

Oklahoma

Forest

Resources

Development

Program

Part 2 - Cost-Share Practices, Components and Specifications

Forestry Services Division
Oklahoma Department of Agriculture, Food and Forestry
2800 North Lincoln Boulevard
Oklahoma City, OK 73105
405-522-6158



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FRDP PART 2

COST-SHARE PRACTICES, COMPONENTS AND SPECIFICATIONS

Introduction

The practices and components eligible for cost-sharing under Oklahoma's Forest Resources Development Program are described in this section. Refer to Part 1 for information about the basic guidelines for program administration.

Because cost-share programs have different requirements, this section includes descriptions of specific practices and components that are currently in effect for the funded cost-share programs that ODAFF administers. As funding ends for a program, practices and components may be removed from this section. As new programs are created or funded, practices and components will be added. The programs that are presently included include:

Ice Storm. The U.S. Forest Service allocated special disaster assistance funds to help landowners recover from the devastating ice storm across southeastern Oklahoma in December 2000. ODAFF Forestry Services requested that \$800,000 in federal funds be managed through the State's cost-share program authority.

Forest Land Enhancement Program (FLEP). Congress created this federal program in 2002 as a replacement for FIP and FRDP. Under federal rules, states that have the capability of administering a cost-share program may incorporate these funds into their program. Eligible practices will coincide with those described in federal program guidelines.

Redcedar Demonstration Project. Forestry Services is administering a special fire mitigation grant, a portion of which will fund redcedar control practices and Firewise demonstration practices in cooperation with landowners. These practices may include girdling, mechanical control, pruning, non-commercial thinning, prescribed burning, etc.

Oklahoma Forest Resource Development Program (FRDP). This state-level program was authorized in 1996 but has never been funded.

It is important to understand the difference between a *practice* and a *component*. A *practice* describes the basic objective that a landowner is trying to achieve through cost-share assistance that results in improved conditions on NIPF lands. A *component* is the specific project or activity the landowner undertakes to achieve his/her objectives. For example, a landowner improves the overall health of the forest (the practice) by implementing a prescribed burn (the component); or he/she reforests a stand in poor condition (the practice) by preparing the site and planting trees (the components); or he/she improves forest stand growth and quality (the practice) by cull tree removal (the component).

The practices included in the FRDP are those described in the Cooperative Forestry Assistance Act and FLEP. The components were derived primarily from the Stewardship Incentives Program, with some modification. Rather than assigning components to specific practices, landowners may select the components that will best accomplish their practice objectives.

Practice Overview

The following practices are eligible for cost-sharing in Oklahoma.

- FRDP-1 *Management Plan Development* – Development or revision of a management plan to meet the minimum standards of a Forest Stewardship Plan. At a minimum, the plan applies to those portions of the landowner’s property on which any funded practice or activity shall be carried out, as well as any property of the owner that may be affected by the activity or practice.

- FRDP-2 *Afforestation and Reforestation* – Site preparation, planting, seeding or other practices to encourage natural regeneration or ensure forest establishment.

- FRDP-3 *Forest Stand Improvement* – Practices to enhance growth and quality of wood fiber, special forest products, including carbon sequestration.

- FRDP-4 *Agroforestry Implementation* – Establishment, maintenance, and renovation of windbreaks, riparian forest buffers, silvopasture, alley cropping or other agroforestry practices, including purposes for energy conservation and carbon sequestration in conjunction with agriculture, forest and other land uses.

- FRDP-5 *Water Quality Improvement and Watershed Protection* – Establishment, maintenance, renovation and restoration practices, including any necessary design and engineering, to improve and protect water quality, riparian areas and forest wetlands and watersheds.

- FRDP-6 *Fish and Wildlife Habitat Improvement* – Establishment, maintenance and restoration practices to create, protect or improve forest-related fish and wildlife habitat, including any necessary design and engineering.

- FRDP-7 *Forest Health and Protection* – Establishment of practices primarily to detect, monitor, assess, protect, improve or restore forest health, including detection and control of insects, diseases and animal damage to established stands.

- FRDP-8 *Invasive Species Control* – Establishment, maintenance and restoration practices primarily to detect, monitor, eradicate or control the spread of invasive species.

- FRDP-9 *Wildfire and Catastrophic Risk Reduction* – Establishment of practices primarily to reduce the risk from wildfire and other catastrophic natural events.

- FRDP-10 *Wildfire and Catastrophic Event Rehabilitation* – Establishment of practices primarily to restore and rehabilitate forests following wildfire and other catastrophic natural events.

- FRDP-11 *Special Practices* – Establishment, maintenance and restoration practices addressing other conservation concerns on non-industrial private forestlands as proposed by the State Forester and the Committee.

Practice Policies

FRDP-1 *Management Plan Development*

A

Definition Development or revision of a forest stewardship plan, or upgrading of an existing management plan to meet or exceed Forest Stewardship Plan standards. The plan applies to lands with existing tree cover, closely associated cover (such as edge, small clearings, floodplains) or other rural lands suitable for conversion to program practices.

B

Practice Delivery This practice will be delivered through existing methods used in the Oklahoma Forest Stewardship Program.

C

C/S Policy The following table provides C/S policies for this practice.

IF the component is...	AND the justification is...	THEN C/S is...
a new Forest Stewardship Plan revision to an existing land management plan so that it will meet Forest Stewardship Plan standards	<ul style="list-style-type: none"> • responsive to landowner objectives • action and multi-resources oriented • developed by a “certified” Forest Stewardship Planner • plan will cover from 25 to 1,000 acres 	Authorized
revision of an existing Forest Stewardship Plan preparation of plans that address single, rather than multiple, objectives development of plans that do not meet the requirements for a Forest Stewardship Plan		Not authorized

D
Other C/S
Requirements

The following requirements are necessary in implementing this practice:

- Plans must meet the standards for Forest Stewardship Plans, shown in the specifications in practice component *MPL Preparation of Forest Stewardship Plan*.
- Plans developed under this practice will be subject to review and approval by the Area Forester prior to payment.
- Only “certified” Forest Stewardship Planners who have attended a Forest Stewardship training course may develop and submit plans for this practice.

E
Technical
Responsibility

Technical responsibility is assigned to ODAFF Forestry Services to assist landowners in contacting eligible consultants, and reviewing plans.

F
Practice Lifespan

The landowner must maintain the plan developed under this practice for a minimum of ten years.

FRDP-2 *Afforestation and Reforestation*

A

Definition Site preparation, planting, seeding, or other practices to encourage natural regeneration, or ensure forest establishment.

B

Practice Delivery This practice will be delivered through cost-sharing approved practices on rural lands suitable for growing trees. Additional delivery will be through educational activities and technical assistance.

C

C/S Policy The following table provides C/S policies for this practice.

IF the component is...	AND the justification is...	THEN C/S is...
<ul style="list-style-type: none"> • plant material purchase and installation • site preparation • prescribed burning 	that the component is only needed when it is essential to permit planting or natural regeneration of desirable tree species	Authorized
<ul style="list-style-type: none"> • control of competition and other undesirable species • individual seedling protection including tree shelters, weed barriers, mulch 	<ul style="list-style-type: none"> • to enhance seedling survival and growth • for protection from fire, wildlife, livestock and other pests 	Authorized
<ul style="list-style-type: none"> • plant material purchase and installation • site preparation • prescribed burning 	<ul style="list-style-type: none"> • for orchard production (including fruits/nuts) • for ornamental or nursery production • for Christmas tree production • for farmstead or homesite windbreaks 	Not authorized
<ul style="list-style-type: none"> • repeated prescribed burning on the same acreage for natural regeneration 		Not authorized, unless the Forester specifies this treatment is needed
<ul style="list-style-type: none"> • practices that impair soil productivity • boundary fencing and/or gates • permanent firebreaks • erosion control measures required to meet the BMP's • planting non-commercial or tree species that are not adapted to Oklahoma 		Not authorized

Replanting of a failed tree-planting project can be cost-shared if the failure was not the fault of the landowner.

Fencing will be eligible for cost-sharing **only** when it is determined that the primary purpose of this practice will not be achieved if it is not protected by a fence.

