

4. Human Factors						
a. Firefighter	Little firefighter exposure.	Some firefighter exposure due to fire duration and smoke.	Potential for high firefighter exposure to smoke during burn and to fire during holding actions.	No specific problems, implement standard safety measures.	Mitigation measures to eliminate smoke exposure.	Mitigation measures must address smoke exposure, use of mechanized equipment to eliminate exposure to fire.
b. Public	No public exposure.	Some public exposure, mitigation actions can remove/ minimize exposure.	Public may be exposed to high smoke concentrations for moderately long periods, especially during nighttime hours.	No adverse consequences anticipated.	Mitigation actions necessary to provide for maximum public safety.	Mitigation actions must be developed, coordinated with other emergency organizations and fully understood prior to ignition.
c. Fire Management	No problems with commitment and acceptance by park staff members.	No problems with commitment but some unwillingness to support and prioritize the prescribed fire over other activities.	Park staff not committed to using prescribed fire as a tool and not willing to support and prioritize prescribed fire over other activities.	No adverse consequences.	Park staff must be briefed on need and importance of prescribed fire.	Park management team must be informed of prescribed fire objectives, support needs, and priority.

Appendix #15
PRESCRIBED FIRE RISK MITIGATION TABLE

Hazard Element	Risk	Mitigations / Controls	Residual Risk	Reference:
		Briefly explain what actions will be taken relative to each hazard element that will reduce the risk.		In Prescribed Fire Plan
1. Environmental Data				
a. Seasonal Severity	L		L	
b. Fire Behavior	L		L	
c. Fuels	L	_____	_____	_____
d. Weather	M	Firing patterns and ignition times will be dependent upon the weather meeting prescription parameters. If weather exceeds prescription parameters, the burn will not be implemented. Weather forecast will be obtained and close attention will be paid to frontal passages.	L	K. Ignition and Holding Actions-Test Fire, Firing and Ignition, Burn Prescription
e. Topography	L		L	
2. Agency Values				
a. Ecological and environmental considerations	M	_____	M	_____
b. Social and Cultural values	M	The plan addresses sites found within the unit through the exclusion of these areas. Adequate holding resources have been calculated to quickly contain an escaped fire.	M	Holding Resources Worksheet/Pre-Burn considerations
c. Project duration and logistics	L	_____	L	_____
d. Smoke and Air Quality Management	L	_____	L	_____

	Risk	Mitigations / Controls	Residual Risk	Reference:
		Briefly explain what actions will be taken relative to each hazard element that will reduce the risk.		In Prescribed Fire Plan
3. Public Values				
a. Land use values	L		L	
b. Dwellings	M	There is one historic structure located within the burn unit which is excluded from the burn and will an engine stationed by it until secure.	M	Pre-burn considerations/ Holding actions/ Holding forces worksheet
c. Non-dwellings	L		L	
4. Human Factors				
a. Firefighter	L		L	
b. Public	L		L	
c. Fire Management	L		L	

**Appendix # 16
Medical Plan (ICS-206)**

MEDICAL AID STATIONS	LOCATION	PARAMEDICS						
		YES	NO					
4 1 st Responders on-site with a burn kit in the fire engine	On-site		X					
6. TRANSPORTATION								
A. AMBULANCE SERVICES								
NAME	ADDRESS	PHONE	PARAMEDICS					
			YES	NO				
Brookline VFD		911						
B. AIR EVACUATION								
NAME	LOCATION	PARAMEDICS						
		YES	NO					
Cox Air Care	3801 S. National Avenue	X						
7. HOSPITALS								
NAME	ADDRESS	TRAVEL TIME		PHONE	HELIPAD		BURN CENTER	
		AIR	GRND		YES	NO	YES	NO
Cox South Medical Center	3801 S. National Ave., Springfield, MO	10 min	20 min	269-6000	X			X
St. Johns Regional Health Center	1235 E. Cherokee	10 min	25 min	885-2876	X		X	
8. MEDICAL EMERGENCY PROCEDURES								
If a person is injured it will be immediately reported to the Burn Boss. The Burn Boss will relay this information to the Visitor Center (732-2662). The Visitor Center will dispatch EMS support, while the Burn Boss calls the appropriate emergency phone number (911).								
9. PREPARED BY B. Bloodworth					10. REVIEWED BY (SAFETY OFFICER)			

