2019 NEW CONSERVATION PLANS

- **All conservation practices must be installed to the individual practice standard and specifications. Follow the installation guidance found in the practice Job Sheet and/or Design. If not installed to standard and specifications the practice will NOT be paid on.**

- **All practices must be installed in the locations that are shown on the Conservation Plan Map(s). If while in the process of implementing the conservation plan and need is determined requiring an alteration of the planned location of installation, the producer will make their request to the NRCS for modification or variation before starting the installation. If any practice is installed in a location different for the originally planned location that is not approved, the practice will NOT be paid on.**

- **Engineering practices (such as ponds, pipelines, tanks, etc.) must be designed and staked by NRCS before a practice is started. If not staked and designed by NRCS or an approved Technical Service Provider, the practice(s) will NOT be paid on. If at any time you are unsure or have questions about ANY planned practices, you are encouraged to contact the NRCS to avoid mistakes.**

- **For all ground disturbing practices, the producer must obtain prior to the practice being staked on initiated a utility notification number. To obtain the utility notification number contact the OKIE One Call (811 or 1-800-522-6543) to have any utility lines marked in the planned area of disturbance. The Notification must be maintained the entire time that the disturbance is being performed. The number is active for ten (10) days and may be renewed if needed. The producer's personal knowledge of the presence/absence or location of any utility is not sufficient. If there is not a utility clearance number before the practice is started, the practice will NOT be paid on.**

- **All ground disturbing practices (ex. Brush mgmt., high tunnel, grass planting) must have an approved cultural resource clearance before being started. If not, the items will not be paid on.**

- **Prescribed fire must have an approved prescribed burn plan before the fire is started. The Prescribed Burn Plan may be developed either by NRCS or by BIA, if a plan is not developed or not followed the practice will not be paid on.**

- **All weed and brush management practices have a grazing deferment period after completion. If the grazing deferment is not completed for the specified deferment period as planned in the appropriate Job Sheet and/or Grazing Plan, this could cause the NRCS to request money back for the associated weed or brush management practice(s).**

- **If you are unsure or have <u>ANY</u> questions about your contract contact Cody Parker 405-612-9447.**

I HAVE READ AND UNDERSTAND
ALL THESE REQUIREMENTS

PARTICIPANT SIGNATURE

DATE

CONSERVATION PROGRAM CONTRACT

Participant: CHOCTAW NATION OF OKLAHOMA	**Program and Contract Number:** EQIP 2018 747335196LG
County and State: PUSHMATAHA County, OK	**Subaccount:** Tribal SFI
Watershed: Robinson Creek-Kiamichi River	This agreement is effective on the date signed by the Natural Resources Conservation Service obligating official unless specified otherwise in the applicable Appendix and extends through **12/31/2022**

1. The undersigned participants enter into this contract with the Natural Resources Conservation Service (NRCS) to implement and/or maintain specific conservation practices, as set forth in the Conservation Plan Schedule of Operations (NRCS-CPA-1155) on the property as identified on the plan map. In consideration for the implementation and/or maintenance of the practices, the NRCS will make payments to the participant(s) in the amount(s) described in the Schedule of Operations as outlined in the Appendix.
2. This agreement is comprised of this Conservation Program Contract form NRCS-CPA-1202. The NRCS-CPA-1202 Appendix and the NRCS-CPA-1155 Plan Schedule of Operations and plan map are hereby fully incorporated into this document and are binding upon the participant(s). The NRCS-CPA-1155 may be modified through execution of a Modification form (NRCS-CPA-1156) by both NRCS and the participant and becomes a part of the contract when both parties have agreed to and signed the Modification.
3. The participant(s) agree:

   A) to implement and maintain conservation practices for the life of this agreement in compliance with the plan or schedule of operations and in accordance with the standards, specifications, and other special program criteria obtained from NRCS;

   B) to forfeit further payments under this agreement and refund the United States, in amounts determined by NRCS, any payments received hereunder upon NRCS determination that participant(s) have violated the material terms of this agreement or accept such payment adjustments as NRCS may deem appropriate if NRCS decides that the participant's violation does not warrant termination of the agreement; and

   C) to forfeit all rights to further payments under the agreement and refund to the United States, in amounts determined by NRCS, payments received hereunder if the subject land is transferred to a non-participant during the term of this agreement, unless the third party agrees to assume this agreement, and the NRCS consents to the modification.

