APPENDIX #1
PRESCRIBED FIRE PLAN - TECHNICAL REVIEW

Park: Hot Springs National Park Project Name: Sugarloaf RX

Prescribed Fire Plan Elements		Status	Date	Initial
A.	Signature Page	+	12/04/06	*RLW*
B.	Executive Summary	+	12/04/06	*RLW*
C.	Description of Prescribed Fire Area	0	12/04/06	*RLW*
D.	Goals and Objectives	+	12/04/06	*RLW*
E.	Project Complexity/Risk	+	12/04/06	*RLW*
F.	Organization	+	12/04/06	*RLW*
G.	Cost	+	12/04/06	*RLW*
H.	Scheduling	+	12/04/06	*RLW*
I.	Preburn Considerations	+	12/04/06	*RLW*
J.	Prescription	+	12/04/06	*RLW*
K.	Ignition & Holding Actions	+	12/04/06	*RLW*
L.	Wildland Fire Transition Plan	+	12/04/06	*RLW*
M.	Protection of Sensitive Features	+	12/04/06	*RLW*
N.	Public and Firefighter Safety	+	12/04/06	*RLW*
O.	Smoke Management	0	12/04/06	*RLW*
P.	Interagency Coordination and Public Information	+	12/04/06	*RLW*
Q.	Monitoring	+	12/04/06	*RLW*
R.	Post Fire Rehabilitation	+	12/04/06	*RLW*
S.	Post Fire Reports	+	12/04/06	*RLW*
U.	Appendices	0	12/04/06	*RLW*

Status Coding:

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

Comments: C. what is vegetation like in the power line right of way? Q. Will smoke impact populated areas down wind during the burn or in the evening when it settles? Appendix 3. Need to locate power line on maps. Appendix 6. Graphs for Behave outputs are confusing.

Signature: \S\Ray L. Wiggs Date: 12/04/2006
Title: Biological Sciences technician RXB2

TECHNICAL REVIEW COMMENTS ADDRESSED

comments: C. The power line right of way will be cleared prior to ignition. Q. Smoke management discussion was revised to clarify. Appendix 3. Added power line location to maps. Appendix 6. Removed graphs.

Signature: Tony Collins Date: 12/27/06
Title: Prescribed Fire Specialist

APPENDIX #2

REVIEWERS' COMMENTS

Fire Management Officer:

Chief Ranger:

Chief of Natural Resources:

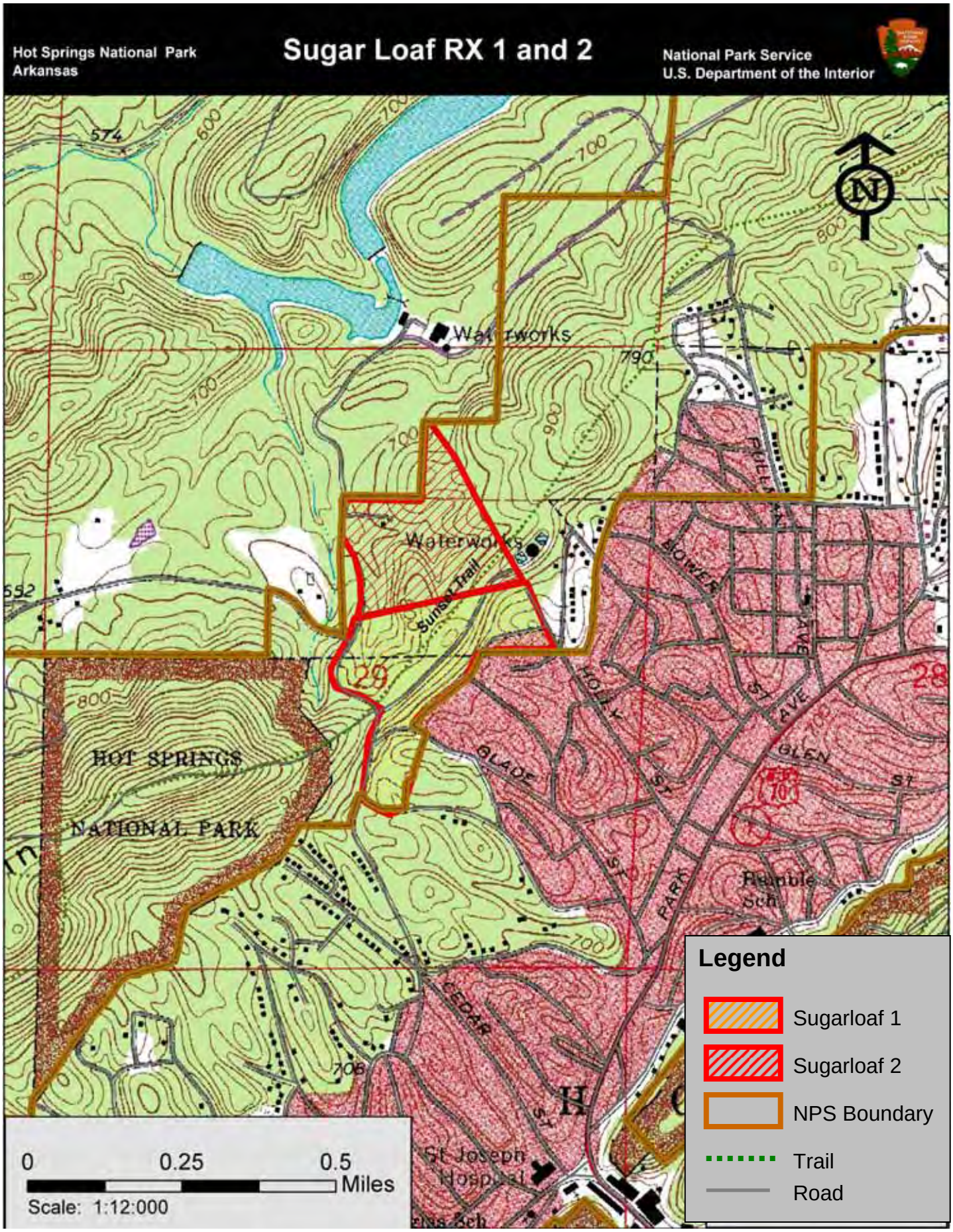
Park Superintendent:

Regional Reviewer:

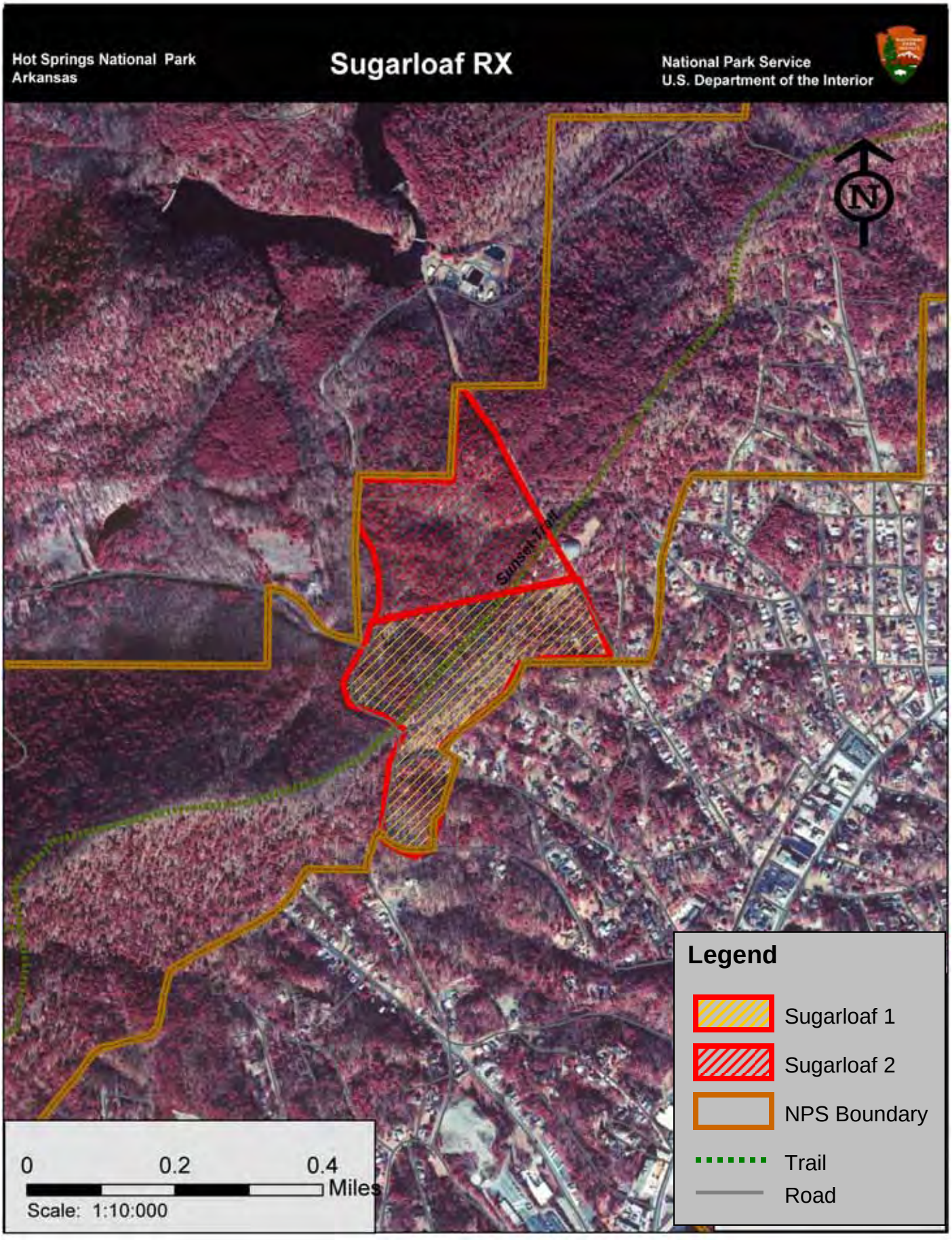
Need to match the total number of personnel required on burn in the Organization section, to the Holding Force Worksheet.
Section I, need to add notification of AFC (include phone number)