D

Other C/S

Requirements

The following requirements are necessary in implementing this practice:

- All necessary BMP's will be implemented.
- The area must be protected from destructive grazing and destructive fire.
- Chemicals used in performing this practice must be Federal and State registered and applied according to authorized uses, directions on the label, and other Federal or State policies and requirements.
- Prescribed burning will be performed according to State and local laws and regulations, including Oklahoma's Smoke Management Guidelines.

E

Technical

Responsibility

Technical responsibility is assigned to ODAFF Forestry Services.

F

Practice Lifespan

Cost-shared practices must be maintained for a minimum of ten years.

FRDP-3 Forest Stand Improvement

A

Definition Practices to enhance growth and quality of wood fiber, special forest products and carbon sequestration.

B

Practice Delivery This practice will be delivered through cost-sharing of approved treatments on existing forest land. Additional delivery will include educational activities and technical assistance.

C

C/S Policy This practice is applied to an existing stand of trees for the purpose of improving the growth, health, vigor, stocking level or species mix of the remaining trees. Eligible practices include prescribed burning, pre-commercial or non-commercial thinning, and chemical release.

Cost-sharing for pre-commercial thinning is only authorized in **pine** stands up to age 15 which as a result of extreme density has not reached an average of 4” dbh. The stand must be thinned to a residual density of 300-500 stems per acre.

The following table provides C/S policies for this practice.

IF the component is...	AND the justification is...	THEN C/S is...
<ul style="list-style-type: none"> • control of competition and other undesirable species • non-commercial thinning • initial prescribed burning for silvicultural purposes 	to improve species composition and timber quality, enhance forest health, and other resource objectives which require manipulation of the existing stand of trees.	Authorized
<ul style="list-style-type: none"> • repeated prescribed burning on the same acreage 		Not authorized, unless the Forester specifies the treatment is needed
<ul style="list-style-type: none"> • improvement of orchard, ornamental, nursery or Christmas trees • boundary line fencing and/or gates or roads • permanent firebreaks • commercial thinning • fertilization • practices that would have an adverse impact on threatened or endangered species 		Not authorized

**D
Other C/S
Requirements**

The following requirements are necessary in implementing this practice.

- All necessary BMP's will be implemented.
- The area must be protected from destructive fire and destructive grazing.
- Chemicals used in performing this practice must be Federal and State registered and applied according to authorized registered uses, directions on the label, and other Federal or State policies and requirements.
- Prescribed burning will be performed according to State and local laws and regulations; including Oklahoma's Smoke Management Guidelines.

**E
Technical
Responsibility**

Technical responsibility is assigned to ODAFF Forestry Services.

**F
Practice Lifespan**

Cost-shared practices must be maintained for a minimum of ten years, unless otherwise described in component specifications.

FRDP-4 *Agroforestry Implementation*

A

Definition Establishment, maintenance, and renovation of windbreaks, riparian forest buffers, silvopasture, alley cropping, or other agroforestry practices, including energy conservation, erosion control with trees and carbon sequestration in conjunction with agriculture, forest and other land uses.

B

Practice Delivery This practice will be delivered through cost-sharing of approved treatments on existing forest land or other rural lands suitable for growing trees. Additional delivery will include educational activities and technical assistance.

C

C/S Policy Where compatible with landowner objectives, this practice establishes or manages trees as part of an agricultural system for protective or conservation purposes, including windbreaks to protect crops and livestock, living snow fences, erosion control, or for other agroforestry purposes.

Fencing will be eligible for cost-sharing **only** when it is determined that the primary purpose of this practice will not be achieved if it is not protected by a fence.

The following table provides C/S policies for this practice.

IF the component is...	AND the justification is...	THEN C/S is...
<ul style="list-style-type: none"> • control of competition and other undesirable species • noncommercial thinning • prescribed burning 	to improve species composition and timber quality, enhance forest health, and other resource objectives which require manipulation of the existing stand of trees	Authorized
<ul style="list-style-type: none"> • control of competition and other undesirable species • individual seedling protection including tree shelters, weed barriers, mulch 	<ul style="list-style-type: none"> • to enhance seedling survival and growth • for protection from fire, wildlife, livestock and other pests 	Authorized
<ul style="list-style-type: none"> • repeated prescribed burning on the same acreage 		Not authorized, unless the Forester specifies this treatment is needed
<ul style="list-style-type: none"> • improvement of orchard, ornamental, nursery or Christmas trees • boundary fencing and/or gates 		Not authorized

D
Other C/S
Requirements

The following requirements are necessary in implementing this practice.

- All necessary BMP's will be implemented.
- The area must be protected from destructive fire and destructive grazing.
- Chemicals used in performing this practice must be Federal and State registered and applied according to authorized registered uses, directions on the label, and other Federal or State policies and requirements.
- Prescribed burning will be performed according to State and local laws and regulations; including Oklahoma's Smoke Management Guidelines.
- The minimum acreage requirement is waived for living snow fences, windbreaks, erosion control and similar plantings.

E
Technical
Responsibility

Technical responsibility is assigned to ODAFF Forestry Services.

F
Practice Lifespan

Cost-shared practices must be maintained for a minimum of ten years unless specified otherwise in the component specifications.

FRDP-5 *Water Quality Improvement and Watershed Protection*

A

Definition Establishment, maintenance, renovation and/or restoration practices including any necessary design and engineering to improve and protect water quality, riparian areas and/or forest wetlands and watersheds.

B

Practice Delivery This practice will be delivered through cost-sharing approved treatments on forestlands to control erosion or on other rural lands capable of supporting forested wetlands or riparian buffers. Additional delivery will be through educational activities, technical assistance, and through the promotion of other existing State and Federal Programs.

C

C/S Policy Fencing will be eligible for cost-sharing **only** when it is determined that the primary purpose of this practice will not be achieved if it is not protected by a fence.

The following table provides C/S policies for this practice.

IF the component is...	AND the justification is...	THEN C/S is...
<ul style="list-style-type: none"> • Mulching • controlling surface water through reshaping¹ • site preparation • native plant material purchase and installation³ 	<ul style="list-style-type: none"> • to control erosion • to close and rehabilitate abandoned² roads, trails, firebreaks, landings, and control eroding and gullied forest land • to foster soil development • to protect or improve water quality 	Authorized
<ul style="list-style-type: none"> • road or trail construction or maintenance • erosion control practices required to meet BMP Guidelines • boundary fencing and/or gates • one that would directly or indirectly result in the loss of wetlands or impair wetlands or riparian area functions 		Not authorized

1. Reshaping (grading) is authorized only to the extent necessary to prevent erosion.
2. Abandoned and closed to vehicular traffic. Once an area is treated under FRDP-5 practices, it cannot be entered except as needed to fulfill the maintenance requirements.
3. Plant material beneficial to wildlife is preferred where feasible.

D
Other C/S
Requirements

The following requirements are necessary in implementing this practice:

- All necessary BMP's will be implemented.
- The area must be protected from destructive grazing and destructive fire.
- Chemicals used in performing this practice must be Federal and State registered and applied according to authorized registered uses, directions on the label, and other Federal or State policies and requirements.
- Practice components involving engineering will meet the standards and specifications of the USDA NRCS.
- All activities under this practice will also be subject to Section "404" permitting and jurisdictional wetland policies.

E
Technical
Responsibility

Technical responsibility is assigned to ODAFF Forestry Services, but may be shared by or referred to NRCS.

F
Practice Lifespan

Cost-shared practices must be maintained for a minimum of ten years, unless other specified in component specifications.

FRDP-6 *Fish and Wildlife Habitat Improvement*

A

Definition Establishment, maintenance, and restoration practices to create, protect, or improve fish and wildlife habitat, including any necessary design and engineering.

B

Practice Delivery This practice will be delivered through cost-sharing of approved treatments on forestland with existing tree cover and closely associated lands necessary for wildlife habitat improvement. Additional delivery will include educational activities, technical assistance, and the promotion of other USDA and State programs (WHIP, EQIP, CRP, WRP).

C

C/S Policy The following table provides C/S policies for this practice.