Appendix # 17
Communication Plan (ICS-205)

INCIDENT RADIO COMMUNICATIONS PLAN ICS - 205			1. INCIDENT NAME: SW-1, SW-2, NW-5 NW-6 & NW- 7	2. PREPARED DATE: 2/13/04 TIME : 1400	3. OPERATIONAL PERIOD DATE: TIME :
SYSTEM/CACHE	CHANNEL	FUNCTION	FREQUENCY	ASSIGNMENT	REMARKS
		Air to Ground	169.150	Burn Boss, Holding Boss and Ignition Boss	
		Command	Rx 173.760 Tx 173.760 141.3	Burn Boss, Ignition Boss, and Division Supervisors	May also use Cellular Phone
		NIFC Tac. 3	168.600 Direct	Holding	
		NIFC Tac. 2	168.200 Direct	Ignition	
5. PREPARED BY (Ozark FMO) B. Bloodworth					

A. SIGNATURE PAGE



WILSONS CREEK NATIONAL BATTLEFIELD

PRESCRIBED FIRE PLAN

UNIT NAME: CORE AREA

Prepared By: /s/ Bobby Bloodworth
Bobby Bloodworth
MWR-Fuels Specialist

Date: 12/28/2001

Reviewed By: /s/ Gary Sullivan
Gary Sullivan
Chief of Resource Management

Date: 1/15/02

Regional
Reviewed By: /s/ Fred Bird

Date: 2/6/02

Technical
Review By: /s/ Doug Alexander
MWRO

Date: 1-30-02

Approved By: _____
Superintendent

Date: _____

FirePro Project #WICR-0202
Account Number:

Copies of approved plan will be sent to:

PRESCRIBED FIRE PLAN - TECHNICAL REVIEW

Park: Wilson's Creek National Battlefield

Project Name: Core Area

Prescribed Fire Plan Elements	Status	Date	Initial
a. Signature Page	+	1/30/2002	DGA
b. Executive Summary	+	1/30/2002	DGA
c. Description of Prescribed Fire Area	0	1/30/2002	DGA
d. Goals and Objectives	+	1/30/2002	DGA
e. Project Complexity/Risk	+	1/30/2002	DGA
f. Organization	0	1/30/2002	DGA
g. Cost	+	1/30/2002	DGA
h. Scheduling	+	1/30/2002	DGA
i. Preburn Considerations	+	1/30/2002	DGA
j. Prescription	+	1/30/2002	DGA
k. Ignition & Holding Actions	0	1/30/2002	DGA
l. Wildland Fire Transition Plan	+	1/30/2002	DGA
m. Protection of Sensitive Features	+	1/30/2002	DGA
n. Public and Firefighter Safety	+	1/30/2002	DGA
o. Smoke Management	+	1/30/2002	DGA
p. Interagency Coordination and Public Information	+	1/30/2002	DGA
q. Monitoring	+	1/30/2002	DGA
r. Post Fire Rehabilitation	+	1/30/2002	DGA
s. Post Fire Reports	+	1/30/2002	DGA
t. Appendices	0	1/30/2002	DGA

Status Coding:

- + Adequate – Meets NPS Standards
- 0 Adequate with modification. See comments.
- Deficient. See comments.
- NC Unable to evaluate.