4. CONTRACT PARTICIPANTS

Name, Address, Telephone CHOCTAW NATION OF OKLAHOMA PO BOX 837 DURANT, OK 74702 (800) 522-6170	**SSN or TAX ID if applicable** *****7979
Signature **Date**	**Payment Shares** 100.00%
Signature required for modifications ✓ Yes ☐ No	**Signature acceptable for payments** ✓ Yes ☐ No

5. CONTRACT OBLIGATIONS

2020	2021									Total
$4,299	$1,427									$5,726
										$5,726

Conservation Plan Map

Date: 7/22/2019

Customer(s): CHOCTAW NATION OF OKLAHOMA
District: TALIHINA CONSERVATION DISTRICT
Approximate Acres: 40
Legal Description: 14-2-22

Field Office: ANTLERS SERVICE CENTER
Agency: USDA-NRCS
Assisted By: CODY PARKER
Land Units: Tract: 3447 Field: 12

Prepared with assistance from USDA-Natural Resources Conservation Service

Legend

- Soils Map
- Brush Management
- Prescribed Burning
- Prescribed Grazing
- 747335196LG
- Pushmataha County Sections
- Firebreak

USDA

130 0 130 260 390 520 Feet

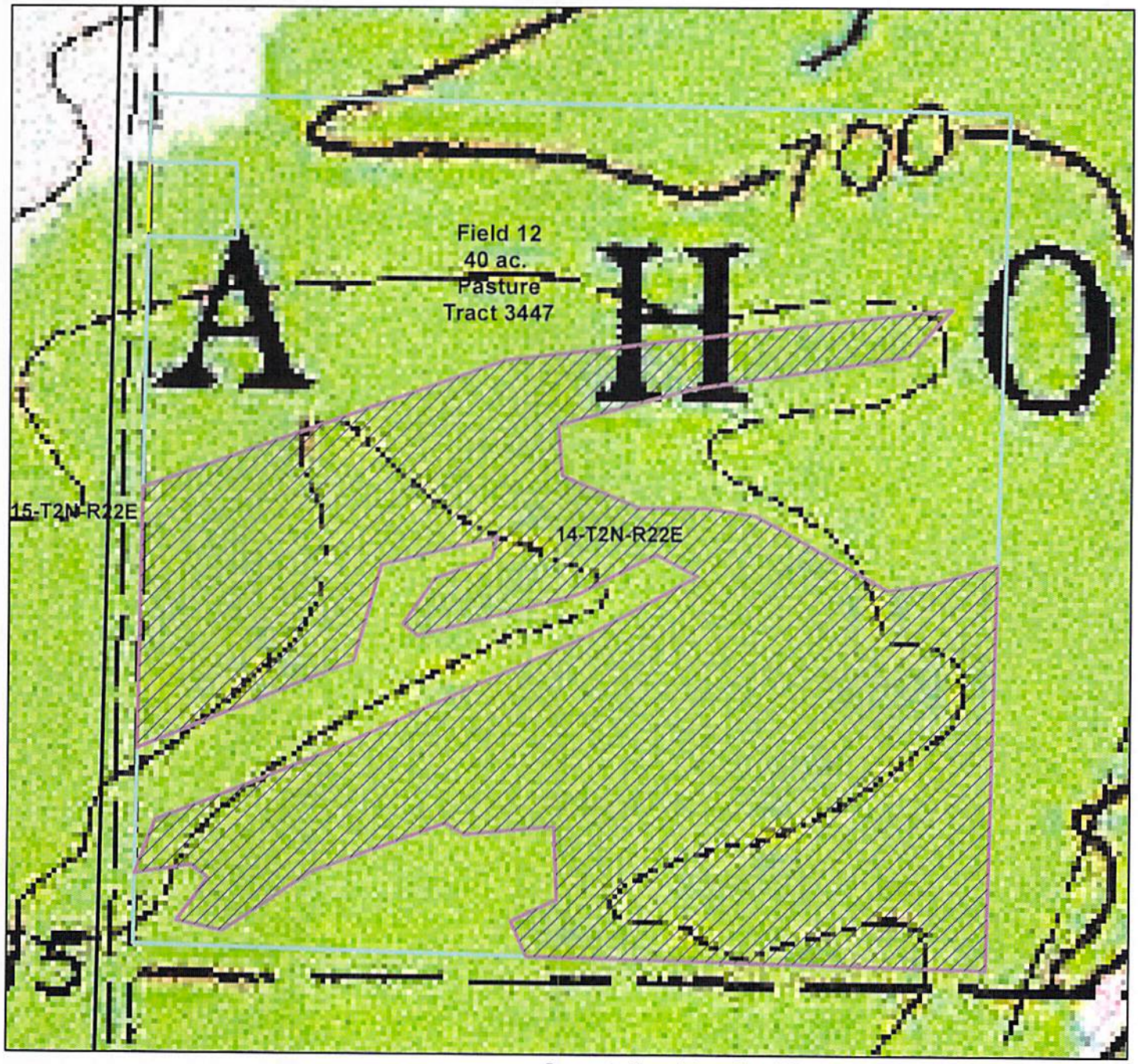
N

Conservation Plan Map

Date: 7/22/2019

Customer(s): CHOCTAW NATION OF OKLAHOMA
District: TALIHINA CONSERVATION DISTRICT
Approximate Acres: 40
Legal Description: 14-2-22

Field Office: ANTLERS SERVICE CENTER
Agency: USDA-NRCS
Assisted By: CODY PARKER
Land Units: Tract: 3447 Field: 12



Prepared with assistance from USDA-Natural Resources Conservation Service

Legend

- Soils Map
- Brush Management
- Prescribed Burning
- Prescribed Grazing
- 747335196LG
- Pushmataha County Sections
- Firebreak

