

MANAGEMENT SYSTEM TEMPLATE

B. CONSERVATION MANAGEMENT SYSTEM OPTIONS WORKSHEET

1.	STATE	OK
2.	FIELD OFFICE	Ardmore, Sulphur, Tishomingo
3.	MLRA	85B - Arbuckle Mountains
4.	COMMON RESOURCE AREA (CRA)	085B.40.001
5.	RESOURCE INTERPRETATIONS	<i>for each resource enter available interp data</i>
5.1	SOIL	
5.2	WATER	
5.3	AIR	
5.4	PLANT	
5.5	ANIMAL	
5.6	HUMAN	
6.	HYDROLOGIC UNIT	
7.	SYSTEM TEMPLATE LABEL	LAAZ4
8.	SYSTEM NAME	Arbuckle Mountains Crop
9.	PLANNING PHASE	Benchmark, Alternative, Planned
10.	PLANNING LEVEL	Resource Management System
11.	NRCS LANDUSE	Crop
12.	PLANNED CONSERVATION PRACTICES	<i>list practices in the system</i>
		<ol style="list-style-type: none"> 1. 328 - Conservation Crop Rotation 2. 329 - Conservation Tillage System 3. 330 - Contour Farming 4. 340 - Cover and Green Manure Crop 5. 342 - Critical Area Planting 6. 344 - Residue Management, Seasonal 7. 362 - Diversion 8. 393 - Filter Strip 9. 412 - Grassed Waterway 10. 590 - Nutrient Management 11. 595 - Pest Management 12. 600 - Terrace 13. 607 - Surface Drainage - Field Ditch
13.	SYSTEM NARRATIVE	<i>describe how the practices work together as a system</i>
		<p>This system includes conservation crop rotation, conservation tillage system, residue management - seasonal, nutrient management, and pest management. On the sloping uplands, the system may also include terraces, diversions, grassed waterways, critical area planting, and contour farming. On the flat bottomlands, the system might include cover and green manure crops, critical area planting, filter strips, and field ditches. The land treatment practices are designed to control the rate and amount of runoff waters, increase soil organic matter, increase infiltration, increase water-holding capacity of the soil, and reduce erosion. Maintenance of existing practices (terraces, grassed waterways, field ditches, filter strips, etc.) is a very important part of the system. The most commonly grown crops include corn, cotton, forage sorghum, grain sorghum, mungbeans, soybeans, peanuts, small grains, and a few specialty crops grown either continuously or in various rotations. Overall, the cropland systems need to be managed more intensively. Nutrient and pest management activities are most effective when the appropriate timing and application techniques are used (including the use of a current soil test analysis and crop scouting). Performing together, all of the various combinations of practices that are a part of this system will significantly improve water quality. Providing the decisionmakers with more information on reduced tillage options, and keeping the communication lines open to new cost-effective ideas will help them to improve their operations. By leaving more residue and developing better tillage systems, the management system is more cost-effective because of the reduction in tillage operations, the savings in time, the savings in labor, the savings in fuel, and the overall improvement in the natural resources. There will be a positive improvement in the production of this management system with less inputs and expenses.</p>

14.	RESOURCE CONCERNS	MAGNITUDE/EFFECTS	IMPACTS
	1. Soil Erosion - Sheet and Rill	1. 4 Tons/Acre/Year	1. 9 Tons/Acre/Year; Improvement in residue management, increased use of winter cover plantings, reduced erosion rates, improved water quality, increased input and maintenance costs, improved yields, improved economic returns, and extended productive life of the field.
	2. Soil Erosion - Concentrated Flow Ephemeral Gully	2. 1.0 Ton/Acre/Year; 5 Acres/160 Acres	2. 2.0 Tons/Acre/Year; 15 Acres/160 Acres; Improvement in the use of terrace maintenance on existing systems, building new terrace systems, and planting the steeper, more erosive soils to permanent vegetation will decrease or eliminate this problem. Reduce the potential risk of the ephemeral gullies forming into classic gullies.
	3. Soil Erosion - Scoured Areas	3. 5 Tons/Acre/Year	3. 45 Tons/Acre/Year; Establishing buffer zones, improving the suitability of the vegetation, and improving the soil organic matter content will readily reduce the magnitude of this concern.
	4. Soil Condition - Soil Tilth	4. Soil Condition Indices range from 0.0 to +2.5. Increased organic matter, reduced tillage and compaction, less runoff.	4. Improved soil condition indices of 2.5 to 5.0. Improved soil tilth, improved infiltration, reduced crusting, reduced input costs through reduced tillage operations, and improved water conservation. There is a slight possible risk of increased pesticide use. Enhanced crop growth and higher economic returns can be expected.
	5. Soil Condition - Compaction	5. Reduced tillage operations and improved crop residue management.	5. Plow pans and compacted layers are decreased, improved soil organic matter, improved infiltration, better water conservation, higher yields, and better economic returns. There is the potential for an increase in the use of pesticides.
	6. Soil Deposition - Damage-Onsite	6. Reduced erosion levels, reduced tillage operations, increased crop residues, increased use of winter cover crops, less damage to growing vegetation.	6. Decreased deposition and less damage to growing crops. Improved yields and better economic returns.
	7. Water Quantity - Excess Amounts - Runoff/Flooding	7. With the installation and maintenance of field ditches the management of excess waters will be significantly improved.	7. Improved crop yields, soil tilth, organic matter, infiltration, cost effectiveness, and an unrestricted suitable use of the land.
	8. Water Quality - Surface Water Contaminants - Pesticides	8. Installation, management and maintenance of associated cropland practices will reduce soil erosion, therefore, less contamination from attached pesticides. Pesticides are applied according to all label directions with the appropriate timing and techniques.	8. Reduced soil erosion directly results in reduced potential pesticide contamination from attached soil particles. Improvement in pest management activities with the application of pesticides according to label directions.
	9. Water Quality - Surface Water Contaminates - Nutrients and Organics	9. Installation, management and maintenance of associated cropland practices, as well as proper nutrient management (appropriate rates, timing, etc.) will reduce the amount of water carried sediments, nutrients, and organics.	9. Reduced water pollution resulting from inappropriate use of nutrients. Proper use and management of nutrients will result in improved suitability and use of the land and improve the economic return.
	10. Plants Management - Establishment, Growth & Harvest	10. Improved conditions for establishment and growth due to proper application techniques of nutrients and pesticides, with a resultant improvement in plant vigor, quality and quantity of production and harvest.	10. Proper techniques and timing for establishment, growth, and harvest improve the quality of the land and provide higher economic returns.
	11. Plants Management - Nutrient Management	11. Proper techniques and timing used during nutrient applications.	11. Plant nutrient needs are met due to improved nutrient management practices.
	12. Plants Management - Pest (Brush, Weeds, Insects, Etc.)	12. Pests are managed when economic thresholds dictate with proper timing and techniques used during application of pesticides.	12. Improvement in pest management resulting in improved economic returns.

