

Watershed Assessment

Introduction

A Rapid Watershed Assessment (RWA) resource assessment matrix has been developed to provide an estimate of conservation systems and practices which are commonly used to address the resource concerns identified in the RWA Resource Profile. The assessment also provides a method to compare current resource conditions with desired future conditions within the watershed.

The rapid assessment matrix summarizes, in tabular form, the projected level of conservation application and the related installation costs at the current rate of participation in NRCS conservation programs. The projected resource conditions and conservation implementation activities are those expected if NRCS programs and funding levels remain the same over the five year evaluation period.

Resource professionals provided an estimate by percent of the conservation systems or practices that are commonly applied in Progressive and RMS systems or on Baseline land units that address resource concerns identified in the resource profile. The estimates are based on long-term watershed trends for participation rates in the existing conservation programs using the Performance Results System (PRS) reports of planned and applied conservation practices for the watershed. This information was merged with estimated costs for practice installation and operation and maintenance to generate a cost estimate by individual practice for each conservation system projected to be applied.

Conservation systems are described in this assessment as a combination of conservation practices developed to address resource concerns on various land uses. The current condition of the soil, water, plant, animal, and human (SWAPA+H) resources for the watershed has been assessed for each land use. The current intensity of resource management was divided into three categories: Baseline, Progressive, or a Resource Management System (RMS).

Baseline –represents those landowners who typically are not participating in conservation programs. There may, however, be a few practices that have been commonly adopted by all landowners in a particular watershed. For example, most landowners follow a “conservation cropping system” that meets Natural Resources Conservation Service (NRCS) conservation practice standards and specifications.

Progressive Management System – progressive adoption of conservation systems which may lead to a full RMS. Landowners at this level are actively participating in conservation programs and have adopted several practices but have not satisfied all of the “Quality Criteria” in Section III of the Field Office Technical Guide (FOTG) for either North Dakota or South Dakota. Progressive conservation plans consist of one or more facilitative practices without any resource management.

RMS –system of conservation practices that address all the SWAPA+H resource concerns typically seen for this land use in this watershed.

The Progressive and RMS level for conservation systems have been defined and are shown in Section III of the Field Office Technical Guide (FOTG).



WEST MISSOURI COTEAU WATERSHED— 10130106 8-DIGIT HYDROLOGIC UNIT ASSESSMENT

USDA Natural Resources Conservation Service (NRCS)

September 2009

The systems that have been evaluated in the assessment are not meant to be comprehensive or address all resource concerns for each land unit in the watershed; rather, only the priority resource concerns and the typical system of conservation practices that are currently applied for the identified resource concerns. Numerous alternatives and combinations of practices exist that are available to watershed landowners and producers in order to meet their desired level of treatment for any resource concern.

Specific resource concerns have been identified for each major land use at the state level. Local watershed residents provided further prioritization of these concerns, identifying the top 13 resource concerns for the watershed:

- ◆ Windbreaks and Shelterbelts
- ◆ Surface Water Quality – Sediment and Nutrients
- ◆ Agricultural Waste Management
- ◆ Riparian Area and Streambank Erosion
- ◆ Water Quantity for Livestock
- ◆ Soil Erosion
- ◆ Nutrient Management
- ◆ Loss of CRP Acres
- ◆ Weed and Pest Management
- ◆ Lack of Grazing Management
- ◆ Wetland and Wildlife Habitat Management
- ◆ Groundwater Quality
- ◆ Air Quality

The resource concerns specific to the watershed have been identified and evaluated by major land use in the watershed assessment.

ASSESSMENT SUMMARY TABLES

The assessment matrix is used to individually assess the identified resource concerns for each land use within the watershed. The land uses that have been assessed in this watershed are cropland, rangeland/pastureland, hayland, wildlife/CRP, and headquarters/farmstead. The acres in each land use category were obtained from the 1997 National Resources Inventory (NRI) Broad Land Use data. The tables in each land use section summarize the current and projected future conditions by conservation system along with the average present value cost per acre and the conservation practices at each treatment level (Baseline, Progressive, and RMS).

Cropland – A land cover/use category that includes areas used for the production of adapted crops for harvest. Cultivated cropland comprises land in row crops or close-grown crops and other cultivated cropland, for example, hayland or pastureland that is in rotation with row or close-grown crops. The cropland acres identified in the watershed are predominantly managed in a corn/soybean/small grain cropping rotation.



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Hayland –Land managed for the production of forage crops that are machine harvested. These crops may be grasses, legumes, or a combination.

Rangeland/Pastureland/Grazed Forest – Rangeland is defined as undisturbed acres that still support a predominantly native population of grasses managed for livestock forage. Pastureland is defined as land managed primarily for the production of introduced forage plants for livestock grazing.

