MANAGEMENT SYSTEM TEMPLATE

B. CONSERVATION MANAGEMENT SYSTEM OPTIONS WORKSHEET

1	STATE	OKLAHOMA
2	FIELD OFFICE	Ada, Atoka, Coalgate, Eufaula, Holdenville, McAlester, Muskogee, Okemah, Stigler, Tulsa, Wagoner
3	MLRA	118B
4.	COMMON RESOURCE AREA (CRA)	118B.40.001
5	RESOURCE INTERPRETATIONS	*see Section II FOTG for interpretations*
5.1	SOIL	FOTG, SECTION I - EROSION PREDICTION FOTG, SECTION II - SOIL AND SITE INFORMATION FOTG, SECTION II - SOILS LEGEND FOTG, SECTION II - SOIL DESCRIPTIONS - NONTECHNICAL FOTG, SECTION II - SOIL DESCRIPTIONS - TECHNICAL FOTG, SECTION II - WATER QUANTITY AND QUALITY INTERPRETATIONS FOTG, SECTION II - HYDRIC SOILS INTERPRETATIONS FOTG, SECTION II - PASTURE AND HAYLAND INTERPRETATIONS FOTG, SECTION II - WILDLIFE INTERPRETATIONS FOTG, SECTION III - RESOURCE MANAGEMENT SYSTEMS - SOIL FOTG, SECTION V-A-1 - CONSERVATION EFFECTS - SOIL FOTG, SECTION V-1-2 - EFFECTS FOR GUIDANCE DOCUMENTS
5.2	WATER	FOTG, SECTION I - CLIMATIC DATA FOTG, SECTION II - WATER QUANTITY AND QUALITY INTERPRETATIONS FOTG, SECTION III - RESOURCE MANAGEMENT SYSTEMS - WATER FOTG, SECTION V-A-1 - CONSERVATION EFFECTS - WATER FOTG, SECTION V-A-2 - EFFECTS FOR GUIDANCE DOCUMENTS
5.3	AIR	FOTG, SECTION I - CLIMATIC DATA FOTG, SECTION I - STATE/LOCAL LAWS, ORDINANCES, REGULATIONS FOTG, SECTION III - RESOURCE MANAGEMENT SYSTEMS - AIR FOTG, SECTION V-A-2 - EFFECTS FOR GUIDANCE DOCUMENTS
5.4	PLANT	FOTG, SECTION I - THREATENED AND ENDANGERED SPECIES FOTG, SECTION III - RESOURCE MANAGEMENT SYSTEMS - PLANTS FOTG, SECTION III - RESOURCE MANAGEMENT SYSTEMS - PASTURE
5.5	ANIMAL	FOTG, SECTION I - THREATENED AND ENDANGERED SPECIES FOTG, SECTION II - WILDLIFE INTERPRETATIONS FOTG, SECTION V-A-1 - CONSERVATION EFFECTS - ANIMALS FOTG, SECTION V-A-2 - EFFECTS FOR GUIDANCE DOCUMENTS
5.6	HUMAN	FOTG, SECTION I - CULTURAL RESOURCE INFORMATION FOTG, SECTION V-B-1 - CONSERVATION EFFECTS - PRODUCER EXPERIENCES
6	HYDROLOGIC UNIT	
7	SYSTEM TEMPLATE LABEL	QAJZ3
8	SYSTEM NAME	PASTURE (with Waste Management)
9	PLANNING PHASE	NON-BENCHMARK
10	PLANNING LEVEL	RMS
11	NRCS LANDUSE	PASTURE

12	PLANNED CONSERVATION PRACTICES	*enter code / name of practice*

1. 312 - Waste Management System
2. 313 - Waste Storage Facility
3. 314 - Brush Management
4. 317 - Compost Facility
5. 342 - Critical Area Planting
6. 359 - Waste Treatment Lagoon
7. 362 - Diversion
8. 378 - Pond
9. 382 - Fencing
10. 391 - Riparian Forest Buffer
11. 410 - Grade Stabilization Structure
12. 512 - Pasture and Hayland Planting
13. 516 - Pipeline
14. 528-A - Prescribed Grazing
15. 580 - Streambank and Shoreline Protection
16. 590 - Nutrient Management
17. 595 - Pest Management
18. 614 - Trough or Tank
19. 633 - Waste Utilization
20. 642 - Well
21. 644 - Wildlife Wetland Habitat Management
22. 645 - Wildlife Upland Habitat Management

