

Element 1: Signature Page

PRESCRIBED FIRE PLAN

ADMINISTRATIVE UNIT NAME(S): Wolf River Coastal Preserve – DeLisle Tract

PRESCRIBED FIRE NAME:

Prescribed Fire Unit (Ignition Unit): DeLisle Burn Unit 1, 2 and 3



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 State 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? <i>Such as drought or other climate indicators of increased risk, insect activity, new subdivisions/structures, smoke requirements, Complexity Analysis Rating.</i>
B. Have compliance requirements and pre-burn considerations been completed? <i>Such as preparation work, NEPA mitigation requirements, cultural, threatened and endangered species, smoke permits, state burn permits/authorizations.</i>
C. Can all of the elements and conditions specified in Prescribed Fire Plan be met? <i>Such as weather, scheduling, smoke management conditions, suitable prescription window, correct season, staffing and organization, safety considerations, etc.</i>
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? <i>Such as preparedness level restrictions, resource availability, other prescribed fire or wildfire activity</i>
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

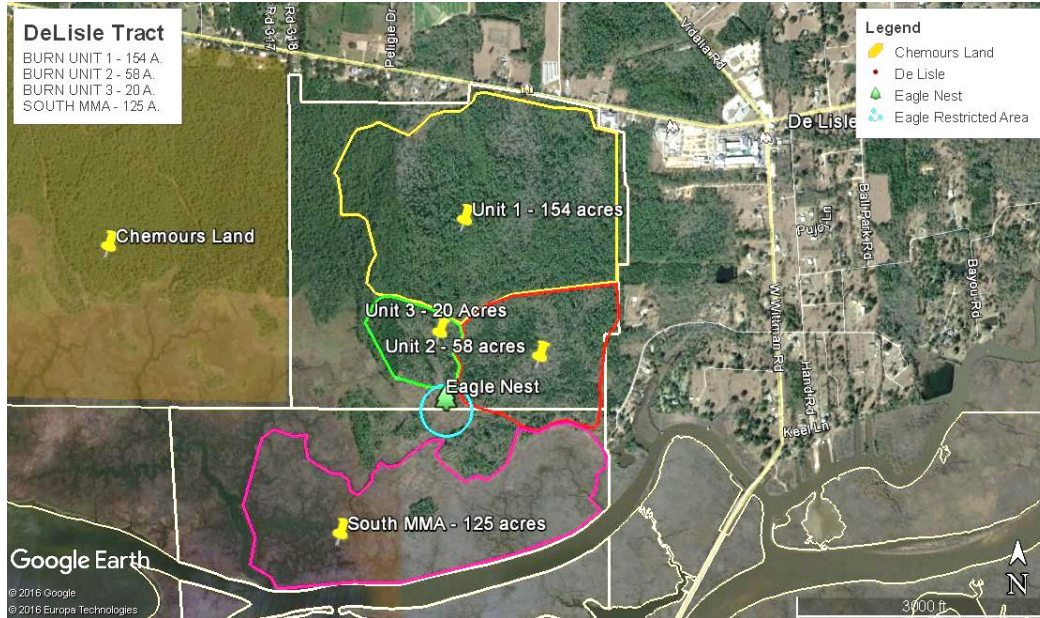
ELEMENT	RISK	POTENTIAL CONSEQUENCE	TECHNICAL DIFFICULTY
1. Smoke Management	Moderate	Moderate	Low
2. Public and Political Interest	Low	Low	Low
3. Off-site values	Moderate	Low	Moderate
4. On-site values	Moderate	Low	Moderate
5. Constraints	Low	Moderate	Low
6. Fire treatment objectives	Low	Moderate	Moderate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

The thick fuels and closeness of improvements on the western boundary add to the overall complexity of burning the unit. The Burn Boss must be skilled at coordination two activities which are not readily visible at any given point on the fireline. Any problem with mechanical equipment could jeopardize completion of the burn or place off site values at a greater risk.

Element 4: Description of Prescribed Fire Area



A. Physical Description

1. **Location:** Harrison County, Mississippi Lat: 30.3798793 Long: 89.2772570, Township 8 S, Range 13 W, Sections 3,4, 8, 9, 10, 16
2. **Size:** Total DeLisle Tract is 650 Acres. The target burn acreage is 232 acres broken into three units of 154 acres, 58 acres and 20 acres. Additional DMR acres on the Tract are primarily marshes to the south, southwest and southeast and 125 acres of marsh are included as a Maximum Management Area in this Plan. Immediately to the West is the old Dupont property, presently owned by The Chemours Company.
3. **Topography:** The Tract is virtually flat, but does slope slightly (less than 1% slope) from the north to the south. Elevations ranging from 25 feet to the north to about 8 feet at the southern edge of the pine flatwoods.
4. **Project area:** The DeLisle Tract of the Wolf River Coastal Preserve consists of three major ecotones. The first is the pine flatwood uplands on the northern third of the Tract. This pine flatwood very gently slopes to marshes that are a mixture of freshwater habitats and salt water habitats located to the southeast, south and southwest of the pine woods. The Wolf River flows east to west in the midst of these marshes, eventually emptying into Bay St. Louis. These marshes make up the remaining two thirds of the Tract and the other two habitat types. Directly south of the pine woods the marsh is mostly fresh water, as indicated by the abundance of Sawgrass (*Cladium*). There are several tree islands embedded in this marsh area, with pines, hardwoods and shrubs. Going further south to the Wolf River the marshes transition to mostly saltwater influenced habitats made up of rushes and sedges including cordgrass.

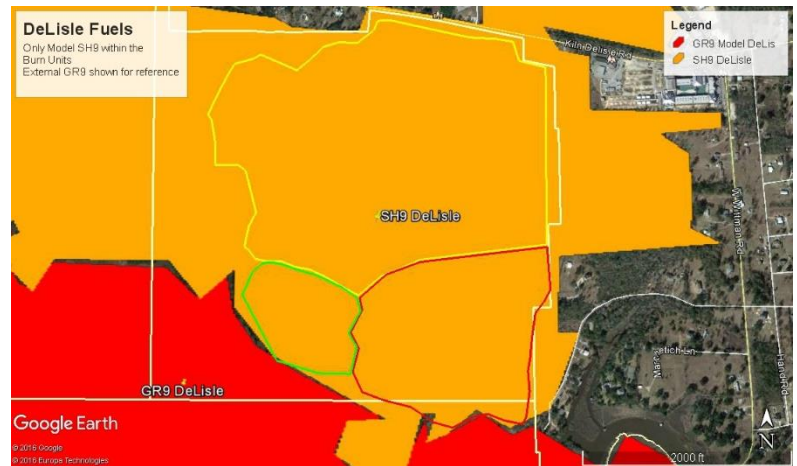
The pine flatwoods, and the Tract boundary, abut privately owned lands to the east, north and west.

5. **Ignition units:** The ignition units of this plan are restricted to the pine flatwood portions of the Tract. The marshes adjacent to the burn units are State DMR owned lands, but only a portion has been identified as a Maximum Management Area where fire may occur in this Plan but is not a treatment target.

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:** The target Burn Units are uplands that are composed of a mixture of southern pines (Slash, Longleaf, Loblolly) and southern hardwoods, shrubs and grass fuels. The Burn Units are flatwoods. Close to the marsh there are bay head drainages that intersperse the otherwise pine dominated stand. The primary on-site fuels are southern rough (modeled here using the Very High Load Humid Climate Shrub SH9 model) with a high level of fuel continuity.



2. **Adjacent fuels data:** Within the DeLisle Tract the fuels adjacent to and west of the Burn Unit 1 western fire break is a continuation of the Very High Load Humid Climate Shrub SH9 model. These adjacent fuels are a buffer zone of continuous fuels leading to the Chemours Company lands. To the South and Southwest of the pine flatwoods there is a transition to coastal marsh with heavy load grass fuels intermixed with islands consisting of pine, hardwoods and shrub leading down 1/3 to 1/2 mile to the Wolf River. The marshes directly adjacent to the Burn units to the south, southwest and southeast have a mixture of grasses but primarily are Sawgrass (Cladium). They become a more maritime mixture of grasses, rushes and sedges the closer you get to saltwater. These marshes are all modeled at Very High Load, Humid Climate Grass GR9.

Outside of the Tract immediately: **North and East**-the fuels are multiple large continuous patches of Very High Load Humid Climate Shrub SH9 intermixed with residential areas, the Gulf Coast Community Head Start Center, Pass Christian School District Offices, the DeLisle Elementary School, agricultural lands and numerous businesses. **West**-the fuels are a private timber plantation owned by the Chemours Company that are modeled as Very High Load Humid Climate Shrub SH9. (Please Refer to Photos 1 & 2 in Appendix A – Vicinity Map for aerial imagery of Adjacent Fuels Data)

3. **Percent of vegetative type and fuels model(s):**

As described above there is only one fuel model within the Burn Units of the DeLisle Tract which is Very High Load Humid Climate Shrub (SH9). Directly adjacent to the Burn Units to the South and Southwest is Very High Load Humid Climate Grass (GR9).

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

There is an occupied Eagle nest only 200-300' south of the Burn Units 2 & 3 perimeter. Special precautions are needed to work within _____ **Enter FWS requirements** _____

The DeLisle Tract trails are commonly used for public recreation and is immediately accessible to the DeLisle community.

The primary management goal is to re-establish and maintain the natural fire regime in the upland pine flatwoods adjacent to the marshes. Due to lack of fire these natural pine uplands are being encroached by hardwoods and shrubs, many of which are invasive plant species. Fragmentation and compartmentalization combined with development of the surrounding natural landscapes have reduced the frequency of naturally occurring fires in this area. So the primary value is to use fire to restore a small part of a fragmented and developed landscape.

