basis until the fire is declared out, and included in the final project file.

ELEMENT 17 - CONTINGENCY PLAN

A. Management Action Points or Limits

The contingency plan is the portion of the prescribed fire plan that considers low probability but high consequence events and the actions needed to mitigate them. Contingency planning is the determination of what additional actions or additional resources (or both) are needed to keep the prescribed fire within the scope of the prescribed fire plan. At a minimum, this element will address contingency options related to maintaining the prescribed fire within the ignition unit and or prescribed fire project area. Contingency planning can also address not meeting prescribed fire objectives, critical holding points, smoke management considerations such as impacts to critical smoke receptors, staffing, accidents, "incidents within incidents" and other unanticipated events. The use of the below narrative descriptors maybe used or the optional Management Action Plan Table Format as identified. If using the MAP Tables, additional tables can be added, or unused tables removed.

If any of the following situations occur, contingency actions will take place:

1. Fire threatens the project boundary.
2. More than three simultaneous spot fires and/or slop overs occur.
3. Fire outside of the primary unit boundary.
4. Smoke management objectives being impacted.
5. Potential for costs to control exceed available project funds.

Management Action Point - Documentation Element	**Management Action Point Narrative**
Designator and Description:	Examples include Fire threatens the project boundary, More than three simultaneous spot fires and/or slop overs occur, Fire outside of the primary unit boundary, Smoke management objectives being impacted, Potential for costs to control exceed available project funds, or specific geographical locations.
Condition:	
Management Intent:	
Recommended Action(s) to Consider:	
Recommended Resources:	
Time Frame:	
Describe the consequences of not taking the recommended action(s) (Optional):	
Responsibility:	
Date Each Action is Initiated (Optional):	
Management Action Point - Documentation Element	**Management Action Point Narrative**
Designator and Description:	
Condition:	
Management Intent:	
Recommended Action(s) to Consider:	
Recommended Resources:	
Time Frame:	
Describe the consequences of not taking	

the recommended action(s) (Optional):	
Responsibility:	
Date Each Action is Initiated (Optional):	
Management Action Point - Documentation Element	**Management Action Point Narrative**
Designator and Description:	
Condition:	
Management Intent:	
Recommended Action(s) to Consider:	
Recommended Resources:	
Time Frame:	
Describe the consequences of not taking the recommended action(s) (Optional):	
Responsibility:	
Date Each Action is Initiated (Optional):	
Management Action Point - Documentation Element	**Management Action Point Narrative**
Designator and Description:	
Condition:	
Management Intent:	
Recommended Action(s) to Consider:	
Recommended Resources:	
Time Frame:	
Describe the consequences of not taking the recommended action(s) (Optional):	
Responsibility:	
Date Each Action is Initiated (Optional):	
Management Action Point - Documentation Element	**Management Action Point Narrative**
Designator and Description:	
Condition:	
Management Intent:	
Recommended Action(s) to Consider:	
Recommended Resources:	
Time Frame:	
Describe the consequences of not taking the recommended action(s) (Optional):	
Responsibility:	
Date Each Action is Initiated (Optional):	

B. Actions Needed

If the objectives are not being met, the Contingency Plan is implemented. Describe action to be taken.

If the contingency actions are successful at bringing the project back within the scope of the Prescribed Fire Plan, the project may continue. Contingency actions will include (described actions to be taken). If contingency actions are not successful by the end of the next burning period, then the prescribed fire will be converted to a wildfire.

C. Minimum Contingency Resources and Maximum Response Time(s)

Resource	Agency & Location	Maximum Response Time	Conformation of Availability*	
			Yes/No	Date

* To be completed within one day of the burn and adjusted during course of extended burning conditions.

ELEMENT 18 - WILDFIRE DECLARATION

A. Wildfire Declared By

The Prescribed Fire Plan will specify who has the authority to declare a wildfire. A prescribed fire must be declared a wildfire by those identified in the plan when that person(s) determines that the contingency actions have failed or are likely to fail and cannot be mitigated by the end of the next burning period.

A prescribed fire, or a portion or segment of a prescribed fire, must be declared a wildfire by the Prescribed Fire Burn Boss, when either or both of the following criteria are met:

- Prescription parameters are exceeded and holding and contingency actions cannot secure the fire by the end of the next burning period, or,
- The fire has spread outside the project area or is likely to do so, and the associated contingency actions have failed or are likely to fail and the fire cannot be contained by the end of the next burning period.

