Element 1: Signature Page

PRESCRIBED FIRE PLAN

ADMINISTRATIVE UNIT NAME(S): Wolf River Coastal Preserve Bells Ferry Tract

PRESCRIBED FIRE NAME:

Prescribed Fire Unit (Ignition Unit): Bells Ferry Unit 1 / Bells Ferry Unit 2

PREPARED BY:

Name (print): Risky Business Incident Management LLC Qualification/Currency: RXB2

Signature:_____ Date:_____

TECHNICAL REVIEW BY:

Name (print):_____ Qualification/Currency:_____

Signature:_____ Date:_____

COMPLEXITY RATING: Moderate **MINIMUM BURN BOSS QUALIFICATION**: RXB2 or Equivalent

APPROVED BY:

Executive Director, MS Dept. of Marine Resources: Jamie Miller

Signature :_____ Date**:**_____

NOTARIZED BY:

Name – Notary (print):_____

Signature – Notary:_____ Date**:**_____

Element 2A: Agency Administrator Ignition Authorization

AGENCY ADMINISTRATOR IGNITION AUTHORIZATION

Instructions: The Agency Administrator Ignition Authorization must be completed before a prescribed fire can be implemented. If ignition of the prescribed fire is not initiated prior to expiration date determined by the agency administrator, a new authorization will be required.

Prior to signature the agency administrator should discuss the following key items with the fire management officer (FMO) or burn boss. Attach any additional instructions or discussion documentation (optional) to this document.

Key Discussion Items

A. Has anything changed since the Prescribed Fire Plan was approved or revalidated? *Such as drought or other climate indicators of increased risk, insect activity, new subdivisions/structures, smoke requirements, Complexity Analysis Rating.*
B. Have compliance requirements and pre-burn considerations been completed? *Such as preparation work, NEPA mitigation requirements, cultural, threatened and endangered species, smoke permits, state burn permits/authorizations.*
C. Can all of the elements and conditions specified in Prescribed Fire Plan be met? *Such as weather, scheduling, smoke management conditions, suitable prescription window, correct season, staffing and organization, safety considerations, etc.*
D. Are processes in place to ensure all internal and external notifications and media releases will be completed?
E. Have key agency staffs been fully briefed about the implementation of this prescribed fire?
F. Are there circumstances that could affect the successful implementation of the plan? *Such as preparedness level restrictions, resource availability, other prescribed fire or wildfire activity*
G. Have you communicated your expectations to the Burn Boss and FMO regarding if and when you are to be notified that contingency actions are being taken?
H. Have you communicated your expectations to the Burn Boss and FMO regarding decisions to declare the prescribed fire a wildfire?

Implementation Recommended by:
FMO or Prescribed Fire Burn Boss Signature:_____ Date:_____

I am authorizing ignition of this prescribed fire between the dates of_____ and_____. It is my expectation that the project will be implemented within this time frame and as discussed and documented and attached to this plan. If the conditions we discussed change during this time frame, it is my expectation you will brief me on the circumstances and an updated authorization will be negotiated if necessary.

Additional Instructions or Discussion Documentation attached (Optional): Yes ☐ No☐
Ignition Authorized by:
Jeff Clark, Coastal Program Director:_____ Date:

Element 2B: Prescribed Fire Go/No-Go Checklist

PRESCRIBED FIRE GO/NO-GO CHECKLIST

Preliminary Questions	**Circle YES or NO**
A. Have conditions in or adjacent to the ignition unit changed, (for example: drought conditions or fuel loadings), which were not considered in the prescription development? If **NO** proceed with the Go/NO-GO Checklist below, if **YES** go to item B.	YES NO
B. Has the prescribed fire plan been reviewed and an amendment been approved; or has it been determined that no amendment is necessary? If **YES**, proceed with checklist below. If **NO, STOP: Implementation is not allowed. An amendment is needed.**	YES NO

GO/NO-GO Checklist	**Circle YES or NO**
Have ALL permits and clearances been obtained?	YES NO
Have ALL the required notifications been made?	YES NO
Have ALL the pre-burn considerations and preparation work identified in the prescribed fire plan been completed or addressed and checked?	YES NO
Have ALL required current and projected fire weather forecast been obtained and are they favorable?	YES NO
Are ALL prescription parameters met?	YES NO
Are ALL smoke management specifications met?	YES NO
Are ALL planned operations personnel and equipment on-site, available and operational?	YES NO
Has the availability of contingency resources applicable to today's implementation been checked and are they available?	YES NO
Have ALL personnel been briefed on the project objectives, their assignment, safety hazards, escape routes, and safety zones?	YES NO
If all the questions were answered "**YES**" proceed with a test fire. Document the current conditions, location and results. If any questions were answered "**NO**", DO NOT proceed with the test fire: Implementation is not allowed.	
After evaluating the test fire, in your judgment can the prescribed fire be carried out according to the prescribed fire plan and will it meet the planned objective? **Circle: YES or NO**	

Burn Boss Signature:_____ Date:_____

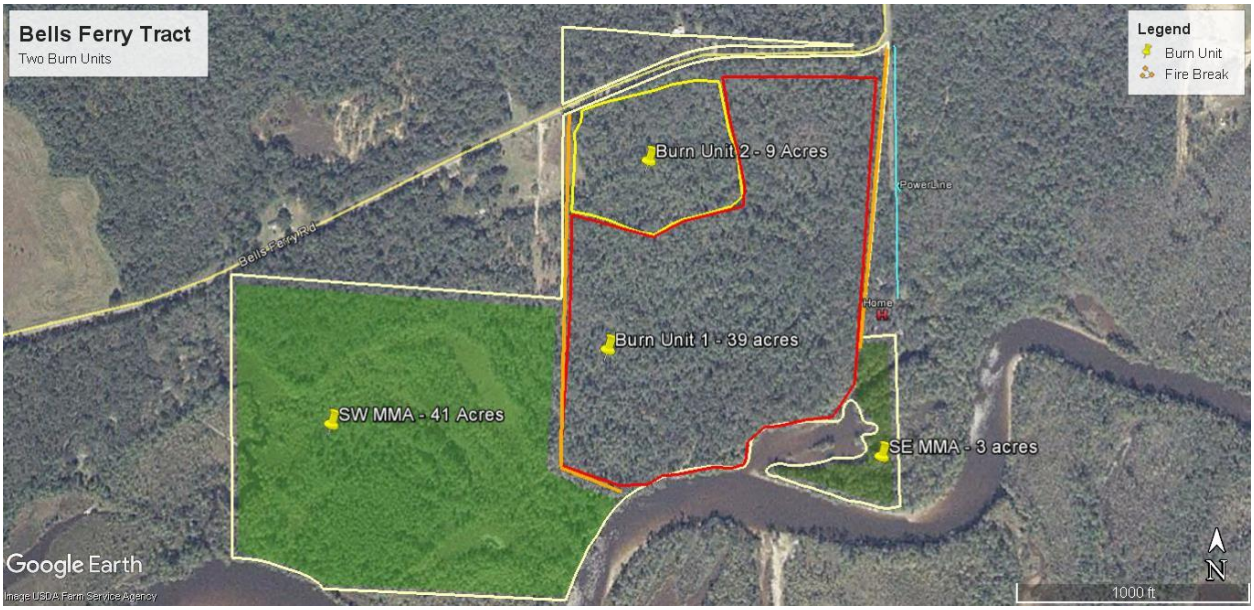
Element 3: Complexity Analysis Summary

ELEMENT	RISK	POTENTIAL CONSEQUENCE	TECHNICAL DIFFICULTY
1. Smoke Management	Low	Moderate	Low
2. Public and Political Interest	Low	Low	Low
3. Off-site values	Low	Low	Low
4. On-site values	Low	Low	Low
5. Constraints	Low	Low	Low
6. Fire treatment objectives	Low	Low	Low
7. Ignition procedures/methods	Low	Low	Low
8. Fire behavior	Moderate	Moderate	Low
9. Potential for escape	Moderate	Moderate	Moderate
10. The number and dependence of activities	Low	Low	Low
11. Management organization	Low	Low	Low
12. Safety	Low	Low	Low
13. Project logistics	Low	Low	Low
14. Interagency coordination	Low	Low	Low

COMPLEXITY RATING SUMMARY	OVERALL RATING
RISK	Moderate
CONSEQUENCES	Moderate
TECHNICAL DIFFICULTY	Moderate
SUMMARY COMPLEXITY DETERMINATION	Moderate

Rationale:
Smoke Management, Fire Behavior, and Potential for Escape are the only Elements that continued to show as Moderate in the Final Evaluations for either Risk, Potential Consequences or Technical Difficulty. Overall these are pretty straightforward burns on relatively small burn units. These burns will require only a small organization. But private interface issues cannot be ignored. Saying that, these burns are at the low end of the Moderate complexity range.

Element 4: Description of Prescribed Fire Area



A. Physical Description

1. **Location: Harrison County, Mississippi** Lat: 30.3895660 Long: 89.225999 Section 31 Township 7S Range 12W
2. **Size**: Total Bells Ferry Tract is 104 Acres of which 48 acres are targeted for prescribed fire treatment. Burn Unit 1 is 39 acres, Burn Unit 2 is 9 acres.
3. **Topography:** Flat to less than 5% slope. The north side of the Tract is the highest ground. This high ground slopes to the south with drainages running both to the SW and to the SE. The majority of the site is a riverine forest complex with varying sub communities based on the moisture gradient. Along the southeast and southwest corners of the site are some freshwater emergent areas. There is a steep eroded riverbank along the Wolf River to the south.
4. **Project area**: The project area includes the upland forests of the Bells Ferry Tract and adjacent riverine freshwater ecotones. The uplands are the northern and central areas of the Tract which constitute the pine flatwoods and central pine savannah which is intended to be restored. This core area comprises the established Burn Units 1 & 2. Adjacent to these units to the SE and SW the Tract transitions to freshwater riverine habitats identified as the SW and SE Maximum Management Areas (MMA's). The SW MMA at 41 acres is the largest MMA and is a riverine habitat with sawgrass and cypress among many more southern hardwoods and shrubs. The second is a similar habitat of 3 acres in the SE corner of the Tract.
5. **Ignition units** Burn Units 1 and 2 are the upland units of the Bells Ferry Tract. Adjacent to them are lower elevation riverine habitats that are the identified MMA's. While these MMA's are areas are not targeted for fire treatment, fire would be acceptable as long as confined to State owned lands.

B. Vegetation/Fuels Description:

This Plan uses the *Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model (Joe H. Scott & Robert E. Burgan), 2005*

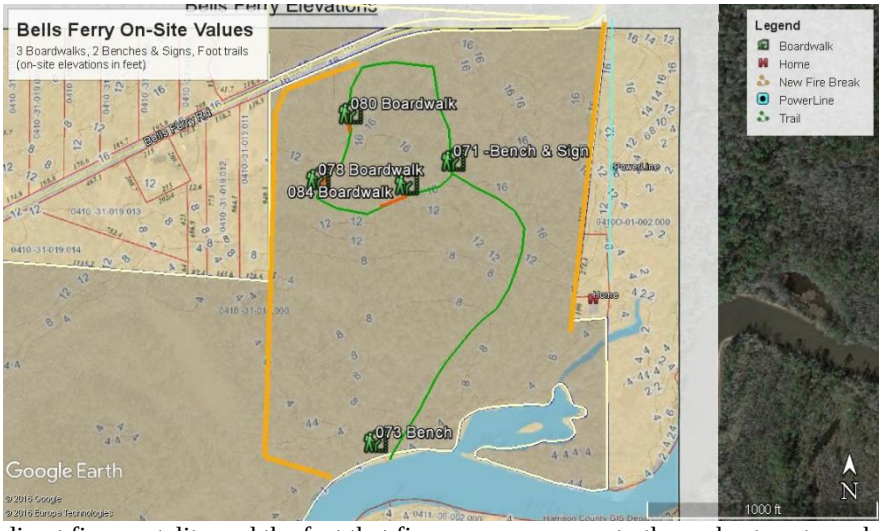
1. **On-site fuels data:** Both Unit 1 and Unit 2 are presently dense southern rough. Historically they would be categorized as Fuel Model 7 but this Plan uses the most current fuel models the *Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model (Joe H. Scott & Robert E. Burgan), 2005*. Using these new models

describes the fuels in finer detail. This southern rough is SH 9 - Very High Load, Humid Climate Shrub (Dynamic). Burn Unit 1 is 100% of this fuel type. Burn Unit 2 does have an interior portion that is more "savannah like", but the entire unit will be modeled using SH9.

2. **Adjacent fuels data:** The adjacent fuels inside the Bells Ferry Tract (SW and SE corners) would be characterized by southern rough (Very High Load, Humid Climate Shrub intermixed with Very High Load, Humid Climate Grass). Immediately off-site the fuels are Very High Load, Humid Climate Shrub intermixed with residential areas of mixed vegetation and open water.
3. **Percent of vegetative type and fuels model(s):** As described above in item #1, the on-site fuels in the targeted burn units are entirely southern rough (Very High Load, Humid Climate Shrub, SH9).

C. Description of Unique Features, Natural Resources, Values:

The Wolf River Coastal Preserve Bells Ferry Tract has two major trails and is a popular recreational area for birdwatchers and other walkers. One trail is a loop that surrounds an area the State DMR is hoping to restore as a flat woods savannah by use of prescribed fire. The other trail continues below the Loop to the banks of the Wolf River at the south end of the Tract. The Tract contains ecotones that represent the contrast between the pine woods uplands and the marshy riverine habitats along the Wolf River. There are three elevated boardwalks along the Loop trail that allow visitors to cross above marshy upland areas. There are two rest benches along the trails, one in a mid-forest trail intersection and one at the southern end of the Tract overlooking the Wolf River.