Reviewers Comments Addressed by: Tony Collins, ARPG Prescribed Fire Specialist 02/08/2007. *Contingency Resources were not computed into the line production equation since the minimum allowance was far exceeded with resources positioned on the fire line. The production rates for the contingency resources are also currently unknown. AFC phone number added to section I.

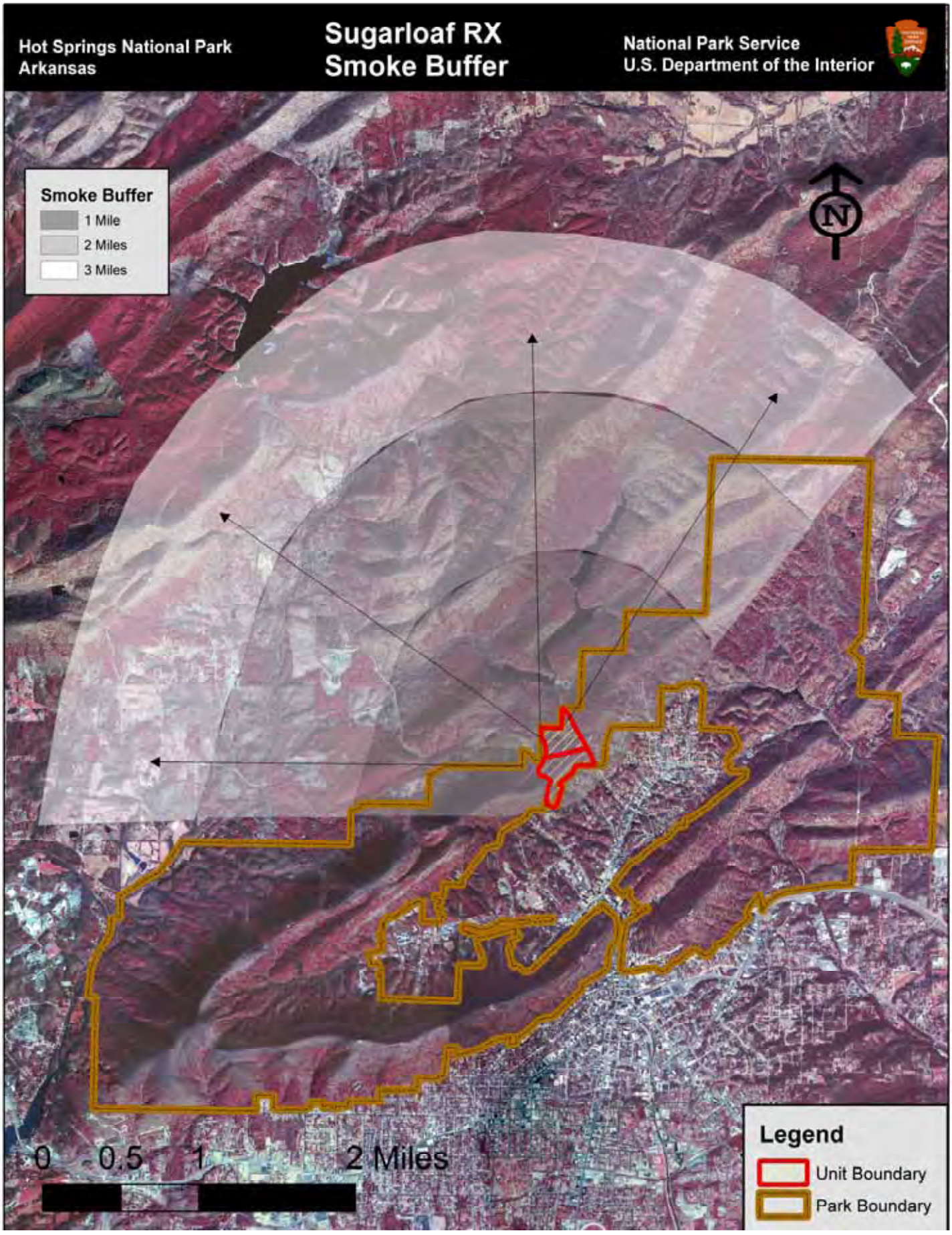
APPENDIX #3A


Hot Springs National Park
Arkansas
Sugar Loaf RX 1 and 2
National Park Service
U.S. Department of the Interior
N
Waterworks
Waterworks
Sunset Trail
HOT SPRINGS
NATIONAL PARK
BOWER AVE
HOLLY ST
GLADE ST
GLEN ST
PARK
CEDAR
St Joseph Hospital
Pauline Sch
0
0.25
0.5
Miles
Scale: 1:12:000
Legend
Sugarloaf 1
Sugarloaf 2
NPS Boundary
Trail
Road