IF the component is...	AND the justification is...	THEN C/S is...
<ul style="list-style-type: none"> • plant material purchase and installation • site preparation • non-commercial thinning • management of early-successional habitat • prescribed burning 	<ul style="list-style-type: none"> • to improve or restore existing wildlife habitat • to create new wildlife habitat 	Authorized
<ul style="list-style-type: none"> • control of competition and other undesirable species • individual seedling protection including tree shelters, weed barriers, mulch 	<ul style="list-style-type: none"> • to enhance seedling survival and growth • for protection from fire, wildlife, livestock and other pests 	Authorized
<ul style="list-style-type: none"> • one that would have an adverse impact on any threatened or endangered species • water facilities and pond installation • structure for human benefit • supplementing improvements to any fee hunting operation • permanent firebreaks • orchard production • ornamental or nursery production • plant materials not approved by the Forester • boundary fencing and/or gates 		Not authorized

<ul style="list-style-type: none"> repeated prescribed burning on the same acreage 		<p>Not authorized, except if in the judgment of the natural resource professional specifies this practice is needed</p>
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**D
Other C/S
Requirements**

The following requirements are necessary in implementing this practice.

- All necessary BMP’s will be implemented.
- The area must be protected from destructive grazing and destructive fire.
- Chemicals used in performing this practice must be Federal and State registered and applied according to authorized registered uses, directions on the label, and other Federal or State policies and requirements.
- Prescribed burning will be performed according to State and local laws and regulations, including Oklahoma’s Voluntary Smoke Management Guidelines.
- Practice components involving engineering will meet the standards and specifications of the USDA NRCS.
- All activities under this practice will also be subject to Section “404” permitting and jurisdictional wetland policies.
- Where endangered or threatened species are involved, consultation with the U.S. Fish and Wildlife Service will be required.

**E
Technical
Responsibility**

Technical responsibility is assigned to the ODAFF Forestry Services, but may be referred to or shared with the Oklahoma Department of Wildlife Conservation.

**F
Practice Lifespan**

Cost-shared practices must be maintained for a minimum of ten years, unless otherwise described in component specifications.

FRDP-7 Forest Health and Protection

A

Definition Establishment of practices primarily to monitor, assess, protect, improve or restore forest health; including detection and control of insects, diseases, and animal damage to established stands.

B

Practice Delivery This practice will be delivered through cost-sharing of approved practices on forestlands and through educational activities and the promotion of existing programs. Improvements in forest health may also be achieved through the installation of practices under FRDP-2 and FRDP-3.

C

C/S Policy The following table provides C/S policies for this practice.

IF the component is...	AND the justification is...	THEN C/S is...
<ul style="list-style-type: none"> • non-commercial thinning • cull tree removal • prescribed burning 	<ul style="list-style-type: none"> • to improve or restore the long-term health of forestlands • to protect a forest stand from pine bark beetle attack and/or infestation 	Authorized
<ul style="list-style-type: none"> • an action that would have an adverse effect on any threatened or endangered species 		Not authorized
<ul style="list-style-type: none"> • repeated prescribed burning on the same acreage 		Not authorized, unless the natural resource professional specifies this practice is needed

D

Other C/S Requirements

The following requirements are necessary in implementing this practice.

- All necessary BMP's will be implemented.
- The area must be protected from destructive fire and destructive grazing.
- Chemicals used in performing this practice must be Federal and State registered and applied according to authorized registered uses, directions on the label, and other Federal or State policies and requirements.
- Prescribed burning will be performed according to State and local laws and regulations, including Oklahoma's Voluntary Smoke Management Guidelines.

- E**
Technical Responsibility Technical responsibility is assigned to ODAFF Forestry Services.
- F**
Practice Lifespan Cost-shared practices must be maintained for a minimum of ten years, unless otherwise described in component specifications.
-

FRDP-8 *Invasive Species Control*

A

Definition Establishment, maintenance and restoration practices primarily to detect, monitor, eradicate, or control the spread of invasive species.

B

Practice Delivery This practice will be delivered through cost-sharing of approved practices on forestlands and through educational activities and technical assistance.

C

C/S Policy The following table provides C/S policies for this practice.

IF the component is...	AND the justification is...	THEN C/S is...
<ul style="list-style-type: none"> • non-commercial thinning • cull tree removal to release crop trees • prescribed burning 	<ul style="list-style-type: none"> • to improve existing forest stands by controlling invasive species and favoring desirable trees 	Authorized
<ul style="list-style-type: none"> • one that would have an adverse effect on any threatened or endangered species 		Not authorized
<ul style="list-style-type: none"> • repeated prescribed burning on the same acreage 		Not authorized, unless the natural resource professional specifies this practice is needed

D

Other C/S Requirements

The following requirements are necessary in implementing this practice.

- All necessary BMP’s will be implemented.
- The area must be protected from destructive fire and destructive grazing.
- Chemicals used in performing this practice must be Federal and State registered and applied according to authorized registered uses, directions on the label, and other Federal or State policies and requirements.
- Prescribed burning will be performed according to State and local laws and regulations, including Oklahoma’s Voluntary Smoke Management Guidelines.

E

Technical Responsibility

Technical responsibility is assigned to the ODAFF Forestry Services.

F
Practice Lifespan Cost-shared practices must be maintained for a minimum of ten years, unless otherwise specified in component specifications.

FRDP-9 Wildfire and Catastrophic Risk Reduction

A

Definition Establishment of practices primarily to reduce the risk from wildfire and other catastrophic natural events.

B

Practice Delivery This practice will be delivered through cost-sharing of approved practices on forestlands and through educational activities and technical assistance.

C

C/S Policy The following table provides C/S policies for this practice.

IF the component is...	AND the justification is...	THEN C/S is...
<ul style="list-style-type: none"> • non-commercial thinning • hazard reduction • prescribed burning 	<ul style="list-style-type: none"> • to reduce the wildfire risk in existing forest stands or their susceptibility to other natural disasters 	Authorized
<ul style="list-style-type: none"> • one that would have an adverse effect on any threatened or endangered species 		Not authorized
<ul style="list-style-type: none"> • repeated prescribed burning on the same acreage 		Not authorized, unless the natural resource professional specifies this practice is needed

D

Other C/S Requirements The following requirements are necessary in implementing this practice.

- All necessary BMP's will be implemented.
- The area must be protected from destructive fire and destructive grazing.
- Chemicals used in performing this practice must be Federal and State registered and applied according to authorized registered uses, directions on the label, and other Federal or State policies and requirements.
- Prescribed burning will be performed according to State and local laws and regulations, including Oklahoma's Voluntary Smoke Management Guidelines.

E

Technical Responsibility Technical responsibility is assigned to the ODAFF Forestry Services.

F
Practice Lifespan Cost-shared practices must be maintained for a minimum of ten years unless otherwise described in component specifications.

FRDP-10 *Wildfire and Catastrophic Event Rehabilitation*

A

Definition Establishment of practices primarily to restore and rehabilitate forests following wildfire and other catastrophic natural events.

B

Practice Delivery This practice will be delivered through technical assistance and cost-sharing approved treatments on forestland to control erosion resulting from wildfire or to reestablish forests affected by natural disasters. Other delivery will be through educational activities related to rehabilitation methods for floods, storms, ice, and other destructive forces of nature.

C

C/S Policy The following table provides C/S policies for this practice.

IF the component is...	AND the justification is...	THEN C/S is...
<ul style="list-style-type: none"> • discing or blading of firelines resulting from wildfires • installing water control structures on eroding firelines resulting from wildfires¹ • mulching • site preparation • native plant material purchase and installation • prescribed burning 	<p>to control erosion on firelines resulting from wildfires</p> <p>to restore forest cover on areas damaged by natural disaster</p> <p>to foster soil productivity</p>	Authorized
<ul style="list-style-type: none"> • road or trail construction or maintenance • erosion control practices required to meet BMP Guidelines • boundary fencing and/or gates 		Not authorized

1. Is authorized only to the extent necessary to prevent erosion

D

Other C/S Requirements The following requirements are necessary in implementing this practice:

- All necessary BMP's will be implemented.
- The area must be protected from destructive fire and destructive grazing.
- Chemicals used in performing this practice must be Federal and State registered and applied according to authorized registered uses,

directions on the label, and other Federal or State policies and requirements.

- Prescribed burning will be performed according to State and local laws and regulations, including Oklahoma's Voluntary Smoke Management Guidelines.

E
Technical
Responsibility

Technical responsibility is assigned to ODAFF.

F
Practice Lifespan

Cost-shared practices must be maintained for a minimum of ten years, unless otherwise described in component specifications.

FRDP-11 *Special Practices*

Establishment, maintenance, and restoration practices addressing other conservation concerns on non-industrial private forest lands as proposed by the State Forester and approved by the Committee.