Pastureland cover may consist of a single species in a pure stand, a grass mixture, or a grass-legume mixture. Grazed Forest is a land cover/use that includes forest land that is being grazed by livestock and managed using range or pasture management principles and practices adapted to the forest ecosystem.

Wildlife/CRP Land – For the purposes of the watershed assessment Conservation Reserve Program (CRP) acres were evaluated with land cover/use categories that include areas that are not actively managed as part of any other land use.

Headquarters/Farmsteads – The headquarters or farmstead areas consist of land used for dwellings, outbuildings, barns, pens, corrals, and feedlots next to buildings, farmstead or feedlot windbreaks and family gardens associated with operating farms or ranches.

Resource Assessment Summary

The following summaries are based on the Resource Assessment matrices that evaluate the projected conservation resource applications and investments expected to occur at current participation rates and program funding levels. Only the top four resource concerns were evaluated for each land use. The cost estimates are based on the typical conservation practices applied that treat these resource concerns.

Disclaimer: This assessment is a combination of North and South Dakota PRS and cost data. The costs and cost share will vary by state for individual practices and combination of practices.

West Missouri Coteau - 10130106

Projected Conservation Program Participation & Costs*

Land Uses	Participation Rate	Acres Treated	Installation Costs			
			Total	Federal		Private
				Cost Share	Technical Assistance	
Cropland	17%	62,907	\$661,000	\$184,000	\$661,000	
Grazingland	15%	69,687	\$513,000	\$133,000	\$513,000	
Hayland	10%	2,585	\$4,000	\$7,000	\$4,000	
HQ	3%	648	\$128,000	\$26,000	\$128,000	
Wildlife/CRP	5%	7,139	\$231,000	\$51,000	\$231,000	

*Estimate of federal and private investments in conservation activities over the next 5 year period. Assumes that past program participation and funding levels will continue over this period.

*Costs rounded to nearest thousand dollars.

Resource Assessment by Landuse

Cropland

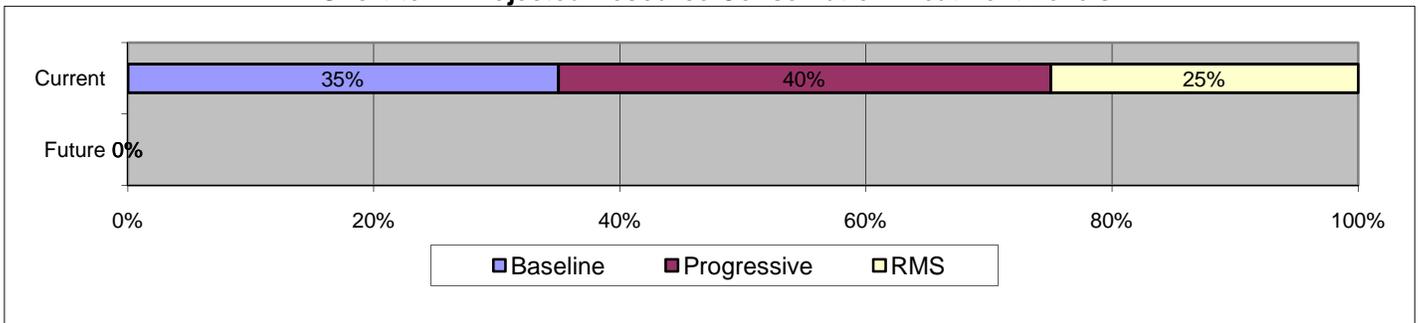
Resource Concerns:

- Soil Erosion – Sheet and Rill
- Soil Erosion – Wind
- Soil Erosion – Ephemeral Gully
- Water Quality – Excessive Nutrients and Organics in Surface Water

Conservation Practices Evaluated:

- ; Conservation Cover; Conservation Crop Rotation; Grassed Waterway; Irrigation System, Sprinkler; Irrigation Water Conveyance, Pipeline; Irrigation Water Management; Mulching; Nutrient Management; Pest Management; Residue and Tillage Management, Mulch Till; Residue Management, No-Till/Strip Till/Direct Seed; Residue Management, Seasonal; Salinity and Sodic Soil Management; Upland Wildlife Habitat Management; Windbreak/Shelterbreak Establishment.