Comments:

- c. Vegetation Description..” .., there will always be two engines – one to contain the slopover & one to control the ignited unit.” This line seems out of place. (Done RLB 1-30-02)
- f. Organization- 15 as stated in organization chart instead of 13 on the Holding Worksheet. (Done (RLB 1-30-02)
- k. No night shift or next day planning for resources. Will the fire be called out after the first day? (RLB 1-30-02)
- l. t. No post fire critique identified. (RLB 1-30-02)
- t. Holding Worksheet- all overhead are unavailable for production rate calculations. (RLB 1-30-02)

Signature: /s/Doug Alexander Date: 1/30/2002

Title: Wildland Fire Management Spec. Office: MWRO

REVIEWERS' COMMENTS

Fire Management Officer:

Chief Ranger:

N/A

Chief of Natural Resources: Comments incorporated into this plan by B. Bloodworth 1/15/02

Park Superintendent:

Regional FMO

Page 13/14, where are the fire behavior predictions? I would like to see the FL, ROS, listed in the charts for the weather parameters that you have identified. RLB 2/7/02
Page 14, last paragraph. Spelling error, its not "migrated" but mitigated. Done RLB.
Page 15, If you are going to described the ignition sequence then I need to be able to go to the map appendix and visualize the wind, topography and sequence of events. Not require to have firing map (CH.10) RLB.
Page 58, Appendix #9, I don't like the words "positive and negative" why not greater

than or less than? Easier to understand. FRB 2/6/02 Standard Form.

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B. EXECUTIVE SUMMARY

This burn supports the park's broad historic landscape restoration efforts to reestablish native plants and open savanna found during the civil war battle on August 10, 1861, for which the park was established. This project is part of continuing sequence of entry and maintenance burn projects to restore this historic landscape. The park brochure (1992) entitled "A Guide to Historic Landscape Restoration" reads:

"Prior to European settlement, savanna covered one third of Missouri. Today, only a few remnants of original savanna remain. Reestablishing an example of this unique biological community is not only an investment in our future but will, with time, recreate the 1861 landscape that was the stage for this important battle."

This project also supports the following specific objectives found in the park Fire Management Plan:

- To utilize prescribed fire as a professional management tool to restore and perpetuate the natural environment and its processes and the historic scene. Initially, the park may implement prescribed burning for savanna restoration and preservation. Ultimately, as research provides the necessary knowledge and management recommendations, prescribed fire use are envisioned to be utilized for other management purposes.
- To research the proper role and effects of fire upon the park's natural and affected historical resources to provide management recommendations.

C. DESCRIPTION OF PRESCRIBED FIRE AREA

GENERAL AREA:

LOCATION:

- Legal: 1. T 28 N, R 23 W, SEC 23,24,25,26 & 36
2. Latitude N 93 24' 30"
 Longitude W 37 06' 30"
3. UTM Zone_____, Easting___, Northing___

Fire Management Zone: Suppression.

District: N/A

GEOGRAPHIC ATTRIBUTES:

Size: 676.6 acres

Elevation Range: 1080 to 1250 ft.

Slope Range: 0-10 %.

Aspect Range: Wilson's Creek runs north to south bisecting the unit. Lands east of Wilson's Creek have a generally west aspect and visa versa.

DESCRIPTION OF PROJECT BOUNDARIES:

The unit is bounded on all sides by the 18-foot-wide asphalt park tour road, which begins and ends at the park Visitor Center in the northwest corner of the park. The Old Wire Road, Wilson's Creek, secondary roads and trails form the boundaries between interior units shown on the Project Map (Appendix #1). These interior units will be designated, as blocks of which there will be four.

Block #1: This interior unit will include bloody Hill and the Edwards Cabin. The boundaries are everything east of Wilson's Creek, west of the Tour Road and North of the Wire Road (BH-1, BH-2, BH-3, NW-4).

Block 2: This unit will include the Ray Cornfield, Ray Orchard and the Pulaski Battery. The Tour Road is on located on the East, Wilson's Creek to the West and the Wire Road to the South (NE-2, NE-3, NE-4, NE-6)

Block 3: This includes all land south of the Wire road but still inside the Tour Road. Wilson's Creek splits this block in half (CN-1, CN-2, CN-3, SW-3, SW-4).