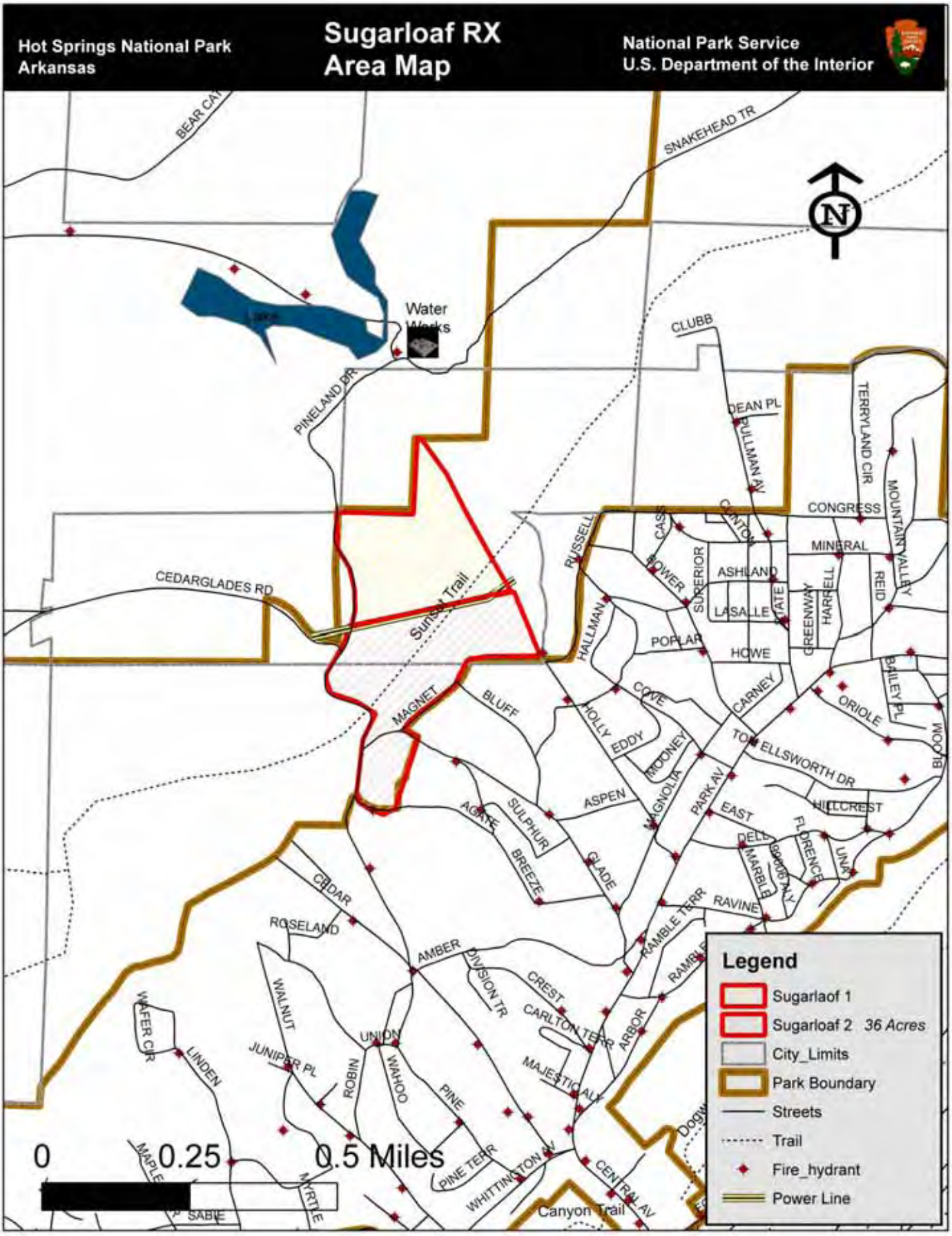
APPENDIX #3B

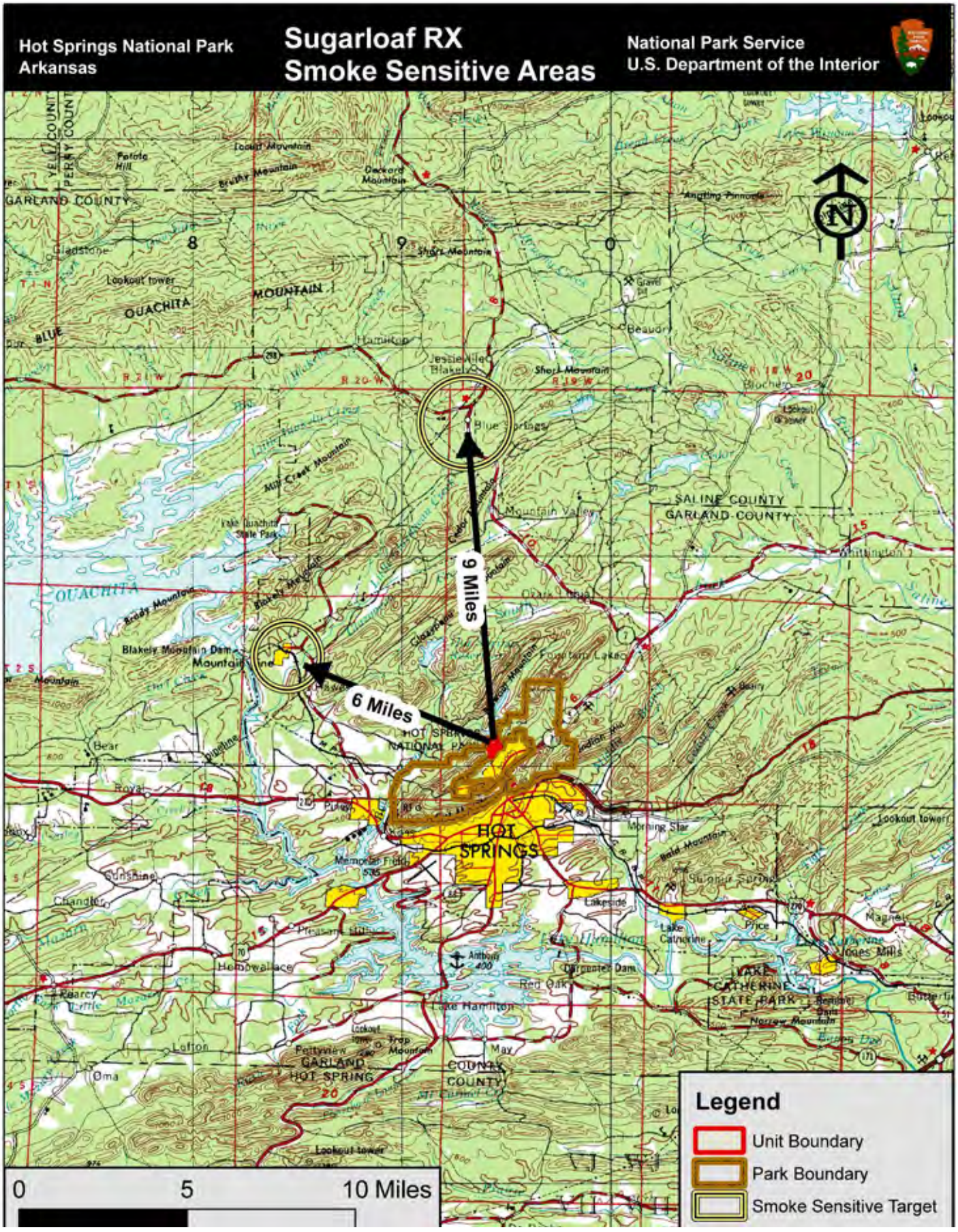

Hot Springs National Park
Arkansas
Sugarloaf RX
National Park Service
U.S. Department of the Interior
N
Sunset Trail
Legend
Sugarloaf 1
Sugarloaf 2
NPS Boundary
Trail
Road
0
0.2
0.4
Miles
Scale: 1:10:000

APPENDIX #3C


Hot Springs National Park
Arkansas
Sugarloaf RX
Smoke Buffer
National Park Service
U.S. Department of the Interior
Smoke Buffer
1 Mile
2 Miles
3 Miles
N
0 0.5 1 2 Miles
Legend
Unit Boundary
Park Boundary

APPENDIX #3D


Hot Springs National Park
Arkansas
Sugarloaf RX
Area Map
National Park Service
U.S. Department of the Interior
N
Water
Works
Lake
BEAR CAT
SNAKEHEAD TR
CLUBB
PINELAND DR
DEAN PL
PULLMAN AV
TERRYLAND CIR
MOUNTAIN VALLEY
CONGRESS
MINERAL
ASHLAND
LASALLE
CLINTON
CASS
RUSSELL
SUPERIOR
FLOWER
GATE
GREENWAY
HARRELL
REID
CEDARGLADES RD
Sunset Trail
HALLMAN
POPLAR
HOWE
CARNEY
ORIOLE
BAILEY PL
BLOOM
COVE
HOLLY
EDDY
MOONEY
MAGNET
BLUFF
ELLSWORTH DR
PARK AV
EAST
HILLCREST
FLORENCE
UNA
MAGNOLIA
ASPEN
AGATE
SULPHUR
BREEZE
GLADE
CEDAR
ROSELAND
AMBER
DIVISION TR
CREST
CARLTON TERR
ARBOR
RAMBLE TERR
RAVINE
WAFER CIR
LINDEN
WALNUT
JUNIPER PL
ROBIN
UNION
WAHOO
PINE
MAJESTIC AV
PINE TERR
WHITTINGTON AV
CENTRAL AV
Canyon Trail
SABLE
MYRTLE
0
0.25
0.5 Miles
Legend
Sugarlaof 1
Sugarloaf 2 36 Acres
City_Limits
Park Boundary
Streets
Trail
Fire_hydrant
Power Line


Hot Springs National Park
Arkansas
Sugarloaf RX
Smoke Sensitive Areas
National Park Service
U.S. Department of the Interior
9 Miles
6 Miles
HOT SPRINGS
OUACHITA MOUNTAIN
GARLAND COUNTY
SALINE COUNTY
Legend
Unit Boundary
Park Boundary
Smoke Sensitive Target
0
5
10 Miles