Short-term Projected Resource Conservation Treatment Levels



Rangeland/ Pastureland

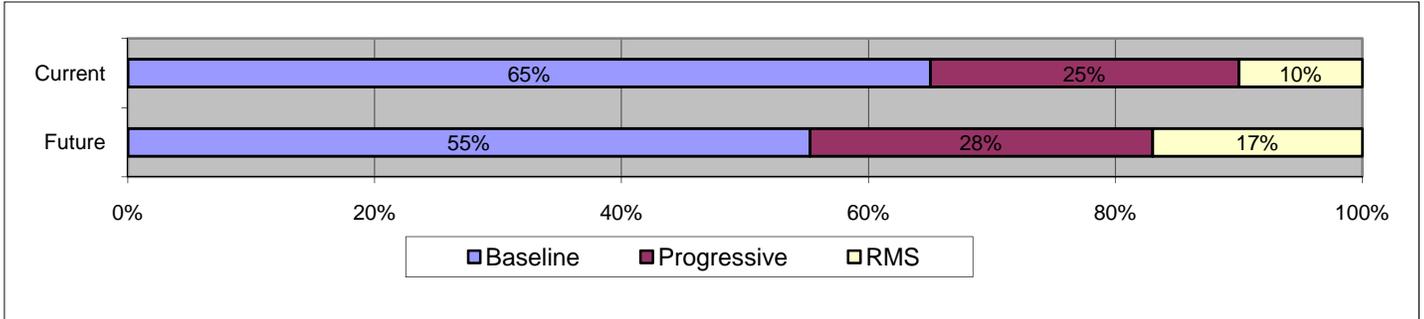
Resource Concerns:

- Soil Erosion – Sheet and Rill
- Plant Condition – Noxious and Invasive Plants
- Domestic Animals – Inadequate Quantities and Quality of Feed and Forage
- Domestic Animals – Inadequate Stock Water

Conservation Practices Evaluated:

- Fence; Pasture & Hayland Planting; Pest Management; Pipeline; Pond; Prescribed Grazing; Pumping Plant; Range Planting; Spring Development; Water Well; Watering Facility.

Short-term Projected Resource Conservation Treatment Levels



Hayland

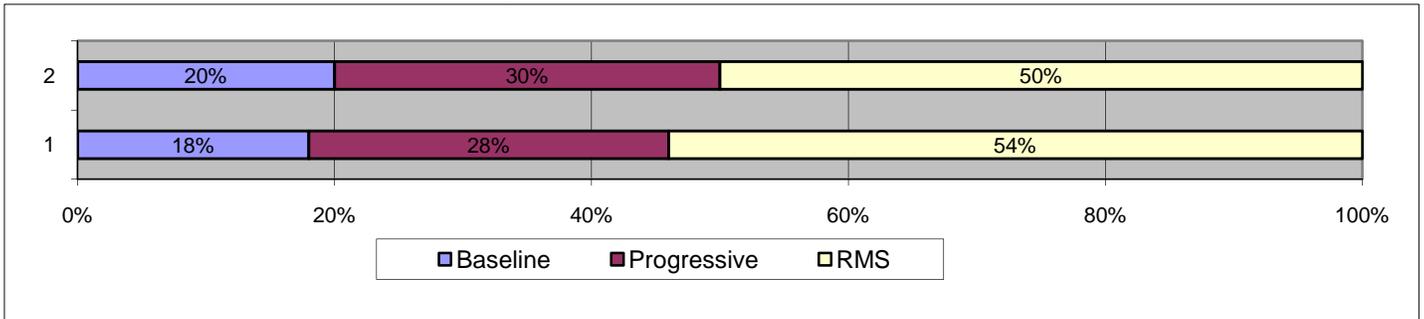
Resource Concerns:

- Soil Erosion – Sheet and Rill
- Plant Condition – Productivity, Health and Vigor
- Plant Condition – Noxious and Invasive Plants
- Plant Condition – Forage Quality and Palatability

Conservation Practices Evaluated:

- Forage Harvest Management; Nutrient Management; Pasture & Hayland Planting; Pest Management.

Short-term Projected Resource Conservation Treatment Levels



Headquarters

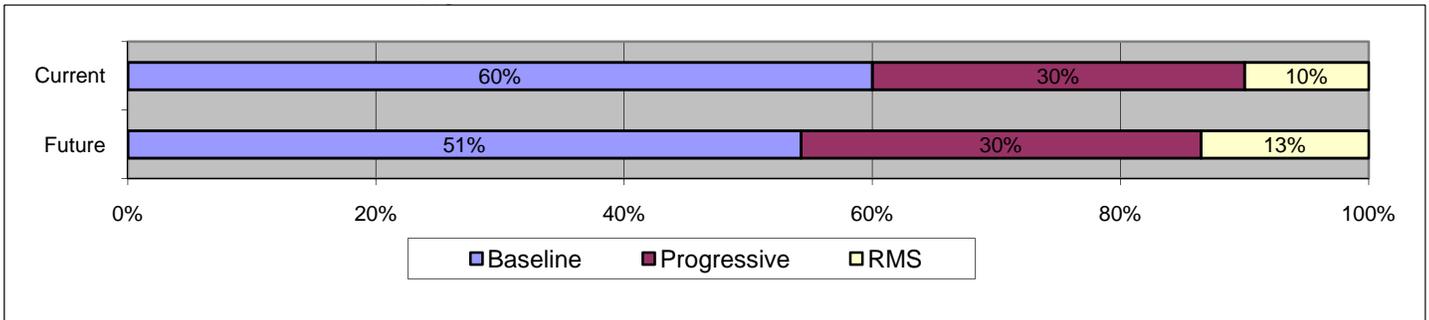
Resource Concerns:

- Water Quality – Excessive Nutrients and Organics in Groundwater
- Water Quality – Excessive Nutrients and Organics in Surface Water
- Water Quality – Excessive Suspended Sediment and Turbidity in Surface Water
- Air Quality – Objectionable Odors

Conservation Practices Evaluated:

- Critical Area Planting; Heavy Use Area Protection; Mulching; Waste Storage Facility; Waste Utilization;
- Windbreak/Shelterbreak Establishment; Windbreak/Shelterbreak Renovation.

Short-term Projected Resource Conservation Treatment Levels



Wildlife/ CRP

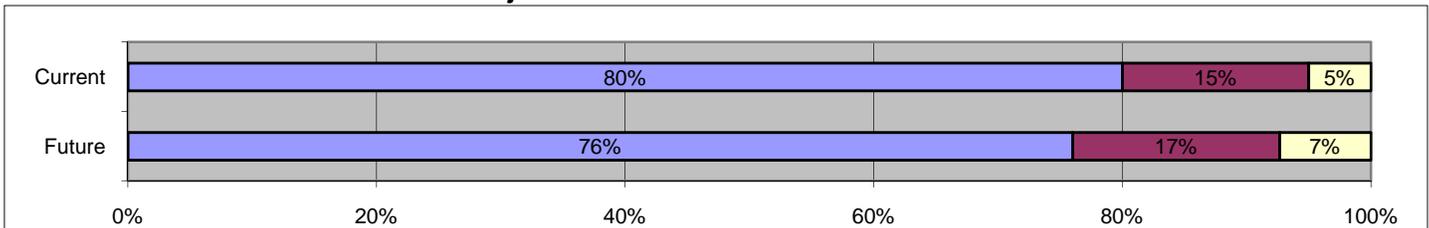
Resource Concerns:

- Plant Condition – Noxious and Invasive Plants
- Fish and Wildlife – Inadequate Cover/Shelter
- Fish and Wildlife – Habitat Fragmentation
- Fish and Wildlife – T & E Fish/Wildlife Species: Listed or Proposed under ESA

Conservation Practices Evaluated:

- Access Control; Conservation Cover; Early Successional Habitat Development/Management; Filter Strip;
- Mulching; Pest Management; Restoration and Management of Declining Habitats; Riparian Forest Buffer;
- Riparian Herbaceous Cover; Upland Wildlife Habitat Management; Wetland Enhancement; Wetland Restoration;
- Wetland Wildlife Habitat Management; Windbreak/Shelterbreak Establishment.

Short-term Projected Resource Conservation Treatment Levels



Enter Watershed Variables Below

Watershed Name	<input type="text" value="West Missouri Coteau"/>	Watershed Code	<input type="text" value="10130106"/>	<input type="button" value="Help"/>	
Landuse Type	<input type="text" value="Cropland"/>	Landuse Acres	<input type="text" value="483,900"/>	Interest Rate	<input type="text" value="6%"/>
Typical Unit Size (ac)	<input type="text" value="80"/>	Percent TA of FA	<input type="text" value="20%"/>	Cost-Share Rate	<input type="text" value="50%"/>
<i>Estimated Time Frame = 5 years</i>	Participation Rate <i>(Based on Watershed Profile)</i>	<input type="text" value="17%"/>	COMPARE	<input type="text" value="17%"/>	Calculated Participation Rate <i>(Based on Projected Future Conditions)</i>

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
Baseline	35%	169,365	Baseline	80%	135,492	Baseline	28%	135,492	135,492	0
			Progressive	10%	16,937					
			RMS	10%	16,937					
				<i>Must Total 100%</i>	<i>100%</i>					
Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
Progressive	40%	193,560	Progressive	85%	164,526	Progressive	38%	181,463	164,526	16,937
			RMS	15%	29,034					
				<i>Must Total 100%</i>	<i>100%</i>					
Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
RMS	25%	120,975	RMS	100%	120,975	RMS	35%	166,946	120,975	45,971
Grand Totals	100%	483,900					100%	483,900	420,993	62,907

DOCUMENTATION SECTION

PRACTICE FACTOR SHEET

Only shaded practices are in this analysis.

Modify the formula for each Base, Prog, RMS to enter feet, no. or acres for each practice factor.

