



VOLUNTARY SMOKE MANAGEMENT GUIDELINES

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INTRODUCTION

Prescribed burning is one of the most efficient and cost-effective tools available to foresters in the Southeast for understory management, fuel reduction, site preparation, and wildlife habitat improvement. It is relied upon and utilized heavily throughout the southern Pine Belt.

For all of its positive and beneficial effects, burning also has a potential negative effect associated with it. Burning cannot be done without producing some level of smoke. This smoke will impact the area downwind of the burn site or down drainage in the absence of wind. The degree of this impact depends on how much consideration the burner has given to potential problems and any mitigation.

In Mississippi, tens of thousands of acres are planted in pine each year. This acreage, along with the acres previously planted and natural stands, adds up to an enormous amount of acreage that could be burned each year.

In meeting this need, burners must consider the impact of smoke and take steps to manage its impact as much as possible. To do less would open the door for possible regulations severely restricting prescribed burning or banning it completely.

These possibilities cannot be taken lightly. Bans and restrictions on prescribed burning have been considered by the legislatures of other states. Being able to burn as much as is needed is important. Being able to burn at all is more important.

Objectives

This document is intended to provide guidelines for forest resource managers which, if properly applied, can reduce the risk of adverse impacts of smoke from forestry or agricultural-related burns on smoke-sensitive areas.

Responsibilities

Maintaining the air quality of Mississippi is the responsibility of the Mississippi Department of Environmental Quality (DEQ). Under their regulations (see Appendix A, page 12), all open burning of waste is prohibited in Mississippi except for “infrequent burning of agricultural wastes in the field, silvicultural wastes for forest management purposes, land clearing debris, debris from emergency clean-up operations and ordinance.”

The following guidelines are recommended when conducting an agricultural or forestry burn:

1. Obtain a burning permit from the Mississippi Forestry Commission.
2. Burn within the time limits specified by the Stagnation Indices (see page 3), which are provided by the Mississippi Forestry Commission when issuing a permit.
3. Do not use a starter or auxiliary fuels that produce excessive visible emissions (i.e., rubber tires, plastic materials, etc.).

If these guidelines are met, and no local ordinance or burning ban prohibits burning, a burn for a recognized forestry or agricultural practice may be carried out.

BURNING PERMIT SYSTEM

The Mississippi Forestry Commission (MFC) administers a burning permit system that provides authorization to burn. A permit is obtained by calling the MFC's Central Dispatch.

(See Appendix B, page 1.) DEQ's air quality regulations require that anyone conducting a burn for a forestry or agricultural purpose in Mississippi obtain a burning permit. This includes MFC personnel.

The permits issued by the MFC are not "permission to burn." They relate only to air quality. If you receive a permit, it means that at least the minimum atmospheric conditions are present for adequate dispersal of your smoke.

The burner is still responsible for conducting their burn in a reasonable and prudent manner. Regardless of whether you have a permit or not, if an individual's smoke is in a highway because they burned too close to it or did not pay attention to wind direction, they are still responsible, even though they had a permit. *If you produce smoke, it's yours no matter where it goes or what it does.*"

If atmospheric conditions are at the minimum level for adequate smoke dispersal, a permit number will be given to the applicant. A record of the following information is made at the time of the permit request and maintained as a state document.

1. The type of burn (agricultural or forestry) and the number of acres involved.
2. The purpose of the burn and if it is a forestry burn.
3. The name of the landowner, and the name, address, and phone number of the person responsible for the burn.
4. The legal location of the burn site (latitude/longitude).
5. The time period covered by the permit.
6. The permit number.

The first five items must be recorded before a permit is issued.

Permit Criteria

Permit issuance is based on daily guides consisting of the *mixing height (MXHT)* and *transport wind speed (TWS)*. (See Glossary, page 33, for definitions.) This information is available on the National Weather Service (NWS) website www.weather.gov. This information is calculated from upper atmosphere readings utilizing weather balloons released by NWS offices. If the mixing height (m/AGL) and transport wind (m/s) values are (≥ 890 and 3) or (≥ 500 and 4) a permit can be issued.

NWS fire weather forecast should be posted by 0700 every morning. No permit can be given before this information has been received. No permits will be issued if either the MXHT or TWS do not reach the minimum values. Issuance of permits may be stopped during periods of extreme wildfire weather conditions or wildfire occurrence. Day permits stop once the NWS fire weather evening forecast is posted. If a burn continues into the evening, an additional permit is needed. Local county governments may also ban burning in their administrative areas during extreme wildfire conditions. The Governor can implement a statewide burn ban if conditions are warranted. Local ordinances and bans on burning take precedence over a permit. All permits may be revoked, if DEQ notifies the MFC of an air pollution episode.

Another factor that has become a matter of concern to DEQ is ozone. Ozone is a criteria pollutant or one that can affect human health. If an "Ozone Action Day" is declared by DEQ's Executive Director for DeSoto, Hancock, Harrison or Jackson counties, burning is prohibited.

High ozone concentrations are a problem during the hotter months of the year, May through September. This should have little or no effect on understory burning with possibly some impact on site prep burns. The stagnant conditions in which ozone concentrations would present a problem would also have low mixing heights or low transport wind speeds that would make issuing a permit unlikely.

The result of ozone or other pollutant concentrations that exceed EPA standards is that an area being designated non-attainment. If this happens, further development becomes more difficult. No actions that would further degrade air quality are allowed. Industries that produce ozone will not be allowed to build unless the ozone producers in place reduce their ozone emissions so there is “no net gain”. Highway projects have to go through additional levels of evaluation and approval. Economic development could be severely curtailed.

Stagnation Indices

The Stagnation Indices (“Stag Index”) readings are divided into a Daytime Stag Index and a Nighttime Stag Index. They provide information on how long atmospheric conditions will be satisfactory for adequate smoke dispersion, placing a time limit on how long a permit will be valid. The Daytime Stag Index covers the period from sunrise to sunset; the Nighttime Stag Index is for sunset to sunrise and also is used as a basis for issuing permits for night burning. Mixing height and transport wind speed information is not applicable during the night period.

The burning times associated with the Stag Index values are as follows:

Daytime Stagnation Index

- 0 - Burning permitted from sunrise until sunset
- 1 - Burning permitted from 1 hour after sunrise until sunset
- 2 - Burning permitted from 2 hours after sunrise until sunset
- 3 - Burning permitted from 2 hours after sunrise until 1 hour before sunset

Nighttime Stagnation Index

- 0 - Night burning permitted from sunset until sunrise
- 1 - Night burning permitted until 2 hours before sunrise
- 2 - Night burning permitted until 4 hours after sunset
- 3 - Night burning not permitted

The values of both Stag Indices range from zero to three. A value of zero indicates the best conditions for smoke dispersion and therefore has a longer burning period. A Stag Index of three indicates stagnant conditions, with the worst smoke dispersion conditions and has a correspondingly shorter burning time.

A burn must be concluded, the fire substantially burned out and little or no smoke being produced by the cutoff time indicated.

