USDA United States Department of Agriculture

CONSERVATION ENHANCEMENT ACTIVITY

E338B

CONSERVATION STEWARDSHIP PROGRAM

Short-interval burns to promote a healthy herbaceous plant community

Conservation Practice 338: Prescribed Burning

APPLICABLE LAND USE: Range, Forest, Associated Ag Land

RESOURCE CONCERN: Animals, Plants

ENHANCEMENT LIFE SPAN: 1 Year

Enhancement Description:

The controlled use of fire is applied in a forest to restore fire-adapted plants and forage while improving wildlife habitat, wildlife food supply, and reducing the risk of damage from intense, severe wildfires. The ideal interval between prescribed burns is not often achieved. To improve the effectiveness of prescribed burning, the frequency of prescribed burning is increased appropriately, for a specified time period, to help restore ecological conditions in forests and woodlands. Short return interval prescribed burning is used to regenerate desirable tree species, improve the condition of fire-adapted plants and native herbaceous vegetation, improve wildlife food supply and forage quantity and quality, create wildlife habitat (snags and den/cavity trees), limit encroachment of competing vegetation including non-native species, and reduce the future risk of damage from intense, severe wildfires.

Criteria:

- States will apply general criteria from the NRCS National Conservation Practice Standard Prescribed Burning (Code 338) as listed below, and additional criteria as required by the NRCS State Office.

- Update the Prescribed Burning Plan or other Prescribed Burn prescription, in consultation with NRCS personnel to address restoration needs for fire-adapted vegetative communities and forages on the property.

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- Assess the need for pre-treatment of vegetation and fuels, and for application of complementary NRCS Conservation Practice Standards such as Fuel Break (Code 383), Firebreak (Code 394), and Woody Residue Treatment (Code 384).
- Apply to sites where prescribed burning has previously been implemented at longer intervals than recommended to maintain the desired plant community, and where burn frequency must be increased to achieve the objectives listed in the enhancement description.
- The prescribed burning frequency will be increased (i.e., the burn interval will be reduced) from the previous regimen to an interval appropriate for the target plant community.
- Assess the existing fuel load using appropriate tools and methods for the geographic area.
- If invasive plants are present, utilize methods and timing that will prevent or control their spread.
- A written burn plan must be developed, and all necessary approvals secured prior to conducting a prescribed burn. The plan will include the following components at a minimum:
  - The objectives of the burn and the expected post-burn conditions.
  - Maps, images and/or descriptions of the proposed burn area and any associated or adjacent smoke sensitive areas.
  - Inventory of available fuels.
  - Required weather and fuel conditions under which the burn will be conducted.
  - Firing sequence and methods.
  - List of equipment and personnel needed and job assignments.
  - Any pre-burn preparation needed to safely and effectively conduct the prescribed burn.
  - List of appropriate authorities, agencies, departments, individuals, and facilities to be contacted and necessary signatures of approval.
  - Checklist for a post-burn evaluation.

Burning criteria

  - Follow all components of the burn plan.
  - A current fire weather forecast is required prior to conducting a prescribed burn. Collect weather parameters and other data that affect fire behavior for the day of the burn and monitor the appropriate weather parameters during the burn. Weather conditions outside those prescribed in the written plan will result in postponement or cessation of the burn.

Grazing criteria

- If grazing is used in combination with prescribed burning to manage understory vegetation, a grazing plan must be in place and be used to guide the frequency and duration of grazing periods.

