Instructions for UAS/Manned MASP

Pages 1-7 require total completion for regional office and state office review and approval signatures (page 1 through aerial hazard analysis and map). Pages 8-10, which includes, pilot information, flight following, frequencies, MTR's, MOA's, crash rescue and medivac plans, may be completed as information becomes available. Users may utilize additional forms as needed in this document's appendices. Partial completion of these pages is recommended during the submission process and all pages **shall** be completed prior to mission start.

Mission Planning sheets (appendix B) will be conducted for the day of mission details. FRAT or GAR risk assessment tools will be used to ensure day of risk is equal to or less than the what is established for the approved plan.

RISK MATRIX INSTRUCTIONS

Risk assessment processes and risk decision approvals follow the guidelines set forth in the Interagency Aviation Risk Management Workbook, aka the "yellow book," National Aviation Safety Management System Guide, and the Operation Risk Management Guide. The risk outcomes on the risk assessment matrix (page 11) have been incorporated into the risk assessment worksheet's drop-down menus. Risk Assessment Category (RAC) outcomes are categorized as follows:

Low	Moderate	High	Extremely High
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In no case will the overall risk of the mission be less than the highest specific factor. (Example: One extremely high, one high, and two moderate threats results in an <u>extremely high</u> risk assessment category outcome).

SIGNATURES

Route all MASP's through the Unit Aviation Officer or Aviation Manager for Regional Office review. Signature blocks on page 2 are listed in the order required for MASP approval. The MASP's will be routed back down through the Unit Aviation Officer or Aviation Manager for line officer approval.

The Regional Aviation Safety Manager (RASM) and the Aviation Officer/Manager will sign with digital signatures. Line officer signatures may sign with a wet signature or digital signature at their discretion.

RETENTION AND FILING OF PLAN

MASPs that have been reviewed by the Regional Office will remain in Pinyon and archived by fiscal year. These plans are accessible by the Regional Office, State Office, Unit/Forest Aviation Officers, and select aviation managers.

<u>Unit</u> :				Low	Moderate	High	Extremely High
Sub-Unit:							
Age	ncy(s) Partic	ipating in Pr	oject Mission				
	FS 🗌	BLM	NPS 🗌		<u>Calenda</u> ı	r Year	
	FWS 🗌	ВІА 🗌					
	STATE	OTHER _					
Fixed	Aircraft Typ Rotor	<u>e</u> UAS	Anticipated Start	Anticipate	ed End Date	MASP	Objectives
- Incu	KOLOI	UAS	Date	7			Objectives
						Training Resource Fire LEI Mission	
Ple	ease add you	ur name and	title below		ature O need to sign		Date
Prepared I	oy:						
Reviewed	by: (Zone FA	O) Unit Leve	ıl:				
Reviewed	by HOS:						
Reviewed	by UAS PM:						
Reviewed	by: (REQUIR	ED) RASM:					
Reviewed	By: (REQUIF	RED) RAO:					
Approved	by: (<mark>Final</mark>) Li	ne Officer:					

Participant's qualifications and responsibilities shall be verified and discussed during daily briefing

Project Aviation Manager Name	Alternate Project Aviation Manager Name
(IAW IAT Guide):	(IAW IAT Guide):
<u>Pro</u>	<u>iect Name</u>
<u>Description and Location:</u>	
Objectives:	
Aircraft Justification:	

	nat apply, if name Leave	e text fields	blank if un	known		
•	rators require an	annual appr			except DOJ airc	raft
Cooperator:			Agen	cy:		
Vendor:		Military:				
Other:						
Rotor Wing:	Type One:	Туј	pe Two:		Type Three:	
	onal requirements wire strike protec	-		_		
Fixed Wing:	Single Engine	Mul	ti-Engine			
Document mission cabin, radio pa	needs for turbine ackage, etc. in the	_			-	•
<u>UAS:</u>	(Appendix D)	Fixed Wing	<u>ç:</u>	Rotor V	Ving:	
Aircraft Make and M Planning Sheet. All in Unknown CWN/OnC	formation shall be		rior to miss		available or utili Vendor:	ize the Mission
FAA Registration #:		Make:			Model:	
Carder for Mission:		Card Expi	ration Date:			
Aircraft Color Schem	e:					
·	CWN helicopter information attained after hiring process, ensure CWN inspection sheet has been completed.					
Procurement and Conformation.	ost Information: (Check unkn	own if un	able to pr	rovide accurate	e or estimated
Procurement Type:			Estimate	d Flight Ho	our Cost:	
Estimated Flight Hou	ırs:		Estimated	d Miscellai	neous Cost(s):	
Charge Code:						