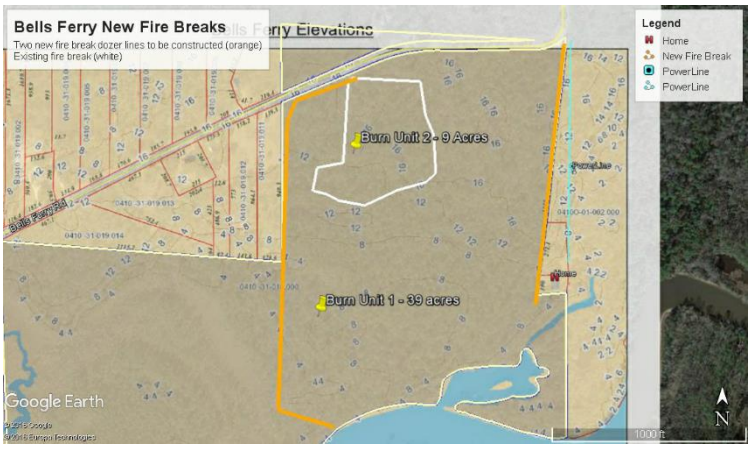


This Tract was likely dominated by Longleaf Pine many years ago, and the management goal is to re-establish Longleaf dominance. There are some mature Longleaf still on this Tract, but the pines are now mostly Slash and Loblolly Pine and there is certainly an overabundance of tree stems per acre if the goal is to establish both a pine flatwoods and a small savannah. A wide variety of southern hardwood trees are also thick in this Tract at present.

The Tract has a wide variety of invasive plant species and a goal is that prescribed fire can be used to assist in control of those species both by direct fire mortality and the fact that fire can open access to the understory to make invasive control actions more accessible. These invasive species include: Chinese tallow (*Triadeca sebifera*), cogongrass (*Imperata cylindrica*), mimosa (*Albisia julibrisson*), camphor tree (*Cinnamomum camphor*), pampas grass (*Cortaderia selloania*), Chinese privet (*Ligustrum sinense*), Japanese honeysuckle (*Lonicera japonica*), Japanese climbing fern (*Lygodium japonicum*), torpedo grass (*Panicum repens*), Cherokee rose (*Rosa laevigata*), common salvinia (*Salvinia minima*), rattlebox (*Sesbania punicea*), wisteria (*Wisteria sinensis*).

DMR has stated they do not wish foot trails to devolve into what appears to be fire lines. While trails may be used tactically during fire management operations, the desire is to maintain a foot trail appearance for the future. As a result fire management actions on these trails should follow a Minimum Impact Suppression Tactics and trails may need some post burn rehabilitation (Refer to the most current Incident Response Pocket Guide, PMS 461 for recommendations). Disking fire lines is preferable to blading.

In addition to the existing trail system in the Bells Ferry Tract two additional permanent fire breaks need to be constructed pre-ignition. These fire breaks will prevent fire from escaping onto adjacent private lands. One fire break of approximately 0.25 mile needs to be constructed along the eastern boundary of the Tract as shown on maps. A second fire break of 0.4 mile needs to be constructed from near the Tract parking area, west to the NW corner of Burn Unit 2, then south along the western edge of Burn Unit's 2 and 1, and finally east along the Burn Unit 1 south boundary to near the Wolf River bank.



D. Maps - Attach in Appendix A – (Note maps embedded in narrative are found in larger format in Appendix A)

1. Vicinity - See Appendix A
2. Project/Ignition Unit(s) – See Appendix A
3. Significant or Sensitive Features: ☒ Included ☐ Not Included
4. Fuels or Fuel Model(s): ☐ Included ☒ Not Included
5. Smoke Impact Area: ☒ Included ☐ Not Included
6. Project Specific KMZ / KML files.

Element 5: Objectives

A. Resource objectives:

Encourage open pine flatwoods habitat.
Encourage savannah habitat succession in the interior of the Loop Trail inside of Burn Unit 2.
Reduce shade in the NW to SE drainage to encourage further use by Pitcher Plants and maintain salamander habitat.

B. Prescribed fire objectives:

This Plan will have a five year shelf life, and multiple burns may occur over the course of five years. To fully meet management objectives there will need to be "first entry" burns with the objective of top killing shrubs (including invasive species) and opening the forest floor to encourage forbs, grasses and sedges and other herbaceous plants. An objective of these first entry burns would also be to kill mature hardwoods and pines in order to reduce stem density to create an interior savannah and overall more of a pine flatwood environments. These first entry burns may occur in either the dormant or growing season. Subsequent to first entry burning a transition to growing season burns would occur, continuing the process of thinning mature trees, reducing shrub cover and encouraging more sunlight to assist in the recovery of forbs, grasses, sedges and other herbaceous ground cover.

Objectives:

- On an ongoing basis provide for the safety of incident personnel and the public by adhering to appropriate (agency) safety guidelines and policies and by using risk analysis processes to select the safest appropriate actions prior to field burn activities.
- Ensure agency and public notifications have been made and that Smoke warning signs are posted along appropriate roadways prior to ignition.
- Top kill 70% of shrubs throughout the Burn Unit immediately post burn.
- Achieve 15% or greater mortality of immature and mature trees.

Element 6: Funding

A. Cost:

Item	Cost/Unit	Duration	Total
Personnel (Minimum of 7) includes overhead and equipment staffing	$500/Day	14 work days (including pre & post burn)	$7000
Engine Type 6 DMR	$200/Day Type 6 Engine for fuel/expendibles	3 (Ignition Day & 2 Patrol Days)	$400
UTV DMR	$100/Day	Pre/Burn/Post = 3 days	$300
Tractor Plow T3/4 Contracted	$1200/Day	Burn Day	$1200
Patrol Boat DMR	$300/Day	Burn Day	$300
Total Estimate			$9200

B. **Funding source:** As determined by DMR.

Element 7: Prescription

B. Prescription Parameters:

1. Environmental or fire behavior (or both)

FACTOR	Maximum	Minimum	Comments
1300 Temperature (F)	**85**	**40**	**Temperature as recorded at 1300 hrs. (1400 during DST)**
Relative Humidity (%)	**75**	**30**	**REQUIRED PARAMETER TO ATTEMPT BURN**
Wind Speed, 20'forecasted (MPH)	**20**	**5**	**REQUIRED PARAMETER TO ATTEMPT BURN**
Wind Speed, mid-flame (MPH)	**12**	**2**	**Measured on site by weather observer**
Wind Direction (20' forecasted)	**Any for Unit 2 Any except due South for Unit 1 or combined units.**		**REQUIRED PARAMETER TO ATTEMPT BURN**

1 Hour Fuel Moisture %	**10**	**5**	**Calculated in Fireline Handbook Appendix B: Fire Behavior**
10 Hour Fuel Moisture %	**11**	**6**	**Add value of 1 to calculated 1 hr. fuel moisture**
100 Hour Fuel Moisture %	**12**	**7**	**Add value of 1 to 10 hr. fuel moisture.**
Live Woody Fuel Moisture %	**180**	**90**	
Live Herbaceous Fuel Moisture %	**150**	**75**	
KBDI	**400**	**100**	**Recommended as guide to local drought conditions.**
Days Since Rain	**5**	**1**	**Recommended guideline as indicator of dead fuel moisture levels.**
Mixing Height (M)	**>500**		**500 is minimum forecasted value at which a permit will be issued REQUIRED PARAMETER TO ATTEMPT BURN**
Transport Wind Speed (M/S)	**>3.5**		**3.5 is minimum forecasted value at which a permit will be issued REQUIRED PARAMETER TO ATTEMPT BURN**
Stagnation Index	**0-3**		**The lower the value, then the clearer the air and higher the potential for atmospheric mixing.**
Minimum Visibility (Mi.)	**5**		**Minimum value to meet MS Voluntary Smoke Mgt. Guidelines.**
Fog Potential	**Low-Moderate**		**Do not burn if fog potential is high.**

2. Fire Modeling or empirical documentation (or both)

(Provide succinct information from BEHAVE runs, perhaps in a brief table. Refer the reader to detailed BEHAVE runs in Appendix E)

FIRE BEHAVIOR OUTPUTS	LOW INTENSITY FIRE	HIGH INTENSITY FIRE
RATE OF SPREAD (CH./HR.)	**5**	**12**
FLAME LENGTH (FT.)	**4**	**9**
FIRELINE INTENSITY (BTU/FT./SEC.)	**100**	**400**

Element 8: Scheduling

A. Implementation Schedule:

1. **Ignition Time Frames**: Ignition can be attempted any time during the five-year time frame of the approved plan when prescribed parameters occur or are forecasted to occur within a one-day time frame.

2. **Season**: Units may be burned any season in which parameters are met and no other agency determined decisions override the need to burn.

B. Projected Duration: All planned ignitions will be completed within one operational period. No resources are planned to be continuously on fire overnight. If the unit is not completed in one operational period, a separate burning permit from MFC will be required for each additional day that firing operations are conducted.

C. Constraints: Prior to burning both Burn Units 1&2 at Bells Ferry permanent fire lines need to be built along the Eastern boundary (0.26 miles) and the Western boundary and western edge of Burn Unit 2 (0.35 miles).

Element 9: Pre-burn Considerations and Weather

A. Considerations:

1. **On-site:** There are very few on-site values and they are easily protected. These include 2 trail benches, some directional signs, and three elevated trail boardwalks. (See map). Constraints can be managed with minor prep actions, increased coordination and effective communications between Burn Boss and igniters and holding crew.

2. There are no threatened or endangered species or other species of concern.

3. Off-site: Potential short term disruptions to the Bells Ferry Road could result from unexpected or adverse events, and would create short term impacts too adjacent and more distant subdivisions. An escaped fire into the marshy SW corner of the tract would cause additional smoke impacts to private homes to the W. There is a powerline running N/S immediately E of the tract and one additional home adjacent to the SE corner of the tract.

B. Method and Frequency for Obtaining Weather and Smoke Management Forecast(s):

1. A dedicated fire weather observer will monitor and record weather information to include but not limited to mid-flame wind speed and direction, relative humidity and smoke column formation and movement on an hourly basis or more often as requested by the Burn Boss. In addition, the observer will calculate fine dead fuel moisture and probability of ignition.

2. On the afternoon prior to the planned burn day download the NWS Fire Weather Zone Forecast (usually posted after 1500 hrs.) and check to see if required burn parameters are forecasted to be within prescription. If they are then request Spot Weather Forecast through NWS national fire weather website. www.weather.gov/spot. Contact Tim Destri, Fire Weather Focal Point at NWS New Orleans 985-649-0357 for technical support and additional information.

C. Notifications:

1. **News Media:**
   a. One day prior to planned burn request DMR Public Affairs to issue basic news release to local media outlets.
   b. Send copy of news release to **rupertlacy@co.harrison.ms.us**
2. **Day of Burn:**

MS Forestry Commission	800-240-5161	Central Dispatch in Pearl MS, (for burning permit)
Harrison County Emergency Mgt. Rupert Lacey	228-865-4002	Leave message for reverse 911 calls 24-48 hrs in advance of burn.

MS Forestry Commission	228-831-3359	Harrison County Work Center, (courtesy call) Corey Williams, Lead Technician
Harrison County Fire Services: Main Office	228-832-0638	Will notify Cuevas Station or closest manned station if Cuevas is unmanned.
Harrison County Fire Services: Cuevas Station	228-452-3952	Staffed 7 days a week 0800-1700
Harrison County Sheriff	228-865-7060	County Dispatcher,
MS Highway Patrol	228-396-7400	Provide closest road intersection: or address
Tim Destri, Fire Weather Focal Point at NWS New Orleans	985-649-0357	Request NWS make notification of the prescribed burn on NOAA Weather Radio and associated NOAA notification systems

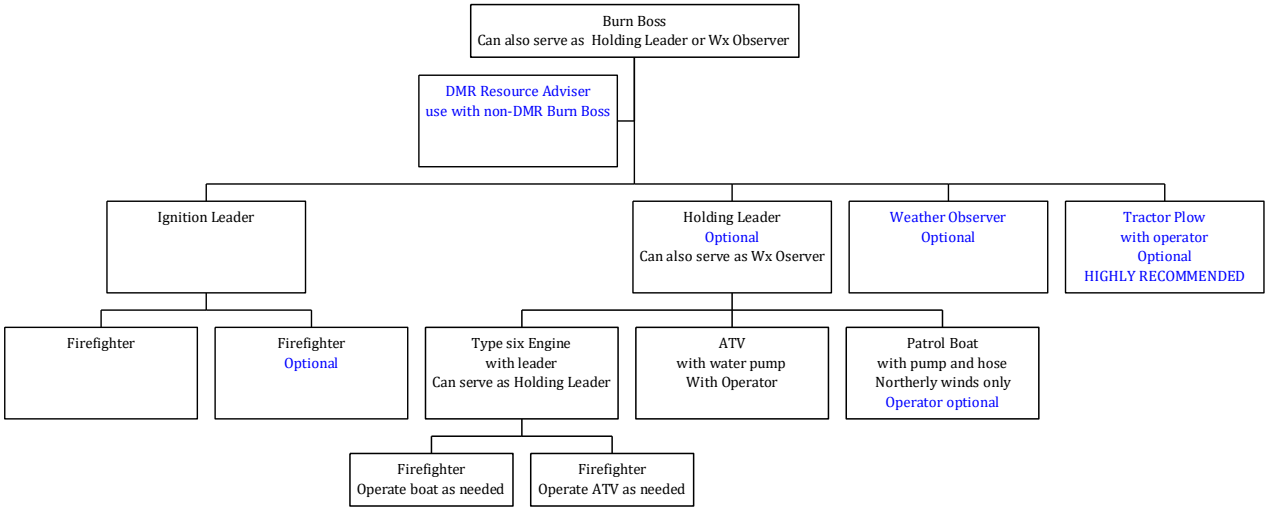
Element 10: Briefing

A. Briefing Checklist; including, but not limited to: (additional items may be added)

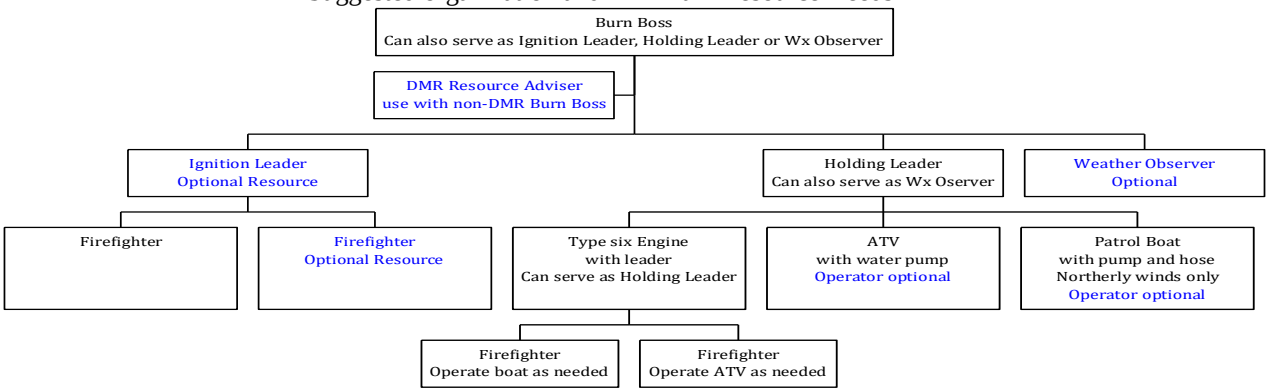
- ☐ Burn organization and assignments
- ☐ Prescribed Fire objectives and prescription
- ☐ Description of prescribed fire project area
  - ☐ Special considerations and sensitive features
- ☐ Expected weather and fire behavior
- ☐ Communications
- ☐ Ignition plan
- ☐ Holding plan
- ☐ Contingency plan and assignments
- ☐ Wildfire declaration
- ☐ Safety and medical plan
- ☐ Aerial ignition briefing (if aerial ignition devices will be used)

Element 11: Organization and Equipment

Suggested organization and Minimum Resource Needs
Unit 1 or Both Units Combined



Suggested organization and Minimum Resource Needs



Unit 2

A. Positions: **<u>The suggested minimum number of people to safely and effectively staff this burn is 7 for Unit 1 burned alone or both burn units combined and 5 for Unit 2 alone.</u>** The Burn Boss plus one fireline leader would meet the suggested ICS span of control of 5 resources. More individuals may be added if available or if conditions warrant. Trainees are acceptable but should not be included in the calculation to determine if the minimum number of individuals are included.