WEATHER INFORMATION (AVAILABILITY AND FORMAT)

Mixing heights and transport wind speeds are calculated from weather computer models. TWS can also be obtained from Doppler radar readings. This information is interpolated with adjacent states' readings and forecast for each zone. The Stagnation Indices are also made available.

Changes in the NWS have moved responsibility for the forecast for North and South Mississippi from Jackson and distributed it to the Mobile, AL, New Orleans/Baton Rouge, LA and Memphis, TN offices of the NWS (See Appendix C on page 15).

Forecast emphasis has shifted more to severe weather and emergency forecasting. Although some weather information is only made available for federal agencies, forestry fire suppression and smoke management forecasts are still available to prescribed burners.

This forecast includes mixing heights and transport wind speed. These measurements indicate the level of atmospheric stability, which affects fire intensity. The stagnation index portion of the forecast also is an indicator of the level of atmospheric stability.

The mixing height and transport wind speed is used for daytime permit issuance. Stagnation Index Criteria is used for nighttime permit issuance. Other information in the Forestry Fire Forecast includes typical weather elements, such as cloud conditions, temperature, relative humidity; morning and afternoon wind speed and wind shifts; the chance, duration, type and amount of precipitation, as well a beginning and ending time for forecast precipitation. Information relating to the mixing height and transport wind speed, specifically the mixing-height, temperature, transport wind speed, and transport wind direction are also forecast. Mixing height and transport wind speed information is given in both English and Metric values.

When the National Weather Service split the forecasting responsibilities for Mississippi, one condition was that each forecast office would provide all of the weather information that the office previously forecasting for an area had provided. As their areas of responsibilities included portions of the surrounding states, there are several pieces of information that are not currently used in Mississippi. These include the ventilation index, category day, LASI and stability.

SMOKE MANAGEMENT GUIDELINES

Prescribed burning to varying degrees does contribute to air pollution. If applied carelessly, it can result in damage to timber resources or a “smoke incident.”

Prescribed Burning Plan

The use of prescribed burning carries with it the obligation and responsibility to minimize adverse effects to air quality and the chance of a smoke-related accident from occurring. This is best accomplished by utilizing a prescribed burning plan.

A prescribed burning plan should fit the complexity of the site on which it is being used. It does not need to be overly complex, but should cover the essentials of weather, terrain and fuels that allow a burn to accomplish its objectives without incident. (See Appendix D, page 18, for examples.) The minimum requirements for information that a prescribed burning plan should contain are as follows:

1. Personal information to include:
 - a. Name of property owner
 - b. Owner's mailing address
 - c. Owner's phone number
 - d. Same information (above) on the individual preparing the plan and/or executing the burn
 - e. Date prescription was prepared
2. Stand Description to include:
 - a. County in which site is located
 - b. Location Latitude/Longitude
 - c. Number of acres to be burned
 - d. Type and size of overstory
 - e. Type and size of understory
 - f. Fuel type
 - g. Topography
3. Management objective of the burn
4. Pre-burn information to include:
 - a. Estimate of needed manpower and equipment
 - b. Firing techniques to be used
 - c. List of areas around site that could be adversely impacted by smoke from the burn (As delineated by the smoke management screening system explained on page 6.
5. Range of desired weather to include:
 - a. Surface wind speed and direction
 - b. Minimum and maximum relative humidity
 - c. Maximum temperature
 - d. Transport wind speed
 - e. Mixing height
 - f. Stagnation Index

The prescribed burning plan must be prepared before carrying out a prescribed burn. Also, the date of the plan must be documented by having the plan notarized at least 24 hours prior to the burn. (See Appendix E, page 27, for a sample notarization form.)

On the day the burn is done, the following information must be recorded on the burning plan:

- Burning permit number
- Time of day the permit is in effect as determined by the Stagnation Index reading.

Smoke Management Screening System

An integral part of any prescribed burning plan should be consideration for managing the smoke. Smoke management is a complex problem, but using MFC's online Simple Smoke Screening Tool www.mfc.ms.gov/smoke-screening-tool or applying the smoke screening system explained below can indicate potential smoke-sensitive areas. No system (at this time) can provide exact predictions on what smoke may do. The screening system does not consider all variables, but does offer broad guidelines.

The screening system's intent is to minimize the impact of smoke downwind from the burn site and indicate when the resource manager should be able to burn without causing a smoke problem. The screening system has five steps:

1. Plot direction of smoke plume
2. Identify smoke-sensitive areas
3. Identify critical smoke-sensitive areas
4. Determine fuel type
5. Minimize risk

Step One: Plot Direction of the Smoke Plume

- A. Locate the burn on a map upon which smoke-sensitive areas can be identified. Draw a line from the burn site representing the desired wind direction. If burn will last 3 or more hours, draw another line showing predicted wind direction for completion of the burn. Plot the anticipated downwind smoke movement a distance of:
 1. 5 miles for grass fuels regardless of fire type.
 2. 10 miles for shrub fuels when using line-backing or spot fires.
 3. 20 miles for shrub fuels using line-heading fires.
 4. 30 miles for all slash fires.
 5. 5 miles for line-backing fires in all other fuel types.
 6. 10 miles for line-heading fires in all other fuel types including, leaf/needle litter, and for burns of 250 acres or more.
- B. To allow for horizontal dispersion of smoke as well as shifts in wind direction, draw two other lines from the burn's location at an angle of 30 degrees from the centerline(s) of the desired wind direction. If the fire location is represented as a spot, draw as in Figure A. If the size of the burn is larger than 250 acres, draw as in Figure B. The result is your probable daytime smoke impact area.

Figure A

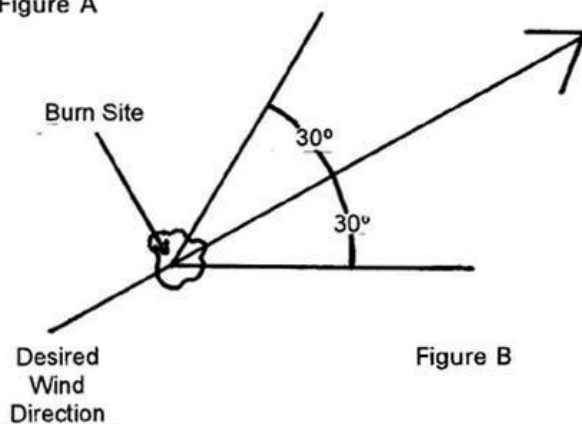
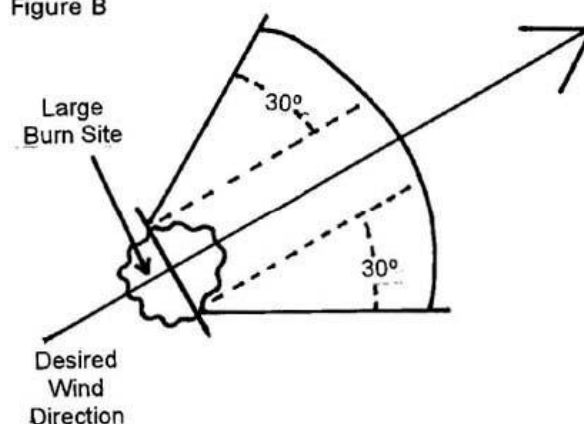


Figure B



- C. Look down drainage for one-half the distance determine above, but do not spread out except to cover any river valleys or creek bottoms. The result is your probable nighttime impact area, providing the burn

will be completed at least 3 hours before sunset, and providing the forecast night winds are light and variable.