13	SYSTEM NARRATIVE	*describe how the practices work together as a system*

These areas are typically established in bermudagrass and are already and/or will be applying animal waste from either confined swine or poultry houses. Swine waste is usually applied through an irrigation system (usually a gun type system) or honey wagon. Chicken litter is usually spread via a manure spreader. Most of the more recently established operations are spreading waste according to an NRCS developed waste management plan. Chicken litter is usually applied at a rate of 3.5 to 4 tons/acre/year on soils that can receive a full rate of application. Other areas are applied at a half rate (1.75 to 2 tons/acre/year) or according to plant needs of phosphorus (soil test recommendations). Swine waste us usually applied according to plant nitrogen needs, however, phosphorus levels are also monitored. By applying the practices listed above, risk of contamination of surface or ground water is held to a minimum and/or eliminated. An increase in forage and livestock production can be expected through the proper utilization of animal waste from the confined feeding operations. In situations where producers are selling animal waste, the purchasers will need to be adequately informed and trained in the proper application of animal waste in order to prevent potential problems offsite. Livestock water will be provided by existing and/or planned ponds, grade stabilization structures, tanks, troughs, and wells. Proper application of animal waste and proper operation of waste storage facilities, compost facilities, and waste treatment lagoons will help keep odor problems to a minimum. Proper timing of waste application will eliminate potential problems on rarely and occasionally flooded areas. By applying critical area planting, fencing, grade stabilization structures, pasture and hayland planting, prescribed grazing and streambank and shoreline protection, most erosion problems can be reduced to a minimum or eliminated. By adhering to prescribed grazing standards, livestock numbers can be kept in balance with forage production, thus preventing any overgrazing problems. In the early stages of implementation of this system, plant pests can be controlled through the implementation of pest management and brush management practices. After implementation of the system, plant pests should rarely be a problem, but can still be controlled using these same two practices. Wildlife needs will be addressed through the development of food and nesting areas, riparian areas, and other needs required by the species being managed for.

14	RESOURCE CONCERNS	MAGNITUDE/EFFECTS	IMPACTS
	1. Classic Gully	1. By using critical area planting techniques, constructing diversions, fencing, constructing grade stabilization structures, protecting riparian areas, and by establishing and properly managing tame pasture, classic gullies can be adequately treated and/or prevented.	1. Reduction in gully erosion of 14 tons/ year and acres affected to 0.
	2. Streambank Erosion	2. By fencing riparian areas to control access by livestock and by using critical area planting techniques to revegetate unstable areas, streambank erosion can be reduced to minimal levels.	2. Reduction in streambank erosion of 12.5 tons/year and a reduction in acres affected to 0.1 acres/160 acre tract.

	3. Excess Fertilizer in Soil	3. By implementing a waste management system, using waste utilization techniques and applying waste according to current soil test recommendations and production goals, excess buildup of phosphorus and other nutrients in the soil can be prevented.	3. Reduction and/or prevention of excess buildup of phosphorus and/or other nutients in the soil.
	4. Runoff/Flooding	4. Risk of contamination of runoff water can be greatly reduced or eliminated by applying waste utilization techniques. This practice will help determine the proper timing of waste application so that seasonal runoff and/or flooding (i.e. - rare to occasional flooding) are not a problem.	4. Reduction in surface water contamination by animal waste.
	5. Annual Phosphorus Applied	5. By applying waste utilization techniques, annual phosphorus application will be reduced to 100 lbs./acre/year or less when a soil test P index reaches a specified maximum and/or P index and slope exceed specified conditions.	5. Reduction in annual phosphorus application of 100 lbs./acre/year or more.
	6. Airborne Odors	6. By implementing a waste management system and properly managing its components, airborne odors can be reduced to minimal levels.	6. Airborne odors held to minimum levels.
	7. Plants Unsuitable for Intended Use	7. By applying fertilizer or animal waste according to current soil test recommendations and by using prescribed grazing techniques, Broomsedge bluestem and other undesirable grasses can be reduced to more manageable levels.	7. Reduced invasion of Broomsedge bluestem into existing bermudagrass stands. Improved bermudagrass production.
	8. Nutrient Management	8. All nutrients will be applied according to current soil test recommendations and production goals, and placement will be properly timed for the best utilization and to prevent loss of nutrients into streams, etc.	8. Improvement in efficiency of the utilization of applied plant nutrients. Improvement in plant growth.