UAS Pilot Information: Only P1	Expiration Date require	ed.
Pilot Name (P1): PIC	C Primary	Pilot Phone Number:
VO Name (P2): Co-Pi	lot/Relief	Pilot Phone Number:
Pilot Carded for Mission:		Pilot Card (P1) Expiration Date:
		Pilot Card (P2) Expiration Date:
UAS Basic Remote Pilot	P1 P2	
UAS P (Fire)	P1 P2	
UAS Aerial Ignition (PSD)	P1 P2	
BLOS/ELOS UAS		
5103/1103 GA3	P1 P2	

Forest - FM Receive:	FM Transmit:		RX:		
			TX:		
A/G - FM Receive:	FM Transmit:		RX:		
			TX:		
A/G - FM Receive:	FM Transmit:		RX:		
			TX:		
A/G - FM Receive:	FM Transmit:		RX:		
Project - FM Receive:	FM Transmit:		TX:		
Project - Pivi Neceive.	rivi ITalisillit.		TX:		
AM Receive:	AM Transmit:		RX:		
			TX:		
ndor Name:	Aircraft Model:	Aircraft N	/lake:	FAA	
viation Manager:	Date:	Pilot:		Date	. .
iation Manager:	Date:	Pilot:		Date	:
riation Manager: Participants Name		Pilot:		Date	:: Training
iation Manager: Participants Name				Date	
				Date	Training
				Date	Training
				Date	Training
				Date	Training

MOA/MRT Information

MOA/MTR Name	Lower Limit	Upper Limit	Activation	
Hours	•	_		
Communications		Contact		
MOA/MTR Name	Lower Limit	Upper Limit	Activation	
Hours				
Communications		Contact		
MOA/MTR Name	Lower Limit	Upper Limit	Activation	
Hours				
Communications		Contact		

Aviation Officer or Aviation Manager will coordinate Temporary Flight Restrictions (TFR) with dispatch if needed.

MOA/MRT Information

MOA/MTR Name	Lower Limit	Upper Limit	Activation	
Hours	•		•	
Communications		Contact		
MOA/MTR Name	Lower Limit	Upper Limit	Activation	
Hours				
Communications		Contact		
MOA/MTR Name	Lower Limit	Upper Limit	Activation	
Hours				
Communications		Contact		

MOA/MRT Information

MOA/MTR Name	Lower Limit	Upper Limit	Activation	
Hours	•		•	
Communications		Contact		
MOA/MTR Name	Lower Limit	Upper Limit	Activation	
Hours				
Communications		Contact		
MOA/MTR Name	Lower Limit	Upper Limit	Activation	
Hours				
Communications		Contact		

- Risk assessment must be completed prior to mission approval
- Risk assessment hazards shall be reassessed prior to starting the mission, see FRAT/GAR
- Ensure appropriate management level for approval
- See the National Aviation Safety Management System Guide, Yellow Book, and ORM guide for additional guidance with Risk Assessments
- This Risk Assessment does not negate the requirement to complete a FRAT/GAR prior to flight.

RISK ASSESSMENT		PROBABILITY					
		Likelihood of Mishap if Hazard is Present					
		MATRIX	Almost Certain (Continuously experienced)	Likely (Will occur frequently)	Possible (Will occur several times)	Unlikely (Remotely possible but not probable)	Rare (Improbable; but has occurred in the past)
	Occurs	Catastrophic (Death, Loss of Asset, Mission Capability or Unit Readiness)					
RITY		Critical (Permanent Disabling Injury or Damage, Significantly Degraded Mission Capability or Unit Readiness)					
SEVERITY	Consequence if Mishap	Moderate (Non-Permanent Disabling Injury or Damage, Degraded Mission Capability or Unit Readiness)					
	O)	Negligible (Minimal Injury or Damage, Little or No Impact to Mission Capability or Unit Readiness)					

RAC Value	Risk Category	Action Required
	Extremely High	Stop, Immediate Correction
	High	Consider Stopping, Urgent Correction
	Moderate	Corrective Attention Needed
	Low	Possible Acceptance

Appropriate Management Level for Operational Risk Decisions				
Risk Level	Fire	Mission		
Extremely High	Incident Commander or Operations Sections Chief	Line Officer		
High	Incident Commander or Operations Sections Chief	Line Officer		
Moderate	Air Operations Branch Director	Project Aviation Manager		
Low	Base Manager	Helicopter or Flight Manager		

System Being Evaluated:		Pre-Mitigation				Post Mitigation		
Sub System(s)	Hazards	Likelihood	Severity	Risk Level	Mitigation	Likelihood	Severity	Risk Level

System Being Evaluated:		Pre-Mitigation				Post Mitigation		
Sub System(s)	Hazards	Likelihood	Severity	Risk Level	Mitigation	Likelihood	Severity	Risk Level

System Being Evaluated:		Pre-Mitigation				Post Mitigation		
Sub System(s)	Hazards	Likelihood	Severity	Risk Level	Mitigation	Likelihood	Severity	Risk Level

System Being Evaluated:		Pre-Mitigation			Pos			est Mitigation	
Sub System(s)	Hazards	Likelihood	Severity	Risk Level	Mitigation	Likelihood	Severity	Risk Level	
Final UAS Risk Assessment									

Prepared by

Aerial Hazard Analysis and map: Provide an analysis of aerial hazards surrounding the mission area in this box, e.g. towers, wires, sloping terrain, dust, proximity to airports, confined landing zones, etc. Replace the blue box below with a hazard map or include map at the end of the MASP.