Step Two: Identify Smoke-Sensitive Areas

Identify and mark any smoke-sensitive areas (e.g., airports, highways, communities, recreation areas, schools, hospitals and factories) within the impact zone plotted in Step One. These areas are potential targets for smoke from your burn.

- A. If no potential targets are found, you may burn as prescribed.
- B. If the area to be burned contains organic soils that are likely to ignite, do not burn.
- C. If any targets are found, continue this screening system.

Step Three: Identify Critical Smoke-Sensitive Areas

- A. Critical smoke-sensitive areas are:
 1. Those that already have an air pollution or visibility problem.
 2. Those within the probable smoke impact area as determined below. If the downwind smoke movement distance determined in Step 1 was:
 - a. 5 miles, then any smoke-sensitive area within $\frac{1}{2}$ mile of burn site is critical, both downwind and down-drainage.
 - b. 10 miles, then any smoke-sensitive area within 1 mile of burn site is critical.
 - c. 20 miles, then any smoke-sensitive area within 2 miles of burn site is critical.
 - d. 30 miles, then any smoke-sensitive area within 3 miles of burn site is critical.
- B. If any critical smoke-sensitive areas are located, **DO NOT BURN** under present prescription!
 1. Prescribe a new wind direction that will avoid such targets and return to the beginning of this screening system, or
 2. If smoke-sensitive area is in the last half of the distance criteria determined from Step 3 A 2, reduce the size of the area to be burned by approximately one half, complete burn at least 3 hours before sunset, and aggressively mop up and monitor, or
 3. Use an alternative other than burning.
- C. If no critical smoke-sensitive areas are found, or criteria B1 or B2 is met, continue the screening system.

Step Four: Determine Fuel Type

The smoke produced may vary greatly by type, amount and condition of fuel consumed.

- A. From the list below determine which broad-type fuel applies.
 1. Grass
 2. Shrubs
 3. Litter
 4. Slash
- B. Review fuel categories or combinations.
 1. If the fuel type is described by one of the above categories, continue.
 2. If the fuel type is not comparable to any of the above, pick the fuel type for which fire behavior and smoke production will most nearly compare and proceed with **EXTREME CAUTION**.
- C. If the fuel type is windrowed logging debris, and you have identified smoke-sensitive areas, **DO NOT BURN** under present prescription. Smoke production will be great and can last for weeks.
 1. Prescribe a new wind direction to avoid all smoke-sensitive areas and return to the beginning of the system.
 2. If you cannot avoid all smoke-sensitive areas, you will need a better procedure than this simple screening system.

- D. If the fuel type is scattered logging debris or small, essentially dirt-free, dry piles, the following conditions should be met:
1. Size of area to burn should be less than 100 acres if hand ignition is used. Aerial ignition would give the capability of burning a larger area in the same or a shorter amount of time. However, no studies have been done to determine how large an area can be safely burned under these conditions. If aerial ignition is used on burns larger than 100 acres, the size of the area, the amount of smoke produced and, most importantly, the allowable burning time as determined by the Stagnation Indices must be considered and due caution used in executing a burn under these circumstances.
 2. There are no major highways within 5 miles down-drainage.
 3. There are no other smoke-sensitive areas within 3 miles down-drainage.
 4. If relative humidity is predicted to stay below 80 percent and surface winds above 4 mph all night, the distances in 2 and 3 above can be cut in half.

Step Five: Minimize Risk

To meet your smoke management obligations when smoke-sensitive areas may be affected by the burn, all of the following criteria should be met to minimize any possible adverse effects:

- Obtain a burn permit
- Promptly mop up and monitor to minimize smoke hazards.
- Make use of “Smoke Ahead” warning signs to caution motorists (signs should meet the Department of Transportation's regulations for size, shape and color). Make night checks to detect possible smoke problems.
- There should be no fog predicted for the time the burn will take place or during the period that residual smoke may be produced.
- If it appears that stumps, snags, or logs may cause a residual smoke problem, take steps to keep them from burning. If they ignite, extinguish them.

If the prescribed burn complies with all the conditions outlined, the manager should be able to burn without causing a smoke problem. If the manager has marginal or negative answers that place a burn outside the screening system's guidelines, the final decision of whether or not the burn can be conducted safely should be based on the manager's prescribed burning experience.

In addition to the smoke screening system, the following list can also aid in reducing potential smoke impacts.

A Smoke Manager's Checklist

- Have definite, defensible resource objectives
- Obtain and use weather and smoke management forecasts.
- Don't burn during pollution alerts or stagnant atmospheric conditions.
- Comply with air pollution control regulations.
- Burn when conditions are good for rapid smoke dispersion.
- Use caution when burn site is near or upwind of smoke-sensitive areas.
- Use caution when smoke-sensitive areas are down-drainage.
- Prior to burning, notify your local fire control office, nearby residents, and adjacent landowners.
- Use test fires to confirm smoke behavior.
- Use backing fires when possible.
- Consider burning in small blocks.
- Do not ignite organic soils.
- Be very cautious of nighttime burning.
- Anticipate down-drainage smoke flow.
- Mop up along roads.
- Have an emergency plan.

MISSISSIPPI PRESCRIBED BURNING STATUTES

In the 1993 Legislative Session the Mississippi Prescribed Burning Act was passed. These statutes (see Appendix F, page 28), which became effective March 1, 1993, recognized prescribed burning as a landowner property right and a land management tool. It specifically authorizes and promotes the continued use of prescribed burning.

The statutes go on to say that "No property owner or his agent shall be liable for damage or injury caused by fire or resulting smoke unless negligence is proven." This is in effect if the prescribed burning is accomplished when:

At least one certified prescribed burn manager supervises the burn. (The criteria to become a Certified Prescribed Burn Manager are in Appendix G, page 31.)

1. A written prescription (prescribed burning plan) is prepared and notarized prior to the burn.
2. A burning permit is obtained from the Mississippi Forestry Commission.
3. The burn is considered in the public interest and does not constitute a public or private nuisance when done according to state Air Quality Regulations applicable to prescribed burning (see Appendix A, page 12).

The evaluation of completed burns was not addressed by the legislature. If an evaluation is made, it is at the individual burner's discretion.

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APPENDIX A

Air Quality Regulations

The Mississippi Department of Environmental Quality monitors the compliance of air quality regulations. Listed below are the air quality regulations pertaining to prescribed burning. This information has been taken from *Air Emission Regulations for the Prevention, Abatement and Control of Air Contaminants (11 Miss. Admin. Code, Pt. 2, Ch. 1*, amended May 24, 2018), a publication of the Mississippi Department of Environmental Quality.