Please enter appropriate factor for each level of treatment (Baseline, Progressive, & RMS)



Code	BASE	PROG	RMS	SHORT NOTE <i>TU = Typical Unit Size</i>	Practice Name	Help
327	x 1.0%	x 10.0%	x 25.0%	PERCENT of TU	Conservation Cover (ac.) 327	
328	x 10.0%	x 25.0%	x 40.0%	PERCENT of TU	Conservation Crop Rotation (ac.) 328	
329	0.0%	x 5.0%	x 15.0%	PERCENT of TU	Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	
344	x 70.0%	x 75.0%	x 80.0%	PERCENT of TU	Residue Management, Seasonal (ac.) 344	
345	0.0%	0.0%	x 4.0%	PERCENT of TU	Residue and Tillage Management, Mulch Till (ac.) 345	
380	0	0	x 125	FEET per TU	Windbreak/Shelterbreak Establishment (ft.) 380	
412	0.0%	0.0%	x 0.1%	PERCENT of TU	Grassed Waterway (ac.) 412	
430	0	0	x 5	FEET per TU	Irrigation Water Conveyance, Pipeline (ft.) 430	
442	0.0%	0.0%	x 1.5%	PERCENT of TU	Irrigation System, Sprinkler (ac.) 442	
449	0.0%	0.0%	x 1.2%	PERCENT of TU	Irrigation Water Management (ac.) 449	
484	x 1.0%	x 1.1%	x 1.2%	PERCENT of TU	Mulching (ac.) 484	
590	0.0%	x 5.0%	x 26.0%	PERCENT of TU	Nutrient Management (ac.) 590	
595	0.0%	x 5.0%	x 15.0%	PERCENT of TU	Pest Management (ac.) 595	
645	x 1.0%	x 5.0%	x 10.0%	PERCENT of TU	Upland Wildlife Habitat Management (ac.) 645	
620	0	0	1	FEET per TU	Underground Outlet (ft.) 620	
600	0	0	5	FEET per TU	Terrace (ft.) 600	
585	0.0%	5.0%	10.0%	PERCENT of TU	Stripcropping (ac.) 585	
633	0.0%	0.0%	0.0%	PERCENT of TU	Waste Utilization (ac.) 633	
378	1	0	0	NUMBER per TU	Pond (no.) 378	
382	1,000	2,500	7,500	FEET per TU	Fence (ft.) 382	
512	0.0%	10.0%	0.0%	PERCENT of TU	Pasture & Hayland Planting (ac.) 512	
516	0	5,000	10,000	FEET per TU	Pipeline (ft.) 516	
528	25.0%	50.0%	100.0%	PERCENT of TU	Prescribed Grazing (ac.) 528	
533	0	1	1	NUMBER per TU	Pumping Plant (no.) 533	
550	0.0%	0.0%	10.0%	PERCENT of TU	Range Planting (ac.) 550	
574	1	1	1	NUMBER per TU	Spring Development (no.) 574	
614	1	3	5	NUMBER per TU	Watering Facility (no.) 614	
642	0	1	1	NUMBER per TU	Water Well (no.) 642	
314	10.0%	20.0%	40.0%	PERCENT of TU	Brush Management (ac.) 314	
410	0	0	1	NUMBER per TU	Grade Stabilization Structure (no.) 410	

