

PRESCRIBED BURN PLAN

C.L. Browning Ranch
159 Browning Drive
Johnson City, Texas

GENERAL

1.1 PLAN

Prepared by:	Scott Gardner	Date:	31 August 2005
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1.2 SITE LOCATION

Site name(s):	Fields # 1 and Field # 3
Property name:	C.L. Browning Ranch
Street:	159 Browning Drive
City:	Johnson City
State; Zip:	Texas
Telephone:	830 868 2222
Owner:	Elizabeth and Theodore Rogers

1.3 BURN OBJECTIVES

Observe the potential of fire as a control mechanism for *ratibida colnifera* (upright prairie coneflower) and *bothriochola ischaemum* (King Ranch bluestem)

1.4 IGNITION PLAN

Burn window	9-5-2005 through 9-15-2005
Weather watch:	Forecast weather reports will be obtained before the burn from the National Weather Service Forecast Office. http://www.srh.noaa.gov/ewx/html/firewx.htm OR NWS San Antonio (830) 606 3600. Temperature, relative humidity, and wind direction and speed will be periodically monitored before and during the burn.
Site preparation:	Telephone poles in the burn site will be black-lined a few days before the burn to 5 ft. One large brush pile in the site will be burned prior to the day of the fire
Test fire:	A small test fire will be ignited to assess fire and smoke characteristics prior to burn. Additionally, the black-line burning around the telephone poles will demonstrate the potential speed of the fire
Firing method:	A backing fire, starting on the downwind control line, will move windward, being met by strip fires to establish a 10 – 15 meter black-line. A flank fire technique on both sides of the burn site will then move windward and eventually initiate a strip head fire to complete the ring. Burns will take place from morning hours through late afternoon over several days dependent on weather.
Mop up:	Crew on site full time

1.5 RANGE OF DESIRED WEATHER

Black line

Burn type (head/back/strip/flank):	Backfire/narrow strip-head (< 6 ft)	
	Min (cool limits)	Max (hot limits)
Surface wind direction:	Any. Field #1 is bordered on the north by Ranch Road 2766, and therefore would prefer a north wind to carry the smoke away from the highway.	
Average eye-level wind speed (mph):	2	12
Transport wind (mph):	8	20
Mixing height (feet):	1800	n/a
Temperature (°F):	50	95
Relative humidity (%):	95	25
Fine dead fuel moisture (%):	9	5
Expected fire type (hot/cool):	75 btu/ft ²	92 btu/ft ²
Expected flame length (feet):	0.1	5 (8)
Expected rate of spread (ft/min):	0.2	4.9 (4.8)
Start time:	08:00 CDT	
Comments:	Ignition not before 08:40 CDT. Sunrise at 07:40 CDT Residual fire shall be extinguished prior to 17:50 CDT. Sunset is at 18:50 CDT. * The expected fire performance data represent predicted fire conditions if ALL the parameters are at maximum or minimum. Upper temperature limit may reach 100 degrees provided RH is greater than 35%	

Main burn

Burn type (head/back/strip/flank):	Head/striphead/ring	
	Min (cool limits)	Max (hot limits)
Surface wind direction:	Any South winds are expected due to the time of year of the burn	
Average eye-level wind speed (mph):	4	12
Transport wind (mph):	8	20
Mixing height (feet):	1800	n/a
Temperature (°F):	50	95
Relative humidity (%):	95	25
Fine dead fuel moisture (%):	9	5
Expected fire type (hot/cool)*:	75 btu/ft ²	92
Expected flame length (feet)*:	0.1 (3)	7.9 (8)
Expected rate of spread (ft/min)*:	50	327 (326)
Start time:	08:00 CDT	
Comments:	Ignition not before 08:00 CDT Sunrise at 06:50 CDT Residual fire shall be extinguished prior to 17:10 CDT. Sunset is at 17:40 CDT. The expected fire performance data represent predicted fire conditions if ALL the parameters are at maximum or minimum. Upper temperature limit may reach 100 degrees provided RH is greater than 35%	

