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 SOIL INTERPRETATIONS FOTG, SECTION II - MINED LAND INTERPRETATIONS FOTG, SECTION II - WILDLIFE INTERPRETATIONS FOTG, SECTION III - RESOURCE MANAGEMENT SYSTEMS - SOIL FOTG, SECTION III - RESOURCE MANAGEMENT SYSTEMS - MINED FOTG, SECTION V-A-1 - CONSERVATION EFFECTS - SOIL FOTG, SECTION V-A-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 III - RESOURCE MANAGEMENT SYSTEMS - MINED 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-1 - CONSERVATION EFFECTS - AIR FOTG, SECTION V-A-2 - EFFECTS FOR GUIDANCE DOCUMENTS
5.4	PLANT	FOTG, SECTION I - THREATENED AND ENDANGERED SPECIES FOTG, SECTION II - RANGELAND INTERPRETATIONS FOTG, SECTION III - RESOURCE MANAGEMENT SYSTEMS - PLANTS FOTG, SECTION III - RESOURCE MANAGEMENT SYSTEMS - MINED FOTG, SECTION V-A-1 - CONSERVATION EFFECTS - PLANTS FOTG, SECTION V-A-2 - EFFECTS FOR GUIDANCE DOCUMENTS
5.5	ANIMAL	FOTG, SECTION I - THREATENED AND ENDANGERED SPECIES FOTG, SECTION II - WILDLIFE INTERPRETATIONS FOTG, SECTION III - RESOURCE MANAGEMENT SYSTEMS - ANIMALS FOTG, SECTION III - RESOURCE MANAGEMENT SYSTEMS - WILDLIFE 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 I - STATE/LOCAL LAWS, ORDINANCES, REGULATIONS FOTG, SECTION V-B-1 - CONSERVATION EFFECTS - PRODUCER EXPERIENCES
6	HYDROLOGIC UNIT	
7	SYSTEM TEMPLATE LABEL	QAGZ1
8	SYSTEM NAME	CURRENTLY MINED AND/OR ABANDONED MINE LAND
9	PLANNING PHASE	NON-BENCHMARK
10	PLANNING LEVEL	RMS

11	**NRCS LANDUSE**	MINED	
12	**PLANNED CONSERVATION PRACTICES**		*enter code / name of practice*
	1. 314 - Brush Management 2. 342 - Critical Area Planting 3. 362 - Diversion 4. 378 - Pond 5. 382 - Fencing 6. 410 - Grade Stabilization Structure 7. 412 - Grassed Waterway 8. 452 - Land Reclamation-Shaft and Adit Closing 9. 454 - Land Reclamation-Subsidence Treatment 10. 455 - Land Reclamation-Toxic Discharge Control 11. 456 - Land Reclamation-Highwall Treatment 12. 472 - Use Exclusion		13. 512 - Pasture and Hayland Planting 14. 516 - Pipeline 15. 528-A - Prescribed Grazing 16. 543 - Land Reconstruction (AML) 17. 544 - Land Reconstruction (CML) 18. 550 - Range Seeding 19. 590 - Nutrient Management 20. 595 - Pest Management 21. 612 - Tree/Shrub Establishment 22. 614 - Trough or Tank 23. 642 - Well 24. 645 - Wildlife Upland Habitat Management
13	**SYSTEM NARRATIVE**	*describe how the practices work together as a system*	
	By applying the appropriate combination of the practices listed above, mine sites, abandoned or new, can be put into some form of productivity. Many of these practices may be needed to treat highwall situations that are dangerous to the public and/or livestock. Practices such as diversions, grassed waterways, critical area planting, pasture and hayland planting, range seeding and tree/shrub establishment can be used to treat sheet, rill, ephemeral, and gully erosion associated with strip mined areas. Soil fertility and condition can be improved through the application of fertilizer and/or animal waste or other organic material. Treatment of soil fertility and condition concerns, along with planting grass, mulching and proper grazing by livestock, will also help minimize or eliminate plant establishment, growth and harvest concerns. Many of these sites have extremely acidic water and will be treated with agricultural limestone or another form of base (pH above 7.0) material. Any livestock grazing will be closely managed in order to prevent damage to established plant cover and to balance livestock forage requirements with forage production.		
14	**RESOURCE CONCERNS**	**MAGNITUDE/EFFECTS**	**IMPACTS**
	1. Sheet and Rill Erosion	1. By planting permanent vegetative cover on these areas, sheet and rill erosion can be reduced to a minimum (approx. 1 ton/ acre/year).	1. Reduction in sheet and rill erosion of 9 tons/acre/year or more.
	2. Ephemeral Erosion	2. By planting permanent vegetative cover on these areas, ephemeral erosion can be reduced to a minimum (approx. 1 ton/acre/year).	2. Reduction in ephemeral erosion of 3 tons/ acre/year or more.
	3. Classic Gully	3. By shaping gullies, planting vegetation and installing grade stabilization structures and grassed waterways, classic gully erosion can be reduced to a minimum of 1 ton/year/each acre of gully treated.	3. Reduction in classic gully erosion of 19 tons/year on each acre of gully treated.
	4. Soil Condition - Other	4. By applying commercial fertilizer at recommended soil test rates and adding organic matter, soil productivity can be improved.	4. Improvement in soil productivity and structure.