A prescribed fire can be declared a wildfire for reasons other than those identified above, if events cannot be mitigated as determined by the burn boss and agency administrator.

A prescribed fire declared a wildfire cannot be returned to prescribed fire status until the appropriate level of review has been completed. When a prescribed fire is declared a wildfire, managers still have the full range of fire management options available based on Land Use Plan (LUP) and Fire Management Plan (FMP) objectives. If a prescribed fire is declared a wildfire, a wildfire number will be assigned and all wildfire management costs will be charged to that number.

B. IC Assignment

Identify who will be the IC and what positions will be used to transition to an ICS organization.

Should a wildfire be declared, the Prescribed Fire Burn Boss (or other on-site position can be identified) will become the Incident Commander until relieved or replaced. The IC will organize all on-site resources for a safe and aggressive response. Personnel within the prescribed fire organization will transition into ICS wildfire positions they are qualified to carry out. The IC will order additional suppression resources identified in the Contingency Plan as well as any other required resources necessary to support the suppression effort.

Upon a wildfire conversion occurring, all overhead personnel will begin to document actions taken prior to wildfire conversion and subsequent actions on a Unit Log. After the incident is contained, the Prescribed Fire Burn Boss will submit a post fire report documenting weather, resources on site, ignition operations, holding actions, and other pertinent data. All prescribed fires declared a wildfire will have a review initiated by the appropriate level Agency Administrator. The level and scope of the review will be determined by agency policy.

C. Notifications

Identify the notifications to be made upon wildfire conversion and who will make them.

The Prescribed Fire Burn Boss/IC will notify (specify Dispatch Center) and the (specify unit) Fire Management Officer (FMO) of the wildfire and identify himself/herself as the IC. FMO will then notify the (specify District Manager/District Ranger/Park Superintendent/Refuge Manager) and the (State/Regional) Fuels Specialist. (Dispatch Center) will notify contacts listed on the notification plan of the wildfire and the current situation.

Burn boss will notify (specify regional fire management officer/state fuels management specialist) within 24 hours of an escape, threat of an escape, or activation of contingency resources identified in the plan, or any prescribed fire that requires additional resources or operational time not accounted for in the IAP or

prescribed fire plan.

D. Extended Attack Actions and Opportunities to Aid in Fire Suppression

Describe the containment strategy, identifying any containment opportunities along with high value and special areas of concern. Suppression activity for a wildfire that has not been contained or controlled by initial attack or contingency forces and for which more firefighting resources are arriving, en route, or being ordered by the initial attack incident commander is defined as Extended Attack. Use of the Wildland Fire Decision Support System (WFDSS) or equivalent is required when a wildfire escapes initial attack. The WFDSS is an analysis and decision process that allows for improve decision documentation, risk assessment/decision support, and operational implementation.

Management response to the declared wildfire is based on objectives established in the LUP and FMP. Contingency plans should be developed to identify critical values at risk, actions and resources needed, and other information necessary that may be utilized as an aid to determine and implement initial response actions when a wildfire is declared.

Ignition will cease upon notification of fire outside of the primary and secondary units except as needed to secure lines. The appropriate management response will be used in order to flank the fire with suppression resources until the forward rate of spread is stopped. The containment strategy will be to utilize safe anchor points and create direct fire line where feasible and indirect fire line, including burning out, depending upon location of natural barriers and roads. The FMO and/or IC, Resource Advisor, and Agency Administrator may develop a Wildland Fire Decision Support System (WFDSS) document which will determine the appropriate management response to the escaped fire. Use of the WFDSS is required when a wildfire escapes initial attack.

Opportunities to aid in fire suppression include: utilize existing roads (identify specific roads) in the vicinity of the burn unit, moist drainages, and changes in fuels (i.e. transition from brush field into timber fuel models).

Areas of high value and special concerns include: (identify areas of high value or special concern).

ELEMENT 19 - SMOKE MANAGEMENT AND AIR QUALITY

A. Compliance

Describe how the project will comply with State, Tribal, and Federal air quality regulations.

Utah Specific - This burn plan complies with the Utah Smoke Management Plan and is designed to meet the requirements of State of Utah Title R307, state administrative rule for air quality; Regional Haze Rule, 40 CFR 51.309(d)(6); and the policies of the U.S. Environmental Protection Agency's (EPA) Interim Air Quality Policy on Wildland and Prescribed Fires.