USDA

130 0 130 260 390 520 Feet

N

US DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	**CONSERVATION PLAN OR SCHEDULE OF OPERATIONS**		NRCS-CPA-1155 02/2014
PARTICIPANT CHOCTAW NATION OF OKLAHOMA	COUNTY AND STATE PUSHMATAHA County, OK	PROGRAM AND CONTRACT NUMBER EQIP 2018 747335196LG	SUBACCOUNT Tribal SFI
LAND UNITS OR LEGAL DESCRIPTION Farm:4395 Tract(s):3447.		WATERSHED Robinson Creek-Kiamichi River	ACRES 40 / EXPIRATION DATE 12/31/2022

Contract Items 1: Brush Management(314) **Practice Lifespan:** 10 years **Status:** Planned 2020

The management or removal of woody (nonherbaceous or succulent) plants including those that are invasive and noxious.

Fields:
Tract: 3447 Fields: 12;

Contract Item	Planned Conservation Treatment	Planned Amount	Unit Cost	Cost Share Rate/Method	COMPLETION SCHEDULE AND ESTIMATED COST-SHARE OR PAYMENT BY YEAR 2020 $	2021 $
1	Brush Management(314)	19 Ac			4,299	
1a	HU-Mechanical Treatment for 31-50% Canopy Cover	19 ac	$226.2600/ ac	PR[1]	4,299	

Notes: [1]Payment rates define the unit cost rate of compensation to be received by the participant.

Contract Items 2: Prescribed Burning(338) **Practice Lifespan:** 1 year **Status:** Planned 2021

Controlled fire applied to a predetermined area.

Fields:
Tract: 3447 Fields: 12;

Contract Item	Planned Conservation Treatment	Planned Amount	Unit Cost	Cost Share Rate/Method	COMPLETION SCHEDULE AND ESTIMATED COST-SHARE OR PAYMENT BY YEAR 2020 $	2021 $
2	Prescribed Burning(338)	39 Ac				417
2a	HU-Level Herbaceous	39 ac	$10.6800/ ac	PR[1]		417

Notes: [1]Payment rates define the unit cost rate of compensation to be received by the participant.

Contract Items 3: Firebreak(394) **Practice Lifespan:** 5 years **Status:** Planned 2021

Establish a strip of bare land or vegetation that resists fire for protection from wildfire and for control of prescribed burns.

US DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	**CONSERVATION PLAN OR SCHEDULE OF OPERATIONS**		NRCS-CPA-1155 02/2014
PARTICIPANT CHOCTAW NATION OF OKLAHOMA	COUNTY AND STATE PUSHMATAHA County, OK	PROGRAM AND CONTRACT NUMBER EQIP 2018 747335196LG	SUBACCOUNT Tribal SFI
		WATERSHED Robinson Creek-Kiamichi River	ACRES 40
			EXPIRATION DATE 12/31/2022

Fields:
Tract: 3447 Fields: 12;

Contract Item	Planned Conservation Treatment	Planned Amount	Unit Cost	Cost Share Rate/Method	COMPLETION SCHEDULE AND ESTIMATED COST-SHARE OR PAYMENT BY YEAR									
					2020 $	2021 $								
3	Firebreak(394)	5611 Ft				954								
3a	HU-Constructed - Moderate Slopes with Medium Equipment	5611 ft	$0.1700/ ft	PR[1]		954								

Notes: [1]Payment rates define the unit cost rate of compensation to be received by the participant.

Contract Items 4: Prescribed Grazing(528) **Practice Lifespan:** 1 year **Status:** Planned 2021

Managing the harvest of vegetation with grazing and/or browsing animals with the intent to achieve specific ecological, economic, and management objectives.

Fields:
Tract: 3447 Fields: 12;

Contract Item	Planned Conservation Treatment	Planned Amount	Unit Cost	Cost Share Rate/Method	COMPLETION SCHEDULE AND ESTIMATED COST-SHARE OR PAYMENT BY YEAR									
					2020 $	2021 $								
4	Prescribed Grazing(528)	19 Ac				56								
4a	HU-Range Deferment	19 ac	$2.9100/ ac	PR[1]		56								

Notes: [1]Payment rates define the unit cost rate of compensation to be received by the participant.

US DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	**CONSERVATION PLAN OR SCHEDULE OF OPERATIONS**		NRCS-CPA-1155 02/2014
PARTICIPANT CHOCTAW NATION OF OKLAHOMA	COUNTY AND STATE PUSHMATAHA County, OK	PROGRAM AND CONTRACT NUMBER EQIP 2018 747335196LG	SUBACCOUNT Tribal SFI
LAND UNITS OR LEGAL DESCRIPTION Farm:4395 Tract(s):3447.		WATERSHED Robinson Creek-Kiamichi River	ACRES 40 / EXPIRATION DATE 12/31/2022

	Total Cost-Share or Payment by Year										Total Contract Payment
Year	2020	2021									
Amount($)	$4,299	$1,427									$5,726

NOTES: A. All items numbers on form NRCS-CPA-1155 must be carried out as part of this contract to prevent violation.
B. When established, the conservation practices identified by the numbered items must be maintained by the participant at no cost to the government.
C. All cost share rates are based on average cost (AC) with the following exceptions:
AA = Actual cost not to exceed average cost; FR = Flat Rate; NC = Non cost-shared; AM = Actual cost not to exceed a specified maximum; PR = Payment rates.
D. By signing, the participant acknowledges receipt of this conservation plan including this form NRCS-CPA-1155 and agrees to comply with the terms and conditions here of.