There are presently exposed culverts at the northern end of Unit 1 and south side of Unit 1/ north side of Unit 2 that will require protection if not repaired prior to ignition.

The majority of this Tract was burned in April 2016.

There are numerous invasive plants on this Tract including : Chinese tallow (*Triadaca sebifera*), Wild Taro (*Colocascia esculenta*), camphor tree (*Cinnamomum camphor*), Chinese privet (*Ligustrum sinense*), Japanese honeysuckle (*Lonicera japonica*), Japanese climbing fern (*Lygodium japonicum*), torpedo grass (*Panicum repens*), rattlebox (*Sesbania punicea*), wisteria (*Wisteria sinensis*) and Johnson grass (*Sorghum halepense*).

D. Maps - Attach in Appendix A

1. Vicinity (Required) - See Vicinity Maps in 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

Element 5: Objectives

A. Resource objectives:

Restore pine flatwoods habitat in the upland portions of the DeLisle Tract.
Re-establish and maintain natural fire interval in the upland forests.
Maintain bay head mosaic in the southern edge of the pine uplands.
Reduce hazard fuels that threaten surrounding private ownerships.

B. Prescribed fire objectives:

This Plan will have a five-year shelf life, and multiple burns may occur over the course of five years. A successful “first entry” burn was completed on this Tract in April 2016 which made a good start toward the goal of transitioning to growing season burning.

Given that this first entry burn was completed, the ideal is for future burns to occur in the growing season on this Tract, perhaps in late spring/early summer of 2018. But if this Tract is not burned for another four years burning

should be considered anytime of the year when prescription is met. Growing season burns should occur, continuing the process of thinning mature hardwood trees, reducing shrub cover and encouraging more sunlight to assist in the recovery of forbs, grasses, sedges and other herbaceous ground cover. Breaking the Tract into 3 Burn Units also allows for flexibility in burn scheduling.

Objectives:

- On an ongoing basis provide for the safety of incident personnel and the public by adhering too appropriate Dept of Marine Resources 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 Units immediately post burn.
- Reduce the overall tree stem count by achieving greater than 20% mortality of immature and mature trees with each fire treatment.
- Protect the Eagle Nest by following USFWS directions that establish adequate disturbance distances, avoidance of direct smoke impacts and recommended seasonal timing.
- Minimize fire extension into surrounding marsh areas by using natural or constructed fire breaks and ignition methods that minimize chance of fire spread into marshes.

Element 6: Funding

A. Cost:

<u>Item</u>	<u>Cost/Unit</u>	<u>Duration</u>	<u>Total</u>
Personnel (8)	\$500/Day	14 including prep day, burn day, patrol and monitoring	\$7000
DMR Equipment	\$200/Day Type 6 Engine	3 days	\$600
DMR Equipment	\$100/Day UTV	2 days	\$200
Rental Equipment	\$1200/Day Tractor Plow Type 3/4 w/ operator	1 day	\$1200
Miscellaneous	\$1000	Includes monitoring	\$1000
Total Estimate			\$10,000

B. Funding source:

Mississippi State Department of Marine Resources determined.

Element 7: Prescription

A. Prescription Narrative:

1. Describe how fire behavior will meet objectives

Growing season or dormant season fires will require moderate to high intensity prescriptions. Early growing season burns tend to more successfully kill shrubs than dormant season burns since they deprive them of their energy. The stored energy in the root systems has been expended during the early growing season in foliating the shrubs leaving the plants in a weakened state. Deprived of their energy producing foliage by fire, the plants are more likely to die as a result of growing season fire. This defoliation of the shrubs, especially during the early growing season, also allows the existing seed bed of desirable forbs, grasses, other herbaceous plants and Longleaf pine to take advantage of the sunlight and thrive. It generally takes two growing season burns to obtain large beneficial response of the grasses, forbs and other herbaceous plants. One caution though is that many invasive species benefit from additional sunlight under the forest and shrub canopy, so manual or mechanical follow up treatments will be required to allow native grasses to thrive.

In order to meet the management objectives, moderate to high intensity fire is prescribed. Intense flanking and head fires will initially top kill unwanted shrubs, and thin encroaching mature hardwoods. Slash and Loblolly Pine are very resistant to fire mortality once established at more than 6' in height, but intense fire may achieve some mortality of mature pines and may help to clear thickets of immature pines. The overall goal in the uplands is to reduce the amount of unwanted pine species and brush and increase the amount of Longleaf pine and herbaceous understory.

B. Prescription Parameters:

1. Environmental or fire behavior (or both)

<u>FACTOR</u>	<u>Maximum</u>	<u>Minimum</u>	<u>Comments</u>
1300 Temperature (F)	85	40	Temperature as recorded at 1300 hrs. (1400 during DST)
Relative Humidity (%)	70	30	REQUIRED PARAMETER TO ATTEMPT BURN
Wind Speed, 20'forecasted (MPH)	15	5	REQUIRED PARAMETER TO ATTEMPT BURN
Wind Speed, mid-flame (MPH)	10	2	Measured on site by weather observer
Wind Direction (20' forecasted)	N, NE for Unit 1 N, NE, SE, S for Unit 2 Any for Unit 3		REQUIRED PARAMETER TO ATTEMPT BURN When combining units, the most restrictive wind vector will be used.
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	100	
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 for Unit 1 Low-Moderate for Unit 2,3		Do not burn if fog potential is high.

2. Fire Modeling or empirical documentation (or both)

FIRE BEHAVIOR OUTPUTS	LOW INTENSITY FIRE	HIGH INTENSITY FIRE
RATE OF SPREAD (CH./HR.)	2	20
FLAME LENGTH (FT.)	2	15
FIRELINE INTENSITY (BTU/FT./SEC.)	10	100

Refer to BEHAVE modeling runs in Appendix E.

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 during 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: Incomplete culvert work limits access of certain fireline vehicles at the northern end of Unit 1 and south side of Unit 1/ north side of Unit 2 and unless repaired can limit access to Unit 3. If completed prior to future burning this risk is entirely mitigated.

Risk to the eagle nest is mitigated by appropriate selection of ignition techniques and by coordination of firing and holding resources. **Research the historic nesting season and follow recommendations from the USFWS Ecological Services Office to minimize negative impacts on nesting activity ongoing.**

Element 9: Pre-burn Considerations and Weather

A. Considerations:

1. **On-site:** There is an eagles nest just south of the Unit 2 / Unit 3 boundary. There are also 3 exposed PVC culverts that will need protection if these have not been covered prior to the burn.
2. **Off-site:** Chemours plant west (1.5 miles), Head Start Center east (adjacent), Elementary School east (adjacent), the DeLisle community and Kiln-DeLisle Road are all adjacent or nearby the burn unit. The burn would most likely take place during school hours or during an active time of day for community businesses and roadway use. Potential short term disruptions to the Chemours plant, Head Start, Elementary School, the DeLisle community and Kiln-DeLisle Road could result from unexpected or adverse events. An escaped fire could potentially damage commercial timberlands west and east of the burn. Protection of off-site values require coordination of holding and ignition forces along each boundary line. During the prescribed burn in

March 2016 an escape occurred into private Chemours lands west of the tract. The burn plan includes having a staged Dozer as well as sufficient holding resources.

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

- a. 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. Online training is required prior to first use of this product. Contact Tim Destri, Fire Weather Focal Point at NWS New Orleans 985-649-0357 for technical support and additional information.
- b. A dedicated or designated fire monitor/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.

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.

2. Day of Burn:

MS Forestry Commission	800-240-5161	Central Dispatch in Pearl MS, (for burning permit)
MS Forestry Commission	228-831-3359	Harrison County Work Center, (courtesy call) Corey Williams, Lead Technician
Harrison County Emergency Mgt.	228-865-4002	Rupert Lacey: Request Reverse 911 calls 24-48 hrs. in advance of burn.
Harrison County Fire Services: Main Office	228-832-0638	Will notify DeLisle Station or closest manned station if DeLisle is unmanned.
Harrison County Sheriff	228-865-7060	County Dispatcher,
Chemours Plant Public Affairs	Cell: 228-342-2723 Office: 228-255-2180	Duane Wilson: Call cell first 24-48 hours ahead of planned burn
Gulf Coast Community Head Start Center	228-225-4225	
DeLisle Schools	228-255-9681	
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

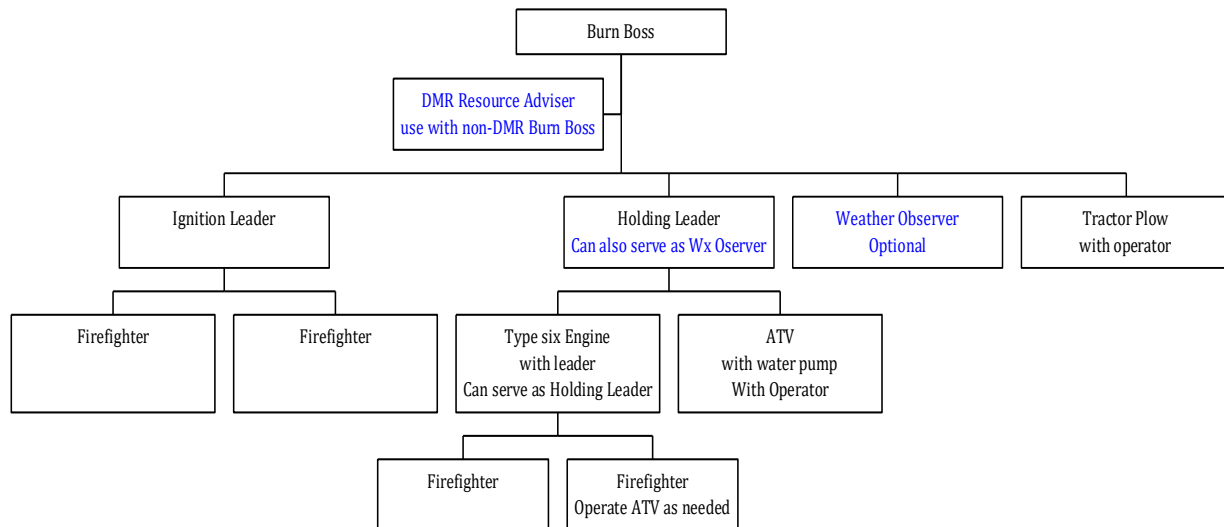
A. Briefing Checklist; including, but not limited to: (additional items may be added)