	9. Plant Pests	9. Brush and weeds will be controlled by biological, chemical or mechanical methods. If herbicides are used, they will be applied according to label directions adhering to all cautions and warnings.	9. Reduction in brush and weed competition. Improved utilization of nutrients and moisture by desirable forage species.
	10. Domestic Animal Water Requirements	10. By constructing and/or installing ponds, wells, pipelines, troughs and tanks, an adequate supply of quality livestock water can be supplied.	10. Adequate supply of livestock water. Improved grazing distribution.
	11. Wildlife Food Requirements	11. By protecting riparian areas, by using wildlife upland and wetland habitat management techniques, and by establishing wildlife food plots and native grass areas, wildlife food requirments can be more adequately met. These practices should help offset the reduction in desirable habitat caused by the establishment of tame pasture.	11. Improvement in wildlife food production. Improvement in wildlife population.
	12. Wildlife Habitat Suitability	12. By protecting riparian areas, establishing food plots and/or native grass areas and by managing other areas of associated land uses, wildlife habitat suitability can be improved.	12. Improvement in wildlife habitat.
	13. Animals Population - Resource Balance Management	13. By applying prescribed grazing techniques, livestock numbers can be balanced with forage production and improve the efficiency in use of the forage base.	12. Improvement in efficiency of use of the forage base and overall improvement in livestock and forage production.
CRA	**118B.40.001**	**SYSTEM TEMPLATE LABEL**	**QAJZ3**

15	*** QUALITY CRITERIA DOCUMENTATION** *list resource concerns then indicate yes/no (X)*	
	1. Classic Gully	_X_YES ___NO
	2. Streambank Erosion	_X_YES ___NO
	3. Excess Fertilizer in Soil	_X_YES ___NO
	4. Runoff/Flooding	_X_YES ___NO
	5. Annual Phosphorus Applied	_X_YES ___NO
	6. Airborne Odors	_X_YES ___NO
	7. Plants Unsuitable for Intended Use	_X_YES ___NO
	8. Nutrient Management	_X_YES ___NO
	9. Plant Pests	_X_YES ___NO
	10. Domestic Animal Water Requirements	_X_YES ___NO
	11. Wildlife Food Requirements	_X_YES ___NO
	12. Wildlife Habitat Suitability	_X_YES ___NO
	13. Animals Population - Resource Balance Management	_X_YES ___NO

* Provides an indication that the resource quality criteria will be met.

Conservation Practice Physical Effects on Resource Concerns
Candidate Practice List

State	Oklahoma	Field Office	Ada, Atoka, Coalgate, Eufaula, Holdenville, McAlester, Muskogee, Okemah, Stigler, Tulsa, Wagoner	MLRA	118B	System Template Label	OAJZ3

Resource Concerns / Conservation Practices	Classic Gully	Streambank Erosion	Excess Fertilizer in Soil	Runoff/ Flooding	Annual Phosphorus Applied	Airborne Odors	Plants Unsuitable for Intended Use	Nutrient Management
312-Waste Management System	+	+ +	+ + +	+ + +	+ + +	F+ + +	+ + +	+ + +
313-Waste Storage Facility	N/A	N/A	F+ + +	F+ + +	F+ + +	F+ + +	N/A	F+ + +
314-Brush Management	-	-	+	0	N/A	N/A	+	+
317-Compost Facility	N/A	N/A	F+ + +	F+ + +	F+ + +	F+ + +	N/A	F+ + +
342-Critical Area Planting	+ + +	+ + +	+	+	0	N/A	+	+
359-Waste Treatment Lagoon	N/A	N/A	F+ + +	F+ + +	F+ + +	F+ + +	N/A	F+ + +
362-Diversion	+ + +	0	N/A	+	N/A	N/A	N/A	0
378-Pond	+ + +	+	N/A	+	N/A	N/A	+	+
382-Fencing	F+ + +	F+ + +	N/A	N/A	N/A	N/A	+ +	+
391-Riparian Forest Buffer	0	+ + +	N/A	+ +	N/A	+	0	+ + +
410-Grade Stabilization Structure	+ + +	+	N/A	+	N/A	N/A	+	+
512-Pasture & Hayland Planting	+ + +	+ + +	+ + +	+ +	+ +	N/A	+ + +	+ + +
516-Pipeline	+	+ +	N/A	N/A	N/A	N/A	+	+

RATINGS:

Not Applicable	=	N/A	Slight	=	+ or -
Negligible	=	0	Moderate	=	+ + or --
Facilitating	=	F	Significant	=	+ + + or ---

Conservation Practice Physical Effects on Resource Concerns
Candidate Practice List