APPENDIX #4A
Sugarloaf Prescribed Fire
HAZARD RATING GUIDE

Hazard Element	Hazard Probability			Potential Consequences		
	L	M	H	L	M	H
1. Environmental Data						
a. Seasonal severity	Burning index below 90th percentile levels. (<34)	Burning Index above 90th percentile but below 97th percentile levels. (34-41) Above average drought conditions	Burning Index above 97th percentile levels. (42+). Severe drought conditions.	Low probability for problematic fire behavior or difficulty in holding activities.	Some potential for Problematic fire Behavior or Difficulty in holding Activities.	High probability for problematic fire behavior and difficulty in control.
b. Fire Behavior	Flame lengths confined to surface fuels, spread rates low.	Flame lengths extending into shrub and tree regeneration, spread rates moderate.	Flame lengths highly Variable, frequently Involving individual Tree crowns, spread Rates moderate to Fast.	Low probability of difficulty in holding fire or for adverse fire effects.	Some potential for Fire behavior to Approach upper Prescription limits And cause Undesirable effects.	High potential for fire behavior to create holding problems, exceed prescription ranges, and cause undesirable effects.
c. Fuels	Surface fuels light with open tree canopies, small shrub component present.	Surface fuels moderate with variable forest stand density and moderate shrub presence.	High surface fuel Loading with dense Shrub component And dense stands With abundant Regeneration.	Fuels present no specific implementation problems.	Fuels will have a Marked effect on Implementation Activities and Holding force Requirements.	Fuels will dramatically affect management organization and qualifications for implementation.
d. Weather	Weather stable, winds light and predictable, no frontal activity.	Weather slightly variable, winds present but light, occasional gusts, no frontal activity.	Weather highly Variable, winds near Prescriptive limits, Gusts prevalent, Frontal activity Possible.	Little impact on implementation.	Weather variation Will require Mitigation actions Involving additional Resources.	Weather will serve as a major influence on organization, personnel qualifications, and specific implementation actions.
e. Topography	Low variability in slope and aspect.	Some variability in slope and aspect, will affect fuel moisture and fire behavior.	High variability in Slope and aspect, Major implications on fire behavior and must be considered in prescription development and implementation.	Little influence on burn implementation.	Consideration of Topography during Planning process is Necessary.	Topography will necessitate mitigation actions to be developed and firing patterns and ignition methods to be modified to reduce impacts.

2. Agency Values						
a. Ecological and Environmental Considerations	Fire poses little threat to cause adverse effects or long-term disturbances to natural resource values. No T and E species or critical habitat.	Fire poses moderate threat of adverse effects on natural resources and may cause short- to mid-term alterations or inconveniences such as air quality. Small amounts of T and E species present.	Fire poses high Potential for adverse Effects to natural Resource values or to cause long-term degradations in air quality. Some T and E species present And/ or critical Habitat.	Low probability for adverse impacts and little need for mitigation actions.	Mitigation actions May need to be Developed to Ensure desirable Outcomes. Some Short- term effects May have to be Accepted.	Prescribed Fire Plan must address mitigation actions to prevent undesirable outcomes.
b. Social and Cultural Values	No known social or cultural values in or adjacent to the project area.	Features of social or cultural value have been identified in and adjacent to the project area. Mitigation measures can be accomplished.	High social or Cultural values have Been identified in or Adjacent to the Project area. Mitigation actions Are difficult to Accomplish.	Severe fire behavior or fire outside the unit would not damage the identified values.	Severe fire Behavior or fire Outside the unit Poses potential for Moderate damage to special values. Concerned parties Are aware and Supportive of the Project.	Excessive fire severity or fire outside the unit will have adverse effects (substantial damage to or potential destruction of the special sites). Acceptance by concerned parties is low.
c. Project Duration and Logistics	Fire planned to be of short duration, logistical needs easily accommodated.	Fire planned to be of short to moderate duration, logistical needs pose some difficulty.	Fire planned to be of Moderate to long Duration, logistical needs create much difficulty in accomplishing.	No consequences because of duration or logistics.	Duration may Impact firefighters And public and Logistical needs Must be specifically Addressed.	Long duration fire necessitates greater information dissemination, mitigation to remove impacts to firefighters and the public, and logistical needs must be met or project postponed.
d. Smoke and Air Quality Management	Few smoke sensitive areas near project area. No potential scheduling conflicts with cooperators.	Multiple smoke sensitive areas, mitigation actions minimize impacts, low potential for scheduling conflicts.	Multiple smoke sensitive areas near burn area, mitigation actions unable to remove all impacts, duration increases impacts, high potential for scheduling conflicts.	No adverse smoke consequences.	Mitigation actions Must address Smoke impacts, And coordination is Required to confirm Scheduling.	Mitigation actions must be developed, regulatory agencies must concur, scheduling conflicts may restrict implementation.

Hazard Element	Hazard Probability			Potential Consequences		
	L	M	H	L	M	H
3. Public Values						
a. Land use values	No commercial or Agriculture activities near planned burn area.	Some commercial or agricultural activities near burn unit, some managed wildlands (recreation, timber, range values).	Planned burn directly adjacent to urban, commercial, and/ or agriculture areas.	No impacts from land use values.	Escaped fire onto nearby managed land causes some impacts to commercial values. Prescribed Fire Plan must consider Actions to prevent Fire movement onto Commercial and/ or Agriculture lands.	Escaped fire onto nearby managed land causes significant impacts to commercial values. Mitigation actions must reflect additional resource needs to protect urban, commercial, and/ or agriculture areas. If mitigation cannot be accomplished, burn must be postponed.
b. Dwellings	No permanent or part-time residences present in area.	Some residences ½ mile or less from burn area.	Planned burn is located in wildland-urban interface zone, permanent residences in close proximity.	No impacts from dwellings.	Plan must address Actions to ensure Adequate Protection of Residences.	Notification of all concerned homeowners, residents, and visitors, coordination with local fire protection organizations is needed, and mitigation actions must adequately address potential fire escapes.
c. Non-dwellings	No non- dwellings present.	Some outbuildings and non-residences ½ mile or less from burn area.	Commercial Structures in close Proximity to burn area.	No impacts.	Planning must Consider these Non- dwellings.	Planning and implementation must adequately address all measures to prevent any adverse impacts.

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#4B
Sugarloaf Prescribed Fire

PRESCRIBED FIRE RISK ANALYSIS WORKSHEET

Hazard Element	Hazard Probability			Potential Consequences			*Risk (Exhibit 4)
	L	M	H	L	M	H	
1. Environmental Data							
a. Seasonal severity	X			X			L
b. Fire Behavior	X			X			L
c. Fuels	X			X			L
d. Weather		X		X			M
e. Topography		X		X			M
2. Agency Values							
a. Ecological and Environmental Considerations	X			X			L
b. Social and Cultural Values		X			X		M
c. Project Duration and Logistics	X			X			L
d. Smoke and Air Quality Management		X			X		M
3. Public Values							
a. Land use values		X			X		M
b. Dwellings			X			X	H
c. Non-dwellings		X			X		M
4. Human Factors							
a. Firefighter		X			X		M
b. Public		X			X		M
c. Fire Management	X			X			L

APPENDIX#4C
Sugarloaf Prescribed Fire

PRESCRIBED FIRE RISK MITIGATION TABLE

Hazard Element	Risk	Mitigations / Controls Briefly explain what actions will be taken relative to each hazard element that will reduce the risk.	Residual Risk	Reference: In Prescribed Fire Plan
1. Environmental Data				
a. Seasonal Severity	**L**	_____	_____	_____
b. Fire Behavior	**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.	**L**	J. Prescribed Fire Prescription K. Ignition and Holding Actions
e. Topography	**M**	Firing patterns and ignition times will be adjusted dependent upon topography and observed fire behavior.	**L**	K. Ignition and Holding Actions
2. Agency Values				
a. Ecological and environmental considerations	**L**	_____	_____	_____
b. Social and Cultural values	**M**	Sufficient personnel, including a Type 1 or 2 structure engine and a Type 1 or 2 water tender will be on scene for a quick response to fire needs. Cooperating fire departments will be briefed so that all know their roles and responsibilities during the burn.	**L**	F. Organization I. Pre-burn Considerations K. Ignition and Holding Actions
c. Project duration and logistics	**L**	_____	_____	_____
d. Smoke and Air Quality Management	**M**	Firing operations will only occur when ventilation and wind direction will not lead to smoke impacts in the area.	**L**	K. Ignition and Holding Actions O. Smoke and Air Quality
3. Public Values				
a. Land use values	**M**	Attempts will be made to contact all park neighbors within one mile of the burn. If personal or telephone contact can not be accomplished, a “door hanger” advising of the planned burn will be left in a conspicuous place at the property.	**L**	P. Interagency Coordination and Public Notification

b. Dwellings	**H**	Sufficient personnel, including a Type 1 or 2 structure engine and a Type 1 or 2 water tender will be on scene for a quick response to fire needs. Cooperating fire departments will be briefed so that all know their roles and responsibilities during the burn.	**M**	F. Organization I. Pre-burn Considerations K. Ignition and Holding Actions
c. Non-dwellings	**M**	Sufficient personnel, including a Type 1 or 2 structure engine and a Type 1 or 2 water tender will be on scene for a quick response to fire needs. Cooperating fire departments will be briefed so that all know their roles and responsibilities during the burn.	**L**	F. Organization I. Pre-burn Considerations K. Ignition and Holding Actions
4. Human Factors				
a. Firefighter	**M**	Burn Boss will ensure that a complete safety briefing is provided for all assigned personnel. All standard wildland firefighter safety rules will be strictly enforced (ref. Fireline Handbook). Effects of smoke will be managed by limiting prolonged exposure for holding personnel as much as possible. Complete mitigation of smoke exposure hazard may not be possible.	**L**	N. Public and Personnel Safety
b. Public	**M**	The prescribed fire area will be closed to the public starting at 0800 the day of the burn. The Sunset Trail will be posted with information regarding the planned prescribed fire 24 hours prior to ignition. The Sunset Trail will be swept prior to ignitions to ensure it is clear of visitors.	**L**	N. Public and Personnel Safety
c. Fire Management	**L**	_____	_____	_____