Block 4a &b: The critical habitat for *Lesquerella filiformis* is located in this block 4 a & b. This block will be excluded in the spring/fall burn windows and burned in the summer as a separate block within this plan. Block 4 is located on North Bloody hill and block 4 b is located by the weather station site (Walnut and North Glade).

Note: Block 4 a & b may be included in the entire burn project if these areas show no *Lesquerella filiformis* plants in the plots located within these blocks. In some years, *Lesquerella filiformis* does not appear.

VEGETATION DESCRIPTION:

The unit is 88% fuel model 2 and 12% fuel model 9. The fuel model surrounding the burn unit is often fuel model 9. This is indicated in the Holding forces worksheet. Fuel model 9 is used to calculate holding resources, as FM1 and FM3 overpredict fire behavior The area surrounding the park is pastureland with some residential areas. For the purpose of calculating fire behavior, percentages of 80% in fuel model 2 and 20% in fuel model 9 will be used.

Vegetation Type	Fuel Model NFFL	Estimated Acres	Estimated Tons Per Acre
Short/Tall Grass	1/3	577	2 - 6
Hardwood litter	9	80	2 - 10

PROJECT MAP (Appendix #1) The burn boss will assign points on the map for ease of communication while units are burned.

VICINITY MAP (Appendix #1)

D. GOALS AND OBJECTIVES

GOALS

1. Reduce wildfire risk to urban interface improvements immediately outside of the park boundary, as well as historic park improvements,
2. Restore fire and associated natural processes in order to retain tall grass prairie species composition and hardwood savannas, characteristic of the park's historic natural communities an average of 10 to 12 oak trees per acre.
3. Protect riparian areas.
4. Provide training opportunity for firefighters

SPECIFIC OBJECTIVES:	PROPOSED REDUCTION WITHIN ONE YEAR	ACTUAL RESULTS
Burn unit with a moderate severity burn.	75-95%	
Reduce 1-hour fuel loading (litter layer).	50-80%	
Reduce 10-hour fuels.	40-70%	
Top-kill of saplings greater than 1.4 meters tall and less than 2.5 meters tall in the forested areas and where hardwoods are encroaching in historic open fields.	>40%	

Range of Acceptable Results Expected across the Project Area

Throughout the entire unit a mosaic of different levels of fire severity are desired and acceptable.

E. RISK MANAGEMENT

This burn project has a low risk value as calculated by the hazard risk analysis process. Assessing reasonable risks and the mitigation to lower these risks generates this low rating. This is documented on the Hazard Rating Guide, Prescribed Fire Risk Analysis Worksheet, and Job Hazard Analysis.

F. PROJECT COMPLEXITY

This burn rates as a low complexity project that should pose no unusual risks to personnel safety or property. Burn duration will be 24 hours or less per interior blocks/unit, with isolated residual burning expected in fuel jackpots.

HAZARD, RISK AND COMPLEXITY WORKSHEETS (attached)

G. ORGANIZATION

The Burn Boss may order additional resources to assist with the project before ignition if in their professional judgement they are needed. This may be done after consultation with the project coordinator or Ozark Fire Management Officer. All non-park resources will be ordered and committed to the prescribed fire project through the Missouri Interagency Dispatch Center (MOCC). The holding resource worksheet and Fireline Handbook will be used to determine adequate number and type of holding resources for each scenario. Specific resources will be identified in an incident action plan prepared prior to each operational period during the implementation of the burn. It is anticipated that one or both Mid-west Fire Use Modules will be used. The regional office will provide a burn boss if Ozark NSR or Buffalo NR can not.

A total of Fifteen (15) persons will be the minimum required conducting the prescribed fire.

Overhead Personnel:

- 1 Burn Boss/ Incident Commander (RXB2)
- 1 Ignition Specialist (RXI2)
- 1 Holding Squad Leader (FFT1)
- 1 Fire Effects Monitor

Additional Crews/Personnel/Resources For Daytime Holding and Ignition Operations:

- 3 FFT2 – Ignition Crew
- 2 Type 6 engine with operator and asst. operator
- 4 ATVs with Water Tanks and operators.