Wire strike prevention addressed, and other hazards are identified (None in the flying area)

MAP OF PROJECT/MISSION:

Maps specific to identified training sites shall be attached to Mission Planning Sheets and include aerial hazard analysis.

BOUNDARY/LAND OWNERSHIP MAP:

For UAS Operations add Lat/Long Coordinates and elevation

Coordinates and elevation

Aerial Hazard Analysis and map: Provide an analysis of aerial hazards surrounding the mission area in this box, e.g. towers, wires, sloping terrain, dust, proximity to airports, confined landing zones, etc. Replace the blue box below with a hazard map or include map at the end of the MASP.

Insert addtitional maps below

Aerial Hazard Analysis and map: Provide an analysis of aerial hazards surrounding the mission area in this box, e.g. towers, wires, sloping terrain, dust, proximity to airports, confined landing zones, etc. Replace the blue box below with a hazard map or include map at the end of the MASP.

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Georeferenced burn unit maps and potential helispots will be provided prior to any missions involving a particular unit(s). Helispots will require manager approval as site conditions may have changed. If the burn is to occur within 5 nautical miles from an airport or 25 nautical miles from a navigational aid (VOR) dispatch will contact the FAA to issue a NOTAM D prior to the start of the burn per the burn plan. High level reconnaissance of the project area will be completed prior to implementation. Dispatch will ensure airspace deconfliction plan has been documented and communicated. General aviation air will be dealt with by see and avoid procedures and checking for NOTAMs. Pilots and crew should monitor local VHF-AM frequencies. Lastly, pre- and post-project briefings will be conducted with aircrew, pilots, aviation managers, and, to the maximum extent possible, the Zone FAO to address any issues or concerns. It is highly encouraged for aircraft managers to forward documented debriefs to the Zone FAO.

Aerial hazards associated with RX PSD operations consist of 1) Ground-based hazards including towers (Radio, Cell, water, etc;) and transmission/electrical lines as well as 2) Airspace conflicts with other aircraft. To minimize hazards associated with ground-based hazards aerial ignition crews must consult applicable maps (FAA sectionals, Forest Hazard Maps, Project Maps, etc.) to determine ground-based hazards within the area of operation.

Burn Unit locations and applicable helispots are located in tables 1 and 2 below.