Rule 1.3. Specific Criteria for Sources of Particulate Matter

G. Open Burning. The open burning of residential, commercial, institutional, or industrial solid waste, is prohibited, except as specified herein. This prohibition does not apply to infrequent burning of agricultural wastes in the field, silvicultural wastes for forest management purposes, land-clearing debris, debris from emergency clean-up operations, and ordnance; and permitted open burning at hazardous waste disposal facilities subject to regulation under Subtitle C of the Federal Resource Conservation and Recovery Act (RCRA).

(1) Fires set for the burning of agricultural wastes in the field and/or silvicultural wastes for forest management purposes must meet the following conditions.

(a) A Permit must be obtained from the Mississippi Forestry Commission.

(b) The open burning must occur within a time period allowing adequate diffusion of air pollutants as defined by the permit and the daily weather guides issued by the National Weather Forecast Office.

(c) Starter or auxiliary fuels may consist of dried vegetation, petroleum derived fuels of the gasoline, kerosene, or light fuel oil types (diesel), or a combination thereof. Use of or burning of other combustible material that causes excessive visible emission (e.g., rubber tires, plastic materials, etc.) is prohibited.

(2) Open burning of land-clearing debris must not use starter or auxiliary fuels which cause excessive smoke (rubber tires, plastics, etc.); must not be performed if prohibited by local ordinances; must not cause a traffic hazard; must not take place where there is a High Fire Danger Alert declared by the Mississippi Forestry Commission or Emergency Air Pollution Episode Alert imposed by the Executive Director and must meet the following buffer zones.

(a) Open burning without a forced-draft air system must not occur within 500 yards of an occupied dwelling.

(b) Open burning utilizing a forced-draft air system on all fires to improve the combustion rate and reduce smoke may be done within 500 yards of but not within 50 yards of an occupied dwelling.

(c) Burning must not occur within 500 yards of commercial airport property, private air fields, or marked off-runway aircraft approach corridors unless written approval to conduct burning is secured from the proper airport authority, owner or operator.

(3) Permitted open burning at a hazardous waste disposal facility subject to regulation under Subtitle C of RCRA is considered a stationary source of air pollution subject to Mississippi air emission permitting regulations.

(4) The prohibition of open burning of residential solid waste applies to open burning of leaves and other yard waste by residential property owners, except when the Department has deferred the regulation of the burning of leaves and other yard wastes to a county board of supervisors and/or municipal governing body, and that county or municipal governing body has in effect a local ordinance that regulates such open burning and has been approved by the Department. Local ordinances approved by the Department must provide that the leaves or other yard waste is burned on the residential property where it originated. Approved local ordinances must also be deemed protective of air quality and public welfare by the Department and must provide for appropriate burning prohibitions and restrictions during Air Quality Action Days. Additionally, approved local ordinances must include fire safety provisions including prohibitions and restrictions on open burning coordinated through the State Forestry Commission during dry weather conditions.

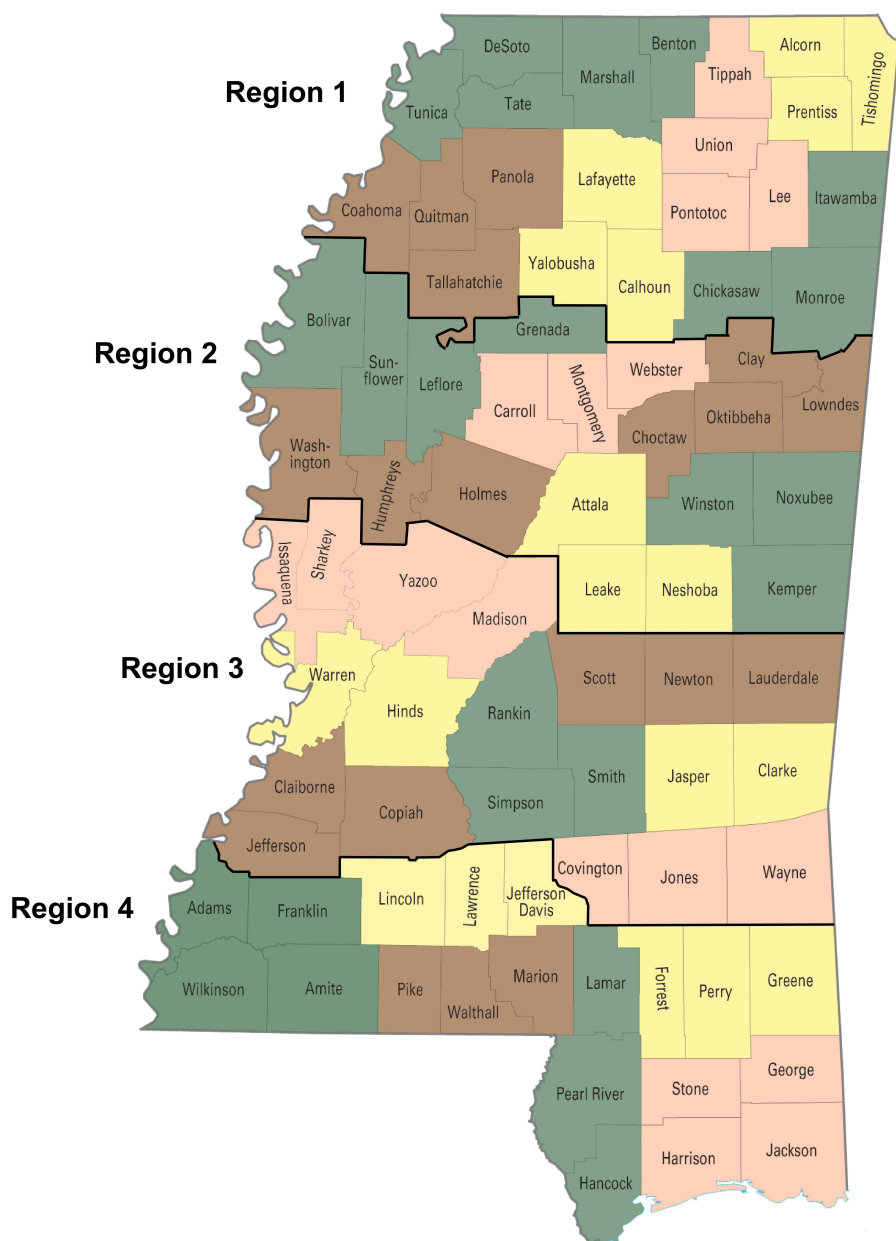
(5) Air Quality Action Days. Open burning of agricultural wastes and silvicultural wastes described in G(1) above, open burning of land-clearing debris described in G(2) above, permitted open burning at a hazardous waste disposal facility described in G(3) above, and open burning of residential leaves and other yard wastes described in G(4) above are prohibited in the specified county(ies) when an Air Quality Action Day is declared by the Executive Director. Certain Air Quality Action Days declared by the Executive Director may be designated as Ozone Action Days in DeSoto County, Hancock County, Harrison County and Jackson County. Ozone Action Days shall be noticed the evening before on the MDEQ website and/or with local news media. The Mississippi Department of Transportation, Mississippi State Forestry Commission, local fire officials, and County Emergency Management Agencies (EMA) shall also be notified the evening before an Ozone Action Day.