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Documentation and Implementation Requirements:

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Participant will:

- ☐ Prior to implementation, identify sites where at least one application of prescribed burning was implemented at longer burn intervals (i.e., insufficient frequency) than recommended for the target plant community by an existing prescribed burn plan or other habitat management plan. (NRCS will provide technical assistance, as needed)
- ☐ Prior to implementation, identify and document those sites in need of restoration of fire-adapted vegetative communities and forages where increased burn frequency will achieve the objectives listed in the enhancement description. (NRCS will provide technical assistance, as needed)
    - If grazing is used in combination with prescribed burning to manage understory vegetation, develop or update a grazing plan prior to implementation to guide the frequency and duration of grazing periods in accordance with the objectives of the enhancement description. Provide a copy to NRCS.
- ☐ Prior to implementation, assess the existing fuel load using appropriate tools and methods for the geographic area. Determine the need for pre-treatment of the vegetation and fuels to facilitate a desired fire intensity to achieve the enhancement objectives. Use complimentary practices as needed, such as NRCS Conservation Practice Standards Fuel Break (Code 383), Firebreak (Code 394) and Woody Residue Treatment (Code 384) to achieve appropriate conditions. (NRCS will provide technical assistance, as needed.)
- ☐ Prior to implementation, acquire a written burn plan for the enrolled land use acres that meets the enhancement criteria and any additional state NRCS requirements. Provide to NRCS for approval.
- ☐ Prior to implementation of a prescribed burn, acquire all necessary approvals and permits (local, state, federal as applicable).
- ☐ During implementation, and prior to ignition of each prescribed burn, acquire a current fire weather forecast and ensure all weather conditions are within those prescribed in the written burn plan. If conditions are not within prescription, postpone burn.
- ☐ During implementation, and prior to ignition of any prescribed burn, notify NRCS to confirm NRCS verification for any planned changes will meet NRCS or State required enhancement criteria.
- ☐ During implementation, install and maintain erosion control measures as needed for the site. (NRCS will provide technical assistance, as needed.)

- ☐ After implementation of each prescribed burn, conduct a post-burn evaluation as required within the burn plan and provide to NRCS.

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NRCS will:

- ☐ Prior to Implementation, as needed, provide technical assistance in determining sites for enhancement implementation that meet specified criteria.
- ☐ Prior to implementation, as needed, provide explanation and technical assistance in interpreting the following NRCS Conservation Practice Standards as they relate to implementing this enhancement:
  - Prescribed Burning (Code 338)
  - Fuel Break (Code 383)
  - Firebreak (Code 394)
  - Woody Residue Treatment (Code 384)
  - Additional Conservation Practice Standards for erosion control, as needed for the site.
- ☐ Prior to implementation, review and certify the prescribed burn plan meets the enhancement criteria and any additional state NRCS requirements.
- ☐ (If livestock are used) Prior to implementation, review the prescribed grazing plan to ensure objectives of the enhancement will be met when used in combination with prescribed burning.
- ☐ During implementation, evaluate any planned changes to verify they meet the enhancement criteria.
- ☐ After implementation of each prescribed burn, review the post burn evaluation provided by the participant. Discuss any issues that may have occurred, and provide assistance as needed in adjusting plans and procedures to improve future prescribed burns.

NRCS Documentation Review:

CONSERVATION STEWARDSHIP PROGRAM

I have reviewed all required participant documentation and have determined the participant has implemented the enhancement and met all criteria and requirements.

Participant Name _____ Contract Number _____

Total Amount Applied _____ Fiscal Year Completed _____

_____ _____

NRCS Technical Adequacy Signature Date

CSP 2020
Mississippi Supplement
E338B

Short-Interval Burns to Promote a Healthy Herbaceous Plant Community for Wildlife Food

Documentation Requirements:

- **Landowner must be provided with attached job sheet, MS-ECS-338-04(JS/SS).**
- **A prescribed burning plan (prescription) must be prepared by a Mississippi certified burner prior to beginning any burning. The type of burn will be determined by plant species, size classes, stocking levels, available fuel, moisture conditions, season of year, and burning prescription.**
- **A copy of the attached "Mississippi Prescribed Burning Act" will be provided to the cooperator. The cooperator must sign a certification verifying receipt of the "Act".**
- **A burning permit must be obtained from the Mississippi Forestry Commission.**
- **Prescribed Burning must always be planned and implemented with the conservation practice Firebreak (394). Landowner must be provided with attached job sheet, MS-ECS-394-01(JS/SS).**
- **Do not burn during the Primary Nesting Season - the nesting and fawning dates in Mississippi are from April 1 to August 15.**
- **Before and after pictures will be documented in case file.**
- **Map(s) delineating the area that will be treated and a schedule for year of treatment.**