1.6 EQUIPMENT/SAFETY CHECK

2 Brush trucks with 200 gal sprayer*	8+ Crew*
4 backpack sprayers*	Wire/bolt cutters
2 drip torches*	Additional truck gas and diesel
Fuel mix (40% gasoline 60% diesel)	Mobile phone
Fire weather kit*	Matches
Two-way radios*	Gates open
2 shovels	First Aid Kit*
2 rakes	Teflon tape (for backpack sprayers)
5 flappers*	Caution flags posted on highway
Nomex suits, hard hats, goggles, gloves*	Detergent
Tool boxes	Oil (for pump)
Robust footwear	Spare battery (for Kestrel)*
Drinking water + cups	Compass
2 x 5 gallon water jugs	Weather flag
1 Bobcat w/ bucket for dirt lines if needed	

1.7 CONTACTS

Name	Pre-burn notify	Telephone
Johnson City Volunteer Fire Department	X	830 868-
Blanco County Sheriff	X	830 868-7401

1.8 GO/NO-GO Check

JCVFD – Sheriff notify (early AM)	
Weather within limits.	
Smoke hazards addressed.	
Personnel brief: Assignments; Safety.	

BURN SITE DESCRIPTION

2.2.1 SITE DESCRIPTION

Site name:	Field # 1
Size:	17.74 acres.
Over-story:	< 5 % Young mesquite, juniper and acacia
Under-story:	95% cool and warm season grasses and coneflower
Fuel Model:	1. 800-1500 lb/acre
Topography:	<5% slope S.
Other:	6 terraces cross the field from the southeast corner to the northwest corner

2.2.2 PREBURN INFORMATION

Fire guards (existing):	Existing road on the northeast flank against the highway Existing road on the southwest flank outside of burn site Existing road on southeast flank outside of burn site
Smoke sensitive areas:	2-lane highway 30ft to NE. Residential housing 3500 ft to NE and 2500 ft to NW. Ranch shop buildings 50 ft to SE.
Smoke management:	Minimum mixing height of 1800 ft. "CAUTION: Smoke of Fog Ahead" signs will be placed in the highway ROW. Observers in vehicles with flashers on will be located in the highway ROW

2.2.3 CONTINGENCIES

Control lines:	Downwind flanks will be wet-lined prior to ignition of head fire. Downwind and flank black-lines installed prior to head fire.
Escape response:	Spot fires will be attacked with flapper and backpack sprayers. More extensive spot fires will be attacked with brush trucks, or fire unit.
Safety areas:	Ranch road to N, E, and S
First aid team and equipment:	Steve Fulton - EMT

BURN SITE DESCRIPTION

2.2.1 SITE DESCRIPTION

Site name:	Field # 3
Size:	12.32 acre.
Over-story:	10% oak, pecan, juniper, and mesquite
Under-story:	90% cool and warm season grasses and coneflower
Fuel Model:	1. 0-1500 lb/acre
Topography:	<5% slope S.
Other:	6 terraces cross the burn site from S to N

2.2.2 PREBURN INFORMATION

Fire guards (existing):	Creek along E flank Ranch roads on N and W flank
Smoke sensitive areas:	2-lane highway 1500ft to W. Residential housing 4500 ft to NE and 4000 ft to NW. Wildflower Center buildings 1200 ft to N.
Smoke management:	Minimum mixing height of 1800 ft.

2.2.3 CONTINGENCIES

Control lines:	Downwind flanks will be wetlined prior to ignition of headfire. Downwind and flank blacklines installed prior to headfire
Escape response:	Spot fires will be attacked with flapper and backpack sprayers. More extensive spot fires will be attacked with workhorse sprayer, brush truck, or fire unit
Safety areas:	Other side of creek along E flank
First aid team and equipment:	Steven Fulton-EMT