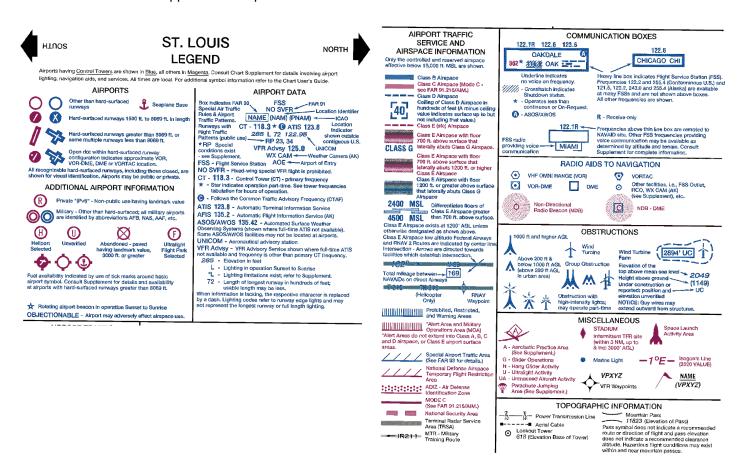
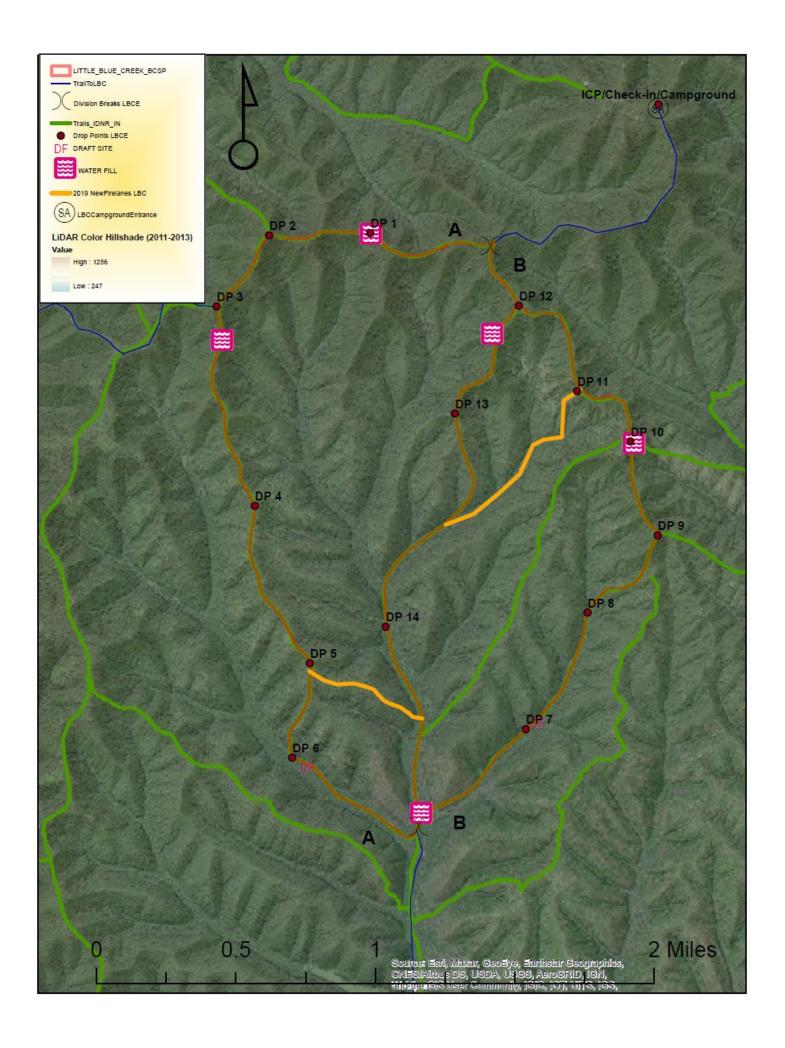


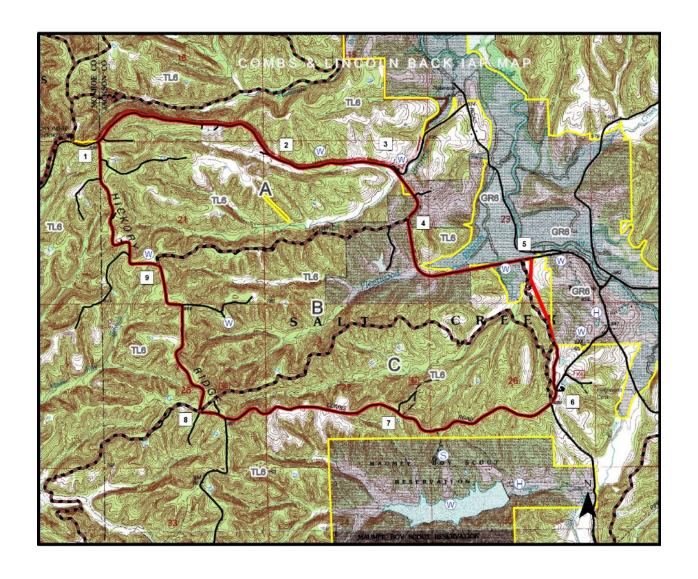
Table 1.) Burn Unit, Lat/Long, Applicable Helispot