Minimum Standards and Specifications for FRDP Component Practices

The standards and specifications in this section are intended to describe the professional and technical bounds for cost-shared practices implemented through the Forest Resources Development Program in Oklahoma. They are not intended to replace, nor are they to be used instead of, site-specific prescriptions.

These standards and specifications should be provided to landowners for cost-shared component practices, because they are the formal basis upon which a component will be evaluated. If performance of a recommended practice fails to satisfy these minimum standards and specifications, it should not normally be approved as satisfactorily completed. On occasion, there may be extenuating circumstances where an exception may be granted. The reasoning behind such exceptions should be documented for the landowner's case file.

Practice specifications and cost-share rates are subject to change. If you find that exceptions to these standards are being granted too often, or that a standard is not working as intended, or if you have other suggestions to make, please contact the Forest Stewardship Program Coordinator in Oklahoma City at the address or telephone number shown below.

Oklahoma Department of Agriculture
Forestry Services Division
2800 North Lincoln Boulevard
Oklahoma City, OK 73105
405-522-6158
FAX 405-522-4583

Summary of FRDP Component Practices

The table below is a list of the components available under FRDP and the practices to which they primarily relate. It is not intended to restrict the use of components in any way to accomplish landowner objectives in other practices.

Code	Component Name	Applicable FRDP Practices										
		1	2	3	4	5	6	7	8	9	10	11
BBD	Broad Based Dips					X						
BPC	Brush Pile Construction						X					
BRK	Fuelbreaks		X	X				X	X	X	X	
CHR	Chemical Release of Crop Trees		X	X	X				X			
CLT	Cultivating Hardwood Plantings		X		X							
CTT	Container/Tubeling Trees				X		X					
DRP	Drip Irrigation System				X							
FNE	Electric Fencing (50% c/s rate)		X		X							
FNR	Fencing (50% c/s rate)		X		X							
MPL	Preparation of Forest Stewardship Plan	X										
MUL	Mulch Trees				X		X					
NTH	Noncommercial Thinning of Hardwoods			X		X	X	X	X	X		
PBN	Prescribed Burning		X	X			X	X	X	X		
PCT	Precommercial or Noncommercial Thinning of Pines			X	X	X	X	X	X	X		
PLH	Planting Hardwoods & Selected Conifers		X		X		X				X	
PLP	Planting Loblolly or Shortleaf Pine		X								X	
RKF	Rock Fords					X						
SPC	Site Preparation – Complete		X		X							
SPH	Site Preparation – Chemical		X		X							
SPL	Site Preparation – Limited		X		X						X	
TSS	Tree Shelters – Shingles				X							
WBF	Weed Barrier Fabric				X							
WBR	Water Bars					X						
WCD	Wooden Cross-Drainage Structure					X						

FRDP Component Cost-Share Rates October 1, 2003

The table below is a list of the current cost-share rates and limits for the practice components available under FRDP.

Code	Component Name	Cost-Share Rate	Unit	Cost-Share Limit/Unit
BBD	Broad Based Dips	75%	Each	\$21.00
BPC	Brush Pile Construction	75%	Each	\$15.00
BRK	Fuelbreaks (under development)	N.A.	Linear feet	N.A.
CHR	Chemical Release of Crop Trees	75%	Acre	\$85.00
CLT	Cultivating Hardwood Plantings (up to 4)	75%	Acre/cultiv.	\$14.00
CTT	Container/Tubeling Trees	75%	Tree	\$1.00
DRP	Drip Irrigation System	75%	Tree	\$2.00
FNE	Electric Fencing	50%	Each	\$250.00
FNR	Fencing	50%	Linear feet	\$0.50
MPL	Preparation of Forest Stewardship Plan	75%	Acre	\$4.00
MUL	Mulch Trees	75%	Tree	\$0.05
NTH	Noncommercial Thinning of Hardwoods	75%	Acre	\$22.00
PBN	Prescribed Burning	75%	Acre	\$17.00
PCT	Pre-Commercial or Non-Commercial Thinning of Pines	75%	Acre	\$22.00
PLH	Planting Hardwoods & Selected Conifers	75%	Tree	\$0.80
PLP	Planting Loblolly or Shortleaf Pine	75%	Tree	\$0.14
RKF	Rock Fords	75%	Linear feet	\$37.50
SPC	Site Preparation – Complete	75%	Acre	\$150.00
SPH	Site Preparation – Chemical	75%	Acre	\$85.00
SPL	Site Preparation – Limited	75%	Acre	\$50.00
TSS	Tree Shelters – Shingles	75%	Each	\$0.20
WBF	Weed Barrier Fabric	75%	Linear feet	\$0.35
WBR	Water Bars	75%	Each	\$26.25
WCD	Wooden Cross-Drainage Structure	75%	Each	\$30.00

Practice Component BBD: Broad Based Dips

Definitions

Broad Based Dips are structures used in a system for draining water from roads that will be frequently traveled and that are not crossed by streams. They should be installed in a series to be most effective.

General Policies

Purpose: To protect water quality by reducing erosion and sedimentation, as well as to protect vital access to forest resources.

Application: Apply to existing forest roads where improper drainage results in accelerated erosion or access problems.

Specifications

- Do not use on grades of more than 10 percent.
- Crushed stone should be used on downslope part of dips where slope exceeds 8 percent.
- Dip Spacing is computed by: $\text{Spacing in feet} = 400/\text{slope percent} + 100$.
- Dips should be about 20 feet long (low point to crest of ridge, downslope) and 6-12" deep.

Quality Standards

- Dip outflows should be near 3% slope and should drain into a buffer zone of stone, grass sod, heavy litter, brush, logs or anything else that would allow slowing of water velocity.
- Crushed stone should be used when slopes exceed 8 percent.

Other Standards, Policies, Regulations and Laws that Apply

- Forestry Best Management Practice Guidelines for Oklahoma will be followed.

References

- "Best Management Practices for Forest Road Construction and Harvesting Operations in Oklahoma" (OSU booklet)
- Forestry Best Management Practice Guidelines for Oklahoma
- USDA NRCS Standards and Specifications for "Forest Land Erosion Control Systems"

Practice Component BPC: Brush Pile Construction

Definitions

Brush piles are loose stacks of branches and limbs piled in such a manner as to provide habitat for small wildlife.

General Policies

Purpose: To enhance wildlife habitat for small mammals, birds, reptiles and terrestrial invertebrates.

Application: Apply to lands lacking in low cover satisfactory for small mammals, birds, reptiles and terrestrial invertebrates. Materials used for this practice may not be produced from the conversion of forested land to non-forest land use.

Specifications

- Brush piles should be larger than 3 feet tall and 5 feet in diameter.
- Materials - a loose base should be constructed of ties or logs that are approximately 8" diameter, laid parallel. Use branches and limbs that are smaller than 4" at the large ends.
- Rates - Brush piles should be dense enough to provide escape cover from larger carnivores and raptors.

Quality Standards

- Base of brush pile should be constructed with large materials, described in "Materials" above, laid parallel and spaced 2" to 18" apart.
- Brush piles should be placed on dry ground, however exceptions may be required for some situations.
- Protect brush piles from wildfire and accidental damage in a prescribed fire.
- In some cases vertical support may also be necessary.

Other Standards, Policies, Regulations and Laws that Apply

- None

Practice Component BRK: Fuelbreaks (Under Development)

Definitions

A fuelbreak is a strip of bare land or vegetation that retards the spread of fire.

General Policies

Purpose: Fuelbreaks are intended to prevent the spread of wildfires or to serve as semi-permanent control lines to facilitate a prescribed burn program.

Application: Use this component to protect forestlands from wildfire, or on forestlands where a long-term prescribed burning program is to be applied. Fuelbreaks are not intended for use with a single controlled burning practice.

Specifications

- Fuelbreaks shall consist of fire-resistant vegetation, non-flammable materials, bare ground or a combination and will be of sufficient width and length to contain the fire.
- Fuelbreaks shall be located to minimize risk to the resources being protected.
- Plant species used for vegetated fuelbreaks will be non-invasive and easy to maintain.
- Erosion control measures shall prevent sediment from leaving the site.