APPENDIX#5A
Sugarloaf Prescribed Fire
Complexity Value Guide

COMPLEXITY ELEMENT	GUIDE TO COMPLEXITY VALUE		
	L	**M**	**H**
Life and Safety	• Safety issues are easily identifiable and mitigated	• Number of significant issues have been identified	• SOF1 or SOF2 required • Complex safety issues exist
Threats to Boundaries	• Low threat to boundaries • POI<50% • Boundaries naturally defensible	• Moderate threat to boundaries • 50<POI<70% • Moderate risk of slopover or spot fires • Boundaries need mitigation actions for support to strengthen fuel breaks, firelines, etc.	• High threat to boundaries • POI>70% • High risk of slopover or spot fires • Mitigation actions necessary to compensate for continuous fuels
Management Organization	• Span of control held to 3 • Single resource incident or project	• Span of control held to 4 • Multiple resource incident or project • Short-term commitment of specialized resources	• Span of control greater than 4 • Multiple branch, divisions or groups • Specialized resources needed to accomplish objectives • Organized management team (FUMT, IMT)
Political Concerns	• No impact on neighbors or visitors • No controversy • No media interest	• Some impact on neighbors or visitors • Some controversy, but mitigated • Press release issued, but no media activity during operations	• High impact on neighbors or visitors • High internal or external interest and concern • Media present during operations
Objectives	• Maintenance objectives • Prescriptions broad • Easily achieved objectives	• Restoration objectives • Reduction of both live and dead fuels • Moderate to substantial changes in two or more strata of vegetation • Objectives judged to be moderately hard to achieve • Objectives may require moderately intense fire behavior	• Restoration objectives in altered fuel situations • Precise treatment of fuels and multiple ecological objectives • Major change in the structure of 2 or more vegetative strata • Conflicts between objectives and constraints • Requires a high intensity fire or a combination of fire intensities that is difficult to achieve

COMPLEXITY ELEMENT	GUIDE TO COMPLEXITY VALUE		
	L	M	H
Fuels/Fire Behavior	• Low variability in slope & aspect • Weather uniform and predictable • Surface fuels (grass, needles) only • Grass/shrub, or early seral forest communities • Short duration fire • No drought indicated	• Moderate variability in slope & aspect • Weather variable but predictable • Ladder fuels and torching • Fuel types/loads variable • Dense, tall shrub or mid-serial forest communities • Moderate duration fire • Drought index indicates normal conditions to moderate drought; expected to worsen	• High variability in slope & aspect • Weather variable and difficult to predict • Extreme fire behavior • Fuel types/loads highly variable • Late serial forest communities or long-return interval fire regimes • Altered fire regime, hazardous fuel /stand density conditions • Potentially long duration fire • Drought index indicates severe drought; expected to continue
Air Quality Values to be Protected	• Few smoke sensitive areas near fire • Smoke produced for less than 1 burning period • Air quality agencies generally require only initial notification and/or permitting • No potential for scheduling conflicts with cooperators	• Multiple smoke sensitive areas, but smoke impact mitigated in plan • Smoke produced for 2-4 burning periods • Daily burning bans are sometimes enacted during the burn season • Infrequent consultation with air quality agencies is needed • Low potential for scheduling conflicts with cooperators	• Multiple smoke sensitive areas with complex mitigation actions required • Health or visibility complaints likely • Smoke produced for greater than 4 burning periods • Multi-day burning bans are often enacted during the burn season • Smoke sensitive class 1 air-sheds • Violation of state and federal health standards possible • Frequent consultation with air quality agencies is needed • High potential for scheduling conflicts with cooperators
Improvements to be Protected	• No risk to people or property within or adjacent to fire	• Several values to be protected • Mitigation through planning and/or preparations is adequate • May require some commitment of specialized resources	• Numerous values and/or high values to be protected • Severe damage likely without significant commitment of specialized resources with appropriate skill levels
Logistics	• Easy access • Duration of fire support is less than 4 days	• Difficult access • Duration of fire support between 4 and 10 days • Logistical position assigned • Anticipated difficulty in obtaining resources	• No vehicle access • Duration of support is greater than 10 days • Multiple logistical positions assigned • Remote camps and support necessary

COMPLEXITY ELEMENT	GUIDE TO COMPLEXITY VALUE		
	L	M	H
Natural, Cultural, and Social Values to be Protected	• No risk to natural, cultural, and/or social resources within or adjacent to fire	• Several values to be protected • Mitigation through planning and/or preparations is adequate • May require some commitment of specialized resources	• Numerous values and/or high values to be protected • Severe damage likely without significant commitment of specialized resources with appropriate skill levels
Tactical Operations	• No ignition or simple ignition patterns • Single ignition method used • Holding requirements minimal	• Multiple firing methods and/or sequences • Use of specialized ignition methods (i.e. terra-torch, Premo Mark III) • Resources required for up to one week • Holding actions to check, direct, or delay fire spread	• Complex firing patterns highly dependent upon local conditions • Simultaneous use of multiple firing methods and/or sequences • Simultaneous ground and aerial ignition • Use of heli-torch • Resources required for over one week • Multiple mitigation actions at variable temporal and spatial points identified. Success of actions critical to accomplishment of objectives • Aerial support for mitigation actions desirable/necessary
Interagency Coordination	• Cooperators not involved in operations • No concerns	• Simple joint-jurisdiction fires • Some competition for resources • Some concerns	• Complex multi-jurisdictional fires • High competition for resources • High concerns

APPENDIX#5B

Sugarloaf Prescribed Fire
PRESCRIBED FIRE COMPLEXITY RATING WORKSHEET

	Complexity Element	Complexity Value L	M	H
Primary Factors	1. Life and Safety	**X**		
	2. Threats to Boundaries		**X**	
	3. Management Organization		**X**	
	4. Political Concerns		**X**	
	SUBTOTAL OF PRIMARY FACTORS		**3**	
Secondary Factors	5. Objectives	**X**		
	6. Fuels and Fire Behavior	**X**		
	7. Air Quality Values		**X**	
	8. Improvements		**X**	
	9. Logistics	**X**		
	10. Natural, Cultural and Social Values		**X**	
	11. Tactical Operations	**X**		
	12. Interagency Coordination		**X**	
	SUBTOTAL OF SECONDARY FACTORS	**4**	**4**	
TOTAL COUNT OF COMPLEXITY VALUES		**5**	**7**	

QUALIFICATIONS DETERMINATION TABLE:

	Prescribed Fire Burn Boss Type 2 (RXB2)		Prescribed Fire Burn Boss Type 1 (RXB1)	
Primary Factors rated H"	Less than 2		2 or more	
	AND		OR	
Total Count rated "H"	Less than 4		4 or more OR	
	Minimum required on all prescribed fires.		When deemed appropriate by the agency administrator or unit Fire Management Officer.	
Prescribed Fire Burn Boss Level Indicated (check one):	RXB2	**X**	RXB1	

PREPARED BY: _____ DATE: _____

APPROVAL BY: _____ DATE: _____
Agency Administrator

REVIEWED BY: _____ DATE: _____
(Burn Boss immediately prior to burning)

APPENDIX #6

FIRE MODELING OUTPUTS (Fuel Model 9: Used in Holding Worksheet calculations)

Modules: Surface, Size Description: BUFF Standard FM9, 30% slope run

Fuel Model		9
Fuel Moisture		
1-h Moisture	%	5, 7, 9, 11
10-h Moisture	%	8
100-h Moisture	%	12
Live Herbaceous Moisture	%	
Live Woody Moisture	%	
Weather		
Midflame Wind Speed	mi/h	1, 3, 5, 7, 9
Direction of Wind Vector (from upslope)	deg	0
Terrain		
Slope Steepness	%	30
Fire		
Fire Size at Report	ac	.1
Suppression		
Suppression Tactic		Rear
Line Construction Offset	ch	.1
Resource Name		j
Resource Line Production Rate	ch/h	63
Resource Arrival Time	h	.1
Resource Duration	h	1

Run Options

Calculations are only for the direction of maximum spread.
Fireline intensity, flame length, and spread distance are always for the direction of the spread calculations.
Wind and spread directions are degrees clockwise from upslope.
Wind direction is the direction the wind is pushing the fire.