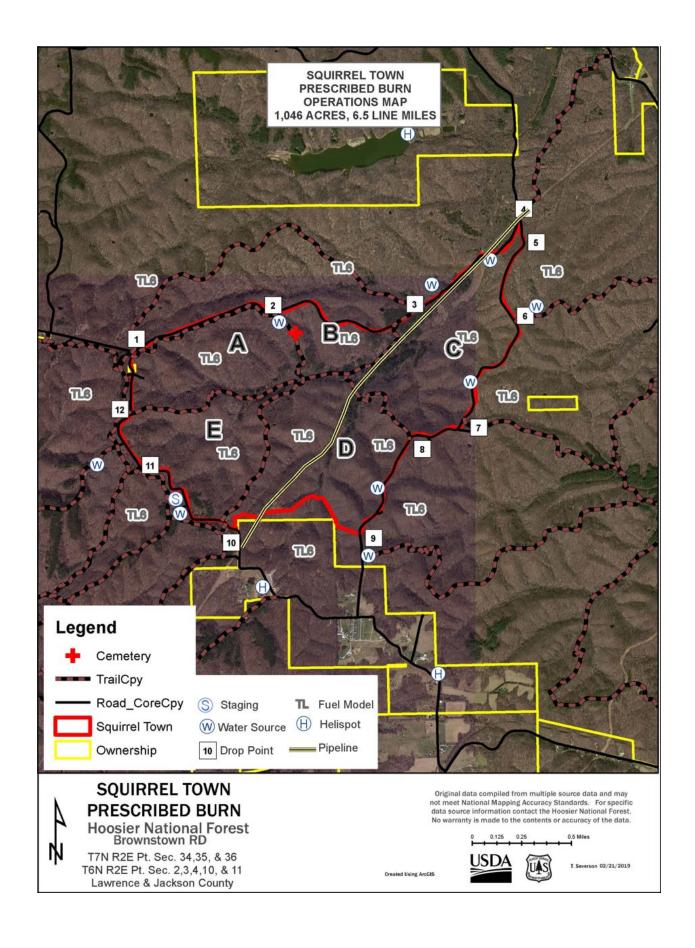
Burn Unit	Lat/Long	Applicable Helispot(s)				
Little Blue Creek	39° 7.435′ x -86° 15.758′	BCSP Airstrip				
		Lake Tarzan Dam				
Winkler	39° 1.717′ x -86° 16.653	Maumee Field				
Wilklei	39 1.717 X-80 10.033	Laney Acres				
		Grissom Airport (BFR)				
		Lake Tarzan Dam				
Combs – Lincoln Back	39° 1.285′ x -86° 17.695′	Maumee Field				
COITIDS — LITICOTTI BACK	39 1.283 X-80 17.093	Laney Acres				
		Grissom Airport (BFR)				
		Lake Tarzan Dam				
Squirrel Town	38° 58.992′ x -86° 16.889′	Maumee Field				
Squirerrown	36 38.992 X-80 10.669	Laney Acres				
		Grissom Airport (BFR)				
Mitchell Creek	38° 17.841′ x -86° 37.019′	U-38 Dam				
Witterien Creek	38 17.841 X-80 37.019	French Lick Airport (FRH)				
Blue Otter	38° 17.66′ x -86° 29.501′	Old Felker				
Blue Ottel	38 17.00 X-80 29.301	French Lick Airport (FRH)				
		Roehm				
Boone Creek	38° 8.286′ x -86° 28.629′	Mill Creek				
		Perry County Airport (TEL)				
Boone Creek North	38° 9.07′ x -86° 27.983′	Roehm				
Bootie Creek North	38 9.07 X-80 27.983	Perry County Airport (TEL)				
Rattlesnake North and South	38° 4.96′ x -86° 34.974′	Saddle Lake Dam				
Rattleshake North and South	36 4.90 X-60 34.974	Perry County Airport (TEL)				
Ash House	38° 4.051′ x -86° 33.938′	Saddle Lake Dam				
ASII nouse	30 4.031 x -00 33.938	Perry County Airport (TEL)				
Rock House	38° 3.36′ x -86° 34.537′	Saddle Lake Dam				
NUCK FIGUSE	30 3.30 X -00 34.337	Perry County Airport (TEL)				

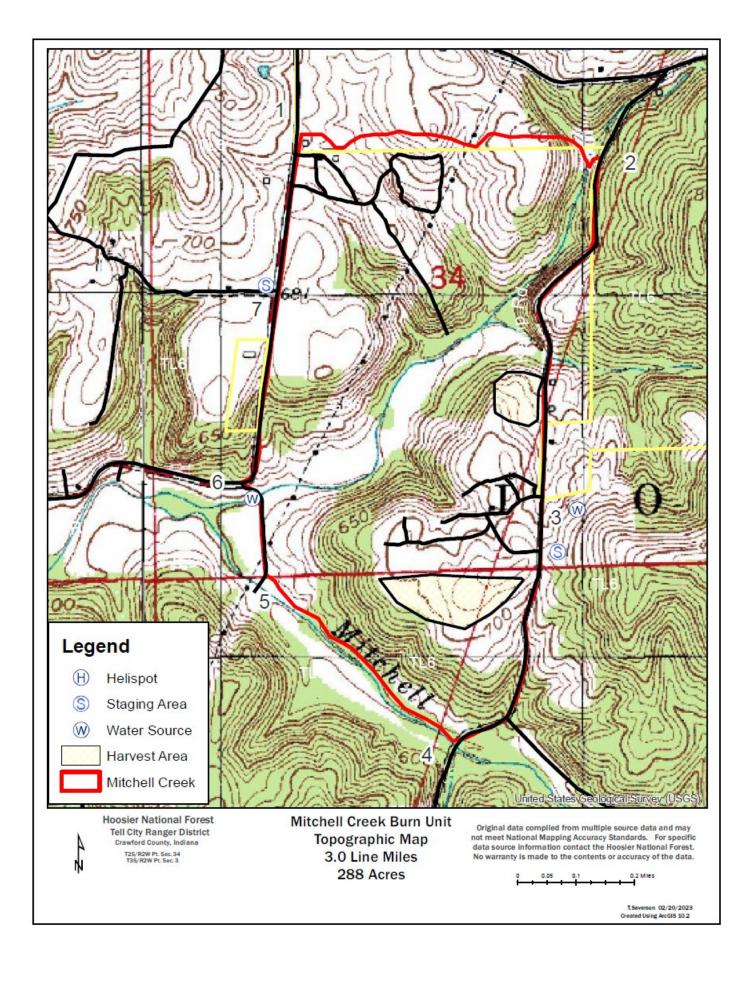
Table 2.) Helispots (should be approved by manager prior to use as conditions may have changed)