A National Weather Service Clearing Index above 500 is required prior to ignition. For de minimus prescribed burning, ignition can occur when the Clearing Index is between 400 and 500. De minimus burning is limited to piles up to 30,000 cubic feet/day or up to 20 acres/day with approval of the executive secretary of the Utah Air Quality Board. When burning within the de minimus category, the Burn Boss is required to (1) notify the executive secretary through the Utah Interagency Smoke Coordinator by fax, e-mail, or phone by 0800 on burn day prior to ignition of the burn and (2) record and submit hourly photographs, a record of any complaints, hourly meteorological conditions and an hourly description of the smoke plume (Form 9). When smoke has potential to enter an adjacent state, coordination with that state is required with the Utah Interagency Smoke Coordinator able to provide assistance.

B. Permits to be Obtained

Smoke Management Number:	

Identify what permits, if any, need to be obtained.

Utah Division of Air Quality Documentation: Smoke approval is through Utah Division of Air Quality and the executive secretary of the Utah Air Quality Board through the Utah Interagency Smoke Coordinator.
Two Weeks Prior - Form 3 - Pre-burn Information - place in project file. Burn Plan to be submitted two weeks prior to ignition to Utah Division of Air Quality - Interagency Smoke Management Program.
Two Days Prior - Form 4 - Burn Request/and Reporting - place in project file.
State of Utah approval will come in the form of an e-mail from the Utah Interagency Smoke Management Coordinator.
Morning After Burn (by 08:00) - Form 5 - Daily Emissions Report - place in project file.

C. Smoke Sensitive Receptors

Identify any non-attainment or Class I airsheds within 15 miles:	Identify smoke sensitive areas including population centers, recreation areas, hospitals, airports, transportation corridors, schools, non-attainment areas, Class I air sheds, and restricted areas that may be impacted.

Receptor	Direction	Distance	Receptor	Direction	Distance

D. Potentially Impacted Areas

Special considerations must be taken to address smoke when the project is in a non-attainment area for a National Ambient Air Quality Standards including insuring compliance with State Implementation Plan provisions and addressing Conformity. Projects which will potentially impact Class I areas should address any efforts to minimize smoke impacts on visibility. Comply with all local, State, Tribal and Federal pre-burn and post-burn data reporting requirements.

E. Mitigation Strategies and Techniques to Reduce Smoke Impacts

Include modeling outputs, mitigation strategies, and techniques to reduce the impacts of smoke production.

ELEMENT 20 - MONITORING

A. Fuels Information (forecast and observed) Required and Procedures
Prescribed fire monitoring is defined as the collection and analysis of repeated observations or measurements to evaluate changes in condition and progress toward meeting a management objective. Monitoring is required to ensure that prescribed fire plan objectives are met. For a prescribed fire, at a minimum specify the weather (forecast and observed), fire behavior and fuels information, and smoke dispersal monitoring required during all phases of the project and the procedures for acquiring it, including who and when.
B. Weather Monitoring Required and Procedures
Weather observations should be measured (by who) and recorded on a (specify time frame) basis on the Weather / Fuels / Fire Behavior / Smoke Observations form found in Appendix G.
C. Fire Behavior Monitoring Required and Procedures
Fire behavior observations should be measured (by who) and recorded on a (specify time frame) basis on the Weather / Fuels / Fire Behavior / Smoke Observations form found in Appendix G.
D. Monitoring Required to Ensure Prescribed Fire Plan Objectives are Met
E. Smoke Dispersal Monitoring Required and Procedures

ELEMENT 21 - POST-BURN ACTIVITIES

Post-Burn Activities that Must be Completed

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

Each operational shift on a prescribed fire should have an informal After Action Review (AAR).
The Prescribed Fire Burn Boss will insure the Prescribed Fire Post Burn Evaluation is completed (Appendix H).
Utah Division of Air Quality, **Form 5** – Daily Emission Report must be submitted by 08:00 on the day following the burn.
The Weather/Fuels/Fire Behavior/Smoke Observations (Appendix G) will be collected and placed into the project folder. Any additional Fire Effects Reports will be completed and placed in the project folder.

A post burn evaluation and summary that documents burn day weather, fuel conditions, fire behavior, problems and concerns is required. The report must also indicate if objectives were met and make recommendations for future projects. The prescribed fire results must be compared to the fire treatment objectives and resource objectives that were identified for the project.

All prescribed fire projects will be reported in National Fire Plan Operations Reporting System (NFPORS) within 5 days after being declared out. When accomplishments are completed across fiscal years, only those accomplishments completed in that fiscal year will be recorded. Prescribed fire accomplishments are automatically reported on a monthly basis in the BLM Financial and Business Management System (FBMS) once entered into NFPORS.

APPENDICES

A. Maps

1. **Vicinity (Required)**
2. **Project/Ignition Unit(s) (Required)**
3. **Fuels or Fuel Model(s)(Optional): ☐ Included ☐ Not Included**
4. **Smoke Impact Area (Required)**
5. **Significant or Sensitive Features (Optional): ☐ Included ☐ Not Included**

B. Technical Review Checklist

C. Complexity Analysis

D. Job Hazard Analysis - Risk Assessment -

E. Fire Behavior Modeling Documentation or Empirical Documentation (unless it is included in the fire behavior narrative in Element 7 - Prescription)

F. Smoke Management Plan and Smoke Modeling Documentation (Optional)

G. Weather / Fuels / Fire Behavior / Smoke Observations

H. Prescribed Fire Post Burn Evaluation

I. Air Operations Plan (if applicable)

APPENDIX A - MAPS

1. Vicinity Map

Map scale will be such that the ignition units can be located on the ground and in sufficient detail to guide implementation.

2. Project Map

The project map(s) identify features in sufficient detail to guide and assist in operational implementation of the prescribed fire. The project map should show the unit boundary, topographic features and significant features such as fences, power poles, areas to be protected, potential hazards, areas of special concern, and control line locations in most cases. Specific locations of sensitive features such as historical or cultural sites (or both) should not be displayed on project maps. The pre-burn briefing should address location and avoidance techniques.

3. Fuels or Fuel Model Map(s):

Optional, but recommended for long-duration or landscape-level projects. Include as needed to describe the spatial complexity of the fuels. Display the distribution of the fire behavior fuel models or other fuels classifications, such as Fuels Characteristic Classification System (http://www.fs.fed.us/pnw/fera/fccs/index.shtml), within and adjacent to the project and ignition units.

4. Smoke Impact Area Map(s):

Required in Utah to be submitted with the Form 3 to identify critical smoke receptors or significant smoke concerns. This is a large-scale map that identifies the potential smoke impact areas for the project and ties in with.

5. Significant or Sensitive Features (Optional)

Insert your significant or sensitive feature map(s) here. Refer to Element 4D in the Interagency Prescribed Fire Planning and Implementation Procedures Guide, PMS 484, to fill out this appendix.

APPENDIX B - TECHNICAL REVIEWER CHECKLIST

PRESCRIBED FIRE PLAN ELEMENTS	S, U, or N/A	COMMENTS
1. Signature Page		
2. GO-NO-GO Checklists		
3. Complexity Analysis Summary		
4. Description of the Prescribed Fire Area		
5. Goals and Objectives		
6. Funding		
7. Prescription		
8. Scheduling		
9. Pre-Burn Considerations		
10. Briefing		
11. Organization and Equipment		
12. Communication		
13. Public and Personnel Safety and Medical		
14. Test Fire		
15. Ignition Plan		
16. Holding Plan		
17. Contingency Plan		
18. Wildfire Conversion		
19. Smoke Management and Air Quality		
20. Monitoring		
21. Post-Burn Activities		
Appendix A: Maps		
Appendix C: Complexity Analysis		
Appendix D: Risk Assessment/JHA		
Appendix E: Fire Behavior Modeling		
Other		

S = Satisfactory U = Unsatisfactory N/A = Non-Applicable

❑ **Recommended for Approval**

❑ **Not Recommended for Approval**

❑ **Approval is recommended subject to the completion of all requirements listed in the comments or on the Prescribed Fire Plan.**

Technical Reviewer	Qualification and Currency (Y/N)	Date

APPENDIX C - COMPLEXITY ANALYSIS

This analysis is designed to be used with the NWCG Prescribed Fire Complexity Rating System Guide (PMS 424 - January 2004) and Prescribed Fire Complexity Rating Descriptors starting on Page 6 of the guide http://www.nwcg.gov/pms/RxFire/complexity_analysis.pdf.

An initial complexity rating should be completed during the project development stage to identify items needing mitigation. These items can then be addressed during the development of the Prescribed Fire Plan. When doing the complexity rating, be sure to consider areas outside of the project boundaries that could be impacted by smoke or an escaped. Once the Prescribed Fire Plan is near completion, the final complexity rating is made providing justifications for changes and any mitigating actions resulting in change. Select rating level and delete remaining ratings for both the preliminary and final ratings (do not highlight as when printed in black and white, rating level is unknown). Entire complexity element should be on one page (not split between multiple pages),

The final rating should be entered on the Complexity Elements Summary and cover page of the Prescribed Fire Plan. The mitigating measures identified in the plan should be noted in the rationale for the Complexity Analysis Summary. All complexity elements with a rating of high should be highlighted in the management summary.

PREPARED BY _____ **DATE** _____

APPROVED BY _____ **DATE** _____
Agency Administrator

APPROVED BY _____ **DATE** _____
Agency Administrator

Complexity Elements

1. Potential for Escape

Risk	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	

2. The Number and Dependency of Activities

Risk	Rationale
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	

3. Off-Site Values

Risk	Rationale
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	

4. On-Site Values

Risk	Rationale
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	

5. Fire Behavior

Risk	Rationale
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	

6. Management Organization

Risk	Rationale
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	

7. Public and Political Interest

Risk	Rationale
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	

8. Fire Treatment Objectives

Risk	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	

9. Constraints

Risk	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	

10. Safety

Risk	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	

11. Ignition Procedures/Methods

Risk	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	

12. Interagency Coordination

Risk	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	

13. Project Logistics

Risk	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	

14. Smoke Management

Risk	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating ***Low Moderate High***	
Final Rating ***Low Moderate High***	

APPENDIX D - JOB HAZARD ANALYSIS / RISK ASSESSMENT

A job hazard analysis or other agency-specific risk assessment is required for each prescribed fire. Refer to your specific agency guidance to fill out this appendix.

APPENDIX E - FIRE BEHAVIOR MODELING DOCUMENTATION OR EMPIRICAL DOCUMENTATION

Refer to Element 7: Prescription, in the Interagency Prescribed Fire Planning and Implementation Procedures Guide, PMS 484, to fill out this appendix.

APPENDIX F - SMOKE MANAGEMENT PLAN AND SMOKE MODELING DOCUMENTATION

(Optional)

Refer to the *Smoke Management Guide for Prescribed and Wildland Fire* (National Wildfire Coordinating Group, 2001) and Appendix B. Basic Smoke Management Practices in the *Interagency Prescribed Fire Planning and Implementation Procedures Guide*, PMS 484 to fill out this appendix. Include any Smoke Modeling completed for project in this appendix.

APPENDIX G – WEATHER / FUELS / FIRE BEHAVIOR / SMOKE OBSERVATIONS

Weather and Fuels

OBSERVATION TIME (24 HR)									
SLOPE (%)									
ASPECT									
ELEVATION (FEET)									
FUEL MODEL (1-13)									
SHADING (<50% or >50%)									
DRY BULB TEMPERATURE (°F)									
WET BULB TEMPERATURE (°F)									
RELATIVE HUMIDITY (%)									
EYE LEVEL WIND SPEED (MPH)									
WIND DIRECTION									
CLOUD COVER (%)									
1-HR FUEL MOISTURE (%)									

Fire Behavior

FIRE (HEAD, FLANK, BACKING)									
AVERAGE FLAME LENGTH (FT)									
MAX. FLAME LENGTH (FT)									
RATE OF SPREAD (CH/HR)									
TORCHING/CROWNING (Y or N)									
FIRE WHIRLS (Y or N)									
SPOTTING (Y or N)									
SMOKE DIRECTION									
SMOKE RISE									

Notes

OBSERVER NAME:		**DATE**	

APPENDIX H - PRESCRIBED FIRE POST BURN EVALUATION

Burn Unit	Date(s) Burned	Acres Burned	Ignition Start Time

Weather and Fuel Conditions

	Time of Ignition	Low	High
Temperature			
Relative Humidity			
1-hr Fuel Moisture			

10-hr Fuel Moisture	100-hr Fuel Moisture	1000-hr Fuel Moisture	Days Since Significant Precipitation

Wind Direction (Average)	Wind Speed (Average)	Percent of Fuel Consumed	Ignition Duration (min.)

Accomplishment of Fuels Treatment Objectives

Overall Objectives Achieved:		Yes		No

Short Term Results (include changes in fuel profile and fire regime condition class)

Cost Evaluation

Burn Plan Preparation	Site Preparation	Burn Operation	Total Burn Costs	Cost/Acre
$	$	$	$	$

Narrative – Prescribed Fire Burn Boss Comments

i.e. operations, safety, fire behavior, personnel & equipment performance, logistics, smoke management

Prescribed Fire Burn Boss		Date	

APPENDIX I - AIR OPERATIONS PLAN