H. ESTIMATED PROJECT COSTS (non-base, other agency, contract):

Costs will be primarily for personnel and equipment preparing and conducting burn operations. The unit requires some preparation. Firing operations and post firing patrols should be of short duration with the goal of keeping overall costs low.

<u>FUNCTION</u>	<u>PROJECTED WORK HOURS/</u>	<u>PROJECTED COSTS*</u>
Planning	10 hours (base salary paid) Rx Fire Plan development	\$0.00
Unit Preparation	20 hours blow line, hazard tree mitigation, brush hog line	\$300.00

Operations (including burning, holding, mop-up)	50	\$750.00
Travel	12 people (includes per diem and lodging) X 4 days	\$3990.0
Monitoring & Evaluation	2 (collateral assignment) site visit coordination between WICR staff and FMO.	\$250.00

TOTAL PROJECTED COST \$ 5290.00 divided by 657 acres = \$ 8.05 PER ACRE

*Required information in final report: ACTUAL COSTS, COST PER ACRE, WORK HOURS PER ACRE.

I. SCHEDULING

Proposed Ignition Date:	Oct. 1 2002 to Sept. 30 th 2002
Projected Burn Duration:	5-6 days total
Actual Ignition Date:	
Date Declared Out:	
Date DI-1202 Submitted:	

J. PRE-BURN CONSIDERATIONS

ON SITE PREPARATION NEEDS:

- A. Construct a leaf blown and wet line (on the day of the burn) around block # 4 this serves to exclude critical habitat for *Lesquerella filiformis* found in the area of the Lyon's marker on top of North Bloody hill glade and Walnut glade. Cedar trees, brush and other ladder fuels will be removed 60 ft. inside the burn along the control line. Limb any low-hanging branches and remove any large woody debris, including snags, within 60 feet of the fireline.
- B. Remove hardwood litter from all roadways and trails to be utilized as control line including the Wire Road and hiking trail. Remove any low-hanging branches or woody debris that may interfere with a wildland fire engine or ATV travelling along these routes.
- C. Construct a 6-8 foot wide mow line in grass around the edge of all split rail fences and cannons, which are being protected. In all fields, the split rail fences and cannons are not to be burned.
- D. Foam the Edwards Cabin the day of the burn and have a 8 to 10 foot mowed line in place.

- E. Prepare 20 gallons of burn mix.
- F. Access the nearest remote automated weather station at least two days prior to the ignition date to assess fuel moisture and weather conditions.
- G. Take fuel moisture samples from the site and calculate % fuel moisture for 1-hr. fuels one day prior to the burn.
- H. Set-up four all-terrain vehicles outfitted with water tank and pump and one all-terrain vehicle outfitted for patrol. Transport ATVs to burn site.
- I. DAY OF BURN: Set up "Prescribed Burn" and "Smoke" signs along the Tour Road, Wire Road, ZZ Highway and Route 182.
- J. Close all trails adjacent to and in the project area.
- K. Fill at least 4 bladder bags and place on the engines.
- L. Program handheld radios for frequencies identified in the Communications Plan (Appendix #16).

OFF SITE:

- A. WICR staff will purchase needed equipment and supplies.
- B. WICR staff will notify local fire departments of the scheduled burn and their role.
- C. WICR staff will complete a press release at least one week prior to the proposed burn in the local newspaper.
- D. At least a week prior to the burn, WICR staff will contact the adjacent landowners with a press release of the proposed burn.

SPECIAL PRECAUTIONS/REGULATIONS:

- A. All improvements (fences, cannons, wayside exhibits and cabin) will be cleared around of fuel prior to the burn.
- B. Ignition will stop short of riparian areas and allow the fire to back and go out or holding forces will stop the fire.
- C. Endangered species habitat areas adjacent to the Lyon's marker, North Bloody Hill Glade and Walnut Glade will be protected with a wet and leaf blown line.
- D. A herpetological study is ongoing within all burn blocks. After each burn unit is complete, personnel will put out smoldering cover boards (map located in appendix).