Outputs

Rate of Spread (maximum) (ch/h)
Heat per Unit Area (Btu/ft2)
Fireline Intensity (Btu/ft/s)
Flame Length (ft)
Direction of Maximum Spread (from upslope) (deg)
Maximum Wind Exceeded?
Time from Report (h)
Contain Status
Contained Area (ac)
Fireline Constructed (ch)

BUFF FM9

Rate of Spread (maximum) (ch/h)

1-h Moisture	Midflame Wind Speed mi/h				
%	1.0	3.0	5.0	7.0	9.0
5	2.8	5.8	10.9	17.6	26.0
7	2.3	4.9	9.2	15.0	22.0
9	2.1	4.4	8.2	13.3	19.5
11	1.9	4.0	7.5	12.1	17.8

Heat per Unit Area (Btu/ft2)

1-h Moisture	Midflame Wind Speed mi/h				
%	1.0	3.0	5.0	7.0	9.0
5	390	390	390	390	390
7	355	355	355	355	355
9	335	335	335	335	335
11	326	326	326	326	326

Flame Length (ft)

1-h Moisture	Midflame Wind Speed mi/h				
%	1.0	3.0	5.0	7.0	9.0
5	1.8	2.5	3.3	4.2	5.0
7	1.6	2.2	3.0	3.7	4.4
9	1.5	2.0	2.7	3.4	4.1
11	1.4	1.9	2.6	3.2	3.9

Direction of Maximum Spread (from upslope) (deg)

1-h Moisture %	Midflame Wind Speed mi/h 1.0	3.0	5.0	7.0	9.0
5	0	0	0	0	0
7	0	0	0	0	0
9	0	0	0	0	0
11	0	0	0	0	0

Maximum Wind Exceeded?

1-h Moisture %	Midflame Wind Speed mi/h 1.0	3.0	5.0	7.0	9.0
5	No	No	No	No	No
7	No	No	No	No	No
9	No	No	No	No	No
11	No	No	No	No	No

Time from Report (h)

1-h Moisture %	Midflame Wind Speed mi/h 1.0	3.0	5.0	7.0	9.0
5	0.2	0.2	0.3	0.4	1.1
7	0.2	0.2	0.2	0.3	0.6
9	0.2	0.2	0.2	0.3	0.5
11	0.2	0.2	0.2	0.3	0.4

Contain Status

1-h Moisture %	Midflame Wind Speed mi/h 1.0	3.0	5.0	9.0
5	Contained	Contained	Contained	Contained
7	Contained	Contained	Contained	Contained
9	Contained	Contained	Contained	Contained
11	Contained	Contained	Contained	Contained

Contained Area (ac)

1-h Moisture %	Midflame Wind Speed mi/h 1.0	3.0	5.0	7.0	9.0
5	0.2	0.4	0.7	1.7	8.8
7	0.2	0.3	0.5	1.1	3.3
9	0.2	0.3	0.5	0.9	2.1
11	0.2	0.3	0.4	0.7	1.6

Fireline Constructed (ch)

1-h Moisture %	Midflame Wind Speed mi/h 1.0	3.0	5.0	7.0	9.0
5	5.6	7.3	11.0	19.9	60.9
7	5.4	6.8	9.6	15.5	32.5
9	5.2	6.4	8.8	13.4	24.2
11	5.2	6.3	8.4	12.2	20.4

Number of Resources Used

1-h Moisture %	Midflame Wind Speed mi/h 1.0	3.0	5.0	7.0	9.0
5	1	1	1	1	1
7	1	1	1	1	1
9	1	1	1	1	1
11	1	1	1	1	1

```
          SPOT-LINKED-TO-DIRECT
          1—FIREBRAND SOURCE--------    3—WIND-DRIVEN SURFACE FIRE
          2—MEAN COVER HEIGHT, FT --    0.0
          3—20-FOOT WINDSPEED, MI/H     2.5   7.5  12.5  17.5  22.5
          FROM DIRECT:
          FROM MIDFLAME WIND =      1.0   3.0   5.0   7.0   9.0
          & EXPOSED FUEL WAF =      0.4
          4—RIDGE/VALLEY ELEVATION
          DIFFERENCE, FT --    0.0
          12—FLAME LENGTH, FT -------    OUTPUT FROM DIRECT. RANGE=    1.3 TO
5.0

          MAXIMUM SPOTTING DISTANCE, MI    HEAD FIRE  FM 9           (V4.1)
          1-HR     I       MIDFLAME WIND, MI/H
          MOIS     I
          I     1.0    3.0    5.0    7.0    9.0
          (%)        I
          5.0      I     0.0    0.1    0.2    0.2    0.3
          I
          7.0      I     0.0    0.1    0.1    0.2    0.3
          I
          9.0      I     0.0    0.1    0.1    0.2    0.3
          I
          11.0      I     0.0    0.1    0.1    0.2    0.3
          I
          13.0      I     0.0    0.1    0.1    0.2    0.2
```

Maximum Probability of Ignition: 50%

MODULES: Surface, Size

Description		Backing Fire FM9
FUEL/VEGETATION		
Fuel Model		9
FUEL MOISTURE		
1-h Moisture	%	5, 7, 9, 11
10-h Moisture	%	8
100-h Moisture	%	12
Live Herbaceous Moisture	%	
Live Woody Moisture	%	
WEATHER		
Midflame Wind Speed	mi/h	1.0, 3.0, 5.0,
Direction of Wind Vector (from upslope)	deg	0
TERRAIN		
Slope Steepness	%	30
FIRE		
Spread Direction (from upslope)	deg	180
TIME		
Elapsed Time	h	1

OUTPUT VARIABLES

- Rate of Spread (ch/h)
- Heat per Unit Area (Btu/ft2)
- Fireline Intensity (Btu/ft/s)
- Flame Length (ft)
- Maximum Wind Exceeded?
- Direction of Maximum Spread (from upslope) (deg)
- Area (ac)
- Perimeter (ch)
- Backing Spread Distance (ch)

Backing Fire FM9

Rate of Spread (ch/h)

Midflame Wind Speed mi/h	1-h Moisture % 5	7	9	11
1.0	0.4	0.3	0.3	0.3
3.0	0.5	0.4	0.4	0.3
5.0	0.5	0.5	0.4	0.4
7.0	0.6	0.5	0.4	0.4
9.0	0.6	0.5	0.5	0.4

Backing Fire FM9

Heat per Unit Area (Btu/ft2)

Midflame Wind Speed mi/h	1-h Moisture % 5	7	9	11
1.0	390	355	335	326
3.0	390	355	335	326
5.0	390	355	335	326
7.0	390	355	335	326
9.0	390	355	335	326

Backing Fire FM9

Fireline Intensity (Btu/ft/s)

Midflame Wind Speed	1-h Moisture %			
mi/h	5	7	9	11
1.0	3	2	2	2
3.0	3	3	2	2
5.0	4	3	2	2
7.0	4	3	3	2
9.0	4	3	3	3

Backing Fire FM9

Flame Length (ft)

Midflame Wind Speed	1-h Moisture %			
mi/h	5	7	9	11
1.0	0.7	0.6	0.6	0.6
3.0	0.8	0.7	0.6	0.6
5.0	0.8	0.7	0.7	0.6
7.0	0.9	0.8	0.7	0.7
9.0	0.9	0.8	0.7	0.7

Backing Fire FM9

Maximum Wind Exceeded?

Midflame Wind Speed mi/h	1-h Moisture % 5	7	9	11
1.0	No	No	No	No
3.0	No	No	No	No
5.0	No	No	No	No
7.0	No	No	No	No
9.0	No	No	No	No

Backing Fire FM9

Area (ac)

Midflame Wind Speed mi/h	1-h Moisture % 5	7	9	11
1.0	0.5	0.4	0.3	0.2
3.0	1.6	1.2	0.9	0.8
5.0	4.3	3.1	2.4	2.0
7.0	9.2	6.6	5.2	4.3
9.0	16.7	12.0	9.4	7.9

Backing Fire FM9

Perimeter (ch)

Midflame Wind Speed mi/h	1-h Moisture % 5	7	9	11
1.0	8.3	7.1	6.3	5.7
3.0	15.4	13.1	11.6	10.6
5.0	26.6	22.5	20.0	18.2
7.0	41.0	34.8	30.8	28.1
9.0	58.4	49.5	43.8	40.1

Backing Fire FM9

Backing Spread Distance (ch)

Midflame Wind Speed mi/h	1-h Moisture % 5	7	9	11
1.0	0.4	0.3	0.3	0.3
3.0	0.5	0.4	0.4	0.3
5.0	0.5	0.5	0.4	0.4
7.0	0.6	0.5	0.4	0.4
9.0	0.6	0.5	0.5	0.4

APPENDIX #7

AGENCY ADMINISTRATOR
GO/NO-GO PRE-IGNITION APPROVAL

Prescribed Fire Name: Sugarloaf RX Date:_____

Instructions
The Agency Administrator's Go/No-Go Pre-Ignition Approval is the first of two GO/NO-GO decisions that must be completed before a prescribed fire can be implemented. The Agency Administrator's Go/No-Go Pre-Ignition Approval is the final management approval prior to execution of the prescribed fire and evaluates whether compliance requirements, prescribed fire plan elements, and internal and external notifications have been completed. The Agency Administrator's Go/No-Go Pre-Ignition Approval is valid for 30 days. If ignition of the prescribed fire is not initiated prior to expiration date determined by the Agency Administrator, a new approval will be required.