- 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)

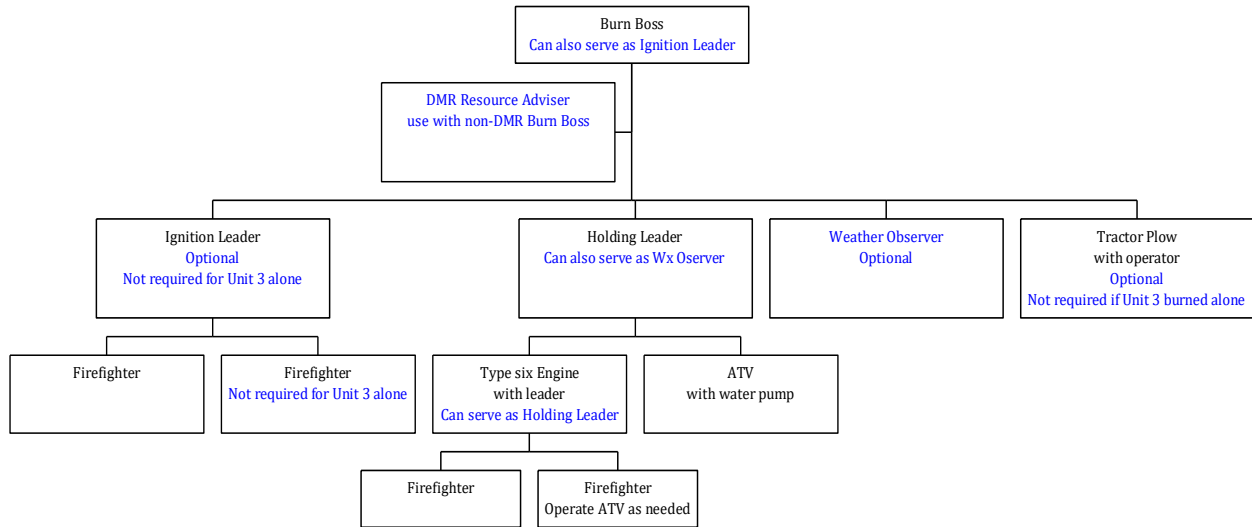
Element 11: Organization and Equipment

On morning of burn complete ICS-201, Block 9 (included in Appendix D) with specific names, types and amount of equipment and identifiers (if known) of all resources assigned to the project. This chart represents the minimum number of resources required to safely complete the DeLisle Prescribed Fire Project.

Suggested Organization and Minimum Resource Needs Unit 1 or Unit 1 Plus Additional Units



Suggested Organization and Minimum Resource Needs Unit 2 and 3 or Both Combined



- A. Positions:** The suggested minimum number of people to safely and effectively staff this burn is 9 for Unit 1 alone or with other units and 7 for Unit 2 or 2 and 3 combined. 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 for all burn units. A tractor plow with operator is required for Unit 1 or any combination of units that includes Unit 1.

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
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B. Telephone Numbers: Cell phone coverage is available throughout the Tract. Complete the following chart for On Scene Rx Fire Resources the day prior to the burn and include in ICS201 action plan.

<u>Name</u>	<u>Fire Position</u>	<u>Cell Phone Number</u>
	Burn Boss	
	Resource Advisor	
	Weather/Fire Observer	
	Public Information	
	Ignitions Leader	
	FFT2 (Ignitions)	
	FFT2 (Ignitions)	
	Holding Leader	
	Engine Captain	
	FFT2 (Holding)	
	FFT2 (Holding)	
	UTV Operator	
	Tractor Plow Operator	
	DMR LE Officer	

Element 13: Public and Personnel Safety, Medical

A. **Safety Hazards:** See ICS 215A below.

B. **Mitigation: Measures Taken to Reduce the Hazards:** See ICS 215A below.

INCIDENT ACTION PLAN SAFETY ANALYSIS (ICS 215A)

1. Incident Name: DeLisle Prescribed Burn		2. Incident Number:	
3. Date/Time Prepared: Date: _____ Time: _____		4. Operational Period: Date From: _____ Date To: _____ Time From: _____ 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 to ICS201 in Appendix D) 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 the Kiln-DeLisle Road via UTV or Engine Type 6. If remaining on scene a firefighter might need to be assigned with the UTV to proceed to Kiln-DeLisle 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 13 th 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 not suggested as a technique to ignite units 1 or 2 due to the length of time necessary to complete the unit. Backing fire may be used to ignite Unit 3 if burned alone.
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.
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 fuses.

C. Minimum Ignition Staffing: An ignitions leader and two firefighters will be the minimum staffing for Unit 1 or any combination including Unit 1. An ignitions leader and one firefighter will be sufficient for burning Unit 3. More igniters may be inserted as can be safely managed in any unit.

Element 16: Holding Plan

A. General Procedures for Holding: The Burn Boss will ensure all vehicles, ignition devices 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 or road 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 also be aware of those areas outside the unit where fire can creep past or spot across the line. The Holding Leader 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). The perimeter lines will be continuously monitored and patrolled for any escapes.

A. Critical Holding Points and Actions: The north and east lines of Unit 1 and the east line of Unit 2 are the most critical areas for holding the fire within the burn area. Prior to burn day all containment lines but particularly these lines must be scouted and critical points where potential for escape are located. These critical holding points are the sharp bends in the containment lines, buildup of dead and down fuels (jackpots) and standing dead snags. Doughty stumps are also critical holding points. The locations of these conditions must be flagged while the proposed permanent line is located and broken up or felled while the line is being established.

Any untreated critical points or 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 prior to all resources leaving the fire in order 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 three firefighters are the minimum number of individuals suggested for holding. A tractor plow with operator is required for Units 1 or combined with 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 for all units.

Element 17: Contingency Plan

A. Management Action Points or Limits:

Management Action Point - Documentation Element	Management Action Point Narrative
Designator and Description:	Spot Fire(s) in 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:	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:	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:	1. Cease ignitions and order contingency resources. 2. Establish anchor point and determine strategy to minimize fire size while waiting on contingency resources to arrive. 3. Order Sheriff if evacuations are a possibility.
Recommended Resources:	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
Responsibility:	Burn Boss

Management Action Point - Documentation Element	Management Action Point Narrative
Designator and Description:	Excessive smoke settling on major roadway.
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 and Harrison County Sheriff. County Sherriff 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. 30-minute response time

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 the MMA, in the forested buffer on DMR lands west, north or east of Units 1, 2 or 3, 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
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 (Optional):

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: Kiln-DeLisle Rd on north, Gulf Coast Community Head Start Center, DeLisle School and Community also immediately east. W. Wittman Rd one mile to the SE. Chemours Plant 1 mile west.

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 Kiln-DeLisle Rd and the immediate community adjacent to the burn unit in the late night and early morning hours following the Unit 1 Burn. Smoke may also settle into the low, marshy area where W. Wittman Rd. crosses the Wolf River.

Residual smoke from Units 2 & 3 will most likely settle into the marsh south of the Preserve.

E. Mitigation Strategies and Techniques to Reduce Smoke Impacts:

- Notify local schools, businesses and residents prior to and day of the burn. Post notices in stores and public places prior to burn day.
- 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 Unit 1 if 20' wind is blowing from the SE, S, SW or W.
- Leave Smoke Ahead signs in place over night on Kiln DeLisle Rd. ½ mile either side of burn unit and on W. Wittman Rd on high ground north and south of where the road enters the marsh
- Patrol Kiln-DeLisle and W. Wittman Rd. at least once during late night or early morning hours.
- Notify Harrison Co. Sheriff if visibility is significantly reduced.