Certification of Participants

Signature	Date	Signature	Date	Signature	Date
CHOCTAW NATION OF OKLAHOMA					

Signatures of Reviewing Officials

Designated Conservationist - Technical Adequacy Certification	NRCS Approving Official
Signature:	Signature:
Date:	Date:

US DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	**CONSERVATION PLAN OR SCHEDULE OF OPERATIONS**		NRCS-CPA-1155 02/2014
PARTICIPANT CHOCTAW NATION OF OKLAHOMA	COUNTY AND STATE PUSHMATAHA County, OK	PROGRAM AND CONTRACT NUMBER EQIP 2018 747335196LG	SUBACCOUNT Tribal SFI
LAND UNITS OR LEGAL DESCRIPTION Farm:4395 Tract(s):3447.		WATERSHED Robinson Creek-Kiamichi River	ACRES 40
			EXPIRATION DATE 12/31/2022

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USDA ANTLERS SERVICE CENTER
510 HWY 271 NORTH
ANTLERS, OK 74523
(580) 298-3281

J.SCOTT PACE
DISTRICT CONSERVATIONIST

Conservation Plan

CHOCTAW NATION OF OKLAHOMA
PO BOX 837
DURANT, OK 74702

Pasture

Tract: 3447

Brush Management(314)

The management or removal of woody (nonherbaceous or succulent) plants including those that are invasive and noxious.

Field	Planned Amount	Month	Year	Applied Amount	Date
12	19. Ac	7	2020		
Total:	19. Ac				

Firebreak(394)

Establish a strip of bare land or vegetation that resists fire for protection from wildfire and for control of prescribed burns.

Field	Planned Amount	Month	Year	Applied Amount	Date
12	5611. Ft	7	2021		
Total:	5611. Ft				

Prescribed Burning(338)

Controlled fire applied to a predetermined area.

Field	Planned Amount	Month	Year	Applied Amount	Date
12	39. Ac	9	2021		
Total:	39. Ac				

Prescribed Grazing(528)

Managing the harvest of vegetation with grazing and/or browsing animals with the intent to achieve specific ecological, economic, and management objectives.

Field	Planned Amount	Month	Year	Applied Amount	Date
12	19. Ac	8	2021		
Total:	19. Ac				

CERTIFICATION OF PARTICIPANTS

CHOCTAW NATION OF OKLAHOM

CERTIFICATION OF:

DISTRICT CONSERVATIONIST

J.SCOTT PACE DATE

CONSERVATION DISTRICT

TALIHINA CONSERVATION DIS DATE

USDA-NRCS

CODY PARKER 6-14-19 DATE

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According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collections is 0578-0013. The time required to complete this information collection is estimated to average 45/0.75 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection information.

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USDA Office of the Assistant Secretary for Civil Rights
1400 Independence Avenue, SW.
Washington, DC 20250-9410

Or call toll free at (866) 632-9992 (voice) to obtain additional information, the appropriate office or to request documents. Individuals who are deaf, hard of hearing, or have speech disabilities may contact USDA through the Federal Relay service at (800) 877-8339 or (800) 845-6136 (in Spanish). USDA is an equal opportunity provider, employer, and lender. Persons with disabilities who require alternative means for communication of program information (e.g., Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

NRCS Natural Resources Conservation Service

Brush Management

Mechanical Control Method

Oklahoma Conservation Practice Job Sheet **314-03**

Landowner Choctaw Nation / Arabian Tract

WHAT IS BRUSH MANAGEMENT?

Brush Management is the removal of woody (non-herbaceous or succulent) plants including invasive and noxious. The use of mechanical brush management is to manipulate or control a species of concern within a conservation plan.

PURPOSE

Mechanical Brush Management is used to:

- Create the desired plant community consistent with the ecological site.
- Improve forage accessibility, quality and quantity for livestock and wildlife.
- Manage fuel loads to achieve desired conditions.

WHERE THE PRACTICE APPLIES

Brush Management applies to all lands excluding cropland where the removal or manipulation of woody species is desired. This practice can be used to restore rangeland, pasture and wildlife land where plant community restoration or enhancement is needed by releasing the desired vegetation as defined within the conservation plan.

WHERE TO GET HELP

For assistance with brush management, contact your local Natural Resources Conservation Service or your local Conservation District office.