APPENDIX B

Mississippi Forestry Commission's Regional Map & Directory

To report a wildfire or obtain a burning permit

Call 1-833-MFC-FIRE
1-833-632-3473



State Office

601-359-1386
3139 Highway 468 West
Pearl, MS 39208

Region 1 Office

662-842-5312
1711 McCullough Blvd.
Tupelo, MS 38802

Region 2 Office

662-226-3321
1801 Highway 51 S
Grenada, MS 38901

Region 3 Office

769-218-6745
3139 Highway 468 West
Pearl, MS 39208

Region 4 Office

601-540-5239
or 601-408-4176
477 South Gate Road
Hattiesburg, MS 39401



National Weather Service Forecast and Sample Formats

Routine Fire Wx Fcst (With/Without 6-10 Day Outlook)

Issued by NWS Jackson, MS

[Current Version](#) | [Previous Version](#) | [Text Only](#) | [Print](#) | [Product List](#) | [Glossary On](#)

Versions: [1](#) [2](#) [3](#) [4](#) [5](#) [6](#)

000
FNUS54 KJAN 171017
FWFJAN

Fire Weather Planning Forecast For Extreme Southeast Arkansas,
Northeast Louisiana, and Central Mississippi
National Weather Service Jackson MS
517 AM CDT Thu Mar 17 2022

.DISCUSSION...Areas of patchy dense fog will continue through mid morning today. Dry weather will prevail today with the chance for rain and thunderstorms returning late tonight and through tomorrow. With moisture increasing, no fire weather concern over the next couple of days however, this weekend we will be a bit drier across the west post cold front Friday.

Use the following link for a graphical forecast of LVORI indices:
http://www.weather.gov/jan/fire_weather_lvori

ARZ074-075-LAZ007>009-172230-
Ashley-Chicot-Morehouse-West Carroll-East Carroll-
Including the cities of Crossett, North Crossett, Hamburg,
West Crossett, Dermott, Lake Village, Eudora, Bastrop, Oak Grove,
Epps, and Lake Providence
517 AM CDT Thu Mar 17 2022

	Today	Tonight	Fri
Cloud Cover	McClear	Pcldy	Pcldy
Precip Type	None	Tstms	Showers
Chance Precip (%)	0	100	30
Temp (24H Trend)	77 (+8)	59 (+10)	71
RH % (24H Trend)	39 (-18)	99 (+1)	45
20ftWnd-AM(mph)	S 5		SW 11 G22
20ftWnd-PM(mph)	S 9	SE 6 G17	W 15 G23
Rain Duratn(hrs)		6	1
Rain Amount(ins)	0.00	0.88	0.01
SILT/500m MLT (F)	68		68
Mixing Hgt(m AGL)	1735		1462
Mixing Hgt(ft AGL)	5693		4797
Transport Wnd (m/s)	S 8		W 14
Transport Wnd (mph)	S 18		W 31
Vent Index (metric)	14311		20349
Vent Index (English)	104751		148947
Stag Index	3	3	2
Category Day	4		5
Stability	C	D	D
Wind Shifts			
Precip Begin		10 PM	Continuing
Precip End		Continuing	11 AM
Maximum LVORI		9	
Dispersion Index	72	9	92

Remarks...None.

.FORECAST FOR DAYS 3 THROUGH 7...

.SATURDAY...Mostly clear. Lows in the lower 40s. Highs in the mid 60s. West winds around 10 mph.
 .SUNDAY...Mostly clear. Lows in the upper 30s. Highs in the lower 70s. Light winds.
 .MONDAY...Partly cloudy. A 50 percent chance of rain showers. Lows in the mid 40s. Highs in the mid 70s. Southeast winds up to 15 mph.
 .TUESDAY...Showers and thunderstorms. Lows in the upper 50s. Highs in the mid 70s. South winds 5 to 15 mph.
 .WEDNESDAY...Partly cloudy. A 50 percent chance of showers and thunderstorms. Lows in the lower 50s. Highs in the upper 60s. West winds 5 to 10 mph.

\$\$

MSZ018-019-025>027-034>036-172230-
 Bolivar-Sunflower-Leflore-Grenada-Carroll-Washington-Humphreys-Holmes-
 Including the cities of Cleveland, Indianola, Ruleville, Greenwood, Grenada, Vaiden, North Carrollton, Carrollton, Greenville, Belzoni, Isola, Durant, Tchula, Lexington, Pickens, and Goodman
 517 AM CDT Thu Mar 17 2022

	Today	Tonight	Fri
Cloud Cover	Pcldy	Pcldy	Pcldy
Precip Type	None	Istms	Istms
Chance Precip (%)	0	100	40
Temp (24H Trend)	74 (+8)	57 (+8)	73
RH % (24H Trend)	47 (-17)	100 (0)	53
20ftWnd-AM(mph)	Lgt/Var		S 11 G23
20ftWnd-PM(mph)	S 7	SE 5	SW 14 G24
Rain Duratn(hrs)		5	1
Rain Amount(ins)	0.00	0.73	0.02
SILT/500m MLT (F)	66		69
Mixing Hgt(m AGL)	1513		1675
Mixing Hgt(ft AGL)	4965		5495
Transport Wnd (m/s)	S 6		SW 15
Transport Wnd (mph)	S 14		SW 33
Vent Index (metric)	9361		25037
Vent Index (English)	68517		183258
Stag Index	3	3	2
Category Day	4		5
Stability	C	D	D
Wind Shifts			
Precip Begin		11 PM	Continuing
Precip End		Continuing	1 PM
Maximum LVORI		8	
Dispersion Index	61	1	100

Remarks...None.

.FORECAST FOR DAYS 3 THROUGH 7...

.SATURDAY...Partly cloudy. Lows in the lower 40s. Highs in the lower 60s. West winds around 10 mph.
 .SUNDAY...Mostly clear. Lows in the upper 30s. Highs in the lower 70s. Light winds.
 .MONDAY...Partly cloudy. Lows in the mid 40s. Highs in the mid 70s. Southeast winds up to 15 mph.
 .TUESDAY...Mostly cloudy with showers and thunderstorms. Lows in the upper 50s. Highs in the mid 70s. South winds 5 to 15 mph.
 .WEDNESDAY...Mostly cloudy. Showers and thunderstorms likely. Lows in the mid 50s. Highs in the upper 60s. West winds 5 to 15 mph.

APPENDIX D

Sample Prescribed Burning Plans

Basic Prescribed Burning Plan

Simple Understory Prescribed Burning Unit Plan

Understory Prescribed Burning Unit Plan

Postharvest Prescribed burning Unit Plan

BASIC PRESCRIBED BURNING PLAN

OWNER OR ADMINISTRATING AUTHORITY

Name: _____
 Address: _____
 City: _____ State: _____ Zip: _____

BURN PLANNER

Name: _____
 Address: _____
 City: _____ State: _____ Zip: _____

PURPOSE(S) OF BURN: Site Prep Fuel Reduction Control Undesirable Species Wildlife
 Disease Control Other _____

STAND INFORMATION:

1. Location lat/long: _____
2. Overstory _____
3. Understory _____
4. Fuels _____
5. Topography _____

PRE-BURN INFORMATION:

- | | |
|--|--|
| 1. # Acres to be burned _____ | 4. # Chains to plow _____ |
| 2. Fuel Model(s) _____ | 5. Estimated Fuel Loading _____ Tons/ac |
| 3. # Personnel _____ | 6. Time of day to start _____ |
| 7. # and type of equipment: <input type="checkbox"/> Tractor/plows _____ | <input type="checkbox"/> Engines _____ <input type="checkbox"/> ATVs _____ |
| <input type="checkbox"/> Other _____ | |

8. List smoke sensitive targets: _____

9. List critical smoke sensitive targets: _____

10. If any of areas in item nine are in the downwind smoke impact area and the burn is to be executed under those conditions, list mitigation measures to reduce smoke impact to acceptable levels.