Key Elements
1. Is the prescribed fire plan up to date?
Hints: changes, amendments, seasonality.

2. Have all compliance requirements been completed?
Hints: cultural, threatened and endangered species, smoke management.

3. Is risk management in place and the residual risk acceptable?
Hints: Prescribed Fire Mitigation Table and Prescribed Fire Complexity Rating Guide completed with rationale and mitigations identified.

4. Will all elements of the prescribed fire plan be met?
Hint: preparation work, mitigation, weather, organization, prescription.

5. Have all internal and external notifications and media releases been completed?

6. Are key park staff fully briefed, and understand the implementation of the prescribed fire?

7. Other?

Recommended by: _____ Date _____
FMO/Burn Boss

Approved by: _____ Date_____
Park Superintendent

Approval expires: _____ (May not be more than 30 days after approved date.)
Date

APPENDIX #8

Prescribed Fire Operations
GO/NO-GO Checklist

Prescribed Fire Name: Sugarloaf RX Date:_____

	YES	NO
- Has Agency Administrator GO/NO-GO Pre-Ignition Approval been approved?		
Narrative/Comments:		
- Are current and forecasted weather conditions favorable for execution of the prescribed fire? (hints: spot weather, dialogue with fire weather forecaster, climatological analysis complete)		
Narrative/Comments:		
- Have all key personnel listed on the Incident Action Plan (IAP) been briefed with an opportunity to give feedback? (hints: safety, objectives, assignments)		
Narrative/Comments:		
- Has all pre-burn preparedness work been completed? (hints: fuels and weather observations, signs, closures, smoke management, unit preparation)		
Narrative/Comments:		
- Are all equipment and supplies required in the prescribed fire plan in place and functional? (hints: pumps, radios, ignition devices, hose lays, vehicles, aviation, etc.)		
Narrative/Comments:		
- Are all holding resources described in the IAP committed and can be on-scene within specified time frames?		
Narrative/Comments:		
- Are all personnel certified for their assigned positions? (hints: Check Red Cards)		
Narrative/Comments:		
- There are no extenuating circumstances that preclude successful completion of this project? (hints: regional & national preparedness, unusual circumstances, unusual drought, outstanding issues, other fires, recent fire escapes, etc.)		
Narrative/Comments:		

	YES	NO
IF ALL BOXES HAVE BEEN CHECKED “YES” YOU MAY PROCEED WITH THE TEST FIRE.		
TEST FIRE DOCUMENTATION AND RESULTS:		
- Observed Fire Behavior within Prescription?		
Narrative/Comments:		
- Test fire was successful?		
Narrative/Comments:		
- Are all prescription parameters in the prescribed fire plan favorable for implementing the project? (hints: each plan element, pre-burn, smoke management, cooperator coordination)		
Narrative/Comments:		
IF LAST 3 BOXES ARE ALL “YES”, YOU MAY PROCEED WITH PRESCRIBED FIRE.		

Signatures

RX BURN BOSS:	IGNITION SPECIALIST:
HOLDING OPERATIONS:	DATE:

APPENDIX #9

IAP/BRIEFING GUIDE

I. Present Handouts
- **A. Map of Burn**
- **B. Organization Chart**

II. Describe Area Of Burn
- **A. Vegetation Type**
- **B. Acreage**
- **C. Slope**
- **D. Roads/Access**
- **E. High Values at risk**
- **F. Water Sources-natural, tanker and hydrants**
- **G. Natural/Manmade barriers**

III. Weather Forecast- Use National Weather Service "Forestry" and "Smoke Management" Forecasts for applicable Zones. Use "Fire Weather Special Request" Form if updates are deemed necessary.
- **A. Wind direction and Speed**
- **B. Relative Humidity**
- **C. Temperatures**
- **D. Predicted Changes**

Organization
- **A. Organization Chart – Location on Map**
- **B. Equipment - tankers, refueling, etc.**
- **C. Fire Monitoring**
- **D. Any other resources**
- **E. Transition Fire Plan**

IV. Firing Sequence
- **A. Test fire**
- **B. Type and Sequence of Firing**

V. Radio Assignments
- **A. Given Day of Burn**
- **B. Communication Plan**

VI. Safety
- **A. Winds**
- **B. Escape Routes and Safe Zones**
- **C. Hazards – crew and equipment (wildlife, research plots, trash, etc.)**
- **D. Personal Protective equipment (PPE)**
- **E. Refueling – fuel handling, gloves, spilling, etc.**
- **F. Activation of emergency and headlights on major roads**
- **G. Other public safety considerations**

VII. Comments and Questions Period

APPENDIX #10

ADEQUATE HOLDING RESOURCES WORKSHEET

Project Name: Sugarloaf RX Fuel Models Inside Project Area: 9

Prepared By/Date: Tony Collins 9/4/06 Fuel Models Outside Project Area: 9

Characteristics	Output type	Modeling Predictions Inside Project Area	Modeling Predictions Outside Project Area	Unit of Measure
CRITICAL FIRE INPUTS	1 Hr Fuel Moisture		5	%
	Wind Speed		9	MPH
	Slope		30	%
KEY FIRE BEHAVIOR OUTPUTS	Rate of Spread		26.0	ch/hr
	Fire line Intensity		186	BTU/ft/sec
	Flame Length		5.0	Feet
	POI		50	%
	Spotting Distance		0.3	Miles
	Scorch Height			Feet
FIRE SIZE	Projection Time		1	Hours
	Forward Spread		26	Chains
	Backward Spread		.6	Chains
FIRE CONTAINMENT	Method Of Attack		Rear	Head/Rear
	Max Escape Target		10	Acres
	Max Containment Time		1	Hours
	Total Line Building Rate		63	Ch/hr

1. Choose worst case total line building rate above that is needed for containment of slop over or spot fire : 63h/hr
2. Estimate potential number spot fires or slop overs at on time: 1
3. TOTAL LINE BUILDING RATE NEEDED (multiply line 1 times line 2) 63ch/hr
4. Production Rates: Ease of Access: POOR-FAIR-**GOOD**-EXCELLENT (circle)
   Fuel Resistance to Control LOW- **MODERATE**-HIGH-EXTREME (circle)

On Site Organization	Total # Planned On Burn	Total # Available for Spot Fire or Slop Over Control		Line Building Production Rates		Spot Fire or Slop Over Line Building Capacity
Overhead	3	0	X	8	ch/hr	0
Firing Crew	4	4	X	8	ch/hr	32
Holding	5	5	X	8	ch/hr	40
Other Personnel			X		ch/hr	
Engine (Crew of 2)	2	2	X	25	ch/hr	50
Dozer (Size)			X		ch/hr	
Other Equipment			X		ch/hr	

5. TOTAL SLOP OVER OR SPOT FIRE LINE BUILDING RATE CAPACITY 122ch/hr

6. DETERMINATION OF ADEQUATE HOLDING RESOURCES (Line 5 minus Line 3) +59ch/hr*

If number on line 6 is positive then adequate holding forces will be available. If number is negative, more holding resources are needed to control potential spot fires or slopovers.

*Contingency Resources were not computed into the line production equation since the minimum allowance was far exceeded with resources positioned on the fire line. The production rates for the contingency resources are also currently unknown.