By signing below, I certify that I have received a copy of the Mississippi Prescribed Burning Act (Also known as the "Mississippi Burning Law"). I understand that I must comply with this act when doing a prescribed burn on acreage that is under contract in the _____ Program (_____). Prescribed burning under these programmatic provisions shall:

A) Require at least one certified prescribed burn manager supervise the burn that is being conducted.

B) Require that a written prescription (also called a burn plan) be prepared and notarized prior to conducting a prescribed burn.

C) Require that a burning permit be obtained from the Mississippi Forestry Commission before the burn is conducted.

LANDOWNER SIGNATURE _____

DATE _____

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 bum 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 bum 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 burn s 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.

§96-6-26. 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.

PRESCRIBED BURNING - Procedures and Specifications

Purpose:

Prescribed burning is applying a controlled fire to a predetermined area as a management tool. Procedures and specifications are set forth for each vegetative type that may need to be prescribed burned and for each specific purpose that the burn is to accomplish. Vegetative types are based on the same factors which determine plant communities and their descriptions, namely plant species, size classes, and stocking. The more common types encountered in Mississippi are listed and briefly described below.

For all types of prescribed burns a burning permit must be obtained and adjoining property owners and the Mississippi Forestry Commission (MFC) County Forester's office notified of intention to burn. A certified prescribed burn manager must be enlisted in planning prescribed burns, plowing the necessary base lines, and actually carrying out the burn. The weather should be checked before starting to burn and periodically throughout the day. Changing conditions, mainly wind should be noted and preparations made to change burning techniques or plow out the fire if an emergency arises. The area should be burned so that the wind will carry smoke away from sensitive areas such as hospitals, schools, and residential areas.

Prescribed Burning in Forest Stands:

1. Mature pine type, medium to well stocked, with more than 50 square feet of pine basal area per acre; hardwood and brush understory of at least medium density, having the potential of preventing natural regeneration of pine or suppressing such regeneration following harvesting operations.
   Objectives: Control or reduction of encroaching hardwoods, preparation of area for harvest cutting, and preparation of seedbed for natural regeneration.
   Procedures: A winter backfire should be used to reduce initial fuel mass, followed by two or more annual or biennial spring or summer burns, if needed. Winter burn should be done 1 to 3 days after passage of a cold front which has brought ½ to 1 inch of rain and is followed by a cold air mass. Humidity should be no lower than 40 percent. Air temperature should be 40 degrees Fahrenheit or lower. Wind direction should be northerly or northwesterly, with a velocity of 2 to 10 miles per hour and steady. Prescribed fires should be set in the morning as soon as the top layer of duff is dry enough to support a low, steady, creeping backfire (usually around 10 a.m. or later).

2. Mixed pine-hardwood stands, medium to sparsely stocked, with less than 50 square feet of pine basal area per acre, mainly of sawtimber size, with soil and site well suited for conversion to pure pine.
   Objectives: Conversion of stand to pure pine; control or reduction of competing hardwoods; preparation of site for tree planting, direct seeding or natural seeding.
   Procedures: The same burning techniques as specified for mature pine type should be used. However, in mixed pine-hardwood stands, the hardwoods are usually of poletimber to sawtimber size, (5 inches DBH and larger). Hardwoods 3 inches and larger are rarely killed by fire alone. Two or more annual summer burns following the initial burn might be needed or the unwanted hardwoods could be controlled by applying an approved herbicide. Refer to Timber Stand Improvement (P.C. 666). Conditions of rainfall and soil moisture, humidity, air temperature, wind direction and velocity as specified for mature pine apply also to mixed pine-hardwood. The same precautionary measures should be applied.