11. Check firing techniques to be used and detail how they are to be applied. Backfire Strip backfire
 Strip head Head fire Flank Spot fire Ring fire Other _____
 Detail the firing sequences. _____

12. List any special precautions: _____

13. Who to notify (if needed): _____

BASIC PRESCRIBED BURNING PLAN

RANGE OF DESIRED WEATHER:

1. Surface wind speed _____
2. Wind Direction North N East N West
 East S East South S West West
3. Transport wind speed _____
4. Mixing height _____
5. Stagnation Index _____
6. Relative Humidity _____
7. Temperature _____
8. Drought Index (KDBI) _____
9. 10 hr Fuel Moisture _____

ACTUAL WEATHER:

1. Surface wind speed _____
2. Wind Direction North N East N West
 East S East South S West West
3. Transport wind speed _____
4. Mixing height _____
5. Stagnation Index _____
6. Relative Humidity _____
7. Temperature _____
8. Drought Index (KDBI) _____
9. 10 hr Fuel Moisture _____

BURN PLANNER (signature): _____ **DATE:** _____

SUMMARY OF BURN:

- | | | |
|-----------------------|--|-------------------------------|
| 1. Acres burned _____ | 4. Firing Techniques: <input type="checkbox"/> Backfire <input type="checkbox"/> Strip | 5. Permit number _____ |
| 2. Date burned _____ | Backfire <input type="checkbox"/> Strip head <input type="checkbox"/> Head fire | 6. Time permit expired: _____ |
| 3. Time Set _____ | <input type="checkbox"/> Flank <input type="checkbox"/> Spot fire <input type="checkbox"/> Ring fire | |
| | <input type="checkbox"/> Other: _____ | |

BURN PLANNER (signature): _____ **DATE:** _____

SIMPLE UNDERSTORY PRESCRIBED BURNING UNIT PLAN

Landowner: _____ Permit #: _____ Time In Effect: _____
 Address: _____ Phone #: Previous _____
 Location: S _____ T _____ R _____ Burn Date: _____
 County _____ Acres to burn _____

Purpose of Burn: _____
 (Draw map on back or attach)

STAND DESCRIPTION:

Overstory type & size _____ Height to bottom of crown: _____
 Understory type & height _____
 Dead fuels: description & amount _____
 Topography _____

PREBURN FACTORS

Manpower & equipment needs _____
 List smoke-sensitive areas & located on map _____
 Special precautions _____
 Estimated # hours to complete _____ Passes smoke screening system _____
 Adjacent landowners to notify _____

WEATHER FACTORS

	Desired Range	Predicated	Actual
Surface winds (speed & direction)	_____	_____	_____
Transport (seed & direction)	_____	_____	_____
Minimum mixing height	_____	_____	_____
Stagnation Index	_____	_____	_____
Minimum relative humidify	_____	_____	_____
Maximum temperature	_____	_____	_____
Fine-fuel moisture (%)	_____	_____	_____
Days since rain _____	Amount: _____		

FIRE BEHAVIOR

	Desired Range	Actual
Type Fire	_____	_____
Best month to burn	_____	_____
Flame length	_____	_____
Rate of spread Inches of litter to leave	_____	_____

EVALUATION (IMMEDIATE)

Any escapes? Yes No Acreage _____
 Objective met? Yes No

EVALUATION (FUTURE)

Evaluation by Date _____

SIMPLE UNDERSTORY PRESCRIBED BURNING UNIT PLAN

Smoke problems? <input type="checkbox"/> Yes <input type="checkbox"/> No _____	Insect/Disease dam. _____
% of area with crown discoloration <input type="checkbox"/> 5- 25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76 _____	Crop tree mortality _____
Live crown consumption _____	% understory kill Soil _____
% understory veg. consumed _____	movement Other _____
Technique used ok _____	adverse effects _____

Remarks _____	Remarks: _____
_____	_____
_____	_____

Plan prepared by _____ Date _____

Address (Complete) _____

Phone Number _____

UNDERSTORY PRESCRIBED BURNING UNIT PLAN

Burning Unit # _____ S _____ T _____ R _____ Gross Acres _____ Net Acres _____
 Landowner _____ Phone # _____
 Address _____

A. RECORD OF PREVIOUS BURNING: Date _____ Fire Type _____ Results _____

B. DESCRIPTION OF STAND

1. Overstory: Type, density, size _____ Height to bottom of crown _____
2. Understory: type, density, height _____
3. Dead fuels: Type, density, age, volume _____
4. Soil type and topography _____

C. PURPOSE(S) OF BURN: _____

(Draw map on back or attach)

D. SPECIFIC OBJECTIVE: _____

E. PREBURN FACTORS:

1. Chains to plow (See Map) _____ Exterior _____ Interior _____ Total _____
2. Chains to fire (See Map) _____ Exterior _____ Interior _____ Total _____
3. Crew Size _____ Equipment Needs _____
4. Estimated tons/acres _____ Total tons to be burned _____
5. Ignition procedure (See Map) _____
6. Passed screening system? _____ Special precautions _____
7. Notify _____
8. Regulations that apply _____
9. List smoke-sensitive areas & critical targets (See Map) _____

F. WEATHER FACTORS

	Desired Range	Predicated	Actual
1. Surface winds (speed & dir.)	_____	_____	_____
2. Transport (Speed & dir.)	_____	_____	_____
3. Stagnation Index	_____	_____	_____
4. Minimum mixing height	_____	_____	_____
5. Dispersion index	_____	_____	_____
6. Minimum relative humidify	_____	_____	_____
7. Maximum temperature	_____	_____	_____
8. Fine-fuel moisture (%)	_____	_____	_____
9. Day since rain _____	Amount _____		
10. Burning index _____	Drought Index _____		

UNDERSTORY PRESCRIBED BURNING UNIT PLAN

G. FIRE BEHAVIOR

Desired Range

Actual

- | | | | |
|------------------------------|-------|--------------|-------|
| 1. Type fire | _____ | Type of fire | _____ |
| 2. Best month to burn | _____ | Date burned | _____ |
| 3. Time of day to start | _____ | Time set | _____ |
| 4. No. hours to complete | _____ | Completed | _____ |
| 5. Flame length | _____ | | _____ |
| 6. Rate of spread | _____ | | _____ |
| 7. Inches of litter to leave | _____ | Litter left | _____ |

H. EVALUATION

Immediately after burn:

Future

- | | | | |
|---------------------------------------|---|---------------------|-------|
| 1. Acres burned | _____ | Evaluation by Date | _____ |
| 2. Spotting | <input type="checkbox"/> Yes <input type="checkbox"/> No | Distance | _____ |
| 3. Any escapes? | <input type="checkbox"/> Yes <input type="checkbox"/> No | made Insect/ | _____ |
| 4. Objective met? | <input type="checkbox"/> Yes <input type="checkbox"/> No | disease dam. | _____ |
| 5. Smoke Problems? | <input type="checkbox"/> Yes <input type="checkbox"/> No | Crop tree mortality | _____ |
| 6. % understory veg. consumed | _____ | | _____ |
| 7. % of area with crown discoloration | _____ | % understory kill | _____ |
| | <input type="checkbox"/> 5- 25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76 | | |
| 8. Live crown consumption | _____ | Soil movement | _____ |
| 9. Adverse publicity | _____ | Other adverse | _____ |
| 10. Remarks | _____ | effects Remarks | _____ |

Plan prepared by _____ Date _____

Address (Complete) _____

Phone # _____ Permit # _____ Time in effect _____

POSTHARVEST PRESCRIBE BURNING UNIT PLAN

Landowner _____

Address _____ Phone # _____

Burning unit # _____ S _____ T _____ R _____ Gross Acres _____ Net Acres _____

Purpose of burn _____

(Draw map on back or attach)

A. DESCRIPTION OF AREA:

1. Natural stand or plantation _____ Stand Age _____ Harvest Date _____
2. Clearcut _____ Harvest method _____ Pine basal area removed _____
3. Organic soil _____ Hardwood basal area _____ Hardwoods utilized _____
4. Unmerchantable tree felled _____ Snags felled _____ Debris evenly distributed _____
5. Debris (light, medium or heavy) _____ Brush (light, medium or heavy) _____
6. Herbaceous fuels (light, medium or heavy) _____ Herbaceous fuels continuous _____
7. Herbicide used _____ Date applied _____
8. Drum chopped _____ Single or double pass _____ Date applied _____
9. Windrowed and/or piled _____ Date piled _____ Piled when wet _____
10. Pile or windrow dimensions Height _____ Width (diameter) _____
11. Windrow break interval _____
12. Topography _____

B. PREBURN FACTORS AND DESIRED FIRE INTENSITY:

1. Areas to exclude _____
2. Chains to plow (see map) Exterior _____ Interior _____ Total _____
3. Chains to fire(see map) Exterior _____ Interior _____ Total _____
4. Equipment needs _____
5. Crew size _____ Type of fire _____ Type of ignition _____
6. Ignition procedure (see map) _____
7. No. of hours to complete _____ Tons/acres to consume _____ Litter to leave (in.) _____
8. Special precautions _____
9. Notify _____
10. Regulations that apply _____
11. Passed on screening system? _____ List smoke-sensitive areas, critical targets & locate on map.

C. WEATHER FACTORS

	DESIRED RANGE	PREDICATED	ACTUAL
1. Surface winds (speed & dir.)	_____	_____	_____
2. Transport (speed & dir.)	_____	_____	_____
3. Stagnation Index	_____	_____	_____
4. Minimum mixing height	_____	_____	_____
5. Dispersion index	_____	_____	_____
6. Minimum relative humidity	_____	_____	_____
7. Maximum temperature	_____	_____	_____

POSTHARVEST PRESCRIBE BURNING UNIT PLAN

8. Fire-fuel moisture % _____

9. Days since rain _____ Amount _____

10. Burning index _____ Drought index _____

11. Best month to burn _____ Dates Burned _____

12. Time of day to start _____ Time Set _____

D. SUMMARY OF BURN:

1. Type fire & ignition _____

2. All piles, windrows & logging decks ignited _____

3. % of area burned _____ Did area between piles burn? _____

4. Spotting frequency _____ Distance _____ Firebrand material _____

E. EVALUATION IMMEDIATELY AFTER BURN:

1. Any escapes? Number _____ Adjacent to burn area? _____ Acres _____

2. Hours to burnout: Active flaming _____ Smoldering _____ involved _____

3. % understory veg. consumed _____ Depth of litter remaining (in.) _____ Total Hours _____

4. % materials <3" dia. consumed _____ Did piled debris burn down? _____

5. Objective met _____

6. Adverse publicity _____

7. Smoke problems _____

8. Remarks _____

F. Future Evaluation (Remarks) _____

Plan Prepared By: _____ Date _____

Address: _____

Phone _____ Permit# _____ Time in effect _____

APPENDIX E

Sample Notarization Form For A Prescribed Burning Plan

STATE OF MISSISSIPPI

COUNTY OF _____

On this, the ____ day of _____, 20____, personally appeared _____ before me, a Notary Public in and for the State of Mississippi, and acknowledge to me that the Prescribed Burning Plan attached, which was prepared by _____ for the tract located at _____ was completed on or before this date AND before the execution of the burn described in said plan.

(SEAL)

Notary Public

My Commission Expires: _____

APPENDIX F

Mississippi Prescribed Burning Act and Other Fire-Related Laws

§49-19-301. Short Title.

§49-19-301 may be cited as the “Mississippi Prescribed Burning Act.”

§49-19-303. Legislative findings; purpose.

- 1) The application of prescribed burning is a landowner property right and a land management tool that benefits the safety of the public, the environment and the economy of Mississippi. Pursuant thereto, the Legislature finds that:
 - a) Prescribed burning reduces naturally occurring vegetative fuels within wildland areas. Reduction of the fuel load reduces the risk and severity of major catastrophic wildfire, thereby reducing the threat of loss of life and property, particularly in urbanizing areas.
 - b) Most of Mississippi's natural communities require periodic fire for maintenance of their ecological integrity. Prescribed burning is essential to the perpetuation, restoration and management of many plant and animal communities. Significant loss of the state's biological diversity will occur if fire is excluded from fire-dependent systems.
 - c) Forest lands constitute significant economic, biological and aesthetic resources of statewide importance. Prescribed burning on forest land prepares sites for reforestation, removes undesirable competing vegetation, expedites nutrient cycling, and controls or eliminates certain forest pathogens.
 - d) The state manages hundreds of thousands of acres of land for parks, wildlife management areas, forests, and other public purposes. The use of prescribed burning for management of public lands is essential to maintain the specific resource values for which these lands were acquired.
 - e) Proper training in the use of prescribed burning is necessary to ensure maximum benefits and protection for the public.
 - f) As Mississippi's population continues to grow, pressures from liability issues and nuisance complaints inhibit the use of prescribed burning.
- 2) It is the purpose of Sections 49-19-307 to authorize and promote the continued use of prescribed burning for ecological, silvicultural and wildlife management purposes

§49-19-305. Definitions.

- 1) "Prescribed burning" means the controlled application of fire to naturally occurring vegetative fuels for ecological, silvicultural and wildlife management purposes under specified environmental conditions and the following of appropriate precautionary measures which cause the fire to be confined to a predetermined area and accomplishes the planned land management objectives.
- 2) "Certified prescribed burn manager" means an individual or county forester who successfully completes the certification program approved by the Mississippi Forestry Commission.
- 3) "Prescription" means a written plan for starting and controlling a prescribed burn to accomplish the ecological, silvicultural, and wildlife management objectives.