If contract resources are used to assist in accomplishing the burn, then it is suggested that they meet minimum NWCG standards for positions and equipment. Since DMR is not required to meet NWCG standards then the most qualified employees should be chosen for leadership positions in a solely DMR burn organization. Caution must be exercised in placing less qualified DMR employees in leadership over more qualified contractors.

When a non-DMR employee serves as Burn Boss then the most qualified DMR employee should be assigned as Resource Adviser to ensure that all burn objectives are met and all DMR specifications are followed and all resource management coordination and concerns are addressed.

B. Equipment: As a minimum one type 6 engine and one ATV with water pump is required.

It is highly recommended that a tractor plow unit, either through contract or through interagency agreement be kept on site while burning Unit 1. A spot or slop over along the eastern flank could spread onto private land if it was not immediately seen and attacked with water. Fuels are thick on both DMR and private lands. Initial attack with hand tools or ATV would be difficult once fire moves away from the control line.

A boat with pump and hose prepositioned on the bank of Unit 1 near the end of the east control line could provide access across the slough in the SE corner of the Preserve if a spot should occur.

C. Supplies: The only supplies needed are standard on engines and in fire caches. No specialized equipment is needed.

Element 12: Communication

A. Radio Frequencies:

Radio Frequency	Assignment
159.570	Command
159.975	Ignitions Tactical
159.510	Holding Tactical

B. Telephone Numbers: There is good cellular phone coverage throughout the Tract. On the day before burning complete this form for all resources and attach to the ICS201 Action Plan for the next day.

Name	Fire Position	Cell Phone Number
	Burn Boss	
	Resource Advisor	
	Weather/Fire Observer	
	Public Information	
	Ignitions Leader	
	FFT2 (Ignitions)	
	FFT2 (Ignitions)	
	Holding Leader	
	FFT2 (Holding)	
	FFT2 (Holding)	
	Tractor Plow Operator	
	DMR Boat Operator	
	DMR LE Officer	

Element 13: Public and Personnel Safety, Medical

INCIDENT ACTION PLAN SAFETY ANALYSIS (ICS 215A)

1. Incident Name: Bells Ferry Prescribed Burn		**2. Incident Number:**
3. Date/Time Prepared: Date: Time:	**4. Operational Period:** Date From: Time From:	Date To: Time To:

5. Incident Area	**6. Hazards/Risks**	**7. Mitigations**
Public Safety	Periods of smoke may hamper visibility on public roads. Public with smoke sensitivities may be exposed to short term issues.	Prior to the burn ensure all public notifications and postings have been completed. Maintain smoke lookout on public roads and advise Burn Boss of issues. Burn Boss may need to adjust firing sequence or timing to reduce smoke hazards. Mop up of smoke sources may be required.
Firefighter Safety	Terrain is very thickly overgrown and includes marshy areas making it difficult for personnel and equipment access.	Use LCES and refer to IRPG LCES checklist with respect to Indirect fireline. Keep one foot in the black to extent possible. Mark escape routes and safety zones and make them know to all personnel. Maintain communications with adjoining forces. Maintain situational awareness.
	In these fuels Fire Behavior will be moderate to very high.	Use LCES. Keep one foot in the black. Mark escape routes and safety zones and make them know to all personnel. Maintain communications with adjoining forces. Maintain situational awareness.
	Trails and fire breaks may have dense smoke for extended periods of time.	Keep equipment lights on. Rotate holding and ignition forces out of smoky areas. Use spotters and backers.
Venomous Snakes / Irritating Plants	There are five kinds of venomous snakes in coastal Mississippi including rattlesnakes, coral snakes, copperheads and cottonmouths. Irritating plants could include poison ivy and poison oak.	Use caution inserting hands into crevices, under logs and vegetation. Keep alert for snakes while walking in brush and open trails or roads. Alert others as to presence of snakes and flag areas. Avoid contact with irritating plants. Wear gloves. Wash exposed areas immediately with detergent soap or Technu.
Tractor Plow Operations	Tractor Plow may be operating in thick brushy areas with poor visibility and could become mired in boggy soils.	Use LCES. Maintain communications with ground forces. Follow current IRPG safety recommendations when working with heavy equipment.
Boating Operations	Personnel will be on open waters. Smoke could reduce visibility. Personnel may be climbing in and out of boat near steep banks and slippery footing conditions.	Where PFD's and follow all DMR boating safety policies and guidelines. Keep boating speed commensurate with visibility (slow down). Ensure boat is secured when loading and unloading passengers.

8. Prepared by (Burn Boss)**:** Name: _____ Signature: _____

ICS 215A Date/Time: _____

C. Emergency Medical Procedures: Notify Burn Boss of any injuries. Provide first aid to injured. Use 9 Line form (attached in Appendix D to the ICS201) to assess situation and gather info for reporting to 911 for assistance. Call 911 to activate medical response. If medical transport is needed, cease ignitions and assign Ignitions Leader to be in charge of this incident within the incident.

D. Emergency Evacuation Methods: Dependent upon nature and scope of injury the injured party may need to be transported to Bells Ferry Road via UTV or Engine Type 6. If remaining on scene a firefighter might need to be assigned with the UTV to proceed to Bells Ferry Road to escort an ambulance or other first responders to the victims location.

E. Emergency Facilities:

Name	**Address**	**Phone**	**Paramedics**	
			Yes	**NO**
Baptist Life-flight, Mobile	Mobile (Jackson, Harrison, Hancock, and George Counties)	1-800-874-1555 (Dispatch) 911	X	
AMR Coastal Counties	12020 Intraplex Pkwy, Gulfport, MS 39503	911 (228) 897-1191)	X	
AAA Ambulance Services		911	X	

Name	**Address**	**Phone**	**Helipad**		**Burn Center**	
			Yes	**NO**	**Yes**	**NO**
Memorial Hospital	4500 13th Street Gulfport N30*22.0093 W89*06.9200	228-575-2020	X			X
Memorial Physician Clinics Beatline Medical & Walk-In	5120 Beatline Road | Suite B Long Beach, MS 39560	(228) 575-2118		X		X
USA Medical/Burn Center	2451 Fillingin Street Mobile, AL N30*42.4909 W88*05.9636	251-471-7520	X		X	
Crosby Memorial	801 Goodyear BLVD, Picayune N30*31.8089 W89*41.2456	601-749-3118	X			X
Baton Rouge General Medical Center	3600 Florida BLVD Baton Rouge, LA	225-387-7000	X		X	
Singing River Hospital	2809 Denny Ave Pascagoula N30*22.4721 W88*31.9556	228-809-5000	X			X

Element 14: Test Fire

A. Planned Location: The test fire will be ignited on the downwind side of the burn unit adjacent to a suitable anchor point. This will usually be the most downwind corner of the unit. Holding personnel will have water and hand tools available to suppress the test fire should that be necessary. All water handling equipment will be tested prior to ignition. A sufficient sized area will be ignited and observed for a sufficient time to determine if fire behavior is in prescription and is likely to accomplish the fire treatment objectives for the unit and if smoke is adequately dispersing in the predicted direction.

If the decision is positive the burn will proceed according to the operational plan discussed during the pre-burn briefing. If the burn cannot be safely conducted, the test fire will be extinguished, the area mopped up, and the prescribed burn postponed.

B. Test Fire Documentation:

1. Weather conditions on site

Unit Name or #	**Date**	**Time**	**Temp**	**RH%**	**WS**	**WD**	**Sky**	**ROS CH/HR**	**FL FT**

2. Test fire results

Yes	No	Question
		Are Fire Treatment Objectives being met?
		Are smoke management objectives being met?
		Is fire behavior within predicted parameters?
		Does Test Fire Meet Prescription Parameters?
		In your opinion, can the burn be safely carried out according to the Prescribed Fire Plan and current and predicted conditions?
COMMENTS:		

Element 15: Ignition Plan

A. Firing Methods:

1. The unit will be ignited on the downwind side, burning back against the wind. Ignition will commence by lighting a narrow strip, along the containment line. One person with a drip torch will suffice, with the remaining individuals securing the line as it burns out. Additional narrow passes will continue, timing them so that the heat from the preceding pass does not make a run to the control line. The specific starting location will be decided on the day of the burn when the selected 20 foot and transport wind directions are known.

2. Once the downwind side is secure, strip width can be increased if a strip head ignition technique is desired, depending on fuel and weather conditions at the time as well as time constraints. Another technique would be to use flanking fire to burn the unit. In that case the igniters would light while walking into the wind allowing for less fire behavior than a strip head technique. Backing fire is an option for Unit 2 due to the small size of the unit. This technique would work best on a north wind with air temps below 45 degrees F. The longer residence time may provide more of a top kill of the deciduous hardwood understory but less consumption of the forest litter if done on the cooler end of the prescription. It is possible to use all three techniques on one burn in these units.

3. Fire intensity and fire behavior can be controlled by using either continuous lines of fire or by using spot fires ignited at a pre-determined distance along each ignition line. Backing fire can be sped up by intermittently igniting the upwind flank for a few linear feet at a time.

4. The Burn Boss or Ignition Leader will monitor current fire behavior, request weather observations as needed and adjust firing technique as necessary to achieve the fire treatment objectives for the unit.

B. Devices: Any devices which are available and of which there are qualified operators present may be used to ignite the unit. The most common devices used will be drip torches and fusees.

C. Minimum Ignition Staffing: An ignitions leader and one firefighter will be the minimum staffing. More igniters may be inserted as can be safely managed.

Element 16: Holding Plan

A. General Procedures for Holding: The Burn Boss will ensure all vehicles, tractor plow, watercraft and water handling equipment is positioned on site and functioning. Ensure that hand tools are readily available, including enough for the ignition crew. As the perimeter is fired, cool the perimeter along the fuel break edge and watch for spots, outside and downwind of the unit. Once this line is black continuing ignition will deepen the black to the rear. Holding forces will intermittently double check secured lines to the rear of the active ignition operations and also be aware of those areas outside the unit where fire can creep past or spot across the line. The Holding Leader or line scout will notify the Burn Boss of any spots outside of the unit and then aggressively attack them. The burn boss will determine if ignitions must be suspended and if the igniters are necessary to control the spot(s).

C. Critical Holding Points and Actions: The critical holding points are the signs, kiosks, benches and foot bridges associated with each unit. The day before or up to a few days prior to the burn, following leaf fall, each improvement must be protected. This will be done by raking, cutting and dragging and scattering all adjacent and overhanging vegetation from each site. Individual improvements must be wet down as needed during ignition if threatened by extensive flame lengths or excessive heat.

Sharp bends in the containment lines, buildup of dead and down fuels (jackpots) and standing dead snags and decaying stumps are also critical holding points. The locations of these conditions must be l flagged while the proposed permanent line is located and broken up or felled while the line is being established. All trails used for fire breaks must be scouted prior to burn day and critical areas flagged and dealt with.

Any untreated critical areas that are ignited on burn day will require a firefighter to stay in that location until threat of spotting is over or it must be wet down or felled to prevent spotting during the evening hours.

C. Minimum Organization or Capabilities Needed: Refer to suggested minimum organization chart in Element 11. A leader and four firefighters are the minimum number of individuals suggested to burn Unit 1 or both units combined. A leader and three firefighters are the minimum holding force required for Unit 2. A type six engine and ATV with water pump represents the minimum equipment other than back pack pumps and hand tools for the holders and igniters. A tractor plow unit with operator is highly recommended to have on site for the larger burn.

Element 17: Contingency Plan

The following Management Action Points assume that there is no tractor plow unit on site or there is one on site and it is broken down or not otherwise available.