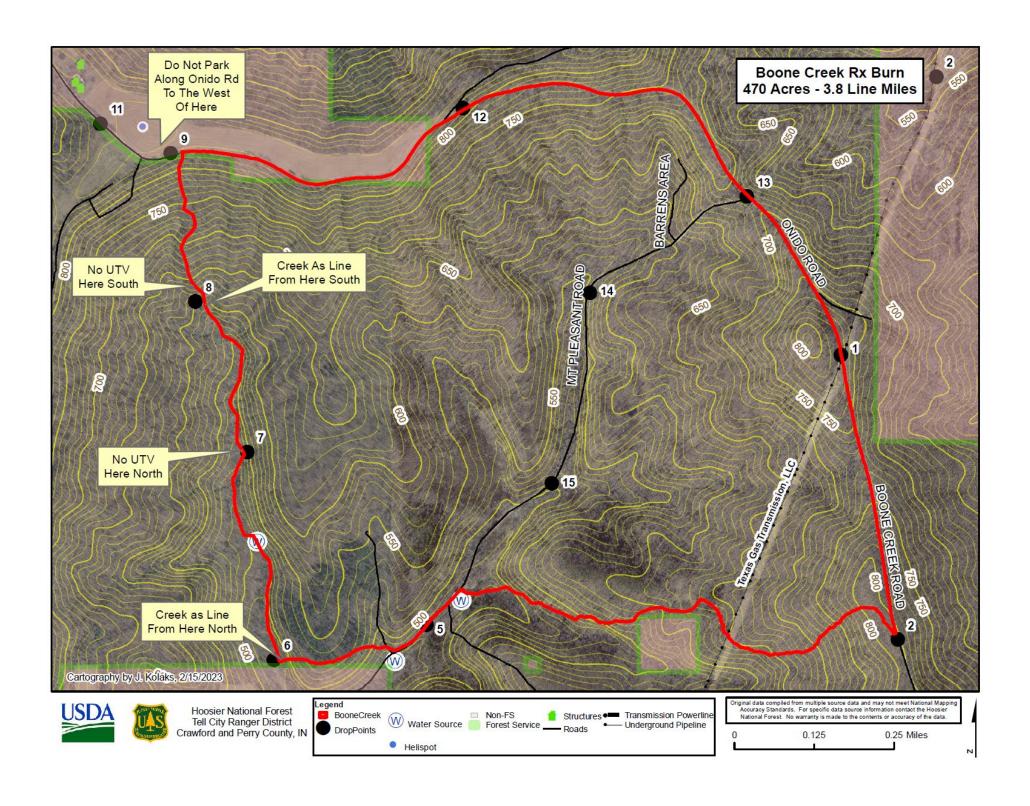
Helispot Name	Description	Lat/Long
BCSP Airstrip (inactive)	Old airstrip at Brown County SP	39° 9.681′ x -86° 13.099′
Tarzan Dam	Top of lake dam	39° 0.212′ x -86° 16.35′
Maumee Field	Field below Lake Tarzan dam	39° 0.229′ x -86° 16.213′
Laney Acres	Mowed lawn with road access	38° 58.979′ x -86° 12.971′
Bedford (Grissom Airport)	General aviation airport	BFR
U-38 Dam	Top of U-38 Lake dam	38° 17.832′ x -86° 40.516
French Lick Airport	General aviation airport	FRH
Roehm	Harvested agricultural field	38° 8.692′ x -86 28.97′
Perry County Airport	General Aviation Airport	TEL
Mill Creek	Field with road access	38° 10.009′ x -86° 28.04′
Indian Lake Dam	Top of lake dam	38° 11.424′ x -86° 39.344′
Celina Lake Dam	Top of lake dam	38° 10.805′ x -86 37.694′
Saddle Lake Dam	Top of lake dam	38° 3.863′ x -86° 39.915′