APPLYING THE PRACTICE

Applying Mechanical brush management shall target specific species where control is needed to obtain the desired response. Targeted species and treatment type shall be identified when conducting brush management. When mixed brush exists control methods will be prescribed for the species that is the greatest concern

Application methods can vary based on the target plant and can be made to the entire pasture or with the use of Individual plant treatment. When dealing with a re-sprouting species do not apply brush management unless a follow up treatment is recommended.

Mechanically disturbed areas may need to be replanted if 20% or more of the existing grass cover is destroyed and will not recover in a reasonable amount of time on its own. When the mechanical brush management coincides with proper planting dates, seeding according to the Range Planting (550) will be used. When working outside of planting dates follow the guidelines in the Range Planting (550) standard for seedbed preparation, etc. Rootplowed areas must be planted to permanent vegetation, also refer to the Range Planting (550) standard for guidance.

Prescribed grazing shall be required to assure that the desired response from the treatment is achieved. Refer to the Prescribed Grazing (528) standard.

Mechanical brush management is a ground disturbing activity and must comply with all NRCS policies on Cultural Resources.

Mechanical Brush Management: Job Sheet

Name	Choctaw Nation Arabian Track	Location	14-2-22	Pushmataha county	Plan No. 7473551966	Arabian track

Goals and Objective	To improve undesirable plant productivity & health			
Treatment Area	Field # 12 tract 3447	Field #	Field #	Field #
Taget Pest(s)	cedar			
Acres	19			
Degree of Infestation	800 plants to the acre			
Optimum Treatment Date	Mach - April			
Treatment Level Desired	100%			
Equipment	Skid steer with pinchers or tree saw			

	Field # 12	Field #	Field #	Field #
Considerations and Methods	cut below lowest green branch. As low to the ground as can.			
Post Treatment and Monitoring	Defer grazing from treated area for a growing season to allow time for fuel to build for a fall burn.			
Other additional information	Burn every 3-5 years to prevent cedar encroachment from coming back.			

Planned and Designed by: 9-6-19

Date

Landowner Acceptance

Date

Certification By:

Date

Clear Form

EQIP MANAGEMENT PLAN
Choctaw Nation-EQIP
Pushmataha County, Oklahoma

September 6, 2019

INVENTORY (refer to attached worksheets)

This plan only covers those acres currently offered for EQIP. It consists of approximately 40 acres Bermuda and mixed native pasture. This land has been grazed by horses in the past but are planning to put cattle on it in the future.

FORAGES: The forage inventory was based from vegetative productivity of what the predominate soils were in each field. Some totals were reduced to allow for tree acres and what was seen out during benchmark and planning visits. Production (Bermuda grass)and mixed grass is estimated at 1 ton, based on soils information and benchmark conditions.

LIVESTOCK: This field is grazed as part of a continuous grazing system.

CURRENT CARRYING CAPACITY EVALUATION: Based on the forage inventory, the carrying capacity is estimated at 2557 lbs. of animal live-weight per year for the entire EQIP acres. Although, each field will have different capacities due to varying levels of production.

GRAZING MANAGEMENT PLAN

- **Deferment is required for a growing season following treatment of brush species. This will allow fuel to build for the fall burn that is planned to get the rest of the small cedars that are to small to cut with equipment.**

- Begin grazing bermudagrass each spring when it reaches a height of 2-3 inches. Rotate cattle when bermudagrass is grazed to 2-3 inches and allow 18-25 days rest when actively growing and during favorable weather conditions (April – July). Allow 25-35 days rest during slower growth periods or at times of unfavorable weather conditions (July - September).

- Do not depend on set stocking rates. Remain flexible and willing to make adjustments as needed due to changes in forage supply, climate and livestock needs. The key to a successful grazing management system is to remain flexible, monitor and make adjustments where needed. Stocking rates may have to be adjusted, supplements fed, rotations changed, herd size adjusted, etc.

OTHER PRACTICES THAT MAY BE NEEDED TO FACILITATE MANAGEMENT

- **Nutrient Management:** (*Utilize soil samples to ensure adequate pH and to determine the levels of N-P-K in the soil.*) When needed to support forage production or improve plant vigor, apply fertilizer to meet the fertility needs based on specific yield goals for each forage type. For bermudagrass, fertilizer should be applied at the beginning of the main growing season (end of May or first of June). Fertilize for fescue growth in early September. To minimize effects of endophyte in tall fescue, avoid fertilizing before May 1.
- **Pest and Brush Management:** *Invasive and Noxious species such as musk thistle, sericea lespedeza and eastern red cedar will be maintained at a level not to exceed 10% of the plant*

community. When needed, apply approved pest management methods (i.e. herbicides, biological, and mechanical, cultural) to control undesired pests and maintain desired plant community. This would most typically be invading sericea lespedeza or eastern red-cedar. The use of approved herbicides (Remedy, Pastureguard, Cimarron) is most commonly used for sericea control. Follow label instructions and recommended timing and rates. Invading eastern redcedar should be mostly controlled through the haying operations, although periodic burning and/or clipping may be needed. If pest and or brush management is needed, contact the local NRCS and/or Extension office for the most current approved herbicides, rates, methods, etc.