14.	RESOURCE CONCERNS	MAGNITUDE/EFFECTS	IMPACTS
	13. Human - Economics - Profitability	13. With the installation, management and maintenance of the associated cropland practices, the cost-effectiveness of the system will be improved due to the expected improvement in yields and the extended sustainable use of the land.	13. Reduced soil erosion, improved crop yields, improved water quality, improved suitability of the landuse, improved cost-effectiveness, and improved profitability.
15.	QUALITY CRITERIA DOCUMENTATION <i>list resource concerns then indicate yes/no</i>		
	<ul style="list-style-type: none"> 1. Soil Erosion - Sheet and Rill 2. Soil Erosion - Concentrated Flow Ephemeral Gully 3. Soil Erosion - Scoured Areas 4. Soil Condition - Soil Tilth 5. Soil Condition - Compaction 6. Soil Deposition - Damage-Onsite 7. Water Quantity - Excess Amounts Runoff/Flooding 8. Water Quality - Surface Water Contaminates - Pesticides 9. Water Quality - Surface Water Contaminates - Nutrients and Organics 10. Plants Management - Establishment, Growth, Harvest 11. Plants Management - Nutrient Management 12. Plants Management - Pest (Brush, Weeds, Insects, Etc.) 13. Human - Economics - Profitability 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO 	

Conservation Practice Physical Effects on Resource Concerns Candidate Practice List

State Oklahoma		Field Office		MLRA 085B.40.001		Template Label LAAZ								
Resource Concerns	>	Soil Erosion Sheet and Rill	Soil Erosion Conc. Flow Ephemeral Gully	Soil Erosion Secured Areas	Soil Condition Soil Tilt	Soil Condition Soil Compaction	Soil Deposition Damage Onsite	Water Quantity Excess Amounts Runoff/Flooding	Water Quality Surface Water Contaminates Pesticides	Water Quality Surface Water Contaminates Nutr & Organics	Plants Mgmt. Establishment Growth & Harvest	Plants Mgmt. Nutrient Management	Plants Mgmt. Pest (Brush, Woods, Insects, Etc.)	Human Economics Profitability

328	+	+	+	+	+	+	+	+	+	+	0	0	0	+
329	+	+	+	+	+	+	+	+	+	+	0	0	0	+
330	+	+	+	0	+	0	+	+	+	+	0	0	0	+
340	+	+	+	+	+	+	+	+	+	+	+	+	+	+
342	+	+	+	+	+	+	+	+	+	+	N/A	N/A	+	+
344	+	+	+	+	+	0	+	+	0	0	+	+	N/A	+
362	+	+	+	0	0	0	+	+	+	+	+	N/A	+	+
393	+	+	+	+	0	0	+	N/A	+	+	+	N/A	0	+
412	0	0	0	0	0	0	+	+	+	+	+	+	+	+
590	0	0	0	0	0	0	0	+	+	0	+	N/A	+	+
595	0	0	0	0	0	0	0	N/A	0	0	+	N/A	0	+
600	+	+	+	0	0	0	+	+	+	+	+	N/A	0	+
607	+	+	+	0	+	+	+	+	-	-	+	-	-	+

+ = Positive Effect - = Negative Effect 0 = Negligible Effect N/A = Not Applicable