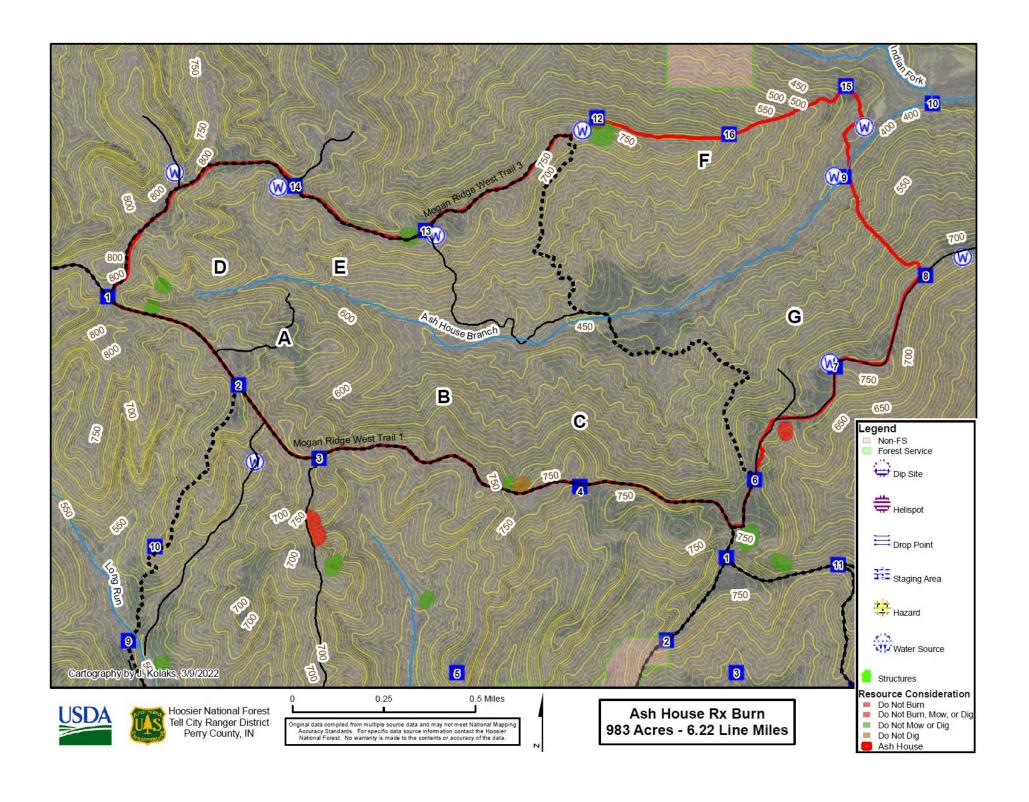


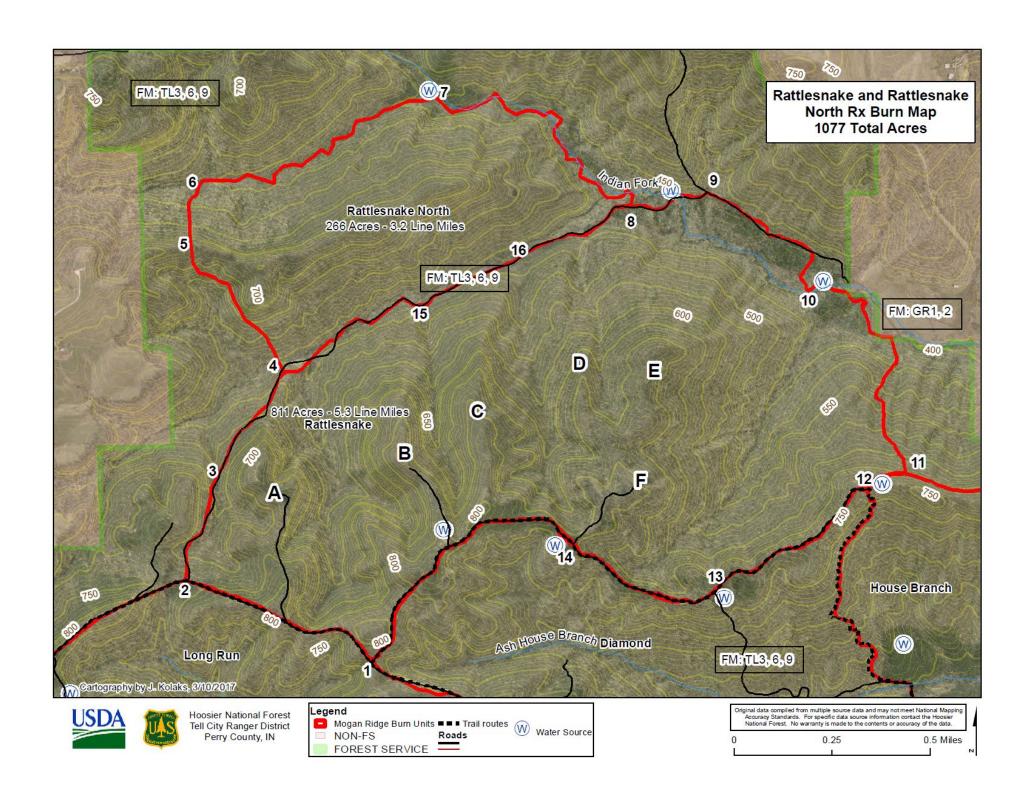


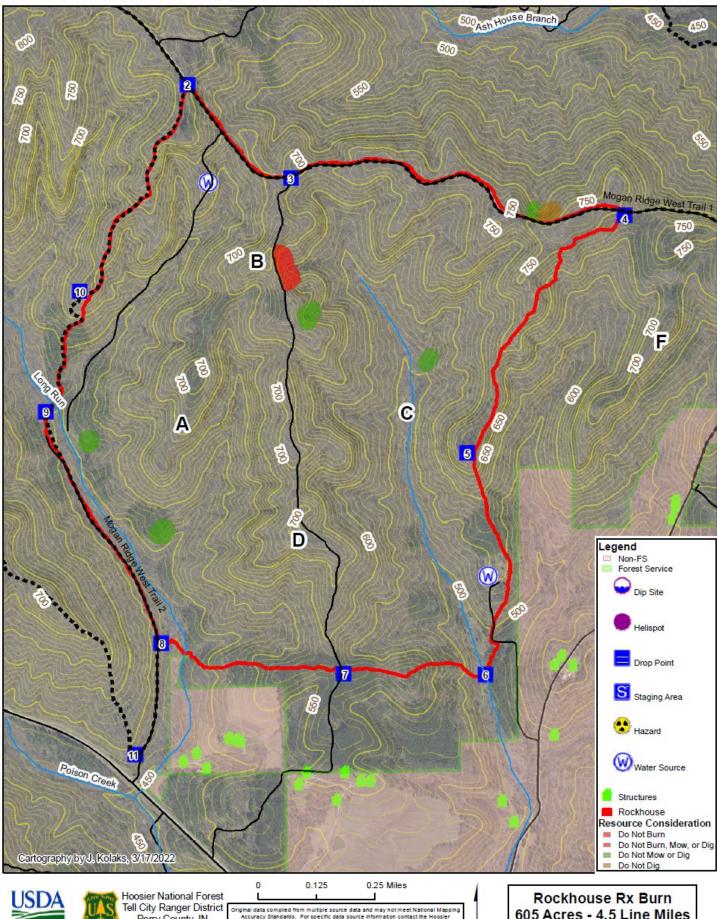
















Original data compiled from multiple source data and may not meet National Mappir Accuracy Standards. For specific data source information contact the Hoosier National Forest. No warranty is made to the contents or accuracy of the data.

605 Acres - 4.5 Line Miles

Medical/Crash Rescue

1. Project Name:			2. Operational F	Period:	Date From: Time From:		ate To: me To:		
3. Medical Aid Stations:									
Name I			Location			ontact s)/Frequency		medics Site?	
							☐ Yes ☐ No		
							☐ Yes	s □ No	
							☐ Yes	s □ No	
							☐ Yes	s 🗌 No	
							☐ Yes	s □ No	
							☐ Yes	s □ No	
4. Transportatio	n (indicate	air or ground):							
Ambulance S	ervice		Location			ontact s)/Frequency	Level o	f Service	
							ALS	BLS	
							ALS	BLS	
							ALS	BLS	
							☐ ALS	BLS	
5. Hospitals:									
		ddress,	Contact	Tra	vel Time	Trauma	Dura		
Hospital Name		e & Longitude Helipad	Number(s)/ Frequency	Air	Ground	Center	Burn Center	Helipad	
						☐ Yes Level:	☐ Yes ☐ No	☐ Yes ☐ No	
						☐ Yes Level:	☐ Yes ☐ No	☐ Yes ☐ No	
						☐ Yes Level:	☐ Yes ☐ No	☐ Yes ☐ No	
						☐ Yes Level:	☐ Yes ☐ No	☐ Yes ☐ No	
						☐ Yes Level:	☐ Yes ☐ No	☐ Yes ☐ No	
6. Special Medic	cal Emerge	ency Procedures	:		·				

Post Operational De-brief / After action Review Notes:

Perform a post mission/post project debrief with participants. Capture pertinent feedback that may help in planning for the next project, reinforce those events and actions that made the project a success, and identify areas where improvement can be made to enhance efficiency and safety. Note any additional hazards that may been identified in the Risk assessment section.