CONTINGENCY PLANS

Contingency plans should be in place at all times for the purpose of having a plan of action to follow in the event that something unforeseen or unpredictable should happen (i.e. extreme climatic circumstances such as dry, wet, hot, or cold; wildfires; pest infestations; disease infestations; etc.). Plans should provide for a variety of options and must be flexible. Economics must be considered in all options.

- Regularly monitor forage supplies to ensure demand can be met without placing additional pressure on forage plants (overgrazing). Should forage and stockpiled forage supplies start becoming short in supply, begin implementing other alternatives. If stored hay supplies are plentiful (reserving enough for winter dormant periods), consider feeding hay. When forage reserves are low and stored hay supplies diminish, consider other alternatives such as de-stocking (i.e. early weaning, selling calves earlier, culling cows, etc.). If needed, hay and supplements can be purchased or lease other property for grazing. Should extreme conditions persist for long periods of time, extend rest periods for pastures by increasing number of grazed pastures (utilize temporary fencing or existing cross fences) and managing for uniform distribution. Manage herds by moving those with highest nutritional demands to the best pastures and monitor body condition.
- Following extreme events such as drought or wildfire, recovery may take 2-5 years depending on severity of the event, management prior to and during the event and health of the plant community. If de-stocking had taken place as part of the plan, don't rush to re-stock. Allow for at least one growing season of rest and then re-evaluate to determine a safe re-stocking period and rate. If de-stocking had not taken place, maintain a lower stocking rate and longer rest periods to promote recovery of plants. Monitor for erosion and pest invasion.

MONITORING PLAN

Monitoring is used to determine the effects of management or environmental variations on a site over a period of time. Monitoring provides the opportunity to evaluate effects of past management, confirm effective management practices, and identify trends to predict future changes. Monitoring plans may consist of short term or long term methods. The best plans will consist of a combination of both.

- Short Term Monitoring – Completed annually or as needed to adjust management current management to meet long tern objectives (i.e. timing of livestock moves, residue levels following a grazing event). Short term monitoring may consist of:
  1. Maintain Grazing records
     a. # animals, dates grazed, vegetation height before and after
  2. Key grazing areas and key plants – Key sites for this operations will be the approximate center of each field/ The key species are those identified in the Grazing Management Plan
  3. Utilization / residuals
  4. Livestock
     a. Body Condition
     b. Calving
     c. Weights / Gains

- Long Term Monitoring - 2-5 year intervals. Long term monitoring documents changes in the landscape caused by changes in management, climate, etc. Several methods available include:
    1. Trend
    2. Photo points
    3. Cover and composition changes
    4. Percent canopy cover
    5. Changes in ground cover
        d. Bare soil
        e. Litter
    6. Erosion
    7. Invasive species

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

PRESCRIBED BURNING

(Ac.)

CODE 338

DEFINITION

Fire applied to a predetermined area using prescriptions to meet specific objectives.

PURPOSE

- Control undesirable vegetation.
- Prepare sites for harvesting, planting or seeding.
- Control plant disease.
- Reduce fuel hazards that lead to wildfire.
- Improve wildlife habitat.
- Improve plant productivity, health and vigor.
- Remove slash and debris.
- Enhance seed and seedling production.
- Facilitate distribution of grazing and browsing animals.
- Restore and maintain ecological processes and ecological site integrity.
- Protect air quality from wildfire smoke impacts.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on all land uses where applicable.

CRITERIA

General Criteria Applicable to All Purposes

All prescribed burn planning shall address the following items and will be included in the prescribed burn plan:

- Location, description and map of the burn area.
- Pre-burn vegetation cover.
- Resource management objectives.
- Weather conditions necessary to meet objectives, including containment of the prescribed burn.
- Notification check list (e.g. adjoining landowners, utility companies, authorities, etc).
- Pre-burn preparation.
- Basic Smoke Management Practices.
- Equipment checklist/personnel assignments and needs/safety requirements.
- Mop up and post burn evaluation.
- Ignition plan.
- Ignition method.
- Contingency for escapes.
- Approval signatures.
- All necessary permits must be obtained and a burning plan developed before implementation of the practice.

The procedure, equipment, and the number of trained personnel shall be adequate to accomplish the intended purposes.

Significant factors affecting fire behavior and safety such as; the expected weather conditions, human and vehicular traffic that may be impeded by heat or smoke, liability (e.g., utility lines), and other safety and health precautions, shall be integrated into the timing, location and expected intensity of the burn.

Timing of burning will be commensurate with soil and site conditions to maintain site productivity and minimize effects on soil erosion and soil properties (e.g., structure, soil

moisture).

Wind speed and direction, relative humidity, air temperature and other variables that affect fire behavior will be evaluated before, and monitored during the burn. Smoke sensitive areas must be identified before the burn. Smoke impact on sensitive areas must be estimated/predicted before the burn and will be monitored during the burn.