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 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 Kiln-DeLisle 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:
 1. Resources on scene during the burn and used
 2. Actions/Fire Behavior
 3. 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.
- 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

Appendix B: Technical Reviewer Checklist

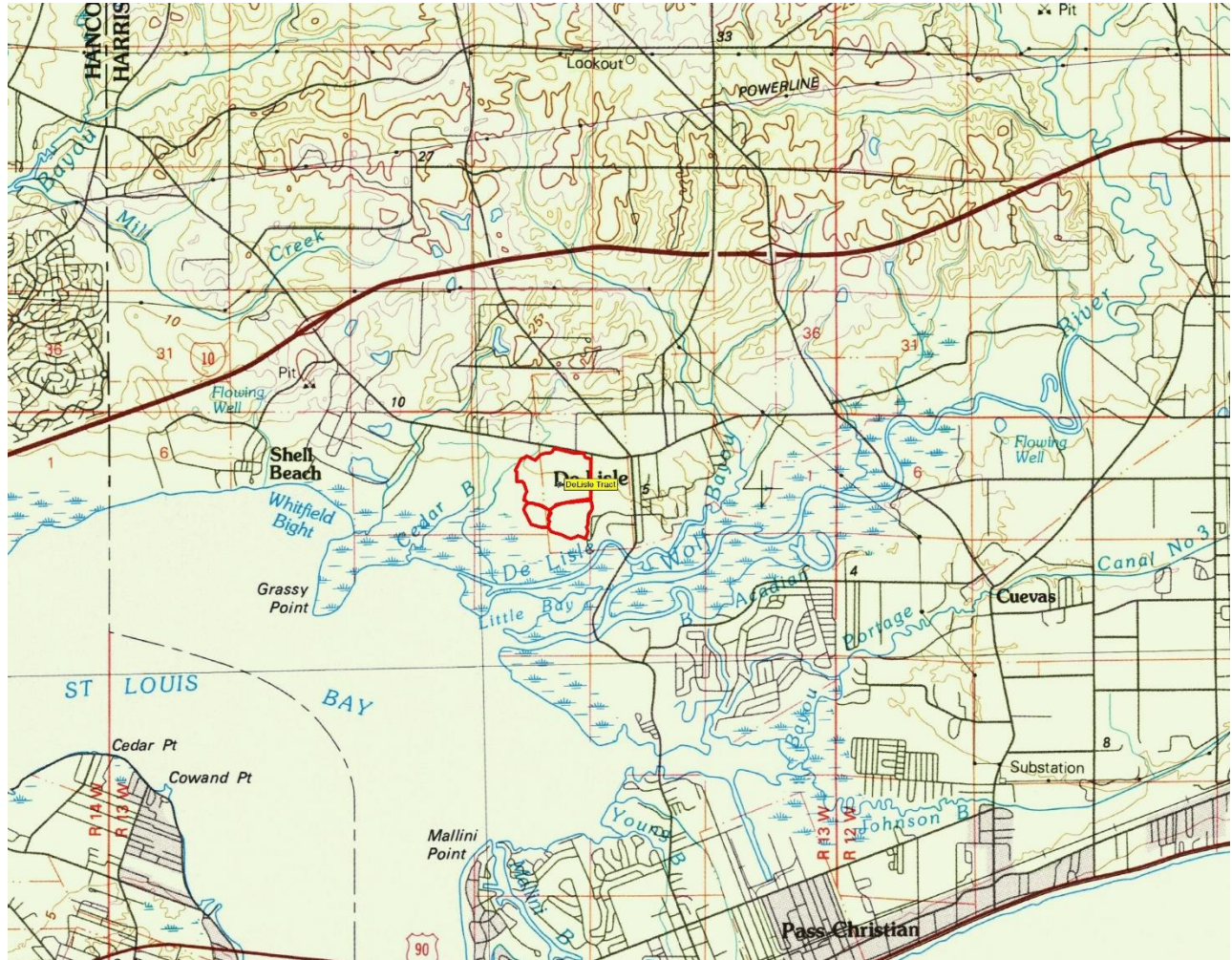
Appendix C: Complexity Analysis

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)