3. Immature pine stands, 15 to 40 years old, well stocked with 70 square feet or more of pine basal area, with hardwood understory light to heavy.
   Objectives: Reduction of fire hazards (fuel) and control or reduction of competing hardwoods.
   Procedures: The same burning technique as specified for mature pine should be used. The initial burn may adequately control hardwoods and in such cases no annual follow-up burns will be needed. In young pine stands with heavy grass growth on the forest floor and pine needles draped on tree branches, the initial burn may be made at night when surface fuels are not as dry as in daytime and when air temperatures are lower. In such cases, the risk of an unduly high scorch line is minimized. Following the initial burn, follow-up burns should be scheduled every 3 to 4 years to reduce rough and control unwanted hardwoods. Other conditions and precautionary measures are the same as those specified for mature pine.

4. Young pine stands, less than 15 years old, densely stocked with 600 or more stems per acre, with dense grass and weed growth and heavy accumulation of pine needles and cured herbage on the forest floor.
   Objectives: Reduction of fire hazards (rough reduction).
   Procedures: A winter backfire should be used just after a cold front passage when air temperature is below 40 degrees Fahrenheit; wind is steady, northerly, and 2 to 10 miles per hour in velocity; humidity is 50 to 60 percent and moisture of the litter layer is 25 to 30 percent. Flame height should not be more than 3 feet. Interior plowed lines should be about 400 to 700 feet apart. The prescribed burn should "back burn" against the direction of the wind at a rate of 60 to 100 feet per hour. After the initial burn, follow-up burns should be scheduled every 3 to 4 years, depending on fuel accumulation and presence of competing hardwoods. The same precautionary measures as for mature pine stands should be taken. Under no circumstances should the initial prescribed burn be applied to stands in which the trees are less than 15 feet in height.

5. Young longleaf pine seedling stand in grass-stage, usually natural but possibly planted, 2 to 10 years old, and when more than 30 percent of the seedlings are infected with brown-spot needle blight.
   Objectives: Primarily to scorch infected needles and kill the causative fungus. Also, to remove cured grasses, pine needles and other vegetation that have a smothering and competing effect on the longleaf pine seedlings. Prescribed burning releases the seedlings, whereas, without it, they might remain in the grass stage and fail to make height growth for up to 12 years. Other benefits include reduction of rough, improvement of wildlife habitat and livestock forage, and control of undesirable vegetation or unwanted hardwoods.
   Procedures: Burn should be done during winter months when longleaf pine buds are dormant and within 1 to 2 days following a rain of 1 to 2 inches when air temperatures fall to 40 degrees Fahrenheit or below, relative humidity is 30 to 60 percent, and winds are northerly, 3 to 10 miles per hour and steady. A strip headfire or running headfire should be used. The object is to get a fast-moving fire that will scorch infected needles without injuring terminal buds of seedlings. Large areas, preferably 200 acres or more, should be burned to discourage reinfection from the unburned areas. The burn should be repeated 2 years later if most of the seedlings still have not started height growth and one-third or more of the needles again have brown-spot. The same precautionary measures as for mature pine should be taken. Burning areas in which over 60 percent of the seedlings have begun to make height growth and terminal buds are 4 to 12 inches above the ground should be avoided. The terminal buds of such seedlings are usually killed since they are at levels where the fires are the hottest. In such cases, the prescribed burn should be delayed until seedlings have grown above 12 inches and are no longer subject to lethal temperatures. The number of seedlings lost to brown-spot needle blight will be less than those killed by a poorly timed strip headfire or running headfire.

6. Pine stand, usually planted and occasionally natural, age 10 to 30 years, usually loblolly pine and less commonly shortleaf, longleaf, and slash pines, growing on old fields with sandy soils and soils low in organic matter, where thinning or some other form of cutting has been done, and trees are susceptible to root rot caused by the fungus, *Fomes annosus*.
   Objectives: To destroy the causal fungus and prevent spread of root rot. Other benefits include fuel reduction, improvement of wildlife habitat and livestock forage, and control of unwanted hardwoods.
   Procedures: The same burning technique as specified for young pine stands should be used. Follow-up prescribed burns should be scheduled if infections by *Fomes annosus*, as evidenced by appearance of fruiting bodies on stumps of cut trees and at bases of standing trees, recur following thinning and other cutting operations. Even though new infections are not widespread, the follow-up burns will reduce the rough and result in other benefits. The same precautionary measures as for mature pine should be taken.