Quality Standards

- Fuelbreaks will tie directly to natural or other existing barriers that serve as a natural break.
- Install according to the Forester's recommendations in the Forest Management Plan.
- Locate fuelbreaks on the contour where feasible to prevent erosion.
- Inspect fuelbreak at least annually. Remove woody debris, mow or graze vegetation to reduce fuel buildup, rework bare soil and correct soil erosion problems.
- Fuelbreaks that are no longer needed shall be stabilized.

Other Standards, Policies, Regulations and Laws that Apply

- "Best Management Practices for Forest Road Construction and Harvesting Operations in Oklahoma" (OSU booklet)
- Forestry Best Management Practice Guidelines for Oklahoma

Practice Component CHR: Chemical Release of Crop Trees

Definitions

This practice involves the application of registered herbicides to selected herbaceous and woody species for the purpose of reducing competition with crop trees, either conifer or hardwood, for forest improvement.

General Policies

Purpose: To achieve stand specific objectives of the landowner by controlling species and stocking levels, in order to increase growth rates and quality of selected crop trees on a forest site.

Application: Apply to forest stands (including windbreaks and shelterbelts) presently stocked with desirable tree species to control stand density, species distribution and stand health. Apply to cull trees that are not economically feasible to sell.

Specifications

- All chemicals must be labeled for control of target species, and applied according to label instructions and forester's prescriptions.
- Cost-shares are approved for a single treatment.
- Treatment is restricted to only those acres to be managed for forest production.

Quality Standards

- Must be applied according to label instructions by licensed certified applicators.
- At least 80% of application to be completed as prescribed in the prescription.
- At least 80% of the prescribed application area is evenly affected.
- 80% of crop trees free to grow for at least two years after treatment.
- Crop trees not unnecessarily damaged.

Other Standards, Policies, Regulations and Laws that Apply

- Forestry Best Management Practice Guidelines for Oklahoma will be followed.
- All chemical applications must comply with the regulations of the Federal Insecticide, Fungicide, and Rodenticide Act as amended in October, 1988 and the Rules and Regulations of the Oklahoma Pesticide Applicators Law as amended in June of 1986.
- Provisions of the Endangered Species Act will be followed.
- Landowners will be responsible for assuring that vendors are in compliance with any applicable labor laws.

Practice Component CLT: Cultivating Hardwood Plantings

Definitions

Cultivation is the mechanical scarification of soil in a planting to reduce competition for moisture using a disc, "spring tooth" harrow, roto-tiller or other similar implement. The term "hardwoods" is used for consistency with other programs, however cultivation is also authorized for conifers such as windbreak conifers, eastern redcedar, baldcypress and ponderosa pine.

General Policies

Purpose: To improve the opportunity for successful establishment of hardwood plantings (including plantings of pines used for windbreaks and wildlife habitat, and reforestation using conifers west of Highway 177).

Application: Use this component where chemical weed control, weed barriers and mulch are not practical or available.

Specifications

- Cultivation may be accomplished using a variety of implements including disks, harrow, roto-tillers and other similar implements. Plowing is not allowed.
- Cultivation will always be on contours to reduce erosion.
- Cultivation will be between 1" and 5" deep.
- Cultivation is authorized for a total of four (4) individual passes over the planting until tree establishment.
- Cultivation is not authorized on slopes of more than 10% or highly erodible soils.

Quality Standards

- Cultivation will cover 90% of planting area as prescribed, at an average of no more than 12" from seedlings but no closer than 6" from seedlings.
- Cultivation depth should be deep enough to eliminate 95% of weeds passed over by the equipment.
- Cultivation period is from April 15 to September 1.

Other Standards, Policies, Regulations and Laws that Apply

- Forestry Best Management Practice Guidelines for Oklahoma will be followed.

Practice Component CTT: Container/Tubeling Trees

Definitions

Container seedlings are trees grown in tubes less than 30 cubic inches in size. They are not re-potted trees.

General Policies

Purpose: To provide hardy planting stock for harsh sites.

Application: Use this component to establish trees on a harsh planting site where survival may be a significant problem. Use this component primarily in counties west of I-35 in Oklahoma.

Specifications

- Container must be removed prior to planting.
- Plant at or no more than 1 inch deeper than grown in the tube.
- Plant between December 1 and April 20.

Quality Standards

- Seedlings must meet seedling standards of the ODAFF Forestry Services.
- Trees to be planted and packed so that when three needles or leaves are pulled, the seedling will not come out of the ground.
- Planting must be according to the forester's recommendations in the Forest Management Plan.
- Trees planted and packed to remove any air pockets from the planting hole.
- No more than 10% of the trees planted can have above-ground defects.
- Minimum survival shall be 80% at the end of the second growing season.

Other Standards, Policies, Regulations and Laws that Apply

- None

Practice Component DRP: Drip Irrigation System

Definitions

Drip irrigation is any system that administers water to planted trees at a low rate to avoid accumulation and excessive evaporation.

Emitters are devices that meter water at a prescribed rate along the irrigation line.

General Policies

Purpose: To improve the opportunity for the successful establishment of tree seedlings planted for windbreaks and shelterbelts in western Oklahoma.

Application: Apply to tree plantings for windbreaks and shelterbelts in Oklahoma counties west of (and including) Grant, Garfield, Kingfisher, Canadian, Grady, Stephens and Jefferson Counties where needed to assure seedling survival. Cost-shares will not be provided for drilling of a water well or construction of storage facilities, but only for lines that extent water to planted trees.

Specifications

- An adequate water supply or storage facility to supply all plants with a minimum of 8 gallons per tree per week.
- Materials –
 - Main feeder line OD = 2"
 - Irrigation line OD = 1/2" if less than 500 feet in length.
 - Irrigation line OD = 3/4" if more than 500 feet in length.
- Use water filter if required.
- Locate at least one emitter within 12" of each tree.
- Emitters must be sized to be compatible with the pressure of the system.
- Use in combination with weed barrier or mulching practices if feasible.

Quality Standards

- System must be installed with "S" shaping of pipe to allow for expansion and contraction with the change in temperature.
- System must be designed and installed to facilitate flushing and drainage.
- If required to make the system functional, a pressure regulator will be installed.

Other Standards, Policies, Regulations and Laws that Apply

- See the specifications for the particular brand of drip irrigation materials used for more information regarding system installation.

Practice Component FNE: Electric Fencing

Definitions

Electric fencing is the construction of a temporary barrier to exclude livestock from an area being treated under FRDP practices. Fencing is only authorized where the practice purpose may not be realized without livestock exclusion. ***Boundary fencing may be permitted if needed to complete an interior electric fencing system if prescribed by the Forester.***

General Policies

Purpose: To control grazing on sites where trees are being established either through planting, seeding or natural methods (including coppice).

Application: Apply to sites where unrestricted grazing will prevent the successful realization of practice objectives, and a temporary fence is satisfactory.

Specifications

- Materials -
 - Posts - Corners, if needed, will be constructed using a minimum of 4" diameter wooden posts of rot-resistant species; or treated wood posts with a minimum diameter of 3." In-line posts and wire supports may be of steel, fiberglass, plastic or wood with appropriate insulators.
 - Wire - Use one-wire polywire or minimum 12.5-gauge high-tensile wire.
- Construction -
 - Fences must be single wire and have corner and line posts or supports placed at appropriate intervals to support electric wire.
 - Gates will not be cost-shared.
 - Energizer shall be 110-volt, with lightning arrestor, or battery powered.

Quality Standards

- Use standard temporary electric fence construction techniques and materials.

Other Standards, Policies, Regulations and Laws that Apply

- Landowner is responsible for repair and maintenance of this component for the practice-maintenance period.

Practice Component FNR: Fencing

Definitions

Fencing is the construction of a semi-permanent barrier to exclude livestock from an area being treated under FRDP practices. Fencing is only authorized where the practice purpose may not be realized without livestock exclusion. ***Only interior, non-boundary fences are authorized.*** Exceptions may be approved by the Oklahoma FRDP Coordinator on recommendation by the Forester.

General Policies

Purpose: To control grazing on sites where trees are being established either through planting, seeding or natural methods (including coppice).

Application: Apply to sites where unrestricted grazing will prevent the successful realization of practice objectives.