Management Action Points or Limits:

Management Action Point - Documentation Element	Management Action Point Narrative
Designator and Description:	**Spot fire(s) on private lands**
Condition:	**Onsite resources fail to contain spot fires.**
Management Intent:	**Protect life and private property and minimize burned area on private land.**
Recommended Action(s) to Consider:	**Cease ignitions and order contingency resources**
Recommended Resources:	**Tractor plow unit, VFD for structure protection if needed and burn crew (minus those needed to keep prescribed fire in burn unit).**
Time Frame:	**Upon failure of initial attack.**
Describe the consequences of not taking the recommended action(s) (Optional):	**Threats to life and property and possible financial claims against DMR.**
Responsibility:	**Burn Boss**

Management Action Point - Documentation Element	Management Action Point Narrative
Designator and Description:	**Spot Fire(s) in either MMA that cannot be contained by initial action**
Condition:	**Onsite resources fail to contain spot fires.**
Management Intent:	**Prevent fire from leaving MMA and encroaching on private lands.**
Recommended Action(s) to Consider:	**1. Cease ignitions and order contingency resources.** **2. Establish anchor point and determine strategy to minimize fire size within MMA boundaries while waiting on contingency resources to arrive.** **3. Grass filled sloughs cannot be depended upon to be effective barriers to spread of fire.**
Recommended Resources:	**1. Most experienced firefighter on burn crew** **2. Burn crew (minus those needed to keep prescribed fire in burn unit).**
Time Frame:	**1. Begin actions upon failure of initial attack** **2. Plan for total containment by end of current burning period.**
Describe the consequences of not taking the recommended action(s) (Optional):	**Fire and or smoke will threaten public safety and health and possible damage or destroy private property.**
Responsibility:	**Burn Boss**

Management Action Point - Documentation Element	Management Action Point Narrative
Designator and Description:	**Excessive smoke settling on major roadway with visibility less than _____? Feet.**
Condition:	**Wind shift or loss of transport wind**
Management Intent:	**Prevent accidents and injury on major roads due to loss of visibility**
Recommended Action(s) to Consider:	**Notify MS Highway Patrol. County Sheriff not allowed to close state or federal highway. Mobilize DMR patrol officers with blue lights to staff roadblocks.**
Recommended Resources:	**DMR law enforcement officers**
Time Frame:	**Immediately upon becoming aware of smoke problems on road**
Describe the consequences of not taking the recommended action(s) (Optional):	**Threat to life and property.**
Responsibility:	**Burn Boss**

B. Actions Needed: Burn Boss or Resource Advisor will notify his or her immediate supervisor at DMR of current conditions, planned actions and potential impacts anytime contingency actions are implemented.

C. Minimum Contingency Resources and Maximum Response Time(s):

Harrison County Fire Services: 15-20-minute response time.

Mississippi Forestry Commission Central Dispatch. Up to 1 hour.

DMR Patrol Officers: Up to1 hour.

Element 18: Wildfire Declaration

A. Wildfire Declared By:

Following the Management Action Points – Documentation Elements in the Contingency Plan (Element 17) the Burn Boss would declare a wildfire when on-site forces fail to contain a spot fire that is either within an MMA or on private lands.

B. IC Assignment:

The Burn Boss would continue to function as the Incident Commander until relieved of command by the IC of the agency / fire

department that has jurisdiction over the wildfire. The Burn Boss will brief the incoming IC on available resources, tactical actions taken, fire behavior and fuels conditions.

C. Notifications:

Harrison County Fire Services: 228-832-0638 / 228-452-3952
Mississippi Forestry Commission Central Dispatch. 800-240-5161
DMR Patrol Officers:
DMR Agency Administrator / Agency Representative:

D. Extended Attack Actions and Opportunities to Aid in Fire Suppression:

Don't abandon the prescribed burn! Although a spot or spots has dictated a wildfire declaration it is possible that responding resources and their IC may focus on the uncontrolled fire. Ensure that a sufficient number of resources remain assigned to patrolling and confining the prescribed fire ground to ensure containment other than the spot fire.

Element 19: Smoke Management and Air Quality

A. Compliance: The Burn Boss will **complete** and document the smoke screening process listed in "Voluntary Smoke Management Guidelines for Mississippi" revised 2012. The Florida Division of Forestry On Line Smoke Screening tool can be used 24 hours in advance to model your smoke plume. This on-line tool integrates with current weather forecasts to model your predicted smoke column. It can be used outside of the State of Florida. The current link for the tool is http://flame.fl-dof.com/wildfire/tools_sst.html

B. Permits to be Obtained: Day of burn call MS Forestry Commission Central Dispatch (800-240-5161) for verbal burning permit. Document in table below:

Permit #	Valid Date	Start & Finish Time	Name of Person Issuing Permit

C. Smoke-Sensitive Receptors: These burn units are relatively isolated from urban development, concentrated rural communities, major roadways and recreational areas. The closest smoke receptors are the few residences along Bells Ferry Rd and isolated camps down river from the unit.

D. Potential Impacted Areas: The area of most concern that is likely to be impacted by smoke to the point of limited visibility is the stretch of Bells Ferry Rd. immediately adjacent to the Preserve on the north.

The stretch of Menge Ave. which crosses the Wolf River approximately one-mile SW of the burn unit. In the late evening and early morning hours following the burn it is possible that drift smoke may settle in the low areas of Menge Ave that cross the river marsh and approach the bridge from the north. Visibility could be significantly reduced until sunrise. If fog forms, then visibility could be reduced to zero on the roadway for at least ¼ mile in this area.

I-10 is 1.5 miles due north of the unit and 2-3 miles NW and NE of the unit. The relatively small size of each burn unit will not produce enough smoke to threaten I-10 if the burn is completed within minimum requirements listed in the prescription.

E. Mitigation Strategies and Techniques to Reduce Smoke Impacts:

- Plot smoke vectors for day of burn.
- Meet or exceed all requirements of Burn Permit.
- Use strip head or flanking fire to encourage rapid dispersion of smoke.
- Do not burn if 20' wind is blowing from the South.
- Leave Smoke Ahead signs in place over night on Bells Ferry Rd. ½ mile either side of burn unit and on Menge Ave. just south of the bridge and just south of the intersection with Bells Ferry Rd .

- Patrol local roads once during late night or early morning hours.
- Notify Harrison Co. Sheriff if visibility is significantly reduced.
- Notify local residents prior to and day of the burn.

Element 20: Monitoring

A. Fuels Information Required and Procedures:

Pre Burn monitoring of prescribed burn indices (fuel moistures, weather, KBDI) should be commenced within a week of expected burn day. This information would be prepared by the Burn Boss, DMR Resource Advisor or the Weather/Fire Observer. The purpose is to ensure that required parameters will be met on burn day.

B. Weather Monitoring (Forecasted and Observed) Required and Procedures:

The Burn Boss will request and obtain a NWS Spot Weather forecast the day prior to the burn and review it on the morning of the burn. During the burn a dedicated fire weather observer will monitor and record weather information to include but not limited to mid-flame wind speed and direction, relative humidity and smoke column formation and movement on an hourly basis or more often as requested by the Burn Boss. In addition, the observer will calculate fine dead fuel moisture and probability of ignition. If no fire weather observer is assigned the Burn Boss will be responsible for making and recording these observations or may assign it to the Holding Leader. It is highly recommended that a Weather/Fire Behavior monitor be assigned as the Burn Boss or Holding Leader will get distracted from primary duties while making and recording these observations.

C. Fire Behavior Monitoring Required and Procedures:

The Weather / Fire Behavior monitor will calculate rate of spread, flame length and fuel bed information during hourly weather observations at the most active area of the fire.

D. Monitoring Required to Ensure that Prescribed Fire Plan Objectives are Met:

The primary responsibility of the Burn Boss is to ascertain whether treatment objectives (see Element 5) have been achieved immediately post burn. This can be performed by post burn inspection, but is mostly limited to the percentage of immediate top killing of shrubs.

It is *recommended* to evaluate long term objectives that 2 permanent photo points should be established prior to each prescribed burn treatment. They should be marked in advance with 3 rebar posts (photo site, line up point 20' away, line up point 30' away, but the lineup markers could be less distant if fuels are thick) at least one day in advance of the planned burn. Photos would be taken at that point within one week prior to the burn, the day after the burn, 6 months post burn, one year post burn and annually post burn. This would enable a comprehensive yet simple analysis basis. These plots would only need to be established prior to burning all or a portion of a burn unit, so they all don't need to be established immediately. In the long run however they can become an important reference tool for the entire tract.

E. Smoke Dispersal Monitoring Required and Procedures:

The Burn Boss or Weather/Fire Behavior Observer should monitor the smoke column hourly and document visibility on Bells Ferry Road and/or other significant smoke vector points hourly. These observations must be documented and it is recommended that photos are taken to supplement the written narrative. Additionally a request can be made from the NWS for digital copy of the radar imagery during the burn for documentation of the smoke plume.

Element 21: Post-burn Activities

Post-Burn Activities that must be Completed:

- The Burn Boss will complete the ICS 201 to document:
    - Resources on scene during the burn and used
    - Actions/Fire Behavior
    - Actual burned perimeter and significant unburnt interior islands

- Patrol the fire the next day and on subsequent days until the burn is declared out.
- Remove smoke signs when there is no longer smoke residual threat.
- If desired complete photo points for day 1 post burn
- Compile and file reports and burn information

Prescribed Fire Plan Appendices

Appendix A: Maps: Vicinity, Project or Ignition Units (or both), Optional: Significant or Sensitive Features, Fuels or Fuel Model, Smoke Impact Areas, KMZ/KML links.

Appendix B: Technical Reviewer Checklist

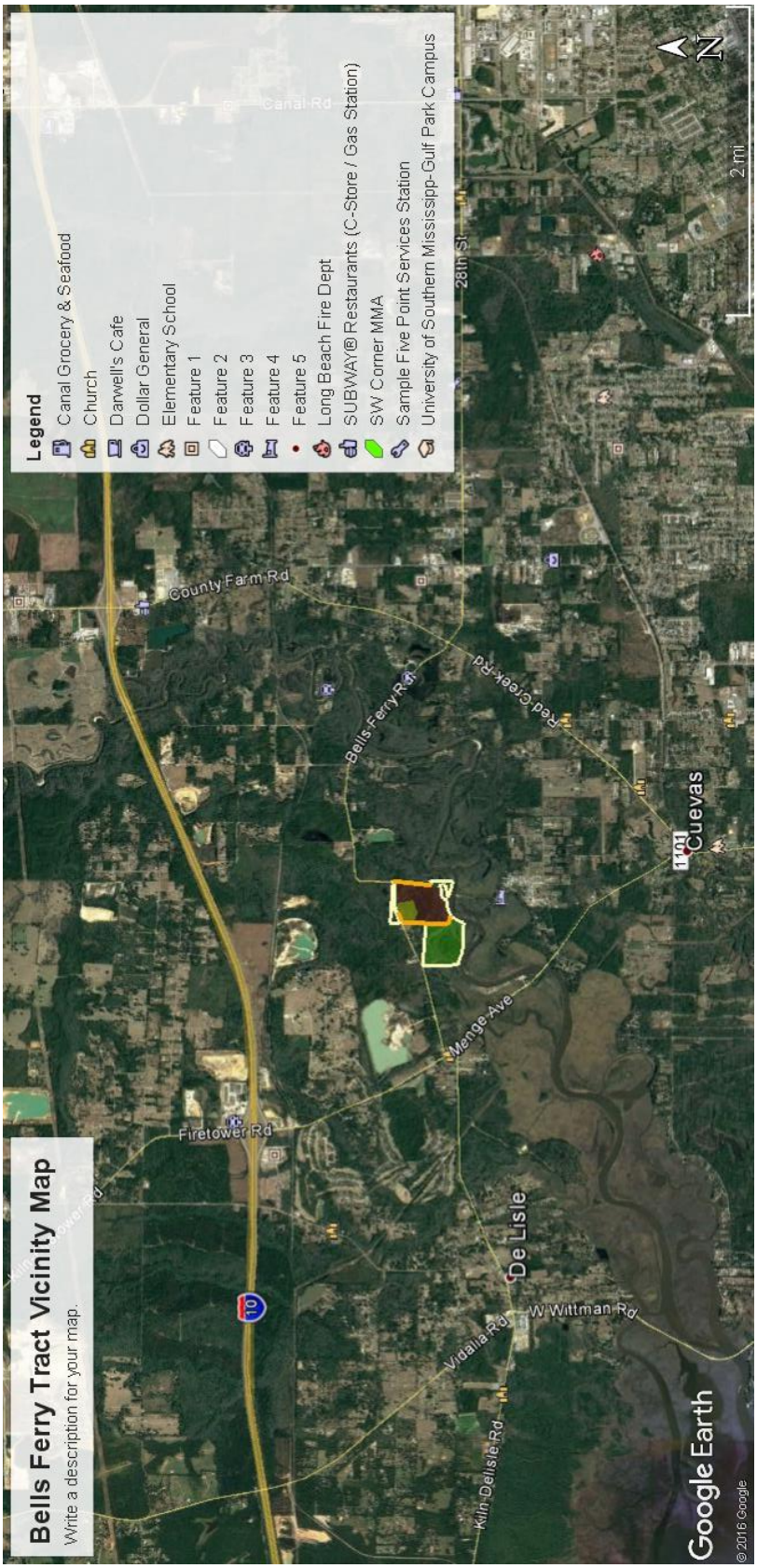
Appendix C: Complexity Analysis

Appendix D: ICS 201 Incident Briefing Form Planning / Documentation Example

Appendix E: Fire Modeling BEHAVE Run Outputs and Historic Weather Data

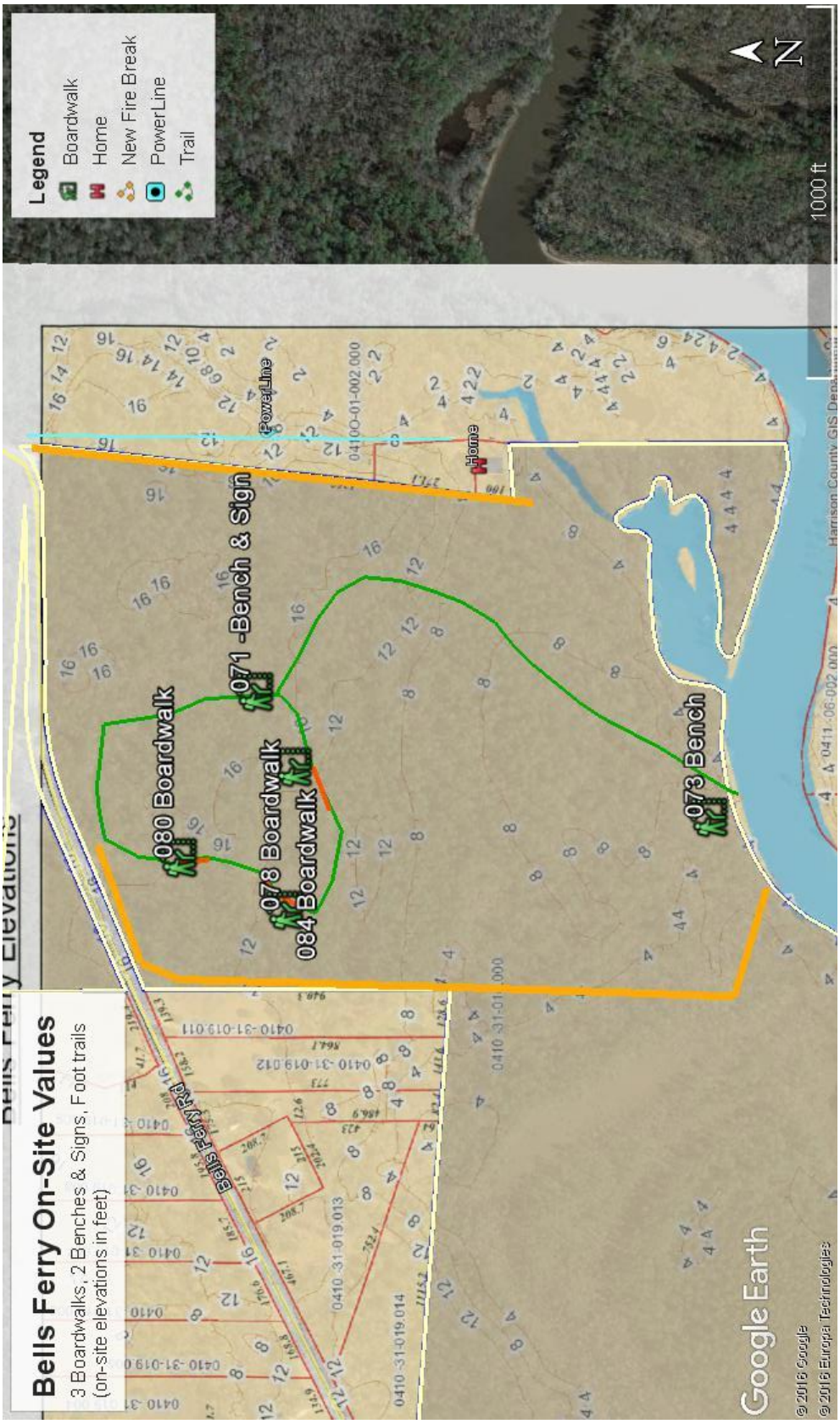
Appendix F: Smoke Management Plan and Smoke Modeling Documentation (Optional)