	5. Surface Water pH	5. Filling and shaping of abandoned strip mines and treating acid water with agricultural limestone will eliminate this concern with strip mines. By plugging shafts and adits of abandoned underground mines acid water seepage and/or flow can be eliminated from abandoned shaft mines.	5. Reduction and/or elimination of acid mine drainage into surface waters. Improvement in livestock and human safety.
	6. Establishment, Growth and Harvest	6. By applying organic matter, planting grass, mulching, managing grazing by livestock and properly fertilizing, some of the establishment, growth, and harvest concerns can be overcome. Due to the high sensitivity of these areas, a high degree of management must be maintained.	6. Vegetating denuded areas. Reduction of soil erosion.
	7. Animals Population - Resource Balance Management	7. By fencing and properly grazing these areas, livestock numbers and forage requirements can be balanced with forage production.	7. Improvement in forage production. Improvement in harvesting efficiency of livestock. Improvement in livestock performance.
CRA	**118B.40.001**	**SYSTEM TEMPLATE LABEL** QAGZ1	

15	*** QUALITY CRITERIA DOCUMENTATION** *list resource concerns then indicate yes/no (X)*	
	1. Sheet and Rill Erosion	_X_YES ___NO
	2. Ephemeral Erosion	_X_YES ___NO
	3. Classic Gully	_X_YES ___NO
	4. Soil Condition - Other	_X_YES ___NO
	5. Surface Water pH	_X_YES ___NO
	6. Establishment, Growth and Harvest	_X_YES ___NO
	7. 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	OAGZ1

Resource Concerns / Conservation Practices	Sheet and Rill Erosion	Ephemeral Gully	Classic Gully	Soil Condition - Other	Surface Water pH	Establishment, Growth and Harvest	Animals Population - Resource Balance Management	
314-Brush Management	-	-	-	N/A	N/A	+	+	
342-Critical Area Planting	+ + +	+ + +	+ + +	N/A	N/A	+	+	
362-Diversion	+ + +	+ + +	+ + +	N/A	N/A	N/A	N/A	
378-Pond	+ + +	+ + +	+ + +	N/A	N/A	N/A	N/A	
382-Fencing	F+ +	F+ +	F+ +	N/A	N/A	F+	F+	
410-Grade Stabilization Structure	+ + +	+ + +	+ + +	N/A	N/A	N/A	N/A	
412-Grassed Waterway	+ + +	+ + +	+ + +	N/A	N/A	+	+	
452-Land Recl.-Shaft & Adit Clsg.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
454-Land Recl.-Subsidence Trtmt.	+	+	+	+	+	+	+	
455-Land Recl.-Toxic Disch. Ctrl.	N/A	N/A	N/A	+	+	+	+	
456-Land Recl.-Highwall Trtmt.	N/A	N/A	N/A	N/A	N/A	+	+	
472-Use Exclusion	F+	F+	F+	N/A	N/A	+ + +	+ + +	
512-Pasture & Hayland Planting	+ + +	+ + +	+ + +	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	OAGZ1

Resource Concerns / Conservation Practices	Sheet and Rill Erosion	Ephemeral Gully	Classic Gully	Soil Condition - Other	Surface Water pH	Establishment, Growth and Harvest	Animals Population - Resource Balance Management	
516-Pipeline	N/A	N/A	N/A	N/A	N/A	N/A	F+ + +	
528A-Prescribed Grazing	+	+	+	N/A	N/A	+ +	+ +	
543-Land Reconstruction (AML)	+ + +	+ + +	+ + +	N/A	+	+	+	
544-Land Reconstruction (CML)	+ + +	+ + +	+ + +	N/A	+	+	+	
550-Range Seeding	+ + +	+ + +	+ + +	N/A	N/A	+ + +	+ + +	
590-Nutrient Management	N/A	N/A	N/A	N/A	N/A	+ + +	+ + +	
595-Pest Management	N/A	N/A	N/A	N/A	N/A	+	+	
612-Tree/Shrub Establishment	+ + +	+ + +	+ + +	N/A	N/A	+	+	
614-Trough or Tank	N/A	N/A	N/A	N/A	N/A	N/A	F+ + +	
642-Well	N/A	N/A	N/A	N/A	N/A	N/A	F+ + +	
645-Wildlife Upland Habitat Mgt.	+	+	+	N/A	N/A	+	-	

RATINGS:

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