Specifications

- Materials -
 - Posts - Corners will be constructed using a minimum of 4" diameter steel pipe or wooden posts of the heartwood of black locust, Osage orange or eastern redcedar; or treated wood posts with a minimum diameter of 3."
 - Line posts will be 3" minimum diameter steel pipe, treated wood or heartwood of black locust, Osage orange or eastern redcedar.
 - In-line posts may be of either steel or fiberglass.
 - Brace rails, when needed, will be of 3" diameter steel pipe, treated wood or heartwood of black locust, Osage orange or eastern redcedar.
 - Wire - New 4 - point, 15 1/2 gauge or heavier barbed wire.
- Construction -
 - Fences must: be 4 wire, barbed wire; have a top wire to be a maximum of 40" from ground level, on the average; have corners constructed in an "N" or "H" pattern; have line posts placed at 150' intervals with in line posts set every rod at the maximum; and have stabilizers or "ties" placed halfway between posts.
- Gates will not be cost-shared.
- Fastening - Attach wires to outside of wooden posts to prevent staples from pulling.
- Water or drainage crossings may be of a breakaway construction.
- Fences may not include boundary fences or fences along public roads.

Quality Standards

- Tension - between 150 and 200 pounds on each strand.

Other Standards, Policies, Regulations and Laws that Apply

- Landowner is responsible for the repair and maintenance of this component for the practice-maintenance period.

Practice Component MPL: Preparation of Forest Stewardship Plan

Definitions

Forest Stewardship Plans are defined as forest management plans approved by the Oklahoma Forest Stewardship Committee as meeting the standards for the Forest Resource Development Program.

General Policies

Purpose: The purpose of this component is to reimburse landowners choosing to use the private sector to develop a multiple resource/multiple-use oriented forest management plan to help them attain their objectives from their forest lands.

Application: Apply this component to lands with existing forest cover, lands intended to be converted to forest and closely associated lands which are from 25 to 1000 acres in size and that have not had a written forest management plan developed or revised in the last 20 years; or to revision of an existing land management plan so that it will meet Forest Stewardship Plan requirements.

Specifications

- Eligible properties are from 25 to 1,000 acres in size (inclusive).
- This component is available for **new** plans, or for revisions of non-Forest Stewardship Plans.
- Cost-sharing only covers land with existing forest cover, closely associated lands such as edge, small clearings, etc. and lands intended to be converted to forest cover.
- Only Oklahoma Certified Forest Stewardship Planners may prepare these plans.

Quality Standards

- Plans must address:
 - Basic landowner information (name, mailing address, phone numbers, and legal description of the property).
 - Landowner's multiple use objectives.
 - Appropriate property maps (including at least a soils map, a general property or stand map and a topographic map).
 - Site specific soils information.
 - Threatened & endangered species information.
 - Forest health information and wildfire protection.
 - Well integrated forest management recommendations.
 - Information on water quality and forestry best management practices.
 - Specific prescriptions.

Other Standards, Policies, Regulations and Laws that Apply

- None

Practice Component MUL: Mulch Trees

Definitions

This component is the application of a mulch, such as cottonseed hulls or wheat straw, to newly-planted tree seedlings to conserve moisture and reduce competition.

General Policies

Purpose: To improve opportunities for successful regeneration to desirable tree species by conserving soil moisture and reducing weed competition.

Application: Apply to tree plantings where soil moisture availability may be a significant barrier to survival and establishment of tree seedlings.

Specifications

- Materials - materials authorized for this component are cottonseed hulls, wheat straw, hay, excelsior or other biologically degradable materials.
- Rates - apply mulch at rates of:
 - No less than 1 inch thick and/or 2 feet in radius around the seedling.
 - No more than 3 inches thick and/or 3 feet in radius around the seedling.

Quality Standards

- Mulched materials should be anchored with a small amount of soil piled on the mulch mat at its perimeter.
- Mulch materials should not include excess viable weed seed such as might be found in grass clippings.
- Shall be maintained for the period of establishment for the trees.

Other Standards, Policies, Regulations and Laws that Apply

- None

Practice Component NTH: Non-Commercial Thinning of Hardwoods

Definitions

Noncommercial thinning refers to mechanically reducing excessive numbers of stems in a forest stand or to removing unmerchantable trees to reduce stocking levels to meet the landowner's objectives.

General Policies

Purpose: To reduce density and competition in precommercial stands by selectively felling hardwoods.

Application: Apply to forest stands where density of tree species exceeds 900 trees per acre with an average dbh of less than 4 inches.

Specifications

- Trees removed may not be sold for a product.
- Stumps must be 8" or lower in height and cut flat across top.
- Treated stands must have a minimum basal area of 70 sq. ft. per acre OR at least 300 free-to-grow trees of the desired species following treatment.
- Treatment must follow the guidelines outlined in the Forest Management Plan.
- Hinge cutting or "half cutting" is acceptable application of this component where prescribed by the Wildlife Biologist for wildlife purposes.

Quality Standards

- All trees left hanging will be lowered to the ground.

Other Standards, Policies, Regulations and Laws that Apply

- Forestry Best Management Practice Guidelines for Oklahoma will be followed.
- Provisions of the Endangered Species Act will be followed.
- Landowners will be responsible for assuring that vendors are in compliance with any applicable labor laws.

Practice Component PBN: Prescribed Burning

Definitions

This component allows the use of fire to obtain specific forestry or wildlife objectives, or to prepare a site for planting. Components include preparing firelines, firing and erosion control.

General Policies

Purpose: Use prescribed fire for forestry purposes to control unwanted vegetation and competition, improve wildlife habitat, reduce fire hazards, or to prepare sites for tree planting, direct seeding or natural regeneration.

Application: Apply to forested sites, sites to be converted to trees or closely associated lands. This component is not authorized to control or eliminate forest species from rangelands.

Specifications

- Follow written burning prescriptions in the Forest Management Plan.
- Control lines, roads and natural barriers must completely enclose the proposed burn area; must be prepared to expose bare mineral soil; and be of sufficient width to control anticipated flame lengths, based on fuels, slope, topography and weather.
- Control lines will be prepared within 3 months of the proposed burn. If they have been covered with leaves or grown up in weeds, they will be cleaned prior to the burn without additional cost-sharing.
- All use of prescribed fire will be in accordance with Federal, State and local laws, and will adhere to Oklahoma's Voluntary Smoke Management guidelines.
- Inside the organized fire protection area, notify ODAFF Forestry Services prior to burning. Outside of this area notify the appropriate local fire departments.
- Provisions will be made to prevent erosion on firelines and avoid burning critically eroding areas.

Quality Standards

- Caution should be used in application of the practice to hardwoods where quality timber production is also an objective.
- Caution should be exercised to avoid damage to the soil from excessively hot fires.
- Vendors/Landowners should have liability insurance.
- No payment is authorized for extra, unplanned acres burned or for the suppression of such fires.

Other Standards, Policies, Regulations and Laws that Apply

- Forestry Best Management Practice Guidelines for Oklahoma will be followed.
- Applicable sections of the Oklahoma Forestry Code will be followed (O.S. Title 2, Article 16).
- The landowner assumes full responsibility and liability for the prescribed fire. ODAFF is in no way liable for any aspect of prescribed fire applied under the FRDP.

Practice Component PCT: Pre-Commercial or Non-Commercial Thinning of Pines

Definitions

Pre-commercial thinning of pines by hand refers to mechanically reducing excessive numbers of stems in a pre-commercial stand or removing unmerchantable saplings to reduce stocking levels.

General Policies

Purpose: To reduce density and competition in pre-commercial pine stands by selectively felling pines and hardwoods. To open the canopy to improve wildlife habitat food and cover conditions.

Application: Apply to forest stands where pine density exceeds 800 trees per acre with an average dbh of less than 4 inches.

Specifications

- Trees removed may not be sold for a product.
- Trees cut will be smaller than 5" dbh.
- Stand must have a minimum of 800 total trees per acre prior to thinning.
- Stumps must be 8" or lower in height and cut flat across the top.
- Special effort should be devoted to leave only the best formed most vigorous trees with consideration for desirable spacing as much as is practicable.

Quality Standards

- All cut pine will be completely severed from stumps.
- No live branches will be left on the stumps.
- The residual stand will be protected from fire.

Other Standards, Policies, Regulations and Laws that Apply

- Forestry Best Management Practice Guidelines for Oklahoma will be followed.
- Landowners will be responsible for assuring that vendors are in compliance with any applicable labor laws.