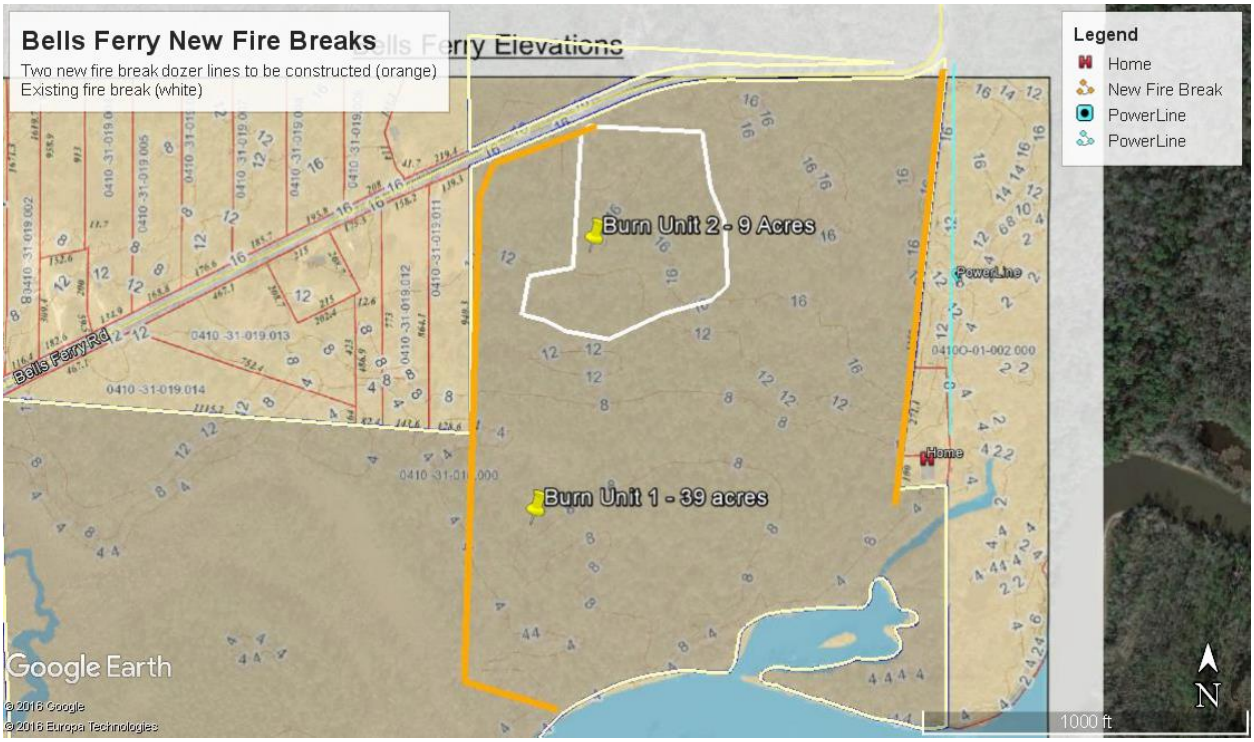
Appendix A: Vicinity Map

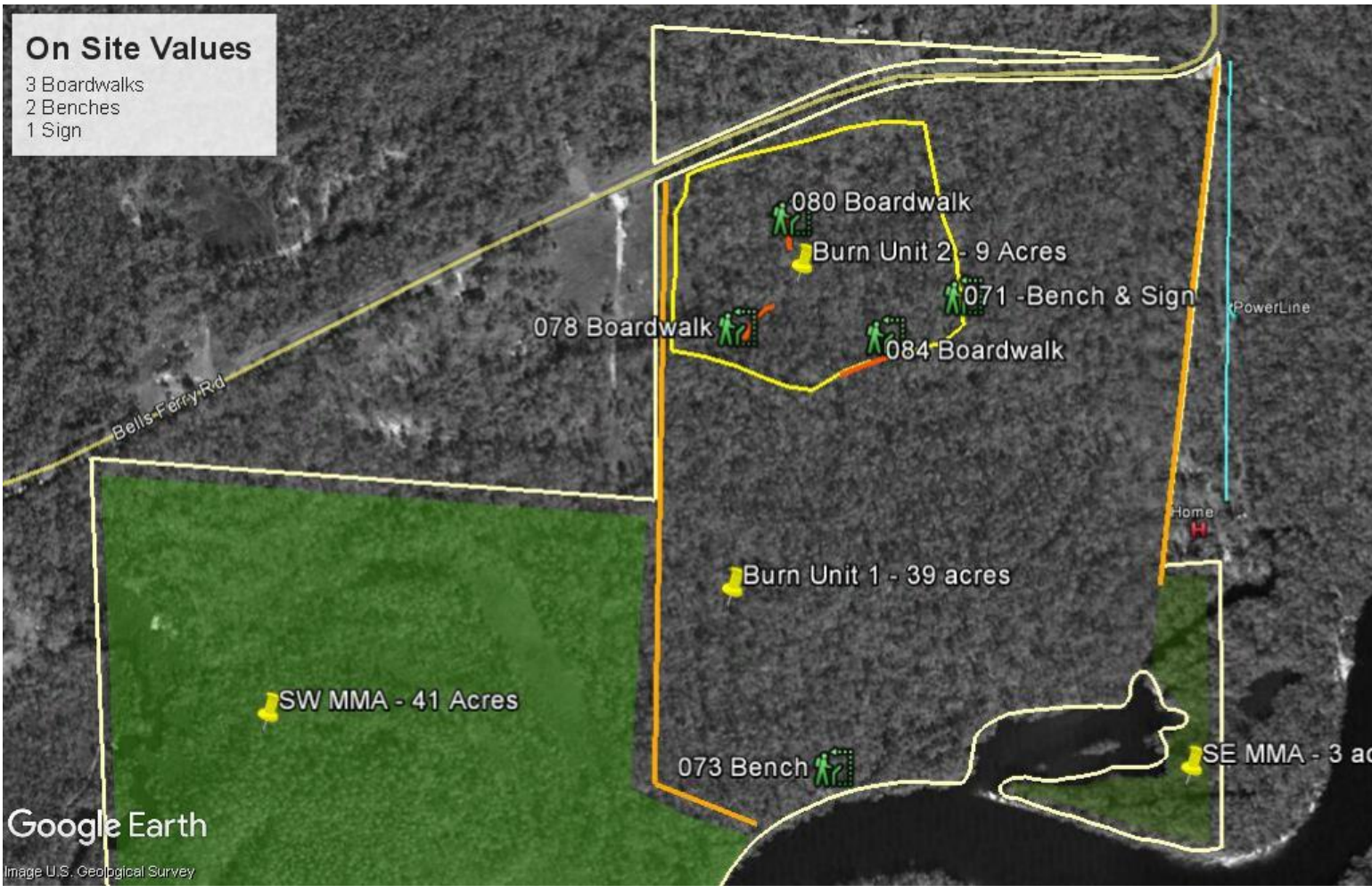


Appendix A: Project (Ignition Units) Maps

Appendix A: Significant or Sensitive Features

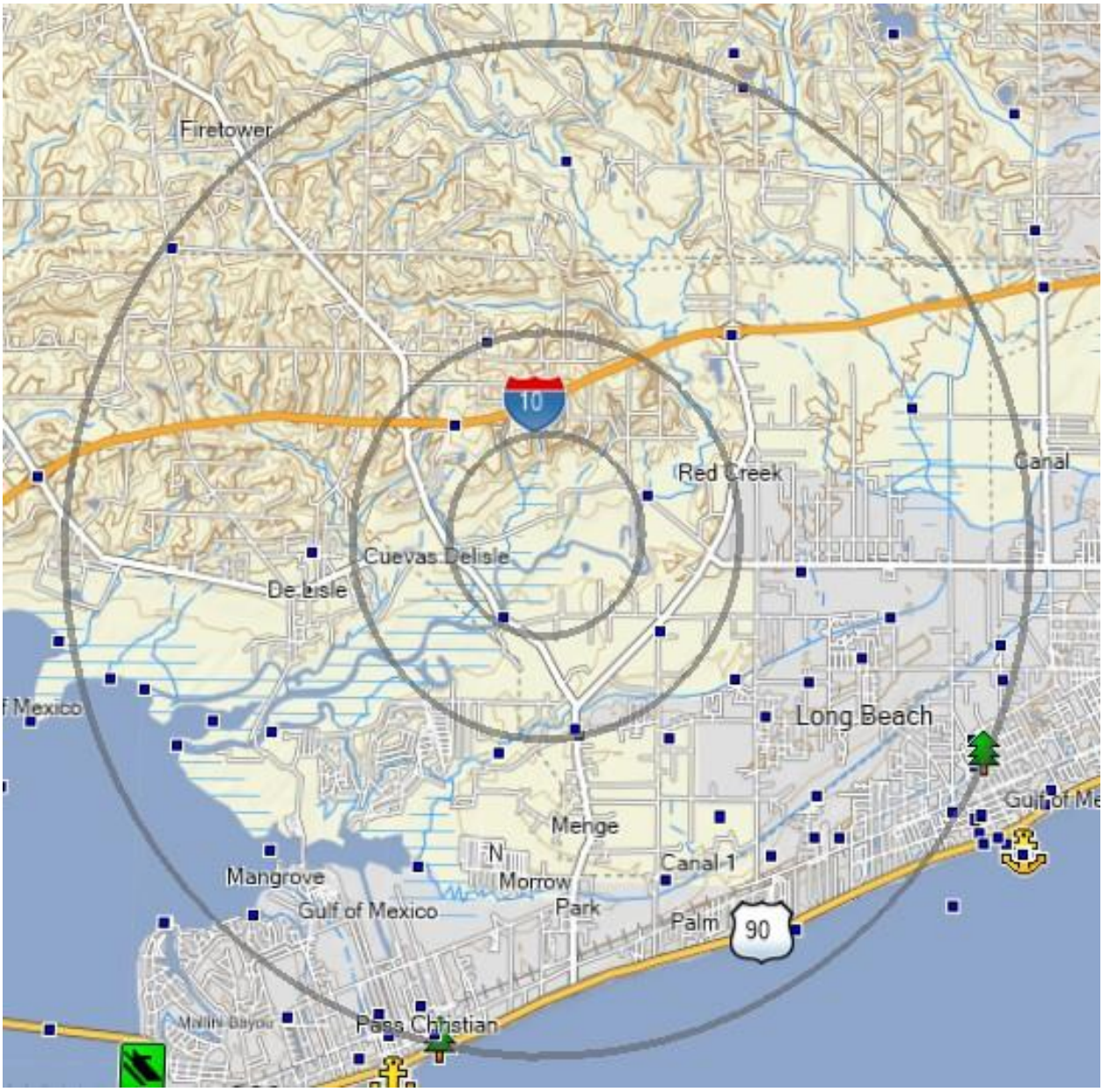



Bells Ferry New Fire Breaks
Two new fire break dozer lines to be constructed (orange)
Existing fire break (white)
Legend
Home
New Fire Break
PowerLine
PowerLine
Burn Unit 2 - 9 Acres
Burn Unit 1 - 39 acres
Bells Ferry Rd
PowerLine
Home
Google Earth
© 2016 Google
© 2016 Europa Technologies
1000 ft
N


On Site Values
3 Boardwalks
2 Benches
1 Sign
080 Boardwalk
Burn Unit 2 - 9 Acres
071 -Bench & Sign
078 Boardwalk
084 Boardwalk
PowerLine
Bells Ferry Rd
Home
Burn Unit 1 - 39 acres
SW MMA - 41 Acres
073 Bench
SE MMA - 3 ac
Google Earth
Image U.S. Geological Survey

Appendix A: Smoke Impact Areas: Maps

Circles are 1 mile, 2 miles and 5 miles from center of the Bells Ferry Tract.



Appendix A: Electronic Maps file for use with Google Earth or other mapping software that reads KMZ Files

In the paper copy of this plan the icon below only shows as an icon.

If viewing an electronic version of this Plan you can click on the icon and choose an application of your choice to open the KMZ file.

This file contains all electronic mapping data generated in preparation of this Plan. It includes the files that generated the maps printed in this Plan but also includes additional data that can be displayed and used to create additional custom maps.

Bells Ferry.kmz

Appendix B: Technical Reviewer Checklist

Fill out this checklist based on the guidance provided in the Technical Review section in the *Interagency Prescribed Fire Planning and Implementation Procedures Guide*, PMS 484. Rate each element in the following table with an "S" for Satisfactory or "U" for Unsatisfactory. Use Comment field as needed to support the element rating.