§49-19-307. Regulation of prescribed burns; liability.

- 1) No property owner or his agent, conducting a prescribed burn pursuant to the requirements of this section, shall be liable for damage or injury caused by fire or resulting smoke, unless negligence is proven.
- 2) Prescribed burning conducted under the provisions of this section shall:
 - a) Be accomplished only when at least one (1) certified prescribed burn manager is supervising the burn or burns that are being conducted;
 - b) Require that a written prescription be prepared and notarized prior to prescribed burning;
 - c) Require that a burning permit be obtained from the Mississippi Forestry Commission; and
 - d) Be considered in the public interest and shall not constitute a public or private nuisance when conducted pursuant to state air pollution statutes and rules applicable to prescribed burning.
- 3) The Mississippi Forestry Commission shall have the authority to promulgate rules for the certification for prescribed burn managers and guidelines for a prescribed burn prescription.
- 4) Nothing in this section shall be construed to limit the civil or criminal liability as provided in §97-17-13 and §95-5-25, Mississippi Code of 1972.

§95-5-25. By firing woods.

If any person shall set on fire, any lands of another, or shall wantonly, negligently, or carelessly, allow any fire to get into the lands of another, he shall be liable to the person injured thereby, not only for the injury to or destruction of buildings, fences, and the like, but for the burning and injury of trees, timber, and grass, and damage to the range as well; and shall moreover be liable to a penalty of one hundred and fifty dollars in favor of the owner.

§97-17-13. Arson-willfully or negligently firing woods, marsh, meadow, etc.

If any person willfully, maliciously, and feloniously, sets on fire any woods, meadow, marsh, field or prairie, not his own, he shall be guilty of a felony and shall, upon conviction, be sentenced to the state penitentiary for not more than two (2) years, nor less than one year, or fined not less than two hundred dollars (\$200.00), nor more than one thousand dollars (\$1,000.00), or both, in the discretion of the court.

Provided, however, if any person recklessly or with gross negligence, causes fire to be communicated to any woods, meadow, marsh, field or prairie, not his own, he shall be guilty of a misdemeanor and shall, on conviction, be fined not less than twenty dollars (\$20.00), nor more than five hundred dollars (\$500.00), or imprisoned in the county jail not more than three (3) months, or both, in the discretion of the court.

APPENDIX G

Criteria For Certification of Prescribed Burn Managers

The requirements to attain certified prescribed burn manager status are as follows:

1. An individual must successfully complete all components of the Prescribed Burning Short Course administered by The Mississippi Forestry Commission.
2. Any individual who has successfully completed the prescribed burning short course presented in a 1987 or later session, will be considered a Certified Prescribed Burn Manager upon the March 1, 1993, effective date of the Mississippi Prescribed Burning Act. Individuals who successfully completed the short course prior to 1987 will be considered a certified prescribed burn manager if they complete or have completed training on smoke management (which included a screening system on managing smoke) and can provide documentation of such training to the Forestry Commission...

or

Any individual who has successfully completed a training course prior to the March 1, 1993, effective date of the Prescribed Burning Act which the Forestry Commission approves as being comparable to the currently required short course.

3. Any individual completing Mississippi State University's School of Forest Resources Forest Fire course (which includes the S-290 Fire Behavior course, Smoke Management Screening System, and must pass the Prescribed Burning Short Course final exam) will have met the criteria for Certified Prescribed Burn Manager in Mississippi, if all components of the course have been passed and a final grade of "C" or higher was obtained. A letter from the School of Forest Resources or the Forest Fire course instructor affirming this and a copy of the letter from the Forestry Commission (obtained from the School of Forest Resources) accepting the course as meeting the criteria will serve as documentation that the certification criteria have been met.

Certificates of completion received from the short course will serve as documentation that the criteria for certified prescribed burn manager have been met for attendees of the 1987 and subsequent sessions. Attendees of short course sessions prior to 1987 must have the course certificate of completion, documentation of an approved smoke management training course and a letter from the Mississippi Forestry Commission accepting the training.

For training provided by an individual's organization, documentation showing an individual has successfully completed the appropriate training, such as a certificate of completion or a letter from the individual's department supervisor or the organization's training officer stating that they have completed the necessary training, and a letter from the Mississippi Forestry Commission accepting the documentation will serve as proof that an individual has met the criteria for certified prescribed burn manager status.

The individual will be responsible for maintaining the necessary documentation to substantiate their certified prescribed burn manager status.

APPENDIX H

Glossary

Air Pollution Emergency Episodes

A statement issued by the Department of Environmental Quality when atmospheric conditions are stable enough that the potential exists for pollutants to accumulate in a given area.

Backing Fire

A fire spreading or set to spread into (against) the wind, or downhill.

Cold Front

The leading edge of a mass of air that is colder and drier than the air mass being replaced.

Dispersion

The decrease in concentration of airborne pollutants as they spread throughout an increasing volume of atmosphere.

Fire Behavior

A general term that refers to the combined effect of fuel, weather and topography on a fire.

Heading Fire

A fire front spreading or set to spread with the wind or upslope.

Inversion

Defined as a layer of the atmosphere through which the temperature increases with increasing height.

Line Ignition

Setting a line of fire as opposed to individual spots.

Mixing Height

The height to which relatively vigorous mixing of the atmosphere occurs.

Mop-up

Act of extinguishing or removing burning material, especially near control lines, after an area has burned to make it safe or to reduce residual smoke.

Organic Soil

Any soil or soil horizon containing at least 30 percent organic matter; examples are peat and muck.

Relative Humidity

The ratio, expressed as a percentage, of the amount of moisture in the air to the maximum amount of moisture the air is capable of holding under the same conditions.

Rough

The live understory and dead fuels that build up on the forest floor over time.

Site Prep Burn

A fire set to expose adequate mineral soil and control competing vegetation until seedlings of the desired species become established.

Smoke Management

Application of knowledge of fire behavior and meteorological processes to minimize air quality degradation during prescribed burning.

Smoke Plume

The gases, smoke, and debris that rise slowly from a fire while being carried along the ground.

Smoke-Sensitive Area

An area in which smoke from outside sources is intolerable.

Spot Fire

Method of igniting fires in which ignition points are set individually at predetermined spacing with predetermined timing throughout the area to be burned.

Stagnant Conditions

Conditions under which pollutants build up faster than the atmosphere can disperse them.

Strip-Heading Fire

A series of lines of fire upwind (or downslope) of a firebreak or backing fire that will burn with the wind toward the firebreak or backing fire.

Transport Wind Speed

A measure of the average rate of the horizontal movement of air throughout the mixing layer.

Underburning

Prescribed burning under a timber canopy.

Wind Direction

Compass direction from which the wind is blowing.

Windrow

Woody debris that has been piled into a long continuous row.



MISSISSIPPI FORESTRY COMMISSION

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PEARL, MS 39208
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The Mississippi Forestry Commission provides equal services and employment opportunities.