Basic smoke management practices (BSMPs) will be used. Examples include: evaluating meteorological conditions and potential smoke sensitive areas before and during the burn, monitoring the effects of the fire on air quality, documenting the fire activity and retaining records, coordinating with other agencies and the public as necessary relative to air quality concerns in the area, reducing smoke exposure, and applying available emission reduction techniques (without compromising burn objectives).

CONSIDERATIONS

Burning should be managed with consideration for wildlife and beneficial insects needs such as nesting, feeding, cover and other resource concerns. Any unique habitats or plant communities should be considered during planning and implementation. Rotational or patch burning may be used to provide areas of undisturbed wildlife habitat to provide disturbance required by many wildlife species, or to facilitate grazing.

Existing barriers and natural features such as lakes, streams, wetlands, roads, and constructed firebreaks should be considered in the design and layout of this practice.

Consider historical fire regimes and return intervals when planning burns that will impact native plant communities and wildlife that rely on these ecological processes.

PLANS AND SPECIFICATIONS

Specifications will be prepared by certified individuals and prepared for each burn site and recorded using approved specification sheets, job sheets, technical notes, and narrative statements in the conservation plan, or other acceptable documentation.

OPERATION AND MAINTENANCE

The kinds and expected variability of site factors (e.g., fuel condition and moisture content, weather conditions, human and vehicular traffic that may be impeded by heat or smoke, liability, and safety and health precautions) shall be monitored during the operation of this practice. Sufficient fire suppression equipment and personnel shall be available commensurate with the expected behavior of these factors during the time of burning to prevent a wildfire or other safety, health, or liability incident.

The burn site and adjacent areas shall be monitored until ash, debris, and other consumed material is at ambient temperatures.

REFERENCES

USDA-NRCS. 1997. National Range and Pasture Handbook. Washington, DC.USDA-NRCS. 2009. Prescribed Burning Policy. General Manual, Title 190, Part 413.

USDA-NRCS/Forest Service. 2011. Basic Smoke Management Practices Technical Note. S.M. O'Neill, P. Lahm, J.A. Matthews. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046311.pdf.

Weir, J.R. 2009. Conducting Prescribed Fires: A Comprehensive Manual, 1st Ed. Texas A&M University Press.

Wright, H.A., and A.W. Bailey. 1982. Fire Ecology: United States and Southern Canada. Wiley, New York, NY.

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

FIREBREAK

(Ft.)

CODE 394

DEFINITION

A permanent or temporary strip of bare or vegetated land planned to retard fire.

PURPOSE

- Reduce the spread of wildfire.
- Contain prescribed burns.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on all land uses where protection from wildfire is needed or prescribed burning is applied.

CRITERIA

General Criteria Applicable to All Purposes

Firebreaks may be temporary or permanent and shall consist of fire-resistant vegetation, non-flammable materials, blackened (burned) areas, bare ground, or a combination of these.

Firebreaks will be of sufficient width and length to contain the expected fire.

Firebreaks shall be located to minimize risk to the resources being protected.

Erosion control measures shall be installed to prevent sediment from leaving the site, when applicable.

Plant species selected for vegetated firebreaks will be noninvasive and capable of retarding fire.

The landowner shall comply with applicable federal, state, and local laws and regulations, during the installation, operation and maintenance of this practice.

Location

Firebreaks shall be located:

- Parallel to public roads, railroads, and adjacent to field boundaries, if needed in the situation.
- Along property boundaries, within burn units or within fields where it is determined necessary to protect areas that are not to be burned.
- Where possible the firebreaks shall be connected to natural barriers such as cultivated fields, streams, rock bluffs, or roads.
- To protect farmsteads or other structures by surrounding them at a safe distance.

Width

The total width of the firebreak is based on the type of fuel to be burned and the location in relation to the area to be burned.

Combinations of firebreak types can be used to establish the total firebreak width (e.g. 10' bare ground firebreak + 290' blackline firebreak = 300' minimum width).

The following minimum firebreak widths shall be established along the edges of the burn unit:

- Downwind edge - 100 feet wide, when fuel consists of non-volatile herbaceous vegetation and 500 feet wide when volatile fuels such as juniper are on-site.
- Downwind flank edge – 100 feet wide, when fuel consists of non-volatile herbaceous vegetation and 300 feet

wide when volatile fuels such as juniper are on-site.

- Upwind flank edge – 10 feet wide and 100 feet wide when volatile fuels such as juniper are on-site.
- Upwind edge – 10 feet wide.

Types of Firebreaks

There are 5 basic types of firebreaks: Natural, Bare Ground, Blackline (burned), Vegetated and Mowed Wet-line. The type selected will be determined by the specific site conditions, due to the variability of vegetation types, topography, and soil conditions.

Natural Firebreaks

Existing terrain features such as streams, lakes, ponds, rock outcrops, roads, field borders, skid trails, landings, drainage canals, railroads, utility right-of-ways, cultivated land, or other areas devoid of flammable material can serve as a firebreak as long as the minimum width requirements are met.

Bare Ground (constructed) Firebreaks

Disks, graders, plows, or bulldozers can be used to create bare ground firebreaks.