PRESCRIBED FIRE PLAN ELEMENTS	RATING	COMMENTS
1. Signature page		
2. A. Agency Administrator Ignition Authorization, PMS 485		
2. B. Prescribed Fire GO/NO-GO Checklist, PMS 486		
3. Complexity Analysis Summary		
4. Description of Prescribed Fire Area		
5. Objectives		
6. Funding		
7. Prescription: Prescription Narrative and Prescription Parameters		
8. Scheduling		
9. Pre-Burn Considerations and Weather		
10. Briefing		
11. Organization and Equipment		
12. Communication		
13. Public and Personnel Safety, Medical		
14. Test Fire		
15. Ignition Plan		
16. Holding Plan		
17. Contingency Plan		
18. Wildfire Declaration		
19. Smoke Management and Air Quality		
20. Monitoring		
21. Post-Burn Activities		
Appendix A: Maps		
Appendix C: Complexity Analysis		
Appendix D: Agency-Specific Job Hazard Analysis or Risk Assessment		
Appendix E: Fire Behavior Modeling Documentation or Empirical Documentation		
Appendix F: Smoke Management Plan and Smoke Modeling Documentation (Optional)		
Other		

☐ **Approval is recommended** subject to the completion of all requirements listed in the comments section, or on the Prescribed Fire Plan.

☐ **Recommendation for approval is not granted**. Prescribed fire plan should be re-submitted for technical review subject to the completion of all requirements listed in the comments section, or on the Prescribed Fire Plan.

Technical Reviewer Signature: _____ Qualification and Currency: _____

Date Signed:_____

Prescribed Fire Complexity Rating System Guide Worksheet

Instructions: This worksheet is designed to used with the Prescribed Fire Complexity Rating descriptors on Page 6.

Project Name **Bells Ferry** Number _____

Complexity elements:

1. Smoke Management

Risk	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	Bells Ferry Road, a two lane paved roadway immediately adjacent north and homes to the west, north and south of the tract are the critical smoke targets. These sites require mitigation to prevent short term exposure of public and private private facilities. There are also homes 0.5 miles NW and 0.4 miles S of the tract. Menge Ave., a busy N/S road is about 1 mile W. Interstate 10 is about 1 mile north of the tract.
Final Rating: **Low** *Moderate* *High*	Following smoke screening mitigations identified within the Plan, including prescribed wind vectors, stagnation index limits, ignition techniques and mop-up will mitigate major impacts, however due to abundance of 100 and 1000 hour fuels there will be a continued concern for drift smoke at night within 1000' of the burn unit. Smoke warning signs will be placed along Bells Ferry Road, and smoke impacts to homes both adjacent and up to 0.5 miles away will be monitored.
Potential Consequences	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	Potential for loss of visibility along the Bells Ferry Road could create short term driving hazards. There is a potential for smoke to intrude into private homes causing short term impacts to residents.
Final Rating: *Low* **Moderate** *High*	Following smoke screening mitigations identified within the Plan, including prescribed wind vectors, stagnation index limits, ignition techniques and mop-up will mitigate major impacts, however due to abundance of 100 and 1000 hour fuels there will be a continued concern for drift smoke at night within 1000' of the burn unit.
Technical Difficulty	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	Following the smoke screening recommendations will reduce the burn opportunities by reducing available wind vectors for implementation. Mitigation actions for smoke impacts need to be performed in a timely manner.
Final Rating: **Low** *Moderate* *High*	Wind vectors for burning are relatively wind on this tract. Other mitigation actions to be identified in the Burn Plan are not difficult to achieve. Request spot weather forecast and maintain dialogue with NWS forecaster beginning two days before the burn.

2. Public and Political Interest

Risk	Rationale
Preliminary Rating: *Low* **Moderate** *High*	The Bells Ferry tract is located in a pretty rural area with no commercial facilities nearby. There are scattered homes in the immediate area. There has been no burning on this tract for a number of years. This area is used recreationally.
Final Rating: **Low** *Moderate* *High*	There are no special public or political interest concerns anticipated.
Potential Consequences	**Rationale**
Preliminary Rating: Low **Moderate** High	Unexpected or adverse events (eg. Temporary closure of Bells Ferry Rd) would not likely attract public and/or media attention. These would be of short duration and would not impact future burn projects.
Final Rating: **Low** *Moderate* *High*	The local community is aware of the need for prescribed fire to reduce threats of wildfire and its ability to enhance visitor experience in future recreational or hunting use of this tract.
Technical Difficulty	**Rationale**
Preliminary Rating: Low **Moderate** High	Notifications will be needed to a variety of stakeholders; commercial, municipal, residential and governmental entities. Requires no special fire information function, and routine DMR media releases and direct contacts with public and stakeholders would meet the anticipated information needs.
Final Rating: **Low** *Moderate* *High*	Post signs along roadways and local businesses. Use reverse 911 and NOAA weather radio if available. As above, normal DMR information releases will meet the informational needs.

3. Off-Site Values

Risk	Rationale
Preliminary Rating: *Low* **Moderate** *High*	There are a limited number of off-site values: private homes, paved primary and secondary roads and of course the I10 one mile to the north.
Final Rating: **Low** *Moderate* *High*	The biggest threat to the above is from smoke and escaped fire. As itemized in Smoke Management section above, following smoke screening mitigations identified within the Plan will reduce this concern from Moderate to Low.
Potential Consequences	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	Potential short term disruptions to the Bells Ferry Road could result from unexpected or adverse events, and would create short term impacts to adjacent and more distant subdivisions. An escaped fire into the marshy SW corner of the tract would cause additional smoke impacts to private homes to the W. There is a powerline running N/S immediately E of the tract and one additional home adjacent to the SE corner of the tract.
Final Rating: **Low** *Moderate* *High*	As itemized in Smoke Management section above, following smoke screening mitigations identified within the Plan will reduce that concern from Moderate to Low. The Plan includes contingency resources to minimize acreage of escapes. Following the burn prescription within the plan will minimize risk of escape.

Technical Difficulty	Rationale
Preliminary Rating: *Low* **Moderate** *High*	Protection of off-site values require coordination of holding and ignition forces along each boundary line.
Final Rating: **Low** *Moderate* *High*	The Plan includes actions for both Smoke Management, Public & Political Interests and Escape Fire that will mitigate threats to off-site values. The burn plan includes having a staged Dozer as well as sufficient holding resources.

4. On-Site Values

Risk	Rationale
Preliminary Rating: **Low** *Moderate* *High*	There are very few on-site values that are easily protected. These include 2 trail benches, some directional signs, and three elevated trail boardwalks. (See map). There are no threatened or endangered species or other species of concern.
Final Rating: **Low** *Moderate* *High*	The features identified are easily protected with hand tools, removal, and special ignition techniques.
Potential Consequences	**Rationale**
Preliminary Rating: **Low** *Moderate* *High*	The management objective of restoring wet pine flatwoods is the primary objective of management of this tract. The tract is also used by recreational users. Prescribed burning will create a short term closures to public use. Lack of fire on this landscape would result in failure to meet the restoration goal. Use of fire will enhance visitor experience in the future.
Final Rating: **Low** *Moderate* *High*	The Bells Ferry tract is broken into two burn units. By breaking down in this manner there is a wider choice of prescription options, thereby maximizing opportunities to conduct the burns and achieve management goals.
Technical Difficulty	**Rationale**
Preliminary Rating: **Low** *Moderate* *High*	The technical difficulties to protect on site values at Bells Ferry is low. There are a few features that need special protection.
Final Rating: **Low** *Moderate* *High*	The Plan calls to mitigate on-site issues either as pre-treatment or directly on burn day.

5. Constraints

Risk	**Rationale**
Preliminary Rating: *Low Moderate* **<u>High</u>**	Prior to burning both Burn Units 1&2 at Bells Ferry permanent fire lines need to be built along the Eastern boundary (0.26 miles) and the Western boundary and western edge of Burn Unit 2 (0.35 miles).
Final Rating: **<u>Low</u>** *Moderate High*	If these fire breaks are constructed the risk would drop to low.
Potential Consequences	**Rationale**
Preliminary Rating: *Low Moderate* **<u>High</u>**	If these fire lines are not constructed the burn(s) cannot be conducted safely without high consequential risk to adjacent landowners and their homes,=.
Final Rating: **<u>Low</u>** *Moderate High*	If completed prior to future burning this potential consequence is entirely mitigated.
Technical Difficulty	**Rationale**
Preliminary Rating: **<u>Low</u>** *Moderate High*	Complete fire break construction at least a day prior to burning.
Final Rating: **<u>Low</u>** *Moderate High*	Contract this fire break construction or do in house.

6. Fire Treatment Objectives

Risk	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	Restore herbaceous surface fuels and reduce or remove mid-story fuel shrubs and create some thinning of the mature trees. Reduce hazard fuel loading. Fire is a good start for achieving this management goal, but might be coupled with mechanical reduction of pine overstory in the future.
Final Rating: **Low** *Moderate* *High*	After first entry burns which may occur in the dormant or growing season, growing season burns should further the achievement of the goal of meeting the objectives above and also improve site access for thinning and invasive plant treatments. This Tract has relatively wide wind vectors in the prescription and relatively small burn units that should enhance burning opportunities in both dormant and growing season.
Potential Consequences	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	Failure to transition the burning cycle to growing season will encourage persistence of mid-story shrubs, and (by shading) discourage the return of natural herbaceous plants to the surface layer, resulting in long term negative impacts to the burning units. Moderately intense fire is required to achieve the objectives.
Final Rating: **Low** *Moderate* *High*	As stated above small burn units and wide wind vectors should permit frequent burning of this Tract reducing the chance of unwanted consequences.
Technical Difficulty	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	Fire effects and weather need to be monitored during burning operations and immediately post burn to evaluate success or failure of treatments. DMR personnel need to monitor forecasted weather events to assure that available burn opportunities are not missed. Growing season burn opportunities need to be a high priority for DMR management.
Final Rating: **Low** *Moderate* *High*	Moderately intense fire behavior is necessary to achieve objectives. That increases risk of spotting, requiring close coordination between ignition and holding, prescription windows of opportunity need to be closely monitored in conjunction with NWS forecasters. Monitoring of first order fire effects is critical to determine if objectives are being met. This may be achieved at the minimal end by establishing permanent photo points and a simple monitoring schedule. At the high end DMR may wish to engage academic or contracted personnel to establish transects and a long term monitoring program. Consider having someone assigned to monitor and document fire behavior and weather throughout the burn.

7. Ignition Procedures / Methods

Risk	Rationale
Preliminary Rating: *Low* **Moderate** *High*	Firing sequence and timing are critical components. Regardless of the wind vector, ignitions should always start with establishing a backing fire black line on the downwind flank to reduce the chance of fire escape and create a buffer for spotting.
Final Rating: **Low** *Moderate* *High*	Once blacklines are established ignition methods may be used that create head and flanking fire to achieve a moderate intensity burn. These are relatively small burn units. Fire breaks identified in Constraints need to be set in place. This Tract, with two burn units, also permits alternate year burning which would simplify ignitions.
Potential Consequences	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	Risk to safety of personnel in firing interior of units. Possibility of excessive scorch when lines of fire converge. Increased possibility of spotting.
Final Rating: **Low** *Moderate* *High*	Establish LCES. Burn Boss can direct ignition actions with no subordinate ignitions supervisor needed. The ignition pattern requires direct control of the lighters to achieve objectives and manage safety concerns. Monitor fire effects and communicate with all resources to make effective adjustments to the ignition patterns.
Technical Difficulty	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	Drip torches sufficient. Ignition crew may be working both interior and along perimeter.
Final Rating: **Low** *Moderate* *High*	Burn Boss supervise two lighters. Coordinate by frequent and communication (radio / face to face) with Burn Boss and Holding forces.

8. Fire Behavior

Risk	Rationale
Preliminary Rating: *Low* *Moderate* **<u>High</u>**	Moderate intensity fire is needed. Fuel loading should heavy on first entry burns but may reduce as burning is transitioned to subsequent growing season burns. Only one fuel model represented. Continuous fuels. Terrain flat. Sea breeze may cause wind shifts presenting moderate safety and holding concerns. Jackpots on control lines may be present and there are opportunities for single and multiple tree torching. Spotting opportunity exists over natural barriers and portions of the unit are not easily accessible. Spotting may be up to ¼ mile (NOTE ADJUST WITH BEHAVE RUNS). Snags may compromise control lines. Fuel loading and arrangement create a safety hazard (restrict mobility) outside the control line and within interior.
Final Rating: Low **<u>Moderate</u>** *High*	Implement LCES. Use patience when igniting interior and perimeter units. Take time to evaluate fire behavior before moving ahead. Monitoring of weather / fuels condition leading to burn day is critical to assure the appropriate KBDI levels, fine and ten hour fuels and overall prescription is met.
Potential Consequences	**Rationale**
Preliminary Rating: *Low* **<u>Moderate</u>** *High*	Excessive burn severity / scorch. To little fire behavior that will not achieve objectives. Burning into adjacent SW or SE areas of the tract or onto private property.
Final Rating: *Low* **<u>Moderate</u>** *High*	Follow established prescription elements that will meet objectives and prevent excessive burn severity. Follow the prescription. Do not be afraid to call off the burn on burn day if out of prescription. Once again, these are relatively small burn units managed on a single burning day.
Technical Difficulty	**Rationale**
Preliminary Rating: *Low* **<u>Moderate</u>** *High*	Occasional on site fire behavior and weather observations are required. Potential for indirect attack of spots due to combination of fire behavior, boggy soils (marsh) and thick, brushy vegetation.
Final Rating: **<u>Low</u>** *Moderate* *High*	These are pretty straightforward burns on relatively small units.