Practice Component PLH: Planting Hardwoods and Selected Conifers

Definitions

This practice component is for planting hardwoods and selected conifers for timber production, soil conservation, wildlife habitat, recreational improvement, site rehabilitation and other afforestation purposes. Component costs include cost for seedlings, including shipping, and planting. Cost-shares will not be provided for the planting of farmstead or homesite windbreaks.

General Policies

Purpose: To establish hardwoods and selected conifers for timber production, wildlife habitat, soil conservation, recreation improvement and other afforestation purposes.

Application: Apply to lands being planted to hardwoods and selected conifers, not including loblolly or shortleaf pine.

Specifications

- Planting density will range from a minimum of 50 to 400 trees per acre to a maximum range of 1200 to 2700 trees per acre, based upon recommendations of the Forester.
- Minimum survival at 2 years = 75%
- Optimum seedling standards for hardwoods are top length of 18 inches, root collar of at least 3/8 inch, and root length of 8 to 10 inches.
- No more than 10% of the planting may exhibit above-ground defects such as excessive lean, shallow planting, exposed roots and cull tree planted.
- No more than 10% of the correctly planted trees may exhibit below ground defects such as "J" or "L" rooting, excessive root pruning (field root pruning in black walnut not allowed), planting too deep (more than 3 inches above root collar) and root twisting.
- Plant bare-root seedlings from December 15 to April 1. Service Representative may extend to April 30 if weather conditions are favorable.

Quality Standards

- Hardwood/conifer plantings should include mixed species.
- Plantings should utilize native species as much as possible.
- Species must be adapted to the site.
- Plantings must be protected from livestock until they are sufficiently established to withstand grazing pressure.

Other Standards, Policies, Regulations and Laws that Apply

- Landowners will be responsible for assuring that vendors are in compliance with any applicable labor laws.
- Provisions of the Endangered Species Act will be followed.
- Forestry Best Management Practice Guidelines for Oklahoma will be followed.

Practice Component PLP: Planting Loblolly or Shortleaf Pine

Definitions

Pine planting is the ordering, shipping and planting of southern pine seedlings for commercial timber production, afforestation and reforestation, and other forest conservation purposes.

General Policies

Purpose: To establish southern pine seedlings for timber production or forest conservation purposes.

Application: Apply to lands where natural regeneration or direct seeding is not practical, economically feasible or desirable to establish stands of shortleaf and loblolly pines.

Specifications

- Plant bare-root seedlings.
- Plant seedlings on a proven and acceptable spacing to yield an initial planting density of 435 to 900 trees per acre. Plantings outside this range must be by specific prescription in the management plan.
- No more than 10% of the planting may exhibit above-ground defects such as excessive lean, shallow planting, exposed roots and cull tree planted.
- Cull trees are further defined for (southern pine only) as seedlings shorter than five (5) inches from root collar to terminal bud; having a root system with the primary tap root shorter than five (5) inches from root collar to tip; and having a root collar caliper smaller than three (3) millimeters.
- No more than 10% of the *correctly planted* trees may exhibit below-ground defects such as "J" or "L" rooting, excessive root pruning, planting too deep (more than 2 inches above root collar) and root twisting.
- Planting dates are from Dec. 15 to April 1. Service Representative may extend planting to April 30 if weather conditions are favorable.

Quality Standards

- Species must be adapted to the site. Seed sources must follow "Pine Seed Sources for Planting in Oklahoma," a publication of ODAFF-Forestry Services.
- Plantings must be protected from livestock until they are sufficiently established to withstand grazing pressure.
- A minimum of 300 well-distributed surviving seedlings per acre must be present after 2 years.

Other Standards, Policies, Regulations and Laws that Apply

- Landowners will be responsible for assuring that vendors are in compliance with any applicable labor laws.
- Provisions of the Endangered Species Act will be followed.
- Forestry Best Management Practice Guidelines for Oklahoma will be followed.

Practice Component RKF: Rock Fords

Definitions

Rock fords are permanent water crossings for forest access. Rock fords consist of a combination of large and small rocks to create a stable road surface in the streambed.

General Policies

Purpose: To protect water quality at stream crossings. They are normally installed to protect water quality from the adverse impacts of vehicle traffic on streams.

Application: Apply to existing or relocated stream crossings where approaches are solid and the streambed will support the materials and traffic.

Specifications

- Maximum crossing length is 25 linear feet.
- Maximum stream depth is 4 feet at the crossing.
- Maximum width of the ford is 12 feet.
- Ford will be between 12" and 24" thick.
- Materials will be native stone (where available).
- Materials dimensions will be 12" maximum and 6" minimum.

Quality Standards

- Only to be used on preexisting roads where traffic creates sediment problems downstream, and where approaches to the stream are solid.
- Rock should be roughly globular, rather than flat plates.
- Rock fords installed to facilitate or as part of a harvesting operation are not authorized under this component.

Other Standards, Policies, Regulations and Laws that Apply

- Forestry Best Management Practice Guidelines for Oklahoma will be followed.
- It may be necessary to obtain a Section "404" permit for the installation of this component where it will impact "waters of the United States" including wetlands.

References

- "Best Management Practices for Forest Road Construction and Harvesting Operations in Oklahoma" (OSU booklet)
- Forestry Best Management Practice Guidelines for Oklahoma, Appendix B
- USDA NRCS Standards and Specifications for "Forest Land Erosion Control Systems"

Practice Component SPC: Site Preparation - Complete

Definitions

Complete Site Preparation is the disturbance of the tree-planting site using heavy equipment. It includes such activities as deep plowing, ripping, heavy disking, shear and piling, roll and chopping, bedding and other similar activities. This component does not include any chemical treatments that might be needed.

General Policies

Purpose: To prepare land for establishing a stand of trees (naturally and artificially) to conserve soil and water, improve wildlife habitat or establish trees for the production of forest products.

Application: Apply to lands where trees are to be established, but some form of heavy equipment work is needed to prepare the site for tree establishment.

Specifications

- Performance of this component will be as prescribed by the Forester in the landowner's Forest Management Plan.
- Ripping must be to a minimum average depth of 18 inches.

Quality Standards

- Trees or shrubs will be established on the site within 6 months of treatment.
- Apply this component on the contour.

Standards, Policies, Regulations and Laws that Apply

- Forestry Best Management Practice Guidelines for Oklahoma will be followed.
- Provisions of the Endangered Species Act will be followed.
- Landowners will be responsible for assuring that vendors are in compliance with any applicable labor laws.
- It may be necessary to obtain a Section "404" permit for the installation of this component where it will impact "waters of the United States" including wetlands.

Practice Component SPH: Chemical Site Preparation

Definitions

Chemical site preparation is the application of registered herbicides to selected herbaceous and woody species for the purpose of reducing competition during establishment of a desirable forest species.

General Policies

Purpose: To improve the chances for successful reestablishment of forest cover on a site.

Application: Apply to forest land presently stocked with non crop or undesirable trees and lands to be converted to forest cover.

Specifications

- All chemicals must be labeled for site preparation and control of target species.
- Application is approved for a single treatment.
- Treatment is restricted to only those acres to be planted or naturally regenerated to trees.

Quality Standards

- Must be applied according to label instructions by licensed certified applicators.
- At least 80% of application to be completed as prescribed in the Forest Stewardship Prescription.
- At least 80% of the prescribed application area is evenly affected.

Other Standards, Policies, Regulations and Laws that Apply

- Forestry Best Management Practice Guidelines for Oklahoma will be followed.
- All chemical applications must comply with the regulations of the Federal Insecticide, Fungicide, and Rodenticide Act as amended in October, 1988 and the Rules and Regulations of the Oklahoma Pesticide Applicators Law as amended in June of 1986.
- Provisions of the Endangered Species Act will be followed.
- Landowners will be responsible for assuring that vendors are in compliance with any applicable labor laws.

Practice Component SPL: Limited Site Preparation

Definitions

Limited site preparation is the light mechanical site preparation of a planting site for tree or shrub species establishment. This includes light disking, brush hogging, mowing, plowing, roto-tilling, scalping and harrowing.

General Policies

Purpose: To prepare land for establishing a stand of trees (naturally and artificially) to conserve soil and water, improve recreational opportunities, improve wildlife habitat or establish trees for the production of forest products.