WATERSHED NAME & CODE		WEST MISSOURI COTEAU - 10130106			LANDUSE ACRES		483,900	
LANDUSE TYPE		CROPLAND			TYPICAL UNIT SIZE ACRES		80	
ASSESSMENT INFORMATION					CALCULATED PARTICIPATION		17%	
Conservation Systems by Treatment Level	Benchmark Conditions	Future Conditions			RESOURCE CONCERNS			
	Total Units	Existing Unchanged Units	New Treatment Units	Total Units	Soil Erosion – Sheet and Rill	Soil Erosion – Wind	Soil Erosion – Ephemeral Gully	Water Quality – Excessive Nutrients and Organics in Surface Water
Baseline	System Rating ->				4	4	4	4
Conservation Cover (ac.) 327	1,694	1,355	0	1,355	5	5	5	3
Conservation Crop Rotation (ac.) 328	16,937	13,549	0	13,549	3	3	3	2
Mulching (ac.) 484	1,694	1,355	0	1,355	4	4	4	4
Residue Management, Seasonal (ac.) 344	118,556	94,844	0	94,844	0	2	2	1
Upland Wildlife Habitat Management (ac.) 645	1,694	1,355	0	1,355	3	3	3	3
Total Acreage at Baseline	169,365	135,492	0	135,492				
Progressive	System Rating ->				5	5	5	5
Conservation Cover (ac.) 327	19,356	16,622	1,524	18,146	5	5	5	3
Conservation Crop Rotation (ac.) 328	48,390	42,825	2,540	45,366	3	3	3	2
Mulching (ac.) 484	2,129	1,979	17	1,996	4	4	4	4
Nutrient Management (ac.) 590	9,678	8,226	847	9,073	0	0	0	5
Pest Management (ac.) 595	9,678	8,226	847	9,073	1	1	1	5
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	9,678	8,226	847	9,073	5	5	4	4
Residue Management, Seasonal (ac.) 344	145,170	135,250	847	136,097	0	2	2	1
Upland Wildlife Habitat Management (ac.) 645	9,678	8,396	677	9,073	3	3	3	3
Total Acreage at Progressive Level	193,560	164,526	16,937	181,463				
RMS	System Rating ->				5	5	5	5
Conservation Cover (ac.) 327	30,244	33,317	8,420	41,736	5	5	5	3
Conservation Crop Rotation (ac.) 328	48,390	57,342	9,436	66,778	3	3	3	2
Grassed Waterway (ac.) 412	60	60	23	83	0	0	3	4
Irrigation System, Sprinkler (ac.) 442	1,815	1,815	690	2,504	0	3	0	1
Irrigation Water Conveyance, Pipeline (ft.) 430	7,561	7,561	2,873	10,434	0	0	0	3
Irrigation Water Management (ac.) 449	1,452	1,452	552	2,003	0	3	0	4
Mulching (ac.) 484	1,452	1,940	63	2,003	4	4	4	4
Nutrient Management (ac.) 590	31,454	32,905	10,501	43,406	0	0	0	5
Pest Management (ac.) 595	18,146	19,598	5,444	25,042	1	1	1	5
Residue and Tillage Management, Mulch Till (ac.) 345	4,839	4,839	1,839	6,678	4	4	4	2
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	18,146	19,598	5,444	25,042	5	5	4	4
Residue Management, Seasonal (ac.) 344	96,780	130,411	3,145	133,556	0	2	2	1
Salinity and Sodic Soil Management (ac.) 610	60	60	23	83	4	4	4	2
Upland Wildlife Habitat Management (ac.) 645	12,098	13,719	2,976	16,695	3	3	3	3
Windbreak/Shelterbreak Establishment (ft.) 380	189,023	189,023	71,829	260,852	0	5	0	1
Total Acreage at RMS Level	120,975	120,975	45,971	166,946				

WATERSHED NAME & CODE		WEST MISSOURI COTEAU - 10130106				LANDUSE ACRES		483,900	
LANDUSE TYPE		CROPLAND				TYPICAL UNIT SIZE ACRES		80	
CONSERVATION COST TABLE						CALCULATED PARTICIPATION		17%	
Conservation Systems by Treatment Level	FUTURE	FEDERAL				PRIVATE			
	New Treatment Units	Installation Cost 50%	Management Cost - 3 yrs 100%	Technical Assistance 20%	Total Present Value Cost	Installation Cost 50%	Annual O & M + Mgt Costs 100%	Total Present Value Cost	
Progressive									
Conservation Cover (ac.) 327	1,524	\$57,161	\$0	\$11,432	\$68,593	\$57,161	\$3,430	\$71,608	
Conservation Crop Rotation (ac.) 328	2,540	\$0	\$0	\$2,540	\$2,540	\$0	\$12,702	\$19,553	
Mulching (ac.) 484	17	\$9,315	\$0	\$1,863	\$11,178	\$9,315	\$0	\$9,315	
Nutrient Management (ac.) 590	847	\$0	\$0	\$847	\$847	\$0	\$4,234	\$6,518	
Pest Management (ac.) 595	847	\$0	\$0	\$847	\$847	\$0	\$4,234	\$6,518	
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	847	\$0	\$0	\$2,540	\$2,540	\$0	\$12,702	\$19,553	
Residue Management, Seasonal (ac.) 344	847	\$0	\$0	\$847	\$847	\$0	\$4,234	\$6,518	
Upland Wildlife Habitat Management (ac.) 645	677	\$0	\$0	\$677	\$677	\$0	\$3,387	\$5,214	
Subtotal	16,937	\$66,476	\$0	\$21,594	\$88,070	\$66,476	\$44,924	\$144,797	
RMS									
Conservation Cover (ac.) 327	8,420	\$315,745	\$0	\$63,149	\$378,894	\$315,745	\$18,945	\$395,547	
Conservation Crop Rotation (ac.) 328	9,436	\$0	\$0	\$9,436	\$9,436	\$0	\$47,180	\$72,627	
Grassed Waterway (ac.) 412	23	\$17,239	\$0	\$3,448	\$20,687	\$17,239	\$690	\$20,144	
Irrigation System, Sprinkler (ac.) 442	690	\$241,345	\$0	\$48,269	\$289,614	\$241,345	\$9,654	\$282,010	
Irrigation Water Conveyance, Pipeline (ft.) 430	2,873	\$5,746	\$0	\$1,149	\$6,896	\$5,746	\$230	\$6,715	
Irrigation Water Management (ac.) 449	552	\$0	\$0	\$552	\$552	\$0	\$2,758	\$4,246	
Mulching (ac.) 484	63	\$34,599	\$0	\$6,920	\$41,519	\$34,599	\$0	\$34,599	
Nutrient Management (ac.) 590	10,501	\$0	\$0	\$10,501	\$10,501	\$0	\$52,503	\$80,821	
Pest Management (ac.) 595	5,444	\$0	\$0	\$5,444	\$5,444	\$0	\$27,219	\$41,900	
Residue and Tillage Management, Mulch Till (ac.) 345	1,839	\$0	\$0	\$3,678	\$3,678	\$0	\$18,388	\$28,306	
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	5,444	\$0	\$0	\$16,332	\$16,332	\$0	\$81,658	\$125,701	
Residue Management, Seasonal (ac.) 344	3,145	\$0	\$0	\$3,145	\$3,145	\$0	\$15,727	\$24,209	
Salinity and Sodic Soil Management (ac.) 610	23	\$1,149	\$0	\$230	\$1,379	\$1,149	\$115	\$1,633	
Upland Wildlife Habitat Management (ac.) 645	2,976	\$0	\$0	\$2,976	\$2,976	\$0	\$14,880	\$22,905	
Windbreak/Shelterbreak Establishment (ft.) 380	71,829	\$44,893	\$0	\$8,979	\$53,872	\$44,893	\$898	\$48,675	
Subtotal	45,971	\$660,716	\$0	\$184,206	\$844,922	\$660,716	\$290,845	\$1,190,038	
Grand Total	62,907	\$727,192	\$0	\$205,800	\$932,992	\$727,192	\$335,769	\$1,334,835	