9. Potential for Escape

Risk	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	There are multiple potential reasons why fire can escape. Spotting, snags within the burn unit or adjacent the control lines or marsh edges and radiant heat are the major potential sources. Wind shifts due to sea breeze effect can be common. The waning days of a cold front passage may also result in wind shifts. There is a private home adjacent to Burn Unit 1 to the East.
Final Rating: *Low* **Moderate** *High*	Improve lines, establish sufficient black lines prior to head or flank firing, patrol lines, establish lookouts, establish anchor points, adjust firing techniques for current and expected conditions and fire behavior. To the south there is open water.
Potential Consequences	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	Damage to private homes and lands primarily to the east and west of the burn tract. Closure Bells Ferry Road.
Final Rating: ***Low*** **Moderate** ***High***	Improve lines, establish sufficient black lines prior to head or flank firing, patrol lines, establish lookouts, establish anchor points, adjust firing techniques for current and expected conditions and fire behavior. Cut snags and mop up along fire breaks.
Technical Difficulty	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	Holding lines around the burn unit need construction prior to ignitions. Interior holding lines (eg. Loop Trail) will need prep work before burning. Ensure adequate staffing of holding resources and contingency resources. Portions of the Bells Ferry tract outside the planned burn unit (allowable areas to SW and SE) are difficult to access with equipment and personnel.
Final Rating: *Low* **Moderate** ***High***	Have tractor plow on site. Establish a burn rotation schedule to create a fuels/age of rough mosaic using the three basic units. Take advantage of rising humidities late in day when burning near marsh areas.

10. The Number and Dependence of Activities

Risk	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	There are multiple activities that need to occur before ignitions. They include posting smoke signs and making contacts with stakeholders. Sufficient time must be planned for on burn days to ensure these activities can be completed in a timely way and not interfere with ignition and holding operations. During the burn resources may be scattered throughout the burn unit.
Final Rating: **Low** *Moderate* *High*	Plan to be out early on a burn day to complete the prep work/notifications in a manner that will not eat into the primary burning period. Confirm communication capabilities to ensure direct coordination of ignition and holding forces.
Potential Consequences	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	Excessive time spent on burn day of pre-ignition prep work or slow implementation of firing actions causing missed peak burn windows or shifts out of prescription.
Final Rating: **Low** *Moderate* *High*	Early start eliminates timing issues. Establish secure black line (30') prior to dividing crews and major ignition operations. Ensure communications systems are in place and working properly.
Technical Difficulty	**Rationale**
Preliminary Rating: **Low** *Moderate* *High*	Only two activities (burning and holding) during firing operations. Smoke signs and notifications (as listed in Public and Political Interest) must be made prior to ignition.
Final Rating: ***Low*** *Moderate* *High*	Burn Boss or DMR program personnel can make contacts with stakeholders at a minimum of one day prior to burn, with follow up phone notifications on day of burn.

11. Management Organization

Risk	Rationale
Preliminary Rating: *Low* **Moderate** *High*	Only one level of line supervision is needed for burns on the Bells Ferry tract. It would benefit the DMR fire program to monitor and document weather and fire behavior to establish a base line for future burns in this tract. There could be a need to have LE assistance along Bells Ferry Road.
Final Rating: **Low** *Moderate* *High*	Burn Boss at RXB2 qualification or equivalent. Dedicated person to monitor and record weather observations and fire behavior. If needed Burn Boss will need to coordinate LE on Bells Ferry Road.
Potential Consequences	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	Failure to have adequate supervision may result in higher possibility of escape, failure to meet objectives, safety violations and accidents or injuries. Failure to observe and record weather and fire behavior will limit the ability to make correct tactical decisions based on current and predicted fire behavior. Recording these observations will aid in planning of future burns in this tract.
Final Rating: **Low** *Moderate* *High*	The Plan includes proper level of supervision needed. Burn Boss must remain within acceptable span of control (no more than 7).

Technical Difficulty	Rationale
Preliminary Rating: *Low* **Moderate** *High*	One level of supervision required. Off-site contacts are required.
Final Rating: **Low** *Moderate* *High*	The Plan meets the requirements for organization and supervision. Organization in plan calls for total staff of 6 (Burn Boss + tractor plow, UTV, T6 engine)

12. Safety

Risk	Rationale
Preliminary Rating: *Low* **Moderate** *High*	Moderate to high fire intensity. Communications over wide unit. Firefighters and public exposed to dense smoke for short periods of time. Resources not directly in line of sight. Firefighters may be working indirectly in unburnt fuels. Coordination of burning operations so as not to entrap firefighters. Terrain in some areas of unit and adjacent to unit is marshy and thick making for difficult movement and slips / trips and other footing hazards. Fatigue of tactical resources. Multiple snags.
Final Rating: **Low** *Moderate* *High*	Detailed briefings will be conducted to make all personnel aware of hazards and communications. Use LCES and keep one foot in the black when possible. Follow IRPG recommendations for hazard detection and avoidance including firing, holding, working around heavy equipment, etc.
Potential Consequences	**Rationale**
Preliminary Rating: *Low* **Moderate** *High*	Injuries to firefighters and public, damages to fire equipment and private property.
Final Rating: **Low** *Moderate* *High*	The Plan addresses operational safety concerns including briefing requirements. Firefighters will follow 10 & 18 and implement LCES. This is a small organization on some relatively small units.
Technical Difficulty	**Rationale**

Preliminary Rating: *Low* **<u>Moderate</u>** *High*	This tract is pretty straightforward from the tactical perspective. The moderate to high planned fire behavior itself is always a watch out. Beyond the prepared control lines the terrain is thick and difficult to move quickly in. But the terrain is flat.
Final Rating: **<u>Low</u>** *Moderate* *High*	Standard safety operations will mitigate most hazards. The Plan design calls for establishing black lines off prepared control lines, but the basic hazards of difficult terrain for interior ignitors remain and must be mitigated by good communications and igniting the fire in a paced manner as directed by the Burn Boss. Smoke signs and notifications reduce safety concerns for the public.

13. Project Logistics

Risk	**Rationale**
Preliminary Rating: **Low** *Moderate* *High*	Minimal logistical support needed. Equipment needs are low. DMR has radio equipment and other supplies are readily available.
Final Rating: **Low** *Moderate* *High*	Check all equipment, supplies and firefighter PPE prior to burn day. Have drinking water available day of burn. Advise resources to bring lunch.
Potential Consequences	**Rationale**
Preliminary Rating: **Low** *Moderate* *High*	Failure to have necessary equipment and personnel would result in not being able to conduct or complete the burn. Be able to remove stuck vehicles.
Final Rating: **Low** *Moderate* *High*	There should be no issues ensuring equipment and personnel are ready prior to burn day.
Technical Difficulty	**Rationale**
Preliminary Rating: **Low** *Moderate* *High*	Burn Boss can handle or direct resources to care for support needs. Supplies and resources must be made available by DMR prior to burn day.
Final Rating: **Low** *Moderate* *High*	Supplies and equipment are already in stock (DMR) or are readily available. Crew has ability to make minor repairs on equipment. Commercial or cooperator assistance may be needed to assist in equipment breakdowns.

14. Interagency Coordination

Risk	**Rationale**
Preliminary Rating: **Low** *Moderate* *High*	No other agency lands directly involved on the Bells Ferry Tract. Possible use of interagency crews.
Final Rating: **Low** *Moderate* *High*	No other agency lands directly involved on the Bells Ferry tract.
Potential Consequences	**Rationale**
Preliminary Rating: **Low** *Moderate* *High*	If depending on interagency crews to assist with the burn, it is possible burn cannot be conducted if they are unavailable on burn day.
Final Rating: **Low** *Moderate* *High*	Coordinate with cooperating agencies 2-3 weeks before burn day and follow up with them 2-3 days ahead.
Technical Difficulty	**Rationale**
Preliminary Rating: **Low** *Moderate* *High*	Permit will be obtained from Mississippi Forestry Commission central dispatch. Agreements must be in place if Interagency resources are going to be used on the burn.
Final Rating: **Low** *Moderate* *High*	Following the notification procedures outlined in the Plan will ensure all proper notifications are made prior to burning.

COMPLEXITY RATING SUMMARY

RISK	OVERALL RATING **Moderate**
POTENTIAL CONSEQUENCES	OVERALL RATING **Moderate**
TECHNICAL DIFFICULTY	OVERALL RATING **Moderate**

SUMMARY COMPLEXITY RATING MODERATE

RATIONALE: Smoke Management, Fire Behavior, and Potential for Escape are the only Elements that continued to show as Moderate in the Final Evaluations for either Risk, Potential Consequences and Technical Difficulty. Overall these are pretty straightforward burns on relatively small burn units. But private interface issues cannot be ignored. These burns will require only a small organization.

Prepared by:_____ Date:_____

Approved by: _____ Date: :_____

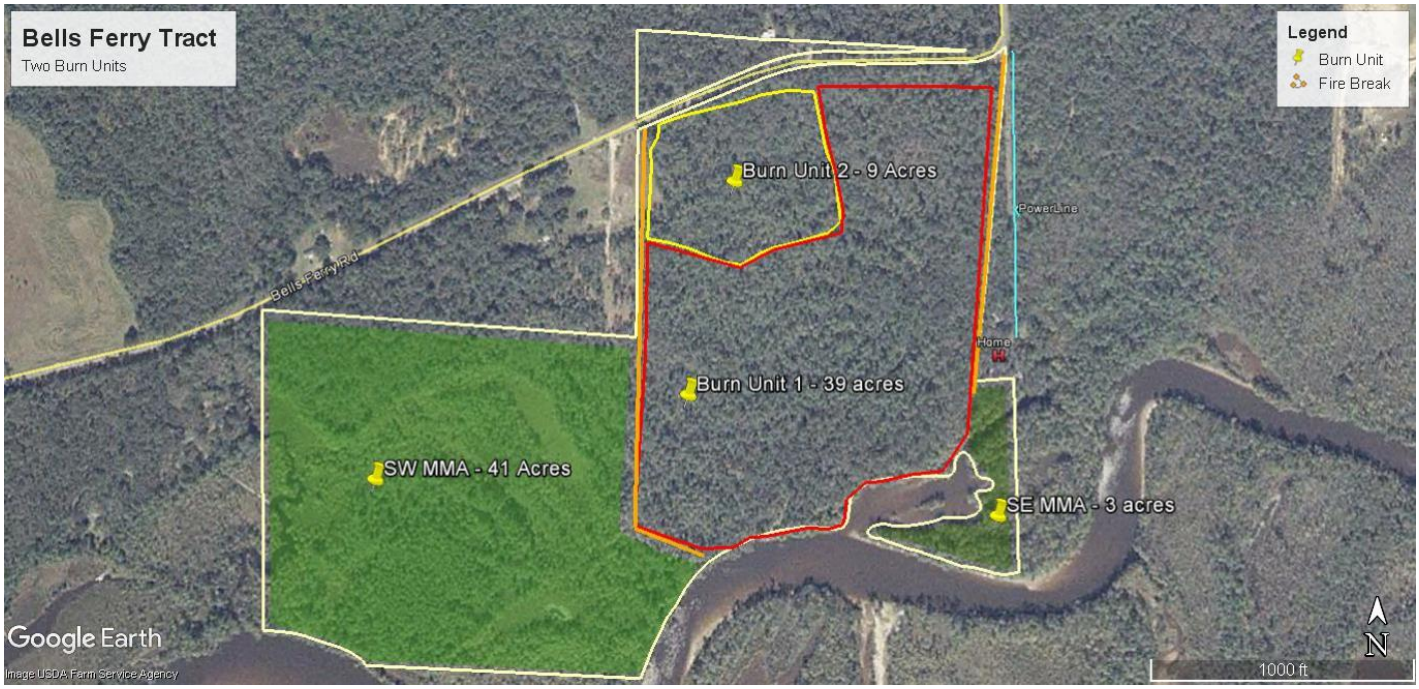
5(Agency Administrator)

Appendix D: ICS201 Form IAP / Burn Documentation Form

INCIDENT BRIEFING (ICS 201)

1. Incident Name: Bells Ferry Rx	2. Incident Number:	3. Date/Time Initiated: Date: Time:

4. Map/Sketch



5. Situation Summary and Health and Safety Briefing:

- ☐ **Burn organization and assignments**
- ☐ **Prescribed Fire objectives and prescription**
- ☐ **Description of prescribed fire project area**
  - ☐ **Special considerations and sensitive features**
- ☐ **Expected weather and fire behavior**
- ☐ **Communications**
- ☐ **Ignition plan**
- ☐ **Holding plan**
- ☐ **Contingency plan and assignments**
- ☐ **Wildfire declaration**
- ☐ **Safety and medical plan**

6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 201, Page 1 Date/Time: _____

INCIDENT BRIEFING (ICS 201)

1. Incident Name: BELLS FERRY RX	2. Incident Number:	3. Date/Time Initiated: Date: Time:

7. Current and Planned Objectives:

- On an ongoing basis provide for the safety of incident personnel and the public by adhering to appropriate (DMR, Mississippi & NWCG) safety guidelines and policies and by using risk analysis processes to select the safest appropriate actions prior to field burn activities.
- Top kill 70% of shrubs throughout the Burn Unit immediately post burn.
- Achieve 15% or greater mortality of immature and mature trees.

8. Current and Planned Actions, Strategies, and Tactics:

Time:	Actions:
Pre Ignition	Post Smoke Signs on Bells Ferry Road
Pre Ignition	Contact adjacent homes regarding prescribed burn
Pre Ignition	Obtain Spot Weather Forecast from NWS
Briefing	All Tactical Resources attend on-site pre-ignition briefing
Monitoring	Burn Boss or Monitor confirm current and expected weather are in prescription
Test Burn	All Tactical resources on site at Test Burn. Burn Boss complete Test Burn documentation.
Ignition Phase	If test burn is acceptable, Ignition resources move ahead under direction of Burn Boss, Holding resources working behind/in tandem or as directed by Burn Boss
Monitoring	Burn Boss or Monitor record hourly weather and fire behavior observations including smoke impact observations surrounding the Burn. Holding resources patrol lines for holding success and spot suppression.
Holding	Post ignition all resources patrolling and holding
Mop Up	All lines are mopped up within 1 chain (66 feet). Any active or potential snags are dropped and mopped.
Mop Up/Smoke Management	As directed by Burn Boss all resources mop up interior smokes in 100 and 1000 hour fuels to reduce/eliminate overnight residual smokes.
Next Day/Subsequent Days	Patrol fire lines for threats. Mop up residual heat sources. Remove Smoke Signs on Bells Ferry Road when smoke threats are mitigated

6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

 Date/Time: _____

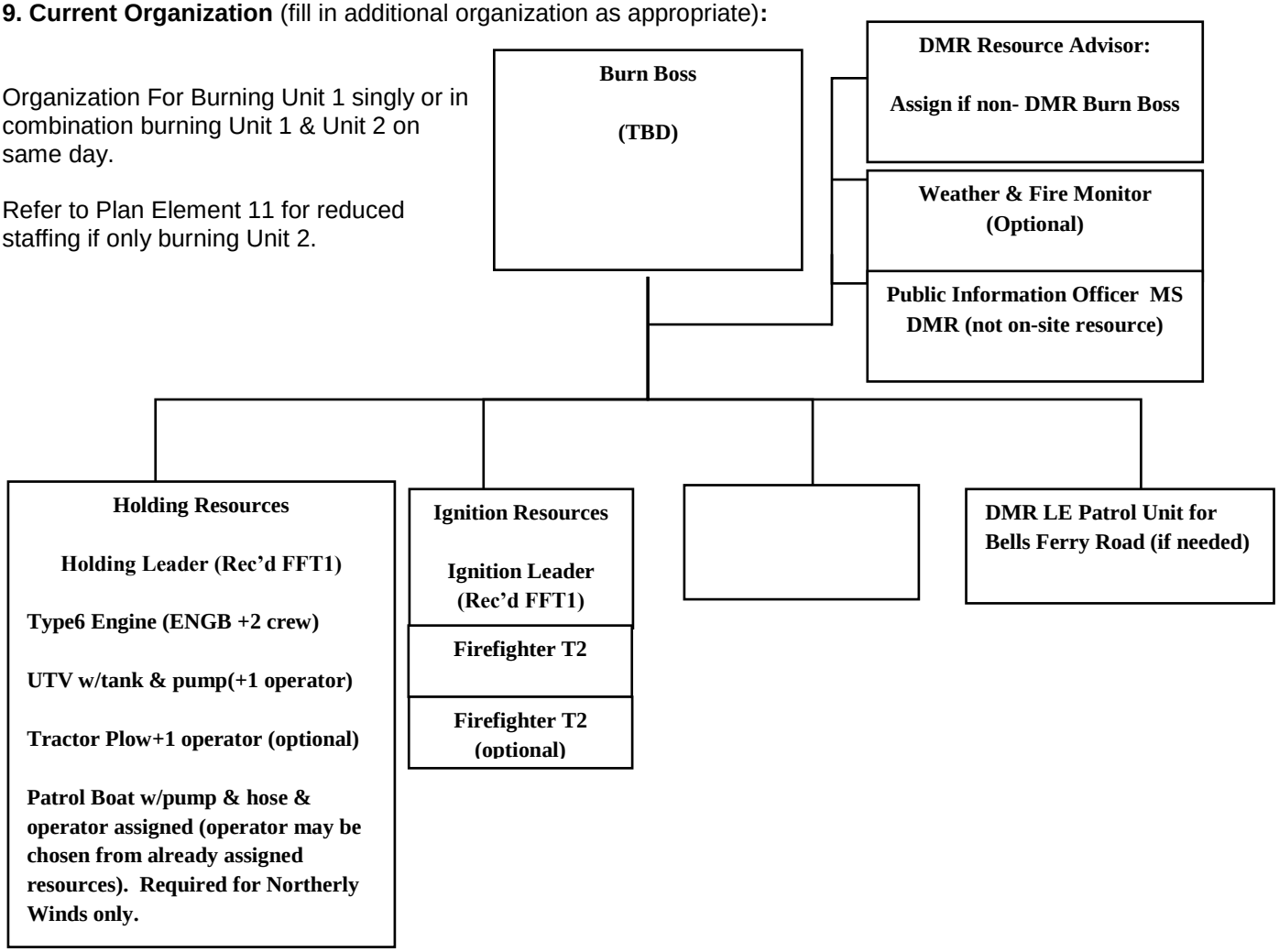
INCIDENT BRIEFING (ICS 201)

1. Incident Name: BELLS FERRY RX	2. Incident Number:	3. Date/Time Initiated: Date: Time:

9. Current Organization (fill in additional organization as appropriate)**:**

Organization For Burning Unit 1 singly or in combination burning Unit 1 & Unit 2 on same day.

Refer to Plan Element 11 for reduced staffing if only burning Unit 2.



6. Prepared by: Name: _____ Position/Title_____Signature: _____

ICS 201, Page 3 Date/Time: _____

INCIDENT BRIEFING (ICS 201)

1. Incident Name: BELLS FERRY RX	2. Incident Number:	3. Date/Time Initiated: Date Time:

10. Resource Summary:

Resource	Resource Identifier	Date/Time Ordered	ETA	Arrived	Notes (location/assignment/status)
Burn Boss (RXB2 or Equivalent)	Contract or State or Other			☐	Incident Command
Resource Advisor DMR	DMR				Assigned if Burn Boss is not DMR staff. Present to advise BB on DMR resource concerns
PIO DMR	DMR Public Affairs				Not an on scene resource. Is identified as the DMR person responsible for pre-ignition coordination of information distribution to adjacent landowners and other stakeholders.
Weather & Fire Monitor	DMR or State other or Cooperator/Contractor				Record hourly weather readings and fire behavior observations. Monitor & record smoke observations adjacent to the burn.
Ignition Crew	DMR or State other or Cooperator/Contractor				Primary ignition resources.
Tractor Plow Type 3 or 4	Contract or State				Holding
Engine Type 6	DMR				Holding
UTV	DMR				Holding
DMR Boat (with pump & hose)	DMR				Holding if burn is conducted on northerly winds.
LE Patrol Unit	DMR				Bells Ferry Road Traffic Management & smoke observations.

6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

 Date/Time: _____

9 Line Medical Incident Report

Medical Incident Report

FOR ALL MEDICAL EMERGENCIES: IDENTIFY ON SCENE INCIDENT COMMANDER BY NAME AND POSITION AND ANNOUNCE

Use items one through nine to communicate situation to communications/dispatch.

1. CONTACT COMMUNICATIONS/DISPATCH
Ex: "Communications, Div. Alpha. Stand-by for Priority Medical Incident Report." (If life threatening request designated frequency be cleared for emergency traffic.)

***2.* INCIDENT STATUS:** *Provide incident summary and command structure.*

Nature of Injury/Illness		*Describe the injury (Ex: Broken leg with*
Incident Name		*Geographic Name + "Medical" (Ex: Trout*
Incident Commander		*Name of IC*
Patient Care		*Name of Care Provider (Ex: EMT*

3. INITIAL PATIENT ASSESSMENT: *Complete this section for each patient. This is only a brief, initial assessment. Provide additional patient info after completing this 9 Line*

Number of Patients:	Male / Female	Age:	Weight:
Conscious? ☐ YES	☐**NO = MEDEVAC!**		
Breathing? ☐ YES	☐ **NO = MEDEVAC!**		
Mechanism of Injury: *What caused the injury?*			
Lat/Long (Datum WGS84) Ex: N 40° 42.45' x W 123° 03.24'			

4. SEVERITY OF EMERGENCY, TRANSPORT PRIORITY

SEVERITY	TRANSPORT PRIORITY
☐ **URGENT-RED Life threatening injury or illness.** *Ex: Unconscious, difficulty breathing, bleeding severely, 2° – 3° burns more than 4 palm sizes, heat stroke, disoriented.*	Ambulance or MEDEVAC helicopter. Evacuation need is **IMMEDIATE.**
☐ **PRIORITY-YELLOW Serious Injury or illness.** *Ex: Significant trauma, not able to walk, 2° – 3° burns not more than 1-2 palm sizes.*	Ambulance or consider air transport if at remote location. Evacuation may be **DELAYED.**
☐ **ROUTINE-GREEN** Not a life threatening injury or illness. *Ex: Sprains, strains, minor heat-related illness.*	Non-Emergency. Evacuation considered **Routine of Convenience.**

5. TRANSPORT PLAN:

Air Transport: (Agency Aircraft Preferred)

☐ Helispot	☐ Short-haul/Hoist	☐ Life Flight	☐ Other

Ground Transport:

☐ Self-Extract	☐ Carry-Out	☐ Ambulance	☐ Other

6. ADDITIONAL RESOURCE/EQUIPMENT NEEDS:

☐ Paramedic/EMT(s)	☐ Crew(s)	☐ SKED/Backboard/C-Collar
☐ Burn Sheet(s)	☐ Oxygen	☐ Trauma Bag
☐ Medication(s)	☐ IV/Fluid(s)	☐ Cardiac Monitor/AED

☐ Other (i.e. splints, rope rescue, wheeled litter)

7. COMMUNICATIONS:

Function	Channel Name/Number	Receive (Rx)	Tone/NAC *	Transmit (Tx)	Tone/NAC *
Ex: Command	*Forest Rpt, Ch. 2*	*168.3250*	*110.0*	*171.4325*	*110.9*
COMMAND					
AIR-TO-GRND					
TACTICAL					

*(NAC for digital radio system)

8. EVACUATION LOCATION:

Lat/Long (Datum WGS84) *EX: N 40 42.45' x W 123 03.24'*	
Patient's ETA to Evacuation Location:	
Helispot/Extraction Size and Hazards:	

9. CONTINGENCY:

***Considerations:* If primary options fail, what actions can be implemented in conjunction with primary evacuation method? Be thinking ahead...**	**REMEMBER:** **Confirm ETA's of resources ordered** **Act according to your level of training** **Be Alert. Keep Calm. Think Clearly. Act Decisively.**

BehavePlus 5.0.5 (Build 307)

Bells Ferry 7 moderate cured
Wed, Jan 04, 2017 at 14:04:09

Input Worksheet

Inputs: SURFACE, IGNITE

Input Variables	Units	Input Value(s)
Fuel/Vegetation, Surface/Understory		
Fuel Model		sh9
Fuel Moisture		
1-h Moisture	%	7
10-h Moisture	%	8
100-h Moisture	%	9
Live Herbaceous Moisture	%	90
Live Woody Moisture	%	120
Weather		
Midflame Wind Speed	mi/h	2, 4, 6, 8, 10
Direction of Wind Vector (from upslope)	deg	0, 45, 90, 135, 180, 225, 270, 315
Air Temperature	oF	60
Fuel Shading from the Sun	%	60
Terrain		
Slope Steepness	%	2
Fire		
Spread Direction (from upslope)	deg	180
Notes		

Run Option Notes

Maximum reliable effective wind speed limit IS imposed [SURFACE].

Calculations are for the specified spread directions [SURFACE].

Fireline intensity, flame length, and spread distance are always for the direction of the spread calculations [SURFACE].

Wind and spread directions are degrees clockwise from upslope [SURFACE].

Direction of the wind vector is the direction the wind is pushing the fire [SURFACE].

Results for: Surface Rate of Spread (ch/h)

Midflame Wind Speed	Direction of Wind Vector (from upslope) deg							
mi/h	0	45	90	135	180	225	270	315
2	1.7	1.9	2.9	6.2	11.5	6.2	2.9	1.9
4	1.8	2.1	3.3	8.6	24.9	8.6	3.3	2.1
6	1.7	2.0	3.3	9.5	40.1	9.5	3.3	2.0
8	1.7	1.9	3.2	9.7	56.7	9.7	3.2	1.9
10	1.6	1.8	3.1	9.6	74.4	9.6	3.1	1.8

Results for: Fireline Intensity (Btu/ft/s)

Midflame Wind Speed	Direction of Wind Vector (from upslope) deg							
mi/h	0	45	90	135	180	225	270	315
2	111	127	193	409	759	409	193	127
4	118	136	220	567	1641	567	220	136
6	115	134	221	628	2646	628	221	134
8	110	128	214	642	3741	642	214	128
10	104	122	205	635	4908	635	205	122

Results for: Flame Length (ft)

Midflame Wind Speed	Direction of Wind Vector (from upslope) deg							
mi/h	0	45	90	135	180	225	270	315
2	3.9	4.2	5.1	7.2	9.5	7.2	5.1	4.2
4	4.0	4.3	5.4	8.3	13.6	8.3	5.4	4.3
6	4.0	4.3	5.4	8.7	16.9	8.7	5.4	4.3
8	3.9	4.2	5.3	8.8	19.8	8.8	5.3	4.2

10	3.8	4.1	5.2	8.8	22.4	8.8	5.2	4.1

Results for: Probability of Ignition from a Firebrand (%)

Midflame	Direction of Wind Vector (from upslope)							
Wind Speed	deg							
mi/h	0	45	90	135	180	225	270	315
2	43	43	43	43	43	43	43	43
4	43	43	43	43	43	43	43	43
6	43	43	43	43	43	43	43	43
8	43	43	43	43	43	43	43	43
10	43	43	43	43	43	43	43	43

BehavePlus 5.0.5 (Build 307)

Bells Ferry 7 moderate cured north

Wed, Jan 04, 2017 at 13:32:18

Input Worksheet

Inputs: SURFACE, IGNITE

Input Variables	Units	Input Value(s)
Fuel/Vegetation, Surface/Understory		
Fuel Model		sh9
Fuel Moisture		
1-h Moisture	%	7
10-h Moisture	%	8
100-h Moisture	%	9
Live Herbaceous Moisture	%	90
Live Woody Moisture	%	120
Weather		
Midflame Wind Speed	mi/h	6
Direction of Wind Vector (from upslope)	deg	0, 45, 90, 135, 180, 225, 270, 315
Air Temperature	oF	60
Fuel Shading from the Sun	%	60
Terrain		

Slope Steepness	%	2
Fire		
Spread Direction (from upslope)	deg	180
Notes		

Run Option Notes

Maximum reliable effective wind speed limit IS imposed [SURFACE].

Calculations are for the specified spread directions [SURFACE].

Fireline intensity, flame length, and spread distance are always for the direction of the spread calculations [SURFACE].

Wind and spread directions are degrees clockwise from upslope [SURFACE].

Direction of the wind vector is the direction the wind is pushing the fire [SURFACE].

Results

Wind Dir (upslope)	Rate of Spread	Flame Length	Firebrand Ignition
deg	ch/h	ft	%
0	1.7	4.0	43
45	2.0	4.3	43
90	3.3	5.4	43
135	9.5	8.7	43
180	40.1	16.9	43
225	9.5	8.7	43
270	3.3	5.4	43
315	2.0	4.3	43

Appendix F: Smoke Management Plan and Smoke Modeling Documentation

Refer to Mississippi Forestry Commission "Voluntary Smoke Management Guidelines, Revised 2012" for instructions in filling out prior to burn. Basically plot wind vector from center of unit (total burn acres less than 250). Show possible smoke plume 30 degrees either side of the wind vector.