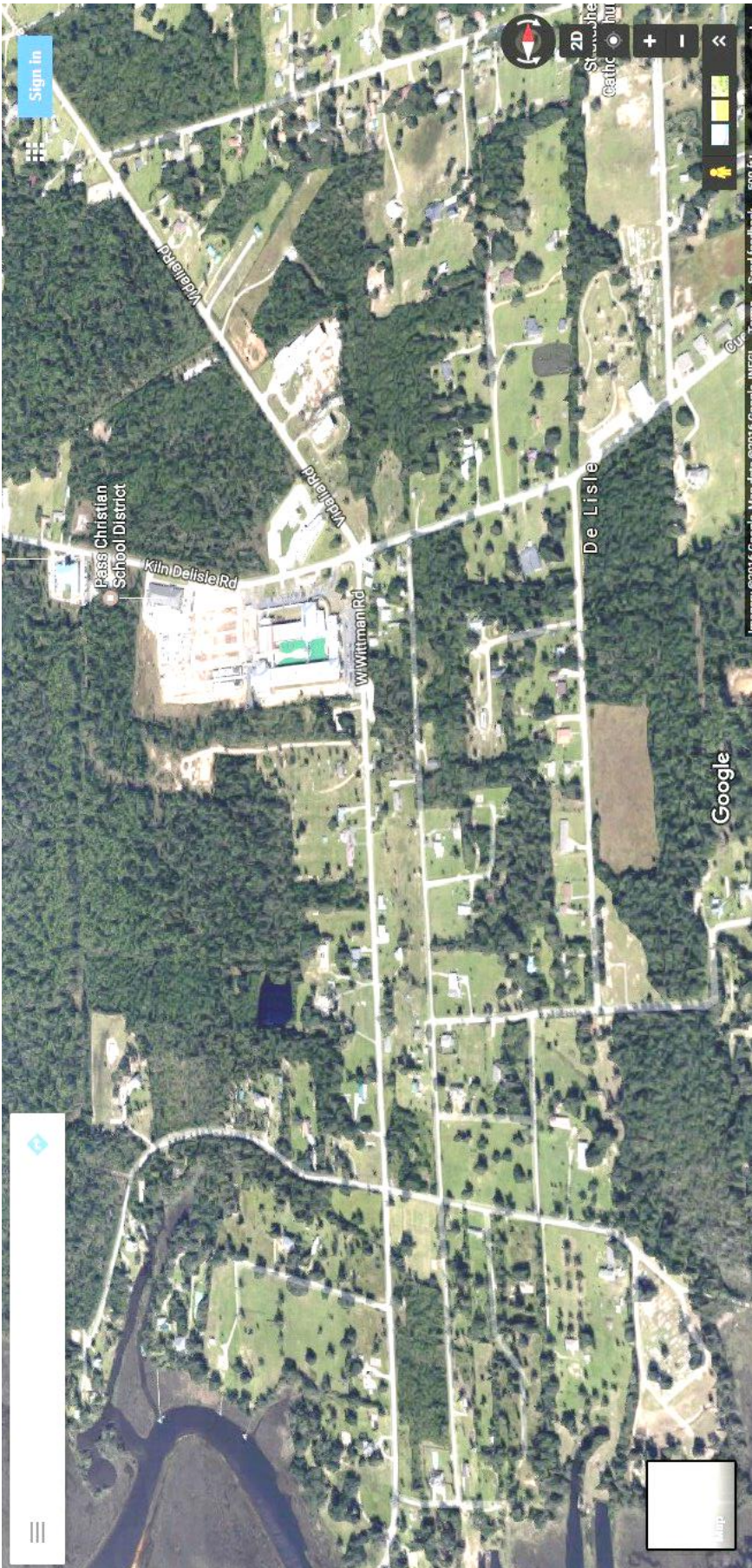
Appendix A: Vicinity Map



DeLisle Vicinity Photo 1

Looking to the South from North of the DeLisle Tract

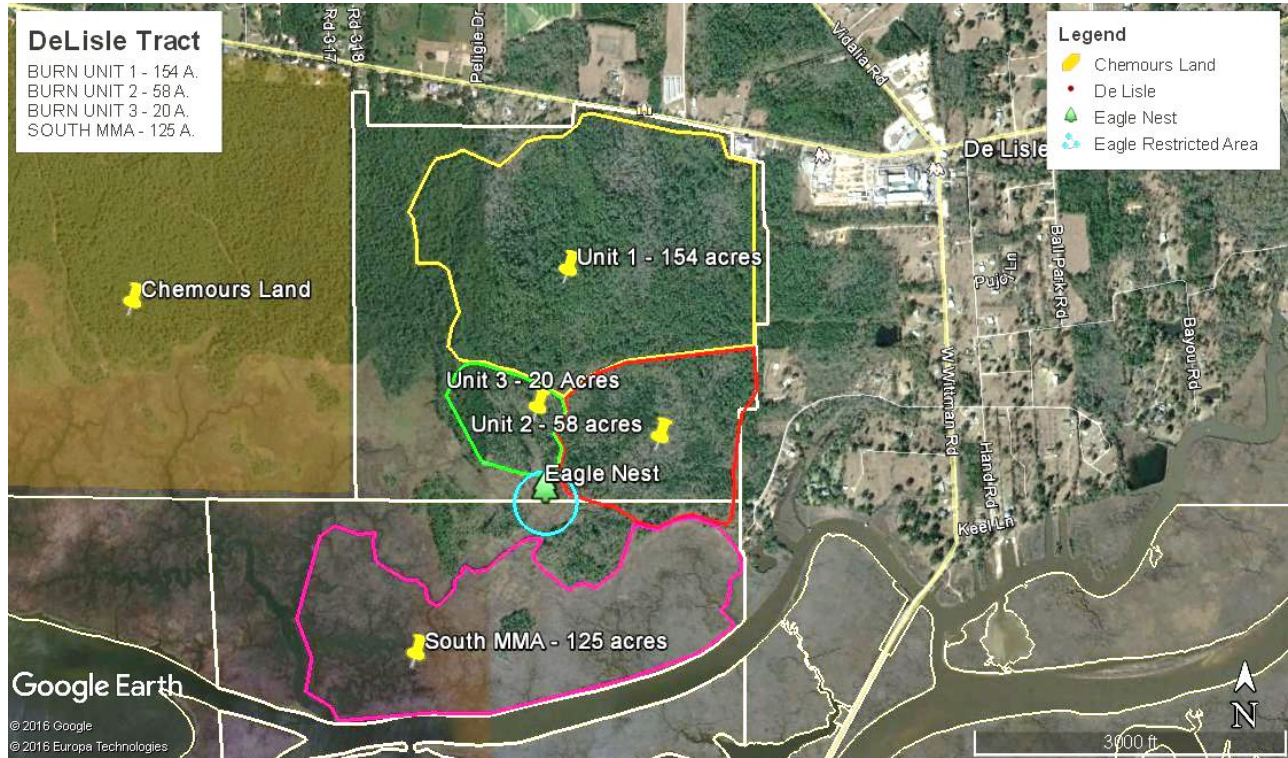




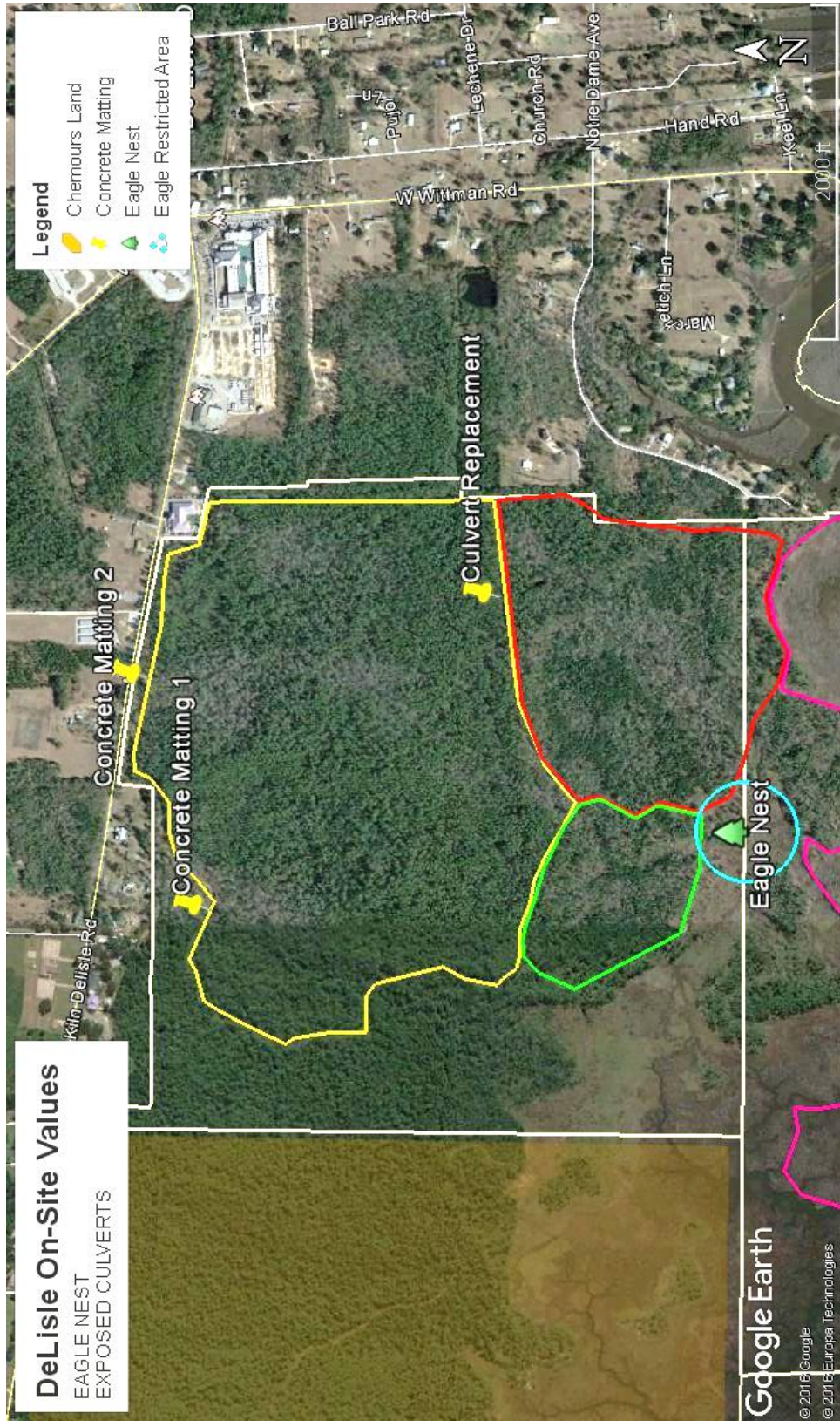
DeLisle Vicinity Photo 2

Looking West from East of the DeLisle Tract

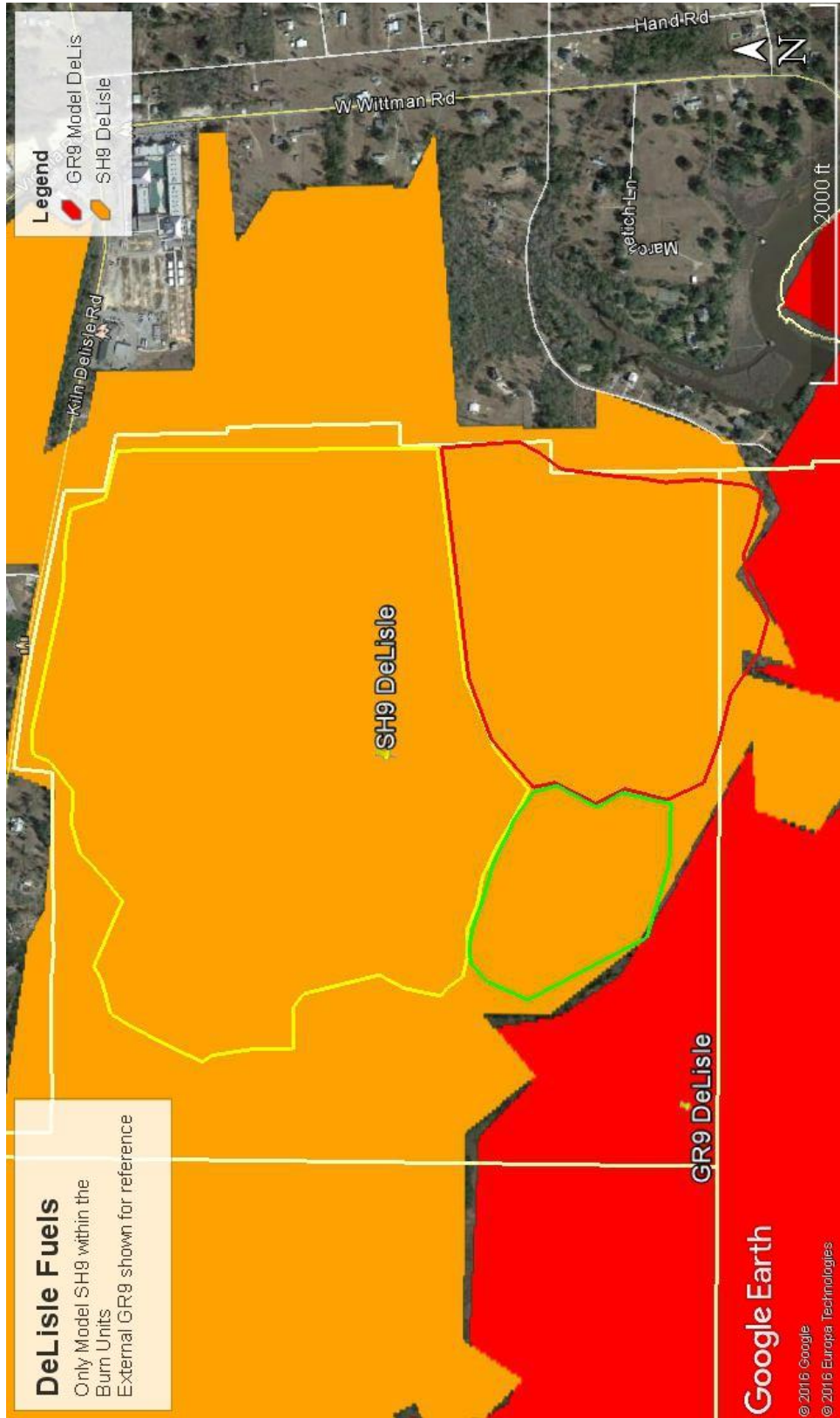
Appendix A: Project (Ignition Units) Maps



Appendix A: Significant or Sensitive Features Map



Appendix A: Fuels or Fuel Model:



Appendix A: Smoke Impact Areas: (Optional) Maps

DELISLE SMOKE OUT TO TWO MILES IF ALL THREE UNITS BURNED FOLLOWING MOST CONSTRUCTIVE WIND PRESCRIPTION



DELISLE BURNING UNIT 2 ALONE, SMOKE OUT TO TWO MILES PLOTTING ALL ACCEPTABLE WIND VECTORS



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: _____

Appendix C: Complexity Analysis

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 DeLisle Number _____

Complexity elements:

1. Smoke Management

Risk	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	Chemours plant west (1.5 miles), Head Start Center east (adjacent), Elementary School east (adjacent) and all are critical smoke targets. These sites require mitigation to prevent short term exposure of public and private facilities. Kiln-DeLisle Road, a 2 lane paved highway is immediately adjacent to the project to the north and is the major access road to the Chemours plant to the west. There are scattered homesteads and ranchettes (community of DeLisle) primarily north and east of the burn unit.
Final Rating: <i>Low <u>Moderate</u> High</i>	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 Kiln-DeLisle Road, and smoke impacts to Head Start and School will be monitored.
Potential Consequences	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	Potential for loss of visibility along Kiln-DeLisle Road could create short term driving hazards. There is a potential for smoke to intrude into Head Start and School buildings causing short term disruption of their activities. There is a slight potential for smoke impacts to the community of DeLisle, which could create adverse impacts of residences, outbuildings and commercial occupancies.
Final Rating: <i>Low <u>Moderate</u> High</i>	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. Due to high potential for sea breeze impacts, meeting the prescription will require burning on days of low chance of shifting winds, however Unit 2 and Unit 3 have a wider wind vector prescription that will enhance burning opportunities during the growing season. Smoke warning signs will be placed along Kiln-DeLisle Road, and smoke impacts to Head Start and School will be monitored.
Technical Difficulty	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	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: <i><u>Low</u> Moderate High</i>	Wind vectors for burning are constrained which is a technical difficulty for implementing the plan. Selected wind vectors would need to make this unit be burned no more than two days after a frontal passage. 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: <i>Low <u>Moderate</u> High</i>	Burn is located in a highly visible and concentrated portion of the DeLisle community and would be visible from the Bay St. Louis Bridge on Highway 90 and waterways. A successful burn was conducted on this tract in March 2016 and no public or political issues were raised.
Final Rating: <u>Low</u> <i>Moderate High</i>	There were no adverse comments from the burn conducted here in March 2016.
Potential Consequences	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	Unexpected or adverse events (eg. Temporary closure of Kiln-DeLisle Road) could attract public and/or media attention. Although this could be a newsworthy item, it would be of short duration and would not impact future burn projects.
Final Rating: <u>Low</u> <i>Moderate High</i>	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: <i>Low <u>Moderate</u> High</i>	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: <u>Low</u> <i>Moderate High</i>	Notify Chemours Plant, Head Start, DeLisle School(s). 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: <i>Low Moderate <u>High</u></i>	Chemours plant west (1.5 miles), Head Start Center east (adjacent), Elementary School east (adjacent), the DeLisle community and Kiln-DeLisle Road are all adjacent or nearby the burn unit. The burn would most likely take place during school hours or during an active time of day for community businesses and roadway use.
Final Rating: <i>Low <u>Moderate</u> High</i>	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 High to Moderate.
Potential Consequences	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	Potential short term disruptions to the Chemours plant, Head Start, Elementary School, the DeLisle community and Kiln-DeLisle Road could result from unexpected or adverse events. An escaped fire could potentially damage commercial timberlands west and east of the burn

Final Rating: <u>Low</u> 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 adjacent commercial timberlands can quickly recover from moderate negative impacts caused by an escaped fire. 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 <u>High</u>	Protection of off-site values require coordination of holding and ignition forces along each boundary line. During the prescribed burn in March 2016 an escape occurred into private lands west of the tract.
Final Rating: Low <u>Moderate</u> 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: <u>Low</u> Moderate High	There is an eagles nest just south of the Unit 2 / Unit 3 intersection. There are also 3 exposed PVC culverts that will need protection if these have not been covered prior to the burn. March 2016 burn was a good first entry treatment that has prepped this tract for future growing season burns.
Final Rating: Low <u>Moderate</u> High	The risk to the eagle nest will be addressed in 5-Constraints. The risk to the culverts is easily mitigated pre-burn.
Potential Consequences	Rationale
Preliminary Rating: Low <u>Moderate</u> High	Failure to have appropriate wind vectors could cause delay in rotational burning of this tract during the growing season, reducing the chance of meeting the management objective of restoring wet pine flatwoods.
Final Rating: <u>Low</u> Moderate High	Breaking the tract into 3 burn units allows for more flexibility of burn windows.
Technical Difficulty	Rationale
Preliminary Rating: Low <u>Moderate</u> High	The eagle nest and culverts are issues. Eagle nest will cause some additional coordination between firing and holding forces. Breaking the tract into 3 burn units reduces the probability of future failure to provide a beneficial treatment cycle.
Final Rating: Low <u>Moderate</u> High	As mentioned above, the eagle nest will be addressed in Constraints. The culverts can be easily mitigated pre-burn.

5. Constraints

Risk	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	Unprotected culverts could constraint access during implementation and this work is integral to establishing permanent fire breaks and buffers to public roads. Eagle nest to the south of junction of burn units 2 & 3.
Final Rating: <u>Low</u> <i>Moderate High</i>	Incomplete culvert work limits access of certain fireline vehicles at the northern end of Unit 1 and south side of Unit 1/ north side of Unit 2 and unless repaired can limit access to Unit 3. If completed prior to future burning this risk is entirely mitigated. Risk to the eagle nest is mitigated in the burn plan by coordination of firing and holding resources, by appropriate selection of ignition techniques and by establishing and marking a 300' perimeter around the site that prohibits entry and disturbance of the nest site.
Potential Consequences	Rationale
Preliminary Rating: <i>Low Moderate <u>High</u></i>	Damage to vehicles and/or limited access. Abandonment of nestlings by adult eagles.
Final Rating: <i>Low <u>Moderate</u> High</i>	Incomplete culvert work limits access of certain fireline vehicles at the northern end of Unit 1 and south side of Unit 1/ north side of Unit 2 and unless repaired can limit access to Unit 3. If completed prior to future burning this risk is entirely mitigated. Risk to the eagle nest is mitigated in the burn plan by coordination of firing and holding resources and by appropriate selection of ignition techniques. Research the historic nesting season and follow recommendations from the State Natural Heritage program for permissible actions.
Technical Difficulty	Rationale
Preliminary Rating: <u>Low</u> <i>Moderate High</i>	Repair culverts. Eagles nest appears to be outside the burn unit at the edge of marsh to south. NOTE COMPLETE AFTER FINDING OUT REPAIR STATUS AND EAGLE REQUIREMENTS
Final Rating: <u>Low</u> <i>Moderate High</i>	Contract repairs or do in house. Follow prescription elements and Natural Heritage recommendations regarding the eagle nest. NOTE COMPLETE AFTER FINDING OUT REPAIR STATUS AND EAGLE REQUIREMENTS

6. Fire Treatment Objectives

Risk	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	Restore herbaceous surface fuels and reduce or remove mid-story fuel shrubs. Reduce hazard fuel loading. Fire alone will not achieve this management goal, but must be coupled with mechanical reduction of pine overstory.
Final Rating: <i><u>Low</u> Moderate High</i>	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.
Potential Consequences	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	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. Opportunities for growing season burns may be limited by narrow burn windows, especially in Unit 1. Moderately intense fire is required to achieve the objectives.
Final Rating: <i>Low <u>Moderate</u> High</i>	If wind vectors prove to limit fire application in the growing season, Unit 1 may need to be divided into smaller burn units to permit growing season burning while limiting smoke generation.
Technical Difficulty	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	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: <i>Low <u>Moderate</u> High</i>	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
<p>Preliminary Rating: <i>Low Moderate <u>High</u></i></p>	<p>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. Ignitions along the marsh edge require special considerations, such as spaced spot ignitions vs. continuous line ignition.</p>
<p>Final Rating: <i>Low <u>Moderate</u> High</i></p>	<p>Ignitions at the southernmost end of Units 2 & 3 (regardless of whether ignitions begin at the north or south ends of the units) need to stop about 130' north of the marsh to the south to allow the fire to work toward the marsh edge. Once blacklines are established ignition methods may be used that create head and flanking fire to achieve a moderate intensity burn. Aerial ignition, if available, would be a valuable tool, but recognize that the addition of an aerial ignition component will increase the overall burn complexity, increase the coordination between ignition and holding, and up the risk of Number and Interdependence of Activities.</p>
Potential Consequences	Rationale
<p>Preliminary Rating: <i>Low <u>Moderate</u> High</i></p>	<p>Risk to safety of personnel in firing interior of units. Possibility of excessive scorch when lines of fire converge. Increased possibility of spotting.</p>
<p>Final Rating: <i>Low <u>Moderate</u> High</i></p>	<p>Establish LCES. Assign a Ignition Specialist (non-lighter position) to direct ignition actions. 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.</p>
Technical Difficulty	Rationale
<p>Preliminary Rating: <i>Low <u>Moderate</u> High</i></p>	<p>Drip torches sufficient. Two levels of supervision. Ignition crew may be working both interior and along perimeter.</p>
<p>Final Rating: <i>Low <u>Moderate</u> High</i></p>	<p>Needs: Two levels of supervision, Burn Boss plus experienced ignitions person assigned to lead the ignitions actions. Two lighters. Coordinate by frequent and communication (radio / face to face) with Burn Boss and Ignition Specialist.</p>

8. Fire Behavior

Risk	Rationale
<p>Preliminary Rating: <i>Low Moderate <u>High</u></i></p>	<p>Moderate intensity fire is needed. Fuel loading should be no more than moderately heavy (burn by March 2018). 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 (or contingency areas) 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.</p>
<p>Final Rating: <i>Low <u>Moderate</u> High</i></p>	<p>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.</p>
Potential Consequences	Rationale
<p>Preliminary Rating: <i>Low Moderate <u>High</u></i></p>	<p>Excessive burn severity / scorch. To little fire behavior that will not achieve objectives. Burning into adjacent marsh or private timberlands.</p>
<p>Final Rating: <i>Low <u>Moderate</u> High</i></p>	<p>Establish 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.</p>
Technical Difficulty	Rationale
<p>Preliminary Rating: <i>Low <u>Moderate</u> High</i></p>	<p>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.</p>
<p>Final Rating: <i>Low <u>Moderate</u> High</i></p>	<p>For this burn a single person needs to be assigned specifically for fire behavior and weather monitoring and documentation. Burn manager needs to be RXB2 (or equivalent) with two subordinate supervisors at the FFT1 (Squad Boss) or equivalent.</p>

9. Potential for Escape

Risk	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	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. During the last prescribed fire in this unit a wind shift resulted in a 75 acre escaped fire.
Final Rating: <i>Low <u>Moderate</u> High</i>	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.
Potential Consequences	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	Damage to private timber tracts primarily to the east and west of the burn tract. Closure of Kiln-DeLisle Road. Disruptions of school activities, Head Start and local community businesses and residents.
Final Rating: <i>Low <u>Moderate</u> High</i>	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.
Technical Difficulty	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	Holding lines around the burn unit need improvement prior to ignitions. Ensure adequate staffing of holding resources and contingency resources. Portions of the DeLisle tract outside the planned burn unit (allowable area) are difficult to access with equipment and personnel.
Final Rating: <i>Low <u>Moderate</u> High</i>	Holding operations will be supervised at the Squad boss level. Have tractor plow on site. Establish a burn rotation schedule to create a fuels/age of rough mosaic using the three basic units. In future consider the need to break Unit 1 into smaller compartments (similar to the Indian Point Tract) to allow for smaller burns and establish fuels /age of rough mosaic. Burn Units 2 and 3 on southerly winds. Do not ignite within 130' of the marsh edge to allow the fire to back to marsh with less intensity. Take advantage of rising humidities late in day when burning near marsh areas.