7. Pine, shrub, grass type, with loblolly, shortleaf, longleaf and slash pine species the dominant vegetation; may be planted or of natural origin, of variable age and density, and usually of poletimber and sawtimber sizes, with associated shrub, grass and forb components suitable for browsing and grazing by deer and cattle.
   Objectives: To burn accumulated rough (cured grasses, dried leaves and pine needles); to reduce the smothering effect of cured vegetation and encourage early "green-up" of forage plants, improve succulence and palatability of grasses, herbs and shrubs; to increase protein, phosphorus and calcium content of the new growth and overall yield and quality of herbage, legumes and browse. Prescribed burning improves wildlife habitat for deer, turkey, quail, and rabbit. Other benefits include control of unwanted hardwoods and brush, control of brown-spot needle blight on longleaf seedlings, and exposure of mineral soil for the germination of seed and establishment of forage.
   Procedures: A winter backfire should be used to reduce initial fuel mass. The burn should be done under the same conditions specified for mature pine. On large ownerships (500 acres or more), the burn should be done in a checkerboard pattern and on a 3- to 4-year rotational basis, burning one block of equal size each year. The same precautionary measures as for mature pine should be taken.

Prescribed Burning on Other Vegetative Types:

1. Recreation areas, vistas, facilities having aesthetic and biological values, and nature study areas.
   Objectives: To enhance appearance, maintain open spaces and increase numbers and visibility of flowering plants, stimulate succession in plant communities and create diversity of vegetative types for wildlife.
   Procedures: Winter backfire should be applied as for young pine stands above. The same precautionary measures should be taken as for mature pine stands. Burning should be avoided when areas are being used by visitors. Careful preplanning and contacts with persons in charge of the area are required.

2. Forested areas requiring improved access
   Objectives. To reduce understory and increase visibility for proper location of access roads and firebreaks; to facilitate aerial and ground application of fertilizers and herbicides; to control unwanted hardwoods; to prepare sites for tree planting, direct seeding or natural seeding; and to facilitate timber marking and cutting.
   Procedures. Winter backfire should be applied under conditions prescribed for mature pine and the same precautionary measures taken. Selective timber marking should be delayed until after 3 to 5 heavy rains have fallen to reduce the amount of "smut" on trees and brush.

3. Grassland
   Objectives. To improve forage quality and quantity by reducing mature vegetation cover and to aid in distribution of grazing. Also, to reduce the smothering effect of cured vegetation in nongrazed areas.
   Procedures. A spring burn immediately prior to or during initial green-up of species being managed. The same precautionary measures should be taken as for mature pine.

SPECIFICATION SHEET FOR
PRESCRIBED BURNING

SITE SPECIFIC COMMENTS AND RECOMMENDATIONS:

1. Name of landowner(s) -

2. Location of prescribed burn management area (section, township, range, other description) -

3. Desired wildlife species/habitat -

4. Present habitat/cover -

5. Purpose of burn -

6. Recommended type, size, timing, and frequency of burn -

7. A burning plan will be prepared by -

Note: A site-specific burning plan must be prepared prior to carrying out a prescribed burn. Also, the date of the plan must be documented by having the plan notarized prior to the burn. On the day the burn is done, a burning permit must be obtained from the Mississippi Forestry Commission. The following information must be recorded on the burn plan: 1) burning permit number and 2) time of day the permit is in effect as determined by Stagnation Index reading.