Safety Hazards: Visitor safety; smoke on the Loop Rd. and Hwy. ZZ and along control lines. Crew safety; safety zones, visibility, and exposure to smoke. **Mitigation:** The area,

including all trails, will be closed while burning. Visibility on roads will be monitored and controlled. "Smoke Ahead" and/or "Prescribed Burn" signs will be posted. The tour road will be kept open but closed when visibility is reduced to 100 yards. Strip burning may be used to increase heat to reduce smoke output. All personnel will have PPE. Escape routes and safety zones will be identified. Engines and Atvs will have headlights on.

K. PRESCRIBED FIRE PRESCRIPTION

NFFL Fuel Models used: 3 & 9 80% and 20 %

BURNING PRESCRIPTION AND OBSERVED CONDITIONS:

A prescribed fire prescription containing those key parameters needed to achieve desired results (see page 7). Prior to ignition, compare prescription elements, both individually and collectively, against local weather forecasts and any other predicted conditions. During implementation of the burn, if objectives are not being met, further ignition shall be evaluated; therefore, prescription parameters must be wide to accommodate established objectives while staying within fire personnel capabilities. All changes to the prescription parameters must be approved with same level of authority required for the plan approval.

The prescription is based on fuel moisture, wind speed and relative humidity. Temperature ranges will not be used as a constraint.

Blocks 1, 2 and 3

ENVIRONMENTAL VARIABLES	HOT	OPTIMUM	COOL	OBSERVED*
Temperature (dry bulb %):				
Relative Humidity (%):	20	30	50	
Wind Direction:	S/SW to N/NW	S/SW		
Wind Speed (midflame):	8 mph	4 mph	2 mph	
Dead Fuel Moisture (%) 1 Hour:	5	8	10	
10 Hour:	8	11	14	
1000 Hour:	14	18	20	

*At time of ignition

PREDICTED FIRE BEHAVIOR	HOT	OPTIMUM	COOL	OBSERVED*
Rate of Spread (ch/h):	192.5		26	
Heat per Unit Area (Btu/ft ²):				
Fireline Intensity (Btu/ft/s):				
Flame Length (ft):	18.5		6.0	

*Standard observation time
 See Appendixes for BEHAVE Projections
Block 4 a & b

ENVIRONMENTAL VARIABLES	HOT	OPTIMUM	COOL	OBSERVED*
Temperature (dry bulb %):				
Relative Humidity (%):	20	30	80	
Wind Direction:	S/SW to N/NW	S/SW		
Wind Speed (midflame):	8 mph	4 mph	2 mph	
Dead Fuel Moisture (%) 1 Hour:	5	8	10	
10 Hour:	8	11	14	
1000 Hour:	14	18	20	

*At time of ignition

PREDICTED FIRE BEHAVIOR	HOT	OPTIMUM	COOL	OBSERVED*
Rate of Spread (ch/h):				
Heat per Unit Area (Btu/ft ²):				
Fireline Intensity (Btu/ft/s):				
Flame Length (ft):				

*Standard observation time
 See Appendixes for BEHAVE Projections

Behave Projections

The Behave projections are located in the appendixes. Fuel models 2, 3, and 9 represent blocks 1, 2 and 3. Fuel models 2 & 9 represent block 4. Fuel model 9 is used to calculate the holding forces worksheet due to the fact that fuel model 3 will overpredict fire behavior. The fuels outside of the burn unit are mowed hay fields and hardwood forest. Block 4 will be surrounded by fuel 3 that was burned in the spring will have a live moisture content at the time block 4 is burned of over 300%. **Note:** The high fire intensities and rate of spreads predicted will be interior in each blocks. This will be migrated by the burn boss with firing patterns and sequences. During black lining operations, fire intensities will be low due to burning on the low end of the prescription and the fact that intensities are over predicted in these blocks.

L. IGNITION AND HOLDING ACTIONS

TEST IGNITION:

A test burn will be ignited near the main point of origin of the burn. Fuels and topography will be representative of most of the project. The Burn Boss will decide at that point to initiate the main

burn or not. It is most likely that the test burn will be conducted near the junction of the Wire Road and Tour Road (near wayside exhibit #5).