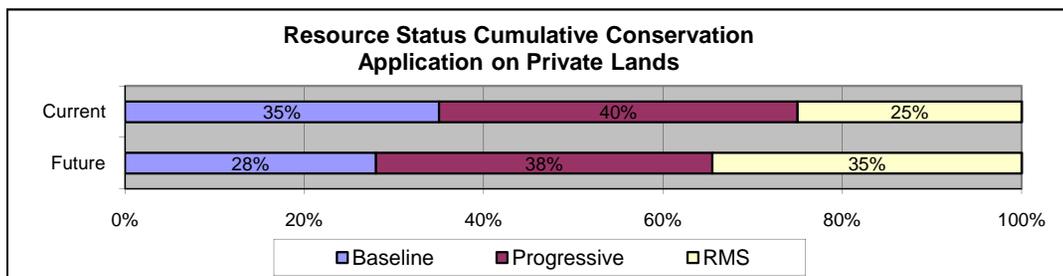


Chart Refers To	
Landuse Type	CROPLAND
Calculated Participation Rate	17%

Average PV Costs per Ac		
System	Federal	Private
Prog	\$5.20	\$8.55
RMS	\$18.38	\$25.89

WATERSHED NAME & CODE		WEST MISSOURI COTEAU - 10130106				LANDUSE ACRES			483,900	
LANDUSE TYPE		CROPLAND				CAL UNIT SIZE ACRES			80	
POSSIBLE SOURCES OF FUNDING						ATED PARTICIPATION			17%	
Conservation Systems by Treatment Level		FUTURE	FARM BILL				OTHERS			NOTES/COMMENTS
		New Treatment Units	CTA	EQIP	WRP	WHIP	Fed	State	Local	
Progressive										
Conservation Cover (ac.) 327		1,524	X							
Conservation Crop Rotation (ac.) 328		2,540	X							
Mulching (ac.) 484		17	X	X		X				
Nutrient Management (ac.) 590		847	X							
Pest Management (ac.) 595		847	X	X	X	X				
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329		847	X							
Residue Management, Seasonal (ac.) 344		847	X							
Upland Wildlife Habitat Management (ac.) 645		677	X	X		X				
New Treatment Acreage		16,937								
RMS										
Conservation Cover (ac.) 327		8,420	X							
Conservation Crop Rotation (ac.) 328		9,436	X							
Grassed Waterway (ac.) 412		23	X	X		X				
Irrigation System, Sprinkler (ac.) 442		690	X	X						
Irrigation Water Conveyance, Pipeline (ft.) 430		2,873	X	X						
Irrigation Water Management (ac.) 449		552	X	X						
Mulching (ac.) 484		63	X	X		X				
Nutrient Management (ac.) 590		10,501	X							
Pest Management (ac.) 595		5,444	X	X	X	X				
Residue and Tillage Management, Mulch Till (ac.) 345		1,839	X							
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329		5,444	X							
Residue Management, Seasonal (ac.) 344		3,145	X							
Salinity and Sodic Soil Management (ac.) 610		23	X	X						
Upland Wildlife Habitat Management (ac.) 645		2,976	X	X		X				
Windbreak/Shelterbreak Establishment (ft.) 380		71,829	X	X		X				