Application: Apply to lands where trees are to be established, but some form of light equipment work is needed to prepare the site for tree establishment.

Specifications

- The site will be prepared according to the Forester's prescription.

Quality Standards

- Plant materials will be established on the site within six months of treatment.
- Soil disturbing applications of this component will be done on the contour.

Other Standards, Policies, Regulations and Laws that Apply

- Forestry Best Management Practice Guidelines for Oklahoma will be followed.
- Provisions of the Endangered Species Act will be followed.
- Landowners will be responsible for assuring that vendors are in compliance with any applicable labor laws.

Practice Component TSS: Tree Shelters – Shingles

Definitions

Shingle tree shelters are protective wood shingles or shakes, placed on the south and west sides of seedlings to reduce the damaging effects of wind and heat on the seedling.

General Policies

Purpose: To improve opportunities for increased success on tree plantings in western Oklahoma where drying winds limit satisfactory tree survival.

Application: Apply this component to tree plantings west of I-35 in Oklahoma.

Specifications

- Shingles should be a minimum of 5 inches wide and 12 inches long.
- Wooden shakes or shingles are the only types authorized.
- Install one shingle or shake on the south and one on the west sides of the seedlings.

Quality Standards

- Place shingle/shake a minimum of 5" and a maximum of 8" from the seedling.
- Anchor the shingle/shake in the ground to a minimum of 3 inches.

Other Standards, Policies, Regulations and Laws that Apply

- None

Practice Component WBF: Weed Barrier Fabric

Definitions

Weed barriers are strips of synthetic porous material that allow moisture to penetrate but do not allow weed competition to become established. Weed barrier is used instead of organic mulch for weed control around newly-planted seedlings.

General Policies

Purpose: To improve opportunities for successful regeneration of desirable tree species by conserving soil moisture and reducing weed competition.

Application: Apply to tree plantings where soil moisture conservation may be a significant benefit to survival and establishment of tree seedlings.

Specifications

- Barriers must be a minimum of 6 feet wide.
- Barriers must be a minimum of 16 millimeters thick.
- Barriers must have a five-year guarantee against deterioration.
- Barriers must be of a woven material to allow for moisture penetration.
- Materials will be anchored in place with rocks, brick, wood, staples, etc. (not soil).
- Ends and edges of the barrier must be buried.

Quality Standards

- Barriers must be placed over a clean seedbed.
- A minimal length slit will be cut in the barrier only at seedling locations.
- The center of the barrier will not be covered with soil.
- Seedlings will be pulled through each slit in the barrier into full sun as soon after planting as possible.
- Fabric barriers should be checked annually after 3 years to make sure tree growth is not being restricted. Enlarge slits if needed to accommodate stem growth.

Other Standards, Policies, Regulations and Laws that Apply

- None

Practice Component WBR: Water Bars

Definitions

Water bars are low mounds on roads for the purpose of aiding drainage of water from roads. They are generally placed in a series across the roadbed, and spaced according to grade.

General Policies

Purpose: To protect water quality from deterioration due to forest roads. Roads must be existing and not recently installed as part of a harvesting operation.

Application: Apply this component to forest roads being temporarily or permanently closed, or to forest roads that will receive only light use.

Specifications

- Dimensions - Distance from low point of dip to crest of water bar should be between 18 and 42.” Maximum length from beginning of uphill cut into roadbed to downhill side of water bar should be 24 feet.
- Placement - Water bars should angle across the centerline of a road 10 to 25 degrees so that water is drained from the downslope end of the water bar onto the forest floor or a dispersion apron.
- Spacing - Water bars should be spaced approximately as follows:
 - 250 feet apart on a 2% grade
 - 135 feet apart on a 5% grade
 - 80 feet apart on a 10% grade
 - 60 feet apart on a 15% grade
 - 45 feet apart on a 20% grade
 - 40 feet apart on a 25% grade
 - 35 feet apart on a 35% grade

Quality Standards

- Follow dimension and placement guidelines.

Other Standards, Policies, Regulations and Laws that Apply

- Forestry Best Management Practice Guidelines for Oklahoma will be followed.

References

- "Best Management Practices for Forest Road Construction and Harvesting Operations in Oklahoma" (OSU booklet)
- Forestry Best Management Practice Guidelines for Oklahoma, Appendix B
- USDA NRCS Standards and Specifications for "Forest Land Erosion Control Systems"

Practice Component WCD: Wooden Cross-Drainage Structures

Definition

Wooden cross-drainage structures are open-topped culverts installed for the purpose of draining water away from a road.

General Policies

Purpose: To protect water quality from impacts from forest roads. Roads must be existing and not installed recently as part of a timber harvesting operation.

Application: Apply this component to forest roads where improper drainage causes deterioration in water quality or problems with access.

Specifications

- Culverts will be made from wood with a minimum of nominal 2" thick materials.
- Maximum culvert width is 8 inches.
- Maximum depth is 12 inches.
- Cross-braces will be placed every 3 feet through the culvert.
- Rocks or slash should be installed at the culvert outlet to prevent erosion.

Quality Standards

- Culverts will be set at approximately a 30-degree angle to the road.
- The ditch immediately downhill of the culvert inlet will be blocked so that all flow is diverted into the culvert.
- All wooden materials used in the construction of these culverts will be treated wood.

Other Standards, Policies, Regulations and Laws that Apply

- Forestry Best Management Practice Guidelines for Oklahoma will be followed.

THE FOLLOWING PRACTICES ARE NOT CURRENTLY AUTHORIZED

Practice Component CTG: One-Gallon Container Trees (Not authorized)

Definitions

One-Gallon Container Trees are trees grown in one-gallon containers, which are planted on especially harsh sites in the Oklahoma Panhandle for conservation purposes.

General Policies

Purpose: To provide larger hardy planting stock for harsh planting sites in Cimarron, Texas and Beaver Counties.

Application: Use this component to establish trees on a harsh planting site where survival of bare-root or tubeling trees may be a significant problem and larger planting stock is needed. Use this component only in Cimarron, Texas and Beaver Counties in Oklahoma.

Specifications

- Container must be removed prior to planting.
- Plant no more than 1 inch deeper than grown in the container.
- Plant between December 1 and April 20.

Quality Standards

- Seedlings must be at least ¼-inch root caliper and at least 9 inches tall, above the root collar.
- Trees to be planted and packed so that when three needles or leaves are pulled, the tree will not come out of the ground.
- Planting must be according to the forester's recommendations in the Forest Management Plan.
- Trees planted and packed to remove any air pockets from the planting hole.
- No more than 5% of the trees planted can have above-ground defects.
- Minimum survival shall be 95% at the end of the second growing season.

Other Standards, Policies, Regulations and Laws that Apply

- None

Practice Component HAZ: Hazard Reduction (Not authorized)

Definitions

Hazard reduction includes activities applied to reduce the risk from wildfires or pest epidemic on forestlands damaged by a natural disaster. This practice may also apply to clearing of existing access roads, trails or fuelbreaks that were impacted by a natural disaster.

General Policies

Purpose: To reduce threats from wildfire or forest pests on lands that have been damaged by a natural disaster, or to restore the function of existing access roads, trails or fuelbreaks affected by a natural disaster.

Application: Apply treatments to forestlands impacted by a natural disaster to specifically reduce wildfire risk, the threat of a forest pest outbreak or to restore access for forestry purposes.

Specifications

- Accumulations of heavy forest fuels, such as damaged or fallen trees, tree tops and branches should be cut or felled so as to be within three feet of the ground to promote decomposition, reduce the “ladder effect” of the fuels or to position the fuel to be more readily consumed by prescribed burning.
- Non-commercial thinning and tree removal, either by mechanical or manual methods, should be done so as to reduce at least 90% of the damaged trees from the site to decrease chances of insect and disease outbreak or for fuel reduction.

Quality Standards

- Treatment must be according to the Forester's recommendations in the Forest Management Plan.
- On average, at least 90% of damaged or downed timber over 6 inches in diameter is dropped to within 3 feet of the soil surface.
- Landowner must include safety considerations in practice implementation.
- Remove tree debris from access roads, trails and fuelbreaks and within a tree length of the edges of roads, trails or fuelbreaks to restore access and the function of fuelbreaks.

Other Standards, Policies, Regulations and Laws that Apply

Forestry Best Management Practice Guidelines for Oklahoma will be followed.