FIRING AND IGNITION:

The firing order will depend largely on wind direction the day of the burn. The burn will be broken down into blocks. The area containing the T&E species habitat is part of block #1, but will be treated in the Summer/Fall. Each block will be treated separately from the others. Since the basic shape of each unit is a rectangle, the downwind firelines will be "blacked-out" in order to make them more secure. A combination of strip head and strip backing ignition methods will be used to build good secure buffer zones along the firelines. Once the exterior firelines, cannons, block #4 and the Edwards cabin are secure, the Burn Boss will determine the best strategy for completing each block.

HOLDING ACTIONS:

All engines and ATV's will be mobile and used accordingly to provide adequate patrol behind the ignition teams. A hoselay, atv with water or engine patrol will be in place along the T & E species habitat exclusion line. Two wildland engines will be used to patrol behind ignition, one engine will patrol on roadways just outside the park boundary, while the fourth engine is on stand-by for water shuttles. Water sources include fill sites at the resource management office, as well as the hydrant at the park Visitor Center. The bulk of handcrew resources will be committed to holding and patrol immediately behind ignition operations.

MOP-UP OPERATIONS:

The fire will be mopped up at least 200' in from the lines as soon as possible. This will be done before all resources are released from the incident. This may require that the fire be staffed all night for one or two nights until this is accomplished. The fire will be checked every day until no smokes are seen for two days in a row.

Burn unit boundaries will be hand ignited with drip torches or atv torches. The unit interior will also be hand ignited with drip torches or atv torches at the direction of the Burn Boss with coordination of the Ignition Specialist.

The Burn Boss or Ignition Specialist will thoroughly describe the firing plan and safety considerations to all burn personnel at the pre-burn briefing. Everyone will be provided a copy of the project map. Firing operations for the entire unit should be completed in one to two days. After the unit has been fired and mop up has been completed, the burn will be turned over to the resource management specialist at Wilson' Creek. He will set up daily patrols as needed until the fire is out. The resource specialist will be the person to call the fire out. Once the fire is called out, the Ozark NSR Fire Management Office will be notified.

M. WILDLAND FIRE TRANSITION PLAN

ESCAPED FIRES:

An escaped fire is an unwanted fire outside the project boundaries that has exceeded holding resource capabilities. If the prescribed fire exceeds project boundaries and/or slopovers and spot fires are not contained within one burning period, the fire will be declared an escaped fire and a Wildland Fire Situation Analysis (WFSA) will be completed. At the time of conversion to an escaped fire, ignition operations within the unit will continue only if deemed to be in the interest of safety and should follow the defined alternatives as outlined in the WFSA.

In case of a fire detected outside the project boundary, designated holding forces will proceed promptly to the spot fire or "slop-over" and initiate the appropriate strategy (direct or indirect) as determined by the Burn Boss and holding specialist. Firing operations may cease at the discretion of the Burn Boss. Any fire that escapes the project boundary will receive aggressive initial attack with the on-site resources. Infrequent and easily managed spots outside of the burn unit will not necessarily cause a conversion to an escaped fire.

Contingency lines have been drawn using human-made and natural features, which form logical barriers to the spread of fire. All holding personnel will be familiarized, during the briefing, with the contingency area boundaries and associated holding lines. Contingency holding lines include Highway ZZ west and a creek and unpaved road to the south. To the north escape across the Tour Road is unlikely, but Highway 182 could then be utilized as a contingency line. Escape west across the Tour Road is even less likely, but contingency lines would include the park boundary and Highway ZZ.

All escaped fires will trigger the conversion of the prescribed fire (unit and escape) to a wildfire. The primary priority will be public and personnel safety followed by protection of structures and cultural resources. At the time of conversion, the Burn Boss will become the Incident Commander and remain as such until the fire exceeds this individual's qualifications and capabilities and/or a transition can take place.