10. The Number and Dependence of Activities

Risk	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	There are multiple activities that need to occur before ignitions. They include posting smoke signs, posting burn information at businesses, 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: <u>Low</u> <i>Moderate High</i>	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. Two levels of line supervision to include Burn Boss and Holding/Ignition specialists at the Squad Boss level.
Potential Consequences	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	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: <u>Low</u> <i>Moderate High</i>	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: <i>Low <u>Moderate</u> High</i>	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: <u>Low</u> <i>Moderate High</i>	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: <i>Low <u>Moderate</u> High</i>	Two levels of line supervision are needed for burns on the DeLisle 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 Kiln-DeLisle Road.
Final Rating: <i>Low <u>Moderate</u> High</i>	Burn Boss at RXB2 qualification or equivalent. Holding/Ignition line supervisors at Squad Boss (FFT1) level or equivalent. Dedicated person to monitor and record weather observations and fire behavior. If needed Burn Boss will need to coordinate LE on Kiln-DeLisle Road.
Potential Consequences	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	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: <i>Low <u>Moderate</u> High</i>	The Plan includes to proper level of supervision needed. Burn Boss has 3 direct reports (holding, ignition, monitor) and may need to coordinate with LE resource(s).
Technical Difficulty	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	Two levels of supervision required. Off-site contacts are required.
Final Rating: <i>Low <u>Moderate</u> High</i>	The Plan meets the requirements for organization and supervision. Organization in plan calls for total staff of 11 (Burn Boss; FFT1+2 ignition,; monitor; holding FFT1 + tractor plow, UTV, T6 engine)

12. Safety

Risk	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	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: <i><u>Low</u> Moderate High</i>	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: <i>Low <u>Moderate</u> High</i>	Injuries to firefighters and public, damages to fire equipment and private property.
Final Rating: <i>Low <u>Moderate</u> High</i>	The Plan addresses operational safety concerns including briefing requirements. Firefighters will follow 10 & 18 and implement LCES.
Technical Difficulty	Rationale
Preliminary Rating: <i>Low <u>Moderate</u> High</i>	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: <i><u>Low</u> Moderate High</i>	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: <u>Low</u> Moderate High	Minimal logistical support needed. Equipment needs are low. DMR has radio equipment and other supplies are readily available.
Final Rating: <u>Low</u> 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: <u>Low</u> 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: <u>Low</u> Moderate High	There should be no issues ensuring equipment and personnel are ready prior to burn day.
Technical Difficulty	Rationale
Preliminary Rating: <u>Low</u> Moderate High	Fireline supervisors can handle support needs. Supplies and resources must be made available by DMR prior to burn day.
Final Rating: <u>Low</u> 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: <u>Low</u> Moderate High	No other agency lands directly involved on the DeLisle. Possible use of interagency crews.
Final Rating: <u>Low</u> Moderate High	No other agency lands directly involved on the DeLisle 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: <u>Low</u> 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: <u>Low</u> 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: <u>Low</u> 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 <u> Moderate </u>
POTENTIAL CONSEQUENCES	OVERALL RATING <u> Moderate </u>
TECHNICAL DIFFICULTY	OVERALL RATING <u> Moderate </u>
SUMMARY COMPLEXITY RATING	<u> Moderate</u>

RATIONALE:

Burning very volatile fuels with a lot of surrounding urban intermix keeps this rating at the Moderate level. An experienced Burn Boss (RXB2 or State equivalent) is required to lead the burns, and a second level of line supervision (Ignition and Holding) is needed to ensure safety and coordination. The prescription wind parameters are relatively narrow vectors, and due to seabreeze affects must be closely monitored. A separate monitoring position is needed within the organization to observe and record weather as well as to make and record observations of smoke in the adjacent roads and community. Proactive notifications and signage are needed, as this burn will occur in a highly visible location (even from the Highway 90 Bridge on Bay St. Louis).

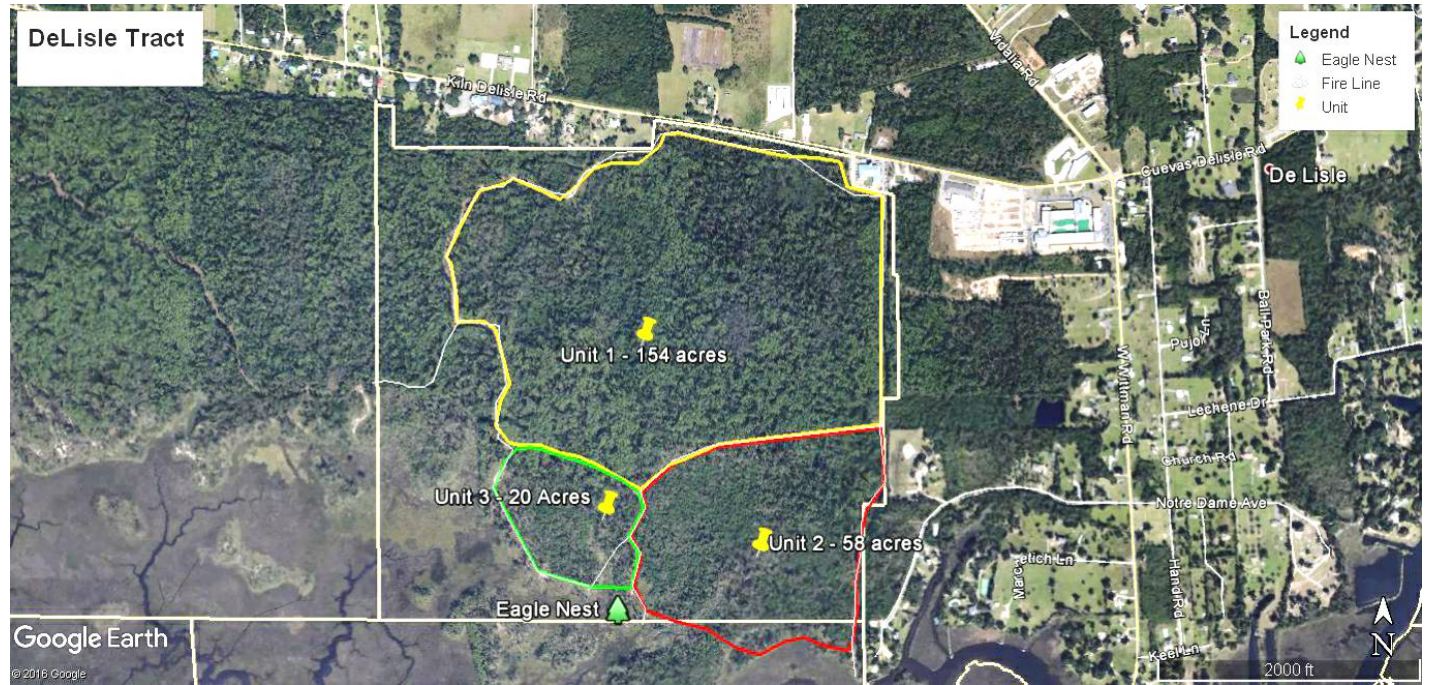
Prepared by: _____ Date: _____

Approved by: _____ Date: _____ (Agency Administrator)

INCIDENT BRIEFING (ICS 201)