Enter Watershed Variables Below

Watershed Name	<input type="text" value="East Missouri Coteau"/>	Watershed Code	<input type="text" value="10130106"/>	<input type="button" value="Help"/>	
Landuse Type	<input type="text" value="Rangeland and Pasture"/>	Landuse Acres	<input type="text" value="516,200"/>	Interest Rate	<input type="text" value="6%"/>
Typical Unit Size (ac)	<input type="text" value="100"/>	Percent TA of FA	<input type="text" value="20%"/>	Cost-Share Rate	<input type="text" value="50%"/>
<i>Estimated Time Frame = 5 years</i>	Participation Rate <small>(Based on Watershed Profile)</small>	<input type="text" value="16%"/>	COMPARE	<input type="text" value="15%"/>	Calculated Participation Rate <small>(Based on Projected Future Conditions)</small>
					<input type="button" value="Next"/>

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
Baseline	65%	335,530	Baseline	85%	285,201	Baseline	55%	285,201	285,201	0
			Progressive	10%	33,553					
			RMS	5%	16,777					

Must Total 100% 100%

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
Progressive	25%	129,050	Progressive	85%	109,693	Progressive	28%	143,246	109,693	33,553
			RMS	15%	19,358					

Must Total 100% 100%

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
RMS	10%	51,620	RMS	100%	51,620	RMS	17%	87,754	51,620	36,134

Grand Totals	100%	516,200					100%	516,200	446,513	69,687
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DOCUMENTATION SECTION

PRACTICE FACTOR SHEET

Only shaded practices are in this analysis.

Modify the formula for each Base, Prog, RMS to enter feet, no. or acres for each practice factor.

Please enter appropriate factor for each level of treatment (Baseline, Progressive, & RMS)



Code	BASE	PROG	RMS	SHORT NOTE <i>TU = Typical Unit Size</i>	Practice Name	Help
378	x 1	x 1	x 1	NUMBER per TU	Pond (no.) 378	
382	0	x 250	x 500	FEET per TU	Fence (ft.) 382	
512	x 1.0%	x 2.0%	x 3.0%	PERCENT of TU	Pasture & Hayland Planting (ac.) 512	
516	0	x 200	x 350	FEET per TU	Pipeline (ft.) 516	
528	0.0%	0.0%	x 65.0%	PERCENT of TU	Prescribed Grazing (ac.) 528	
533	0	x 0	x 0	NUMBER per TU	Pumping Plant (no.) 533	
550	0.0%	0.0%	x 0.3%	PERCENT of TU	Range Planting (ac.) 550	
574	0	x 0	x 0	NUMBER per TU	Spring Development (no.) 574	
595	0.0%	0.0%	x 20.0%	PERCENT of TU	Pest Management (ac.) 595	
614	0	x 0	x 0	NUMBER per TU	Watering Facility (no.) 614	
642	0	x 0	x 0	NUMBER per TU	Water Well (no.) 642	
578	0	1	2	FEET per TU	Stream Crossing 578	
314	0.0%	0.0%	5.0%	PERCENT of TU	Brush Management (ac.) 314	
511	0.0%	0.0%	0.1%	PERCENT of TU	Forage Harvest Management (ac.) 511	
548	0.0%	0.0%	10.0%	PERCENT of TU	Grazing Land Mechanical Treatment (ac.) 548	
410	0	0	1	NUMBER per TU	Grade Stabilization Structure (no.) 410	
561	0.0%	0.0%	5.0%	PERCENT of TU	Heavy Use Area Protection (ac.) 561	
575	5.0%	5.0%	5.0%	PERCENT of TU	Animal Trails and Walkways (ac.) 575	
328	100.0%	100.0%	100.0%	PERCENT of TU	Conservation Crop Rotation (ac.) 328	
353	1	1	1	NUMBER per TU	Monitoring Well (no.) 353	
412	5.0%	5.0%	5.0%	PERCENT of TU	Grassed Waterway (ac.) 412	
442	100.0%	100.0%	100.0%	PERCENT of TU	Irrigation System, Sprinkler (ac.) 442	
560	500	500	500	FEET per TU	Access Road (ft.) 560	
702	1	1	1	NUMBER per TU	Agrichemical Handling Facility (no.) 702	
311	30.0%	30.0%	30.0%	PERCENT of TU	Alley Cropping (ac.) 311	
591	1	1	1	NUMBER per TU	Amendments for the Treatment of Agricultural Waste (no.) 591	
365	1	1	1	NUMBER per TU	Anaerobic Digester, Ambient Temperature (no.) 365	
366	1	1	1	NUMBER per TU	Anaerobic Digester, Controlled Temperature (no.) 366	
316	1	1	1	NUMBER per TU	Animal Mortality Facility (no.) 316	
450	100.0%	100.0%	100.0%	PERCENT of TU	Anionic Polyