



Burn Plan for Prescribed Burning

John R Weir

Research Associate
Natural Resource Ecology and Management

J. Derek Scasta

Graduate Research Associate
Natural Resource Ecology and Management

Russell Stevens

Wildlife and Range Consultant
Samuel Roberts Noble Foundation

Terrence G Bidwell

Extension Range Specialist
Natural Resource Ecology and Management

A burn plan helps to determine the safest and easiest way to complete tasks before, during and after a prescribed burn. The most important reason for having a burn plan is to thoroughly think about each action before striking the match. The burn plan will help determine where the burn should be conducted, what type of management is required before burning, how to conduct the burn, when to burn and what should be done after the burn.

A burn plan is a written prescription for the prescribed fire including critical elements such as the weather conditions under which the burn will be conducted, number of personnel and duties of each, and the type, amount and placement of equipment needed to safely conduct the burn. All of this information allows the fireboss to consider all actions prior to the burn, reducing many problems and complications. A burn plan also helps the fireboss consider any social impacts of the burn such as: smoke management concerns, traffic patterns or problems, how to contact neighbors and fire departments, along with other public safety issues. In rural areas many of these issues may not be of concern, but in areas associated with urban sprawl, it can be a major problem. Finally, a well-written burn plan can help reduce liability risk, which is a major concern for most people conducting prescribed burns. A burn plan can be used to show the amount of diligence and care used in planning and conducting the burn if some type of liability issue occurs.

No burn plan is perfect and no two are alike because they are as different as the burn units for which they are written. Each burn plan may require different information or planning, with some requiring more information about a specific topic than others. A burn plan should be written to meet local needs and be adapted to the region. The more experience a person has preparing plans, the easier it will become to write good ones. When preparing a burn plan, it is important not to limit implementation by being too specific with details or prescriptions. For example using weather conditions with a range that is too narrow and cannot be followed for the duration of the

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burn is not a prescription for success. Be sure to include all necessary information, but do not clutter a plan with point-less information that could cause confusion, or prevent the execution of a burn, and potentially increase liability. The following instructions on completing a burn plan and the sample burn plan contained in this publication will assist anyone interested in conducting a prescribed burn. This burn plan provides information appropriate for most situations.

Information: Provide basic information about the unit and landowner/manger conducting the burn.

Description of Area to be Burned: Include pasture name, legal description and dominant vegetation type in the burn unit.

Vegetation Present: Describe the main vegetation/fuels present. *Example - Tallgrasses, scatted shrubs with cedars <6 ft tall in the upland and solid stands of cedar >15 ft tall along the creek.*

Directions from Nearest Town: Provide directions to the burn unit. This may be needed in case of an accident or escaped fire. In emergency situations, people often forget things as simple as providing directions to the burn unit. Also, someone not familiar with the area can provide directions from the burn plan to emergency responders.

Objectives: Explain what the burn will accomplish. Objectives can be singular or multiple, along with being broad or very specific. *Examples – Forage production for livestock, wildlife habitat management, cedar control, brush suppression, improve forage quality, hardwood reduction, fuel reduction and wildfire suppression.*

Notification: List the names of fire departments, adjoining landowners, and others that need to be notified prior to conducting the burn. This allows the planner to have all phone numbers in one place for quick reference. It also provides a place for the planner to enter the date, time and person notified, which can be helpful if problems arise or for verification of notification.

Pre-Burn Preparations: Describe what should be done before conducting burn.

Management Needed Prior to Burn: Describe management required to prepare for the burn in order to meet objectives. These practices could include grazing management, mechanical treatments to make the burn safer or more effective, or the protection of specific areas or items.

Firebreak Types and Location Around the Burn Unit: Describe the type of firebreaks used and the location of each around the burn unit. Firebreaks can be disked, dozed, roads, cultivated fields or natural breaks like creeks. *Example- Firebreaks on the west and north side of the burn unit are disked strips 15 feet in width and the east and south firebreaks are comprised of a two-track pasture road.*

For more information about firebreaks see Extension Fact Sheet NREM-2890, *Firebreaks for Prescribed Burning*. (<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-8542/NREM-2890web.pdf>)

Fuel Conditions: Record the amount and continuity of fine fuel (herbaceous vegetation) desired for the burn and actual amount in the burn unit on the day of the burn.

Fine Fuel Amounts: Determined by visual estimation or by clipping and weighing samples.

Fuel Continuity: Describes the amount of coverage or distribution of fuels. This is important for fire spread. Many times there may be adequate fuel amounts, but fuel continuity will not allow the fire to spread or carry across the burn unit.

Prescribed Weather Conditions: Define the weather conditions needed to safely and effectively conduct the burn.

Desired Range: Describes ideal weather conditions for the burn.

Maximum Range: Upper and lower weather conditions allowable for the burn. These ranges allow flexibility in order to account for daily weather variation. *Example- Relative humidity desired range 40 percent to 60 percent, maximum range 20 percent to 80 percent.*

For more information about weather conditions for prescribed burning, see Extension Fact Sheet NREM-2878, *Fire Prescriptions for Maintenance and Restoration of Native Plant Communities*. (<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-2704/NREM-2878web.pdf>)

Smoke Management Considerations: Identify and list smoke sensitive areas around the burn unit and with what wind direction and dispersion conditions will be needed to reduce smoke impacts. *Example- Due to road on west side of burn unit and homes to the south of burn unit, a west or southwest wind is needed to reduce smoke impacts.* Attach a smoke dispersion forecast map to the burn plan. Smoke sensitive areas can be roads, communities, airports and houses.

Other Smoke Management Considerations: Category day can be determined from the National Weather Service

Fire Weather websites Go to www.weather.gov, select your region from map, then select fire weather).

Dispersion Condition: Information can be found at sites like OK-Fire (<http://okfire.mesonet.org/public/?cat=smoke>) or Kansas Flint Hills Smoke Management (<http://www.ksfire.org>). For more information about smoke management see Extension circular E-1008, *Smoke Management for Prescribed Burning*. (<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-5672/E-1008%20Smoke%20Management.pdf>)

Pre-Burn Checklist: This allows the planner to determine if there are potential problems within or around the burn unit and what could be done to reduce or eliminate them. *Example – Brush piles are present along firebreaks and will be pushed a minimum of 300 feet inside the burn unit.*

Observed Weather: On the day of the burn, record on-site weather conditions before, during and after the burn.

Equipment: List equipment that is needed or might be needed to conduct the burn. It also provides area for recording what was actually on the burn.

Crew Members: List the number of people needed to safely conduct the burn. On the day of the burn, record names of the people comprising the burn crew.

Ignition Plan: Describe the ignition sequence(s) required to ignite the burn safely. This forces the planner to consider in what sequence the burn crew(s) will move around the burn unit igniting the fire and potential problems or hazardous areas that should be addressed. Describe each sequence in writing and draw them on a map of the burn unit. *See sample plan on how to write ignition plan and draw an ignition plan map.*

Go-No Go Check List: List items needed and tasks to be done prior to conducting the burn. The fireboss should review this list prior to conducting the burn to make sure everything is in order.

Escaped Fire Plan: This is a step-by-step action plan describing what should be done if the fire escapes and the proper procedures for controlling an escaped fire.

Signature Box: Signed and dated by the preparer when the plan is finished

Prescribed Burn Notification Form: In Oklahoma, this form should be completed and attached to the burn plan. Doing so may limit liability in the event of an escaped fire. A copy of this form should also be filed with the nearest rural volunteer fire department and if in the forestry protection area, a copy must be provided to the local Forestry Services Division office or representative. This portion of the electronic fire plan version will automatically be filled in with information from the fire plan. The only blank that will need to be filled in is the date of previous burn. For more information see Forestry Services Division publication "Notification Requirements and Considerations for Safe and Lawful Prescribed Burning in Oklahoma." (<http://www.forestry.ok.gov/Websites/forestry/Images/Burn%20within%20the%20law,%202009%20Update.pdf>).

The following sample prescribed burn plan is to show how the burn plan is filled out, along with examples of smoke management, written and mapped ignition plans.

PRESCRIBED BURNING PLAN

Information			
Landowner/Lessee Information			
Name: OSU Research Range		Phone: 405.744.5442	
Address: 4922 S Coyle Road		County: Payne	
City: Stillwater	State: OK	Zip: 74074	
Description of Area to be Burned			
Pasture Name/Number: Section 17			
Vegetation Present: Tallgrass prairie, scattered oaks and brush, few large cedars			Acres: 160
Legal Description:	Section: SW/4 17	Township: 18N	Range: 1E
Directions from nearest town:			
8 miles W of Stillwater on Hwy 51 to Coyle Rd, then 4.5 miles south, turn east into unit			
Range of Projected Burn Dates: 10 Jan-15 May 2014		Actual Burn Date: 10 April 2014	
Objectives to be Accomplished			
Control eastern redcedar, improve livestock forage quality, improve wildlife habitat			

Notification		
When burning within Forest Protection Areas, Contact Oklahoma Dept. of Ag. Forestry Services:	Location	Phone Number
	n/a	n/a
Fire Departments	Phone Number	Date, Time and Person Notified
Stillwater FD	372.0497	10 April, 8:10am FRANK
Coyle VFD	466.3741	10 April, 8:12am BRADY
Adjoining Landowners	Phone Number	Date, Time and Person Notified
J. Smith	555.5555	9 April 7:30pm J. Smith
F. Jones	777.7777	9 April 8:05pm Mrs. Jones
P. Pete	888.8888	10 April 7:45am P. Pete
Others, as Needed (Sheriff, OHP, DEQ, Utility Companies, Oil and Gas Leases)	Phone Number	Date, Time and Person Notified

Pre-Burn Preparations

– Describe management needed prior to burn in order to successfully accomplish burn and meet objectives.
(Grazing management, fireguard preparation, burning of brush piles, etc.)

Continue grazing with proper stocking rate. Cut down and drag large cedars (>6 ft tall) within 300 ft of North and East sides of burn unit to reduce spotfire potential.

Firebreak Types and Location Around Burn Unit

North and East side-mow 20 ft wide path where possible, inside fence just after grass goes dormant. Then disk a 10' wide firebreak in the mowed path, leaving as much mowed area inside the burn unit to reduce fire intensity when igniting.
South and West sides-use existing county roads

Fuel Conditions

	Desired			Actual (day of burn)		
Fine Fuel Amount	☐ Light	☐ Moderate	☒ Heavy	☐ Light	☐ Moderate	☐ Heavy
Fuel Continuity	☒ Good	☐ Fair	☐ Poor	☐ Good	☐ Fair	☐ Poor

Prescribed Weather Conditions

Prescription	Desired Range	Maximum Range
Temperature (F)	50-80	35-90
Relative Humidity (%)	40-60	30-80
Wind Direction	west or southwest	
Wind Speed (mph)	4-15	4-15

Smoke Management Considerations

Sensitive Areas Identified	Direction from Burn Area	Distance to Area
neighbors houses	north	100 yards to .25 miles
Coyle Road	west	next to unit
Stillwater	northeast	10 miles
highway 51	north	4.5 miles

Other Smoke Management Considerations

Category Day	Preferred Category Day	3 or greater	Actual Category Day (day of burn)	4
Dispersion Conditions	Preferred Dispersion Conditions	moderately good or greater	Actual Dispersion Conditions (day of burn)	Good

Attach Smoke Screening Map or Smoke Dispersion Forecast to plan as needed

Attachment A

Pre-Burn Checklist

	Present in burn unit	If Present Action Needed / Recommended	Accomplished
Brush Piles	☐		☐
Pens/Barns	☒	metal corrals in NW corner should not be a problem	☒
Oil/Gas/Pipelines/ Utility Structures	☐		☐
Fences	☒	will burn through fences on South and West sides not a problem	☒
Homes/Cabins	☐		☐
Windmills/Watering Facilities	☐		☐
Feeding Facilities/Hay Storage	☐		☐
Equipment/Vehicles	☐		☐
Wildlife Habitat Areas	☐		☐
phone junction box	☒	located at SW corner of burn unit, woodcut around junction box to remove fuel and wet it down prior to burning	☒
	☐		☐
	☐		☐

Observed Weather

For Pre & Post-Burn Weather Monitor Available Weather Sources

Burn Site Observed Weather Conditions

Observation Time	9:05 am	9:45 am	10:30 am	11:15 am
Temperature	51	55	59	64
Relative Humidity	62%	51%	45%	40%
Wind Direction	SW	WSW	SW	SW
Wind Speed	6-8	8-9	8-9	9-10

ATTACH COPY OF OK-FIRE PRESCRIPTION PLANNER AND OR WEATHER FORECAST

Equipment	Desired on burn	Number Available at Burn	Comments/Other Considerations
Drip Torch/Ignition Device	☒	4	
Matches/Lighter	☒		
Shovel	☐		
Rake	☒	2	
Backpack pump	☒	1	
Flapper/Swatter	☒	1	
Chainsaw	☐		
Leaf Blower	☒	1	
Pumper Units/Sprayers	☒	2	will have 1 200 gallon unit and 1 300 gallon unit mounted on trucks
ATV Sprayers	☐		
ATV/4-Wheelers	☐		
Utility Vehicle (UTV)	☒	2	these have 55 gallon sprayers on them
Torch Fuel	☒	5 gallon	
Pump Fuel	☒	2 gallon	
2-Cycle Fuel	☒	1 gallon	
Weather Instrument/Kit	☒	1	
Two-Way Radios	☒	6	if not enough radios for entire crew, radios will be spread out along fireline to facilitate communication
Cell Phone	☒	1	
Drinking water	☒	5 gallon	
Fence Pliers/Bolt Cutters	☒	4	should have 1 pair in each vehicle/UTV
Road Signs	☒	2	place on Coyle Road N and S of unit
Stop/Go Signs	☒	2	have in case issue arises that we need to control traffic on Coyle Road
NOAA Radio	☐		
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		

Crew Members

Crew Members Present

T. Bidwell	
D. Scasta	
R. Stevens	
J. Wein	
D. Elmore	
M. Porter	
C. Stansbury	
A. Goulex	

Ignition Plan

Draw and write ignition plan and add as attachment to fire plan

Attachment B/C

Go-No Go Check List

If answer to any is NO, do not burn until corrected

Firebreaks prepared	Yes ☒ No ☐	Adequate crew available	Yes ☒ No ☐
Neighbors contacted	Yes ☒ No ☐	Smoke management goals within prescription	Yes ☒ No ☐
Fire departments contacted	Yes ☒ No ☐	Crew briefed on plan and safety hazards	Yes ☒ No ☐
Weather conditions within prescription	Yes ☒ No ☐	Can burn objectives be met	Yes ☒ No ☐
Equipment ready	Yes ☒ No ☐	All hazards in unit identified	Yes ☒ No ☐

Escaped Fire Plan

1. If fire escapes all ignition stops until escape is contained, unless needed to control the fire
2. Use standard fire suppression methods to control escaped fire
3. If fire cannot be contained by standard methods other tactics will be used (i.e. backfires)
4. If other methods do not work or are not practical fire boss or designated person will call for assistance

This Prescribed Burn plan was prepared by:

Name:

John Wein

Date:

15 Dec 2013

The prescribed burn described below is to be conducted according to the information provided here and the Oklahoma forestry code (title 2, sections 16-28 and 16-28.2 of the state statutes). File the original copy of the notification plan with the local rural fire department, and keep a copy for your records. Inside the designated forest protection area in eastern Oklahoma (refer to list of forestry offices), also provide a copy to the forestry division representative.

Prescribed Burning Notification Plan

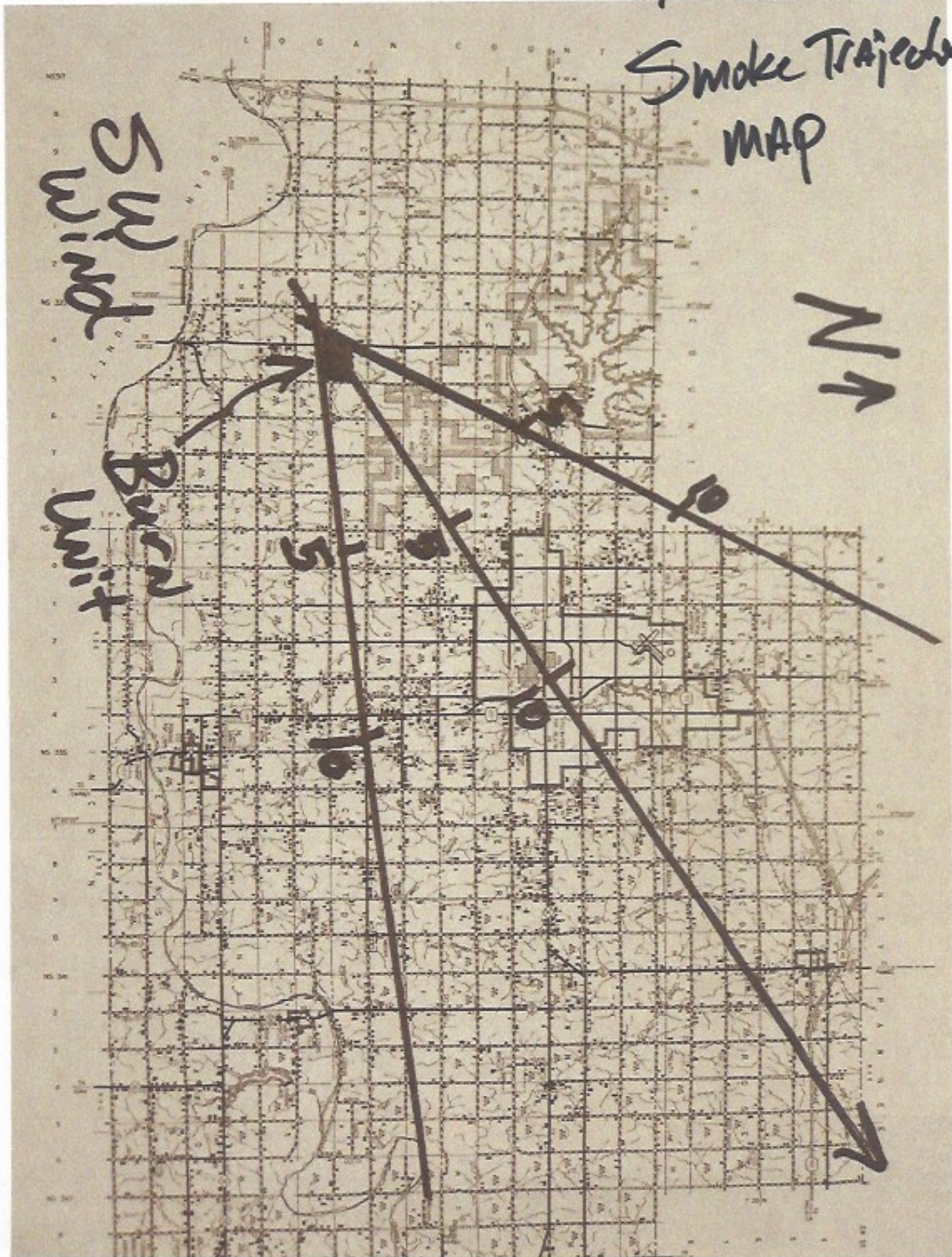
Name: OSU Research Range	Telephone: 405.744.5442
Address: 4922 S Coyle Road	County: Payne
City, State, Zip Code: Stillwater	OK 74074
Ranch Name (if any):	

Description of area to be burned:	SW/4 17	18N	1E
Approximate acres to be burned:	160		
Written description of location:	8 miles W of Stillwater on Hwy 51 to Coyle Rd, then 4.5 miles south, turn east into unit		
Projected time frame:	10 Jan-15 May 2014		
Date of previous burn:	March 2012		
Objectives to be accomplished through the prescribed burn:	Control eastern redcedar, improve livestock forage quality, improve wildlife habitat		

Contact information:		
Rural Fire Department Name	Location	Phone No.
Stillwater FD		372.0497
Coyle VFD		466.3741
Forestry Division Office (for protection areas):		
n/a	n/a	
Adjoining landowners:		
J. Smith	555.5555	
F. Jones	777.7777	
P. Pete	888.8888	

Attachment A

Smoke Trajectory
MAP



Attachment B

With a southwest wind ignition will start in the northeast corner at point A (see attachment C). Crew will be divided into two groups, crew 1 (east) and crew 2 (west). Equipment will be divided between both groups with 1 UTV and the 200 gallon pumper going with Crew 1 since that firebreak is rough and harder to traverse. The 300 gallon pumper and other UTV will go along the north line. Ignition will consist of strip heaffires using a minimum of 2 torches starting at Point A with Crew 1 going south along the east line stopping at Point B and Crew 2 going west along the north line stopping at Point C. A blackened area of 300 ft wide minimum will need to be established before either Crew can proceed. The UTV's will patrol their respective lines, while the pumpers will be positioned in problem areas and moved as needed. Once adequate black is established one torch from each crew will begin igniting the headfire and meet at Point D. While the headfire is being ignited equipment and crew will continue to monitor the east and north lines. Equipment will be moved to the west and south lines as needed. Crew 2 should take extra caution along the west side due to traffic on Coyle Road.

Attachment C



PRESCRIBED BURNING PLAN

Information			
Landowner/Lessee Information			
Name:		Phone:	
Address:		County:	
City:	State:	Zip:	
Description of Area to be Burned			
Pasture Name/Number:			
Vegetation Present:		Acres:	
Legal Description:	Section:	Township:	Range:
Directions from nearest town:			
Range of Projected Burn Dates:		Actual Burn Date:	
Objectives to be Accomplished			

Notification		
When burning within Forest Protection Areas, Contact Oklahoma Dept. of Ag. Forestry Services:	Location	Phone Number
Fire Departments	Phone Number	Date, Time and Person Notified
Adjoining Landowners	Phone Number	Date, Time and Person Notified
Others, as Needed (Sheriff, OHP, DEQ, Utility Companies, Oil and Gas Leases)	Phone Number	Date, Time and Person Notified

Pre-Burn Preparations

– Describe management needed prior to burn in order to successfully accomplish burn and meet objectives.
(Grazing management, fireguard preparation, burning of bush piles; etc.)

Firebreak Types and Location Around Burn Unit

Fuel Conditions

	Desired			Actual (day of burn)		
Fine Fuel Amount	☐ Light	☐ Moderate	☐ Heavy	☐ Light	☐ Moderate	☐ Heavy
Fuel Continuity	☐ Good	☐ Fair	☐ Poor	☐ Good	☐ Fair	☐ Poor

Prescribed Weather Conditions

Prescription	Desired Range	Maximum Range
Temperature (F)		
Relative Humidity (%)		
Wind Direction		
Wind Speed (mph)		

Smoke Management Considerations

Sensitive Areas Identified	Direction from Burn Area	Distance to Area

Other Smoke Management Considerations

Category Day	Preferred Category Day		Actual Category Day (day of burn)	
Dispersion Conditions	Preferred Dispersion Conditions		Actual Dispersion Conditions (day of burn)	

Attach Smoke Screening Map or Smoke Dispersion Forecast to plan as needed

Pre-Burn Checklist			
	Present in burn unit	If Present Action Needed / Recommended	Accomplished
Brush Piles	☐		☐
Pens/Barns	☐		☐
Oil/Gas/Pipelines/ Utility Structures	☐		☐
Fences	☐		☐
Homes/Cabins	☐		☐
Windmills/Watering Facilities	☐		☐
Feeding Facilities/Hay Storage	☐		☐
Equipment/Vehicles	☐		☐
Wildlife Habitat Areas	☐		☐
	☐		☐
	☐		☐
	☐		☐

Observed Weather For Pre & Post-Burn Weather Monitor Available Weather Sources				
Burn Site Observed Weather Conditions				
Observation Time				
Temperature				
Relative Humidity				
Wind Direction				
Wind Speed				
ATTACH COPY OF OK-FIRE PRESCRIPTION PLANNER AND OR WEATHER FORECAST				

Equipment	Desired on burn	Number Available at Burn	Comments/Other Considerations
Drip Torch/Ignition Device	☐		
Matches\Lighter	☐		
Shovel	☐		
Rake	☐		
Backpack pump	☐		
Flapper/Swatter	☐		
Chainsaw	☐		
Leaf Blower	☐		
Pumper Units/Sprayers	☐		
ATV Sprayers	☐		
ATV/4-Wheelers	☐		
Utility Vehicle (UTV)	☐		
Torch Fuel	☐		
Pump Fuel	☐		
2-Cycle Fuel	☐		
Weather Instrument/Kit	☐		
Two-Way Radios	☐		
Cell Phone	☐		
Drinking water	☐		
Fence Pliers/Bolt Cutters	☐		
Road Signs	☐		
Stop/Go Signs	☐		
NOAA Radio	☐		
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		

Crew Members

Crew Members Present

Ignition Plan

Draw and write ignition plan and add as attachment to fire plan

Go-No Go Check List

If answer to any is NO, do not burn until corrected

Firebreaks prepared	Yes ☐ No ☐	Adequate crew available	Yes ☐ No ☐
Neighbors contacted	Yes ☐ No ☐	Smoke management goals within prescription	Yes ☐ No ☐
Fire departments contacted	Yes ☐ No ☐	Crew briefed on plan and safety hazards	Yes ☐ No ☐
Weather conditions within prescription	Yes ☐ No ☐	Can burn objectives be met	Yes ☐ No ☐
Equipment ready	Yes ☐ No ☐	All hazards in unit identified	Yes ☐ No ☐

Escaped Fire Plan

1. If fire escapes all ignition stops until escape is contained, unless needed to control the fire
2. Use standard fire suppression methods to control escaped fire
3. If fire cannot be contained by standard methods other tactics will be used (i.e. backfires)
4. If other methods do not work or are not practical fire boss or designated person will call for assistance

This Prescribed Burn plan was prepared by:

Name:

Date:

The prescribed burn described below is to be conducted according to the information provided here and the Oklahoma forestry code (title 2, sections 16-28 and 16-28.2 of the state statutes). File the original copy of the notification plan with the local rural fire department, and keep a copy for your records. Inside the designated forest protection area in eastern Oklahoma (refer to list of forestry offices), also provide a copy to the forestry division representative.

Prescribed Burning Notification Plan

Name:	Telephone:
Address:	County:
City, State, Zip Code:	
Ranch Name (if any):	

Description of area to be burned:
Approximate acres to be burned:
Written description of location:
Projected time frame:
Date of previous burn:
Objectives to be accomplished through the prescribed burn:

Contact information:		
Rural Fire Department Name	Location	Phone No.
Forestry Division Office (for protection areas):		
Adjoining landowners:		

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