1. Incident Name: DeLisle 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: _____

Date/Time: _____

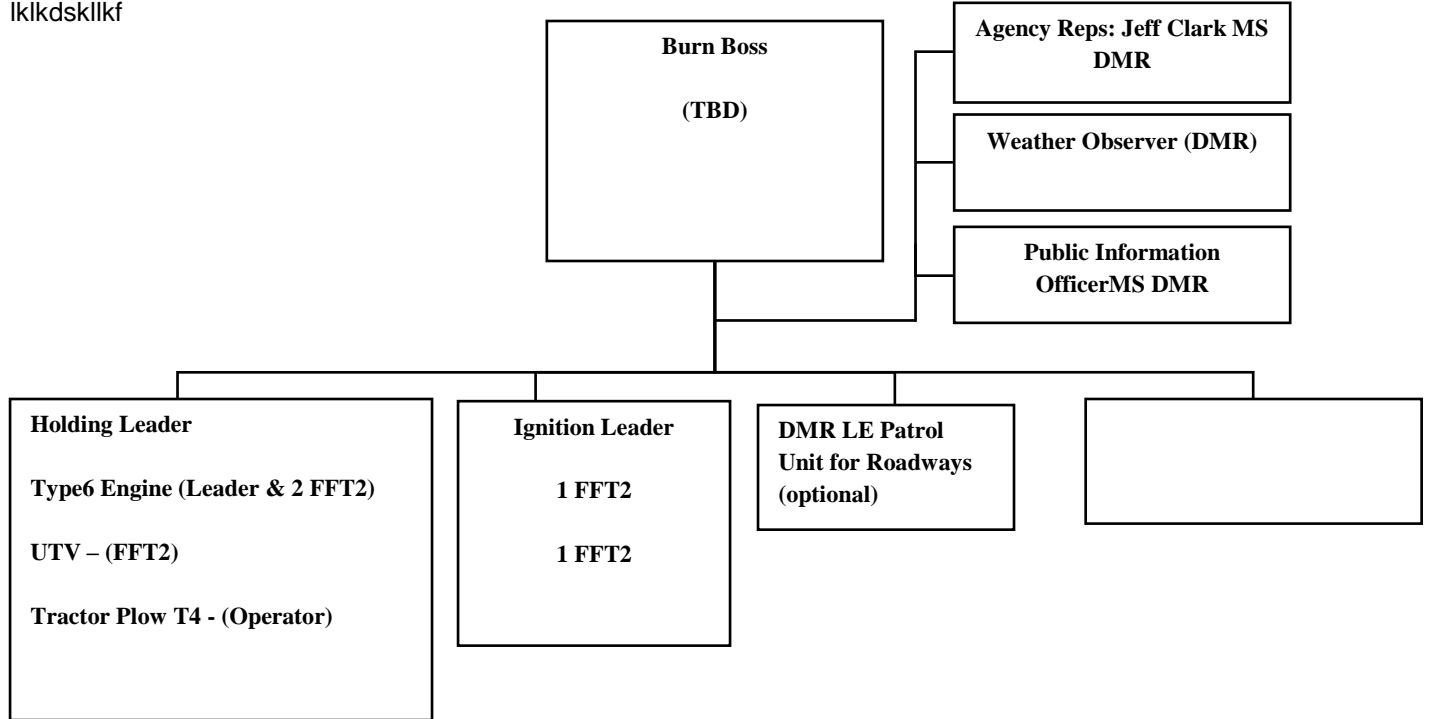
INCIDENT BRIEFING (ICS 201)

1. Incident Name: DELISLE RX	2. Incident Number:	3. Date/Time Initiated: Date: _____ Time: _____
7. Current and Planned Objectives:		
<ul style="list-style-type: none"> ▪ On an ongoing basis provide for the safety of incident personnel and the public by adhering too 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 Units immediately post burn. ▪ Reduce the overall tree stem count by achieving greater than 20% mortality of immature and mature trees with each fire treatment. ▪ Protect the Eagle Nest by following USFWS directions that establish adequate disturbance distances, avoidance of direct smoke impacts and recommended seasonal timing. ▪ Minimize fire extension into surrounding marsh areas by using natural or constructed fire breaks and ignition methods that minimize chance of fire spread into marshes. 		
8. Current and Planned Actions, Strategies, and Tactics:		
Time:	Actions:	
Pre Ignition	Post Smoke Signs as appropriate	
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	
Ignition Phase	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 Roads when smoke threats are mitigated	
6. Prepared by: Name: _____ Position/Title: _____ Signature: _____		
ICS 201, Page 2	Date/Time: _____	

INCIDENT BRIEFING (ICS 201)

1. Incident Name: DELISLE RX	2. Incident Number:	3. Date/Time Initiated: Date: _____ Time: _____
--	----------------------------	---

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



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

ICS 201, Page 3 Date/Time: _____

INCIDENT BRIEFING (ICS 201)

1. Incident Name: DELISLE RX	2. Incident Number:	3. Date/Time Initiated: Date _____ Time: _____
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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			<input type="checkbox"/>	Incident Command
Agency Rep DMR	DMR Coastal Preserve Director				Not an on scene resource. Is identified as the DMR Agency Rep for the Exec. Director on Burn Day.
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.
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.
Engine Type 6/7	DMR				Holding
ATV	DMR				Holding
LE Patrol Unit	DMR				Traffic Management

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

ICS 201, Page 4 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 "MEDICAL EMERGENCY" TO INITIATE RESPONSE FROM IMT COMMUNICATIONS/DISPATCH.

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 Meadow Medical)
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 Report.

Number of Patients:	Male / Female	Age:	Weight:
Conscious? <input type="checkbox"/> YES	<input type="checkbox"/> NO = MEDEVAC!		
Breathing? <input type="checkbox"/> YES	<input type="checkbox"/> 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
<input type="checkbox"/> 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.
<input type="checkbox"/> 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.
<input type="checkbox"/> 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)

<input type="checkbox"/> Helispot	<input type="checkbox"/> Short-haul/Hoist	<input type="checkbox"/> Life Flight	<input type="checkbox"/> Other
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Ground Transport:

<input type="checkbox"/> Self-Extract	<input type="checkbox"/> Carry-Out	<input type="checkbox"/> Ambulance	<input type="checkbox"/> Other
---------------------------------------	------------------------------------	------------------------------------	--------------------------------

6. ADDITIONAL RESOURCE/EQUIPMENT NEEDS:

<input type="checkbox"/> Paramedic/EMT(s)	<input type="checkbox"/> Crew(s)	<input type="checkbox"/> SKED/Backboard/C-Collar
<input type="checkbox"/> Burn Sheet(s)	<input type="checkbox"/> Oxygen	<input type="checkbox"/> Trauma Bag
<input type="checkbox"/> Medication(s)	<input type="checkbox"/> IV/Fluid(s)	<input type="checkbox"/> Cardiac Monitor/AED
<input type="checkbox"/> 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.	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:	

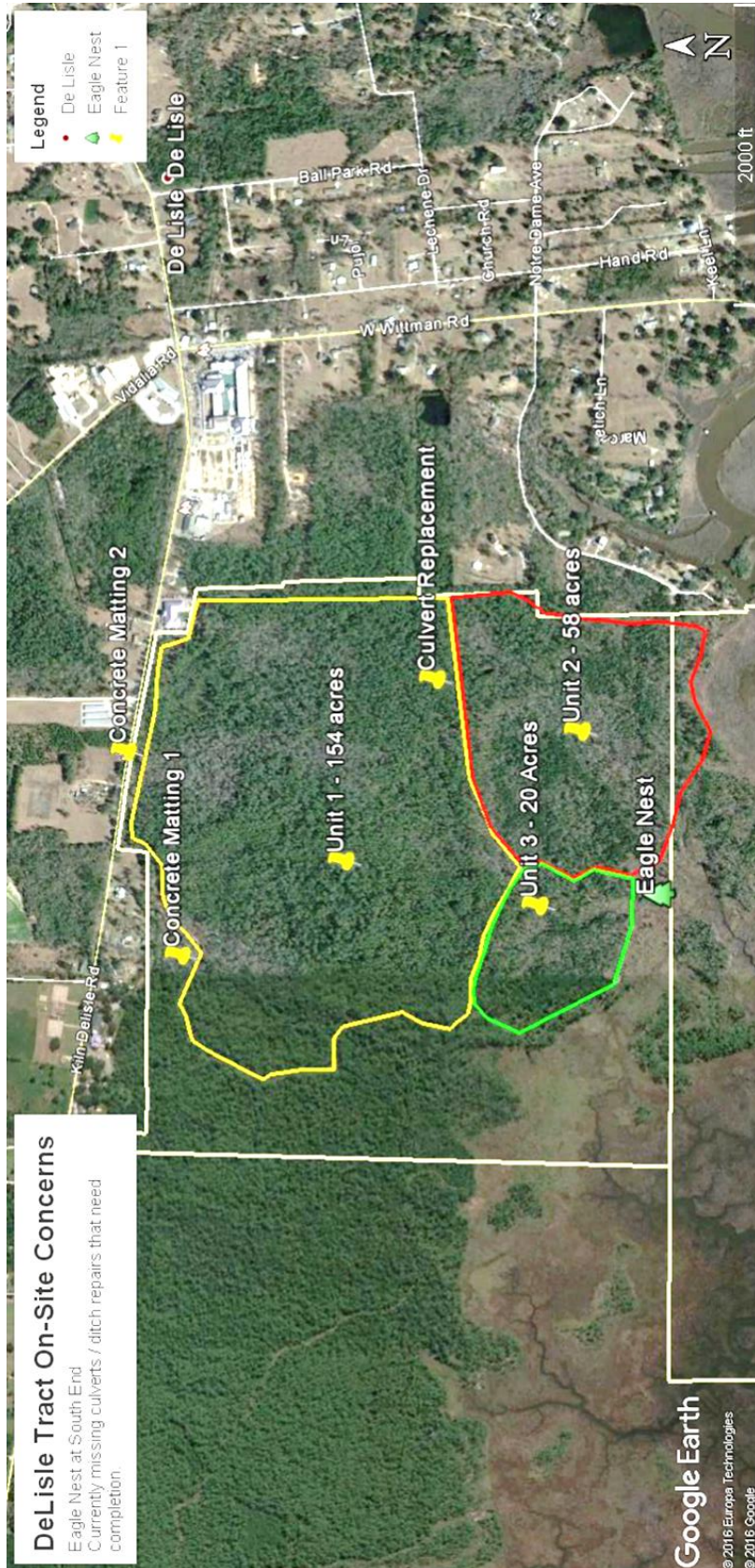
9. CONTINGENCY:

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.**

Additional Features Map For ICS201:



Appendix E: Fire Behavior Modeling Documentation or Empirical Documentation

DeLisle 7 moderate cured
Wed, Jan 04, 2017 at 14:16:38

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

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)

Delisle7mcn

Wed, Jan 04, 2017 at 14:22:16

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	Fireline Intensity	Flame Length	Firebrand Ignition
deg	ch/h	Btu/ft/s	ft	%
0	1.7	115	4.0	43
45	2.0	134	4.3	43
90	3.3	221	5.4	43
135	9.5	628	8.7	43
180	40.1	2646	16.9	43
225	9.5	628	8.7	43
270	3.3	221	5.4	43
315	2.0	134	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.