APPENDIX #11
POST-PROJECT EVALUATION

Instructions for Completion of Post-Project Evaluation Form

This form is to be completed and submitted for review within 30 days of declaring the project complete.
Block 1 Self-explanatory
Block 2 Copy of the Project Objectives as listed in the Project Plan.
Block 3 Give quantitative results of how well objectives were met, i.e. % of 1 hour and 10 hour fuels removed, % of burn area with fuels reduced, % of area with acceptable/unacceptable scorch, etc.
Block 4 Give a short narrative of problems encountered and suggestions for improving or refining operations and prescriptions i.e. firing pattern, equipment limitations, drought index, effectiveness of barriers.
Block 5 Self-explanatory - for providing feedback to the Program

(Block 1)
Individual Leading Evaluation:_____

Project Name: _____

Acres Treated: _____

Fire Number: _____

Total Cost: _____

Cost/Acre: _____

(Block 2)
Objectives:

(Block 3)
Results:

(Block 4)
Problems Encountered, Methods to Improve Next Operation:

POST-PROJECT EVALUATION (continued)

Review & Signature:

Burn Boss:_____

Comments:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

FMO:_____

Comments

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

APPENDIX #12

PRESCRIBED FIRE MONITORING FORM

WEATHER OBSERVATIONS

FIRE NAME: Sugarloaf RX
LOCATION:

DATE:
OBSERVER:

LOCATION	ELEV	TIME	WIND DIR	WIND SPEED	DRY BULB	WET BULB	RH/DP	ASPECT	FDRM	PIG	REMARKS

FIRE BEHAVIOR/SMOKE OBSERVATIONS

TIME	LOCATION	ROS	ROS DIR	FL	FZD	FUEL MODEL	% SHADING	MIX HGT	DIR	COLOR	VISIBILITY	5% SLOPE

REMARKS:

APPENDIX #13
Job Hazard Analysis

U.S. Department of Interior	1. WORK PROJECT/ACTIVITY	2. LOCATION	3. UNIT
National Park Service	**Prescribed Burning**	**State of Arkansas**	**AR Group NPS Units**
JOB HAZARD ANALYSIS (JHA)	4. NAME OF ANALYST	5. JOB TITLE	6. DATE PREPARED
Prescribed Burning	**Jim Mattingly**	**Buffalo National River FMO**	**April 2003**

7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE
***Prescribed burning**	**Vehicle travel to project**	**Be aware of commercial vehicle traffic, drive with lights on, drive defensively, use seat belts.**
*	**Public Traffic**	**Allow extra time, use seat belts, drive defensively, keep alert.**
*	**Wildlife**	**Allow extra time, know and watch for used wildlife crossings, stay alert.**
*	**Road Conditions**	**Clear road of objects (rocks, logs, low hanging limbs, etc). Use chains when needed, have traction tires during hazardous seasons: winter, spring and fall. Do not put vehicle in a hazardous situation, drive at speeds that will allow you to stop in ½ your sight distance. All equipment secured in pickup beds prior to transport.**
*	**Vehicle at Project Site**	**Park safe distance off traveled road, turn off lights, leave keys in ignition, roll up windows, chock block wheels and properly store personal gear and/or project equipment in parked vehicles**
*	**Environmental: Weather**	**Heat exposure: wear protective clothing, drink plenty of water, rest and pace yourself. High Winds: Wear hard hats, eye protection, be alert to obstacles around you, watch for flying debris. Cold: Recommend brush jacket for fireline duty during cold periods. Snake bites: Be aware of hazardous situations, know first aid, carry first aid equipment, be alert. Bee Stings: Be aware of the hazardous situations, carry bee sting kit, know who is allergic and know first aid. Poison plants: Wear proper clothing, carry first aid kit and know how to use it, know what to do if contaminated, have soap and water available. Ticks: Spray cuffs with insecticide or secure loose openings in cloths. Document bites.**
*	**Night driving**	**Use drivers who have not worked all day or all night if possible, if not rotate often. Wear seat belts, avoid driving alone if possible DOUBLE UP. Be alert.**
*	**Public in Project area**	**Post prescribed burning signs on all access routes to burn area. Do newspaper releases prior to burning season, explaining the program and giving location of areas planned for burning.**
*	**Smoke**	**Workers need to limit their exposure to smoke, rotate people in and out of smokey areas. Prior to start of project, all workers will be informed of the health hazard associated with smoke inhalation. Records of any accidents, person's name and number of hours worked will be kept as per managing competing and unwanted vegetation environmental impact statement.**
*	**ATV operation**	**Follow established guidelines for ATV use, including the use of DOT-approved helmet, gloves, leather boots. Secure all loose items and equipment with bungi cords or P-cord. Ensure that no fuel leakage occurs from transported equipment. No smoking while operating an ATV**
*	**Firing equipment**	**Ensure all agency and DOT standards for the transport of HAZMAT are followed. Wear PPE during use. Ensure proper fuel mix ratios. Refuel devices away from flame sources.**

APPENDIX #14

NOTIFICATIONS

Fire management staff will notify the following:

Arkansas Forestry Commission Dispatch	501-332-3000/4445
AOICC	501-321-5231
MWRO (Connie Burns)	402-221-3476
National Weather Service – Little Rock	501-384-0308/3955

Notifications are to be made the day of the burn or the day before by either the Burn Boss, Fire Program Clerk, Fire Management Officer or designated person. Notifications will be recorded into dispatcher's log and on the original burn plan with the time, date and agency/person notified.

Contact Numbers for Emergency ONLY

RESOURCE	CONTACT PHONE NUMBER	LOCATION
BAPTIST HOSPITAL-MED FLIGHT	501-202-1000	Little Rock, AR
NATIONAL PARK MEDICAL CENTER AMBULANCE	501-620-2400	Hot Springs
NATIONAL PARK MEDICAL CENTER	501-620-2400	Hot Springs
ARKANSAS CHILDREN'S HOSPITAL BURN TREATMENT UNIT	501-364-1323	Little Rock, AR

APPENDIX #14 (continued):

NOTIFICATION CHECKLIST

AGENCY/PERSON CONTACTED	DATE	TIME	CONTACTED BY

COMMENTS:

NATIONAL PARK SERVICE EDITED VERSION
UNITED STATES DEPARTMENT OF THE INTERIOR
DI-1202, INDIVIDUAL FIRE REPORT

1. STATUS CODE 2. REPORTING AGENCY 3c. YEAR 3d. FIRE NUMBER

4. FIRE TYPE PROTECTION TYPE 5. GENERAL CAUSE SPECIFIC CAUSE 6. PEOPLE

8. STATISTICAL DATA

	8a. STATE	8b. OWNER	8c. VEGETATION	8d. ACRES BURNED

9. AGENCY DATA

9a. FIRE NAME

9b. AREA NAME

9f. OWNER

9g. FY. YR.

9h. FISCAL DATA

9j. PROBLEM CLASS

9k. COORDINATE TYPE (L/L, UTM):

L/L AS DD; DD:MM.MMM; DD:MM:SS.S

Map Datum: LATITUDE: LONGITUDE:

UTM Z E N

10. SUPPRESION DATA

	DATE	TIME	TYPE	AMOUNT	ACRES
10a. DISCOVERY / START					
10b. INITIAL ATTACK			1 2 3 4	1 2 3 4	
10c. CONTROL/COMPLETE					
10d. DECLARED OUT					

11. SITE DATA

11a. TOPOGRAPHY	11d. ELEVATION	11h. BURNING INDEX
11b. ASPECT	11e. STATION	11i. ADJ CLASS
11c. SLOPE	11f. MSGC	

12. PREVENTION DATA

12k. DAY OF WEEK 12l. WAS FIRE INVESTIGATED (Y / N) 12m. FIRE CAUSE SUSPECT, KNOWN OR UNKNOWN (K / U)

12n. SUSPECT = RESIDENT, TRANSIENT OR UNKNOWN (R / T / U)

NOTE: If you use 2 through 9 for "General Cause" and 30 for "Specific Cause" in Block #5, please explain the cause in general terms in the "Remarks" section.

13. PRESCRIBED FIRE DATA

13c. Plot Obj:
13d. Fire Typ:
13f. Fuel Model:
13l. Project Number:
13m. PNF Complexity
Escape :
Values :
Fuels/Behavior :
Duration :
Air Quality :

13n. Size Classes	13e. Cost/Acre: Pre-burn Tons/acre	Percent Consump	Post-burn Tons/acre
Shrub/Herb		%	
Zero - 1.0		%	
1.1 - 3.0		%	
3.1 - 9.0		%	
Over 9 Inches		%	
Lit/Duff Inch		%	

(Total Emissions Emitted in Tons) PM10 : PM2.5 :

20. FIRE ECOLOGY

	20a. Fire Regime Group	20b. Pre-Fire Condition Class	20c. Post-Fire Condition Class	20d. Acres	

21a. Is this a Wildland Urban Interface (WUI) Fire? Y/N: __

22a. Total number of Homes/Significant Structures Burned: _____

23a. Gross Fire Suppression Cost: _____

Was there an Escape? Y/N: __
(Type 48 or 49 Rx fire only)

Attach a topography map of the fire.

Remarks:

Submitted by (Signature)		Approved by (Signature)	
Title	Date	Title	Date