The I.C. will immediately notify **Mark Twain National Forest Dispatch (573-364-4621 x484) and WICR Superintendent** of the change in status to a wildfire and will order the appropriate resources. The I.C. will also complete a WFSA (see following page). Dispatch will order additional resources specified by the I.C., and suppression actions on the escape fire will be conducted using the most appropriate suppression response. Any suppression actions will be in accordance with the Wilson's Creek National Battlefield Fire Management Plan. On-scene individuals will be utilized and assigned to suppression positions. If management of the escaped fire is turned over to an incident management team (IMT), prescribed fire personnel may be assembled as a division in charge of the burn unit portion of the converted fire.

Resource:	Location and Phone Number:	Response Time:
1. 1 Type VI+ Wildland Engines	1. Fire Chief's Office (417-882-2014)	1. <1 hr.
2.	2.	2.
3.	3.	3.
4.	4.	4.

N. PROTECTION OF SENSITIVE FEATURES

- A. Archeological features should not be impacted by the project, as control lines will be raked or mowed, as often as possible utilizing existing roads and trails, as no soil disturbance is anticipated during project preparation. Any cultural sites discovered during the pending survey requiring mitigation would be identified and prepared prior to ignition.
- B. The federally listed *Lesquerella filiformis* is known to be utilizing the proposed burn unit area, however an exclusion line will be constructed to exclude habitat for *Lesquerella filiformis* from treatment, during the spring burn treatment. This step exempts the park from undertaking formal consultation with the U.S. Fish and Wildlife Service regarding potential impacts under NEPA. After the *Lesquerella filiformis* dies and cures in the late summer, block # 4 will be treated with prescribed fire.
- C. No foam concentrate or solution will be handled, mixed, or sprayed within 50 feet of any water source.

O. PUBLIC AND PERSONNEL SAFETY

- A. "Prescribed Burn-Do Not Report" and/or "Smoke Ahead" signs will be posted along major streets and highways near the burn site.
- B. Traffic control will be conducted by assigned burn personnel and/or Park Rangers along the park road if smoke emissions are impacting driving visibility.
- C. A safety briefing will be given at the pre-burn briefing and at the start of each operational period. An Incident Action Plan describing burn operations, objectives, personnel/division assignments, and radio frequency information will be distributed to all personnel. A project map and spot weather forecast will be distributed, as well. All personnel will be advised of

Lookouts, Communications, Escape Routes, and Safety Zones. Any potential safety hazards (power lines) will be pointed out.

- D. All burn personnel will wear standard fire fighting leather boots, Nomex clothing, leather gloves, and a hard hat. They will carry a fire shelter and a fire tool at all times.
- E. All standard wildland fire fighter safety rules will be strictly enforced (ref: Fireline Handbook).
- F. Ensure safety of FEMO with IC and maintain effective communication with ignition and holding teams.
- G. The public will be kept at a safe distance from the firelines. Authorized personnel must accompany all visitors and press.
- H. In case of an accident or injury involving fireline personnel or the public, refer to the Medical Plan (Appendix #16).
- I. Only red-carded personnel or cooperators who meet their own agency's qualifications will be utilized during the burn.

1. EMERGENCY MEDICAL PROCEDURES:

- EMT or First Responder assigned the day of the burn.
- First Aid equipment available and location made known to all burn personnel.
- Burn Boss notified immediately of injury.
- Burn Boss will coordinate with EMT/First Responder.
- Burn Boss will notify Park Dispatch of an injury and will follow up with information as soon as the injury has been assessed.
- EMT/First Responder will assess injury and begin treatment.
- Once injury has been assessed, the Burn Boss or designee will activate the appropriate EMS response for evacuation of injured personnel.
- If personnel need to be evacuated, park dispatches will dispatch/contact EMS resources from the following table or the Medical Unit Plan (ICS-206) located in the Appendix.

RESOURCE	CONTACT PHONE NUMBER	LOCATION
Cox Air Care	911	Springfield, MO.
Brookline VFD	911	Springfield, MO.