Bare ground firebreaks shall be constructed before the fire hazard season or prior to the prescribed burn, and fashioned so that it can be traversed by fire suppression vehicles.

All combustible material shall be:

- Covered with soil by machinery.
- Stacked outside the planned burn unit.
- Stacked inside the burn unit well past the minimum firebreak width.
- Stacked and burned prior to the prescribed burn when the surrounding fuel source is too green or wet to burn.

Heavy equipment, such as a bulldozer, will be required on rocky areas, creek crossings, steep slopes and to remove thick brush or large trees.

The width of the bare ground firebreaks shall be a minimum of 10 feet. Other firebreak types can be used in combination with bare ground firebreaks to establish the minimum total width required.

Slopes 10% and greater will have water bars constructed. (Refer to: Forestry Extension Report #5, Best Management Practices for Forest Road Construction and Harvesting Operations in Oklahoma.)

Blackline (Burned) Firebreaks

Blackline firebreaks are installed only when used in combination with other types of firebreaks to meet the minimum total width requirement.

Blackline firebreaks can be installed by constructing two 10 foot wide parallel strips to mineral soil, around the area to be burned (Refer to Oklahoma NRCS Job Sheet JS 394 01). The two parallel strips shall be approximately 100 feet apart on grasslands and up to 500 feet apart when volatile fuels are to be burned. Burn the area between the strips to complete the firebreak.

Flammable material, such as logs, limbs, brush piles, standing or downed juniper, or discarded fence posts shall be removed from the blackline firebreak.

Burning of the blackline firebreaks shall be implemented using guidance found in the Oklahoma NRCS Prescribed Burning (338) standard and/or with the assistance of the Oklahoma Forestry Services Division.

Vegetated Firebreaks

Vegetated firebreaks are constructed firebreaks, which are established to non-flammable perennial or annual cool season plants to reduce future maintenance costs, prevent soil erosion, and provide wildlife food.

Establish vegetation across the entire minimum firebreak width if the vegetated firebreak is the only means of fire protection.

Vegetated firebreaks will be established according to the Oklahoma NRCS Critical Area Planting (342) and/or Cover Crop (340) standard.

Fertilizer will be applied according to the Oklahoma NRCS Nutrient Management (590) standard.

Mowed Wet-Line

Mowed firebreaks using wet-lines can be used as long as adequate personnel, equipment,

and water supplies are available for safe conduct of the procedure.

Mowed firebreaks shall be a minimum of 10 feet wide or 10 times the height of the flammable vegetation in the area to be burned. The mowing height shall be approximately 4 inches or less. Piles of grass shall be removed by raking or baling.

Water will be sprayed on the mowed firebreak to create a wet-line immediately in advance of ignition of the fire. Fire creeping across the mowed firebreak shall be immediately extinguished before the ignition crew proceeds along the mowed firebreak.

Burned firebreaks can be used in combination with mowed wet-line firebreaks to create the total minimum firebreak width.

Mowed wet-line firebreaks can provide a firm surface for equipment but can be quite time consuming and less predictable, therefore it is not the preferred method. However, mowed wet-line firebreaks can be feasible alternatives on steep slopes to reduce erosion potential.

CONSIDERATIONS

When using natural barriers, consider the effects on wildlife and fisheries and the crew's ability to cross them if the fire escapes.

Electric lines can be hazardous in heavy smoke as they may conduct electricity to the ground, therefore use caution when burning near them.

Attempt to locate firebreaks near ridge crests and valley bottoms to reduce fire intensity.

If winds are predictable, firebreaks should be located perpendicular to the wind and on the upwind side of the area to be protected.

Consider using diverse plant species combinations, on vegetated firebreaks, which best meet local native wildlife and pollinator needs.

Locate firebreaks on the contour where practical to minimize risk of soil erosion.

Design and layout should include multiple uses such as roads, food plots, etc.

Consider the beneficial and other effects of firebreak installation on cultural resources and threatened and endangered species, natural areas, riparian areas and wetlands.

PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, technical notes, and narrative statements in the conservation plan and the burn plan (JS 338 01), or other acceptable documentation. In the prescribed burn plan record location, type, dimensions, equipment requirements, and maintenance of firebreak.

OPERATION AND MAINTENANCE

Mow, disk, or graze vegetative firebreaks to avoid a build-up of excess litter. Treatment should be timed to reduce impacts to ground nesting birds, when possible.

Inspect all firebreaks for woody materials such as dead limbs or blown down trees and remove them from the firebreak.

Inspect firebreaks at least annually and rework bare ground firebreaks as necessary to keep them clear of flammable vegetation.

Repair erosion control measures as necessary to ensure proper function.

Access by vehicles or people should be controlled, when necessary, to prevent damage to the firebreak.

Bare ground firebreaks, which are no longer needed, will be stabilized.

REFERENCES

OSU Cooperative Extension Service Circular E 927, "Using Prescribed Fire in Oklahoma".

"A Guide for Prescribed Fire in Southern Forests". USDA Forest Service, Southern Region. Technical Publication R8-TP 11, February 1989.