State	Oklahoma	Field Office	Ada, Atoka, Coalgate, Eufaula, Holdenville, McAlester, Muskogee, Okemah, Stigler, Tulsa, Wagoner	MLRA	118B	System Template Label	OAJZ3

Resource Concerns / Conservation Practices	Plant Pests	Domestic Animal Water Requirements	Wildlife Food Requirements	Wildlife Habitat Suitability	Animals Population - Resource Balance Management			
312-Waste Management System	N/A	N/A	N/A	+	+ + +			
313-Waste Storage Facility	N/A	N/A	N/A	N/A	0			
314-Brush Management	+ + +	N/A	-	+ + +	+ + +			
317-Compost Facility	N/A	N/A	N/A	N/A	0			
342-Critical Area Planting	+	N/A	N/A	+ + +	+ +			
359-Waste Treatment Lagoon	N/A	N/A	N/A	N/A	0			
362-Diversion	N/A	N/A	N/A	N/A	0			
378-Pond	N/A	+ + +	N/A	+ + +	+ + +			
382-Fencing	F+ +	N/A	--	F+ + +	F+ + +			
391-Riparian Forest Buffer	N/A	N/A	+ + +	N/A	0			
410-Grade Stabilization Structure	N/A	+ +	N/A	+ +	F+ + +			
512-Pasture & Hayland Planting	+ + +	N/A	---	+ + +	+ + +			
516-Pipeline	N/A	F+ + +	N/A	F+ + +	F+ + +			

RATINGS:

Not Applicable = N/A		Slight =	+ or -
Negligible = 0		Moderate =	+ + or --
Facilitating = F		Significant =	+ + + or ---

Conservation Practice Physical Effects on Resource Concerns
Candidate Practice List

State	Oklahoma	Field Office	Ada, Atoka, Coalgate, Eufaula, Holdenville, McAlester, Muskogee, Okemah, Stigler, Tulsa, Wagoner	MLRA	118B	System Template Label	QAJZ3

Resource Concerns / Conservation Practices	Classic Gully	Streambank Erosion	Excess Fertilizer in Soil	Runoff/ Flooding	Annual Phosphorus Applied	Airborne Odors	Plants Unsuitable for Intended Use	Nutrient Management
528A-Prescribed Grazing	+	+	+	+ +	+ +	N/A	+ + +	+
580-Streambank & Shoreline Prot.	F+	F+	F+	F+	F+	N/A	N/A	N/A
590-Nutrient Management	N/A	N/A	+ + +	+	+	+ + +	+	+ + +
595-Pest Management	N/A	N/A	N/A	+	+	N/A	+	N/A
614-Trough or Tank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
633-Waste Utilization	N/A	N/A	+ + +	+	+	+ +	+	F+ + +
642-Well	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
644-Wildlife Wetland Habitat Mgt.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
645-Wildlife Upland Habitat Mgt.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

RATINGS:

Not Applicable	=	N/A	Slight	=	+ or -
Negligible	=	0	Moderate	=	+ + or --
Facilitating	=	F	Significant	=	+ + + or ---

Conservation Practice Physical Effects on Resource Concerns
Candidate Practice List

State	Oklahoma	Field Office	Ada, Atoka, Coalgate, Eufaula, Holdenville, McAlester, Muskogee, Okemah, Stigler, Tulsa, Wagoner	MLRA	118B	System Template Label	QAJZ3

Resource Concerns / Conservation Practices	Plant Pests	Domestic Animal Water Requirements	Wildlife Food Requirements	Wildlife Habitat Suitability	Animals Population - Resource Balance Management			
528A-Prescribed Grazing	+ + +	0	+ + +	+ + +	+ + +			
580-Streambank & Shoreline Prot.	0	+	+ + +	+ + +	+			
590-Nutrient Management	+ + +	+	+ +	+	F+ + +			
595-Pest Management	+ + +	+	+ +	+ +	+ + +			
614-Trough or Tank	+	+ + +	N/A	F+ + +	F+ + +			
633-Waste Utilization	+ + +	+	+ +	+	+ + +			
642-Well	+	+ + +	N/A	F+ + +	F+ + +			
644-Wildlife Wetland Habitat Mgt.	+	0	+ + +	+ + +	+			
645-Wildlife Upland Habitat Mgt.	+	0	+ + +	+ + +	+			

RATINGS:

Not Applicable	=	N/A	Slight	=	+ or -
Negligible	=	0	Moderate	=	+ + or --
Facilitating	=	F	Significant	=	+ + + or ---