NRCS Natural Resources Conservation Service
MISSISSIPPI

MS-ECS-394-01 (JS/SS)
June 2017

FIREBREAK

Purpose: To create or construct an area cleared of brush and trees surrounding an area to aid in control and prevention of wildfires and/or to be used to conduct a prescribed burn.

Purpose (check all that apply)	
☐ Prevent the spread of wildfire	☐ Control prescribed burns

Layout		
Firebreak Location and Length: (Also see attached map(s))		
Firebreak Width:		
Firebreak Vegetative Cover (if applicable):		
Species:	Seeding Rates:	Planting Dates:

General Considerations and Maintenance:

1. Firebreaks should consist of clean-tilled bare ground; fire-resistant vegetation, non-flammable materials; or a combination of these.
2. Plants selected for establishment within vegetated firebreaks will be noninvasive herbaceous species, comprised of attributes making them capable of retarding fire, and easy to maintain. Consider the selection of plant species that will enhance the needs of wildlife in the area.
3. Firebreaks must be of sufficient width and length to contain the expected fire. The minimum width is 10 feet for non-vegetated firebreaks (clean-tilled), and the minimum width is 30 feet for vegetated firebreaks. **Construction with a firelane plow is not an approved method to create firebreaks.**
4. Firebreaks shall be located to minimize risk to the resources being protected, including location on the contour where practicable to minimize risk of soil erosion. Attempt to locate firebreaks near ridge crests and valley bottoms. Avoid constructing firebreaks down steep slopes, in wet soils, or within streamside management zones (SMZ's) areas if at all possible.
5. Back blade firebreaks away from the edge of streams, roads, or gullies.
6. Install water bars and water turnouts at approaches to streams, roads, and gullies to prevent channeling water from firebreaks into these areas. (*Water bars should be located OUTSIDE of SMZ's.*)
7. Install water bars and/or water turnouts as needed on sloping terrain to prevent water from running down a firebreak with the potential for erosion. Water bars should be constructed at a 30-40 degree angle to the center of the firebreak.

Spacing of water bars: Gradient (% slope)	Interval (feet)	Spacing of Wing Ditches: (turnouts) Gradient (%slope)	Interval (feet)
2	250	2-5	200
5	135		
10	80	5-10	100
15	60		
20	45	>10	75
30	35		

8. Mow or graze vegetative firebreaks to avoid a build-up of excess litter and to control weeds.
9. Inspect all firebreaks for woody materials such as dead limbs or blown down trees and remove them from the firebreak.
10. Inspect firebreaks annually and rework bare ground firebreaks as necessary to keep them clear of flammable vegetation.
11. Repair erosion control measures as necessary to ensure proper function.
12. Access by vehicles should be controlled to prevent damage to the firebreak.
13. Existing roads may be used as firebreaks if properly maintained. They should be at least 10 feet wide if used for this purpose.

Additional Comments:

_____

_____

_____

_____

NRCS will:

- Provide specifications and information for the construction of firebreaks, such as the width and length; number of water-bars or diversions needed to prevent erosion of the firebreaks; and species selected for vegetated firebreaks. These specifications will be detailed within this job sheet.
- Provide a map showing locations of firebreaks.
- Measure and certify completed firebreaks.

Participant will:

- Remove trees and shrubs creating an area free of vegetation for either 10' clean-tilled firebreaks or for 30' vegetated firebreaks (herbaceous vegetation is required to be replanted), as specified.
- Maintain the open firebreak as specified in the contract by disking, grading or mowing.
- Follow NRCS Standards and Specifications for this practice and other associated practices, such as prescribed burning.

General Information:

NRCS technical specifications (such as Practice Codes 338 - Prescribed Burning), job sheets, bulletins, technical notes, and other sources of information, such as the Mississippi Forestry Commission's, Best Management Practices Handbook (BMP's) can be referenced for additional details. **USDA program policies and procedures may restrict or supercede information in this job sheet. Therefore, check with the appropriate agency for guidelines pertaining to lands under USDA programs.**

Examples of firebreaks: bare ground and vegetated in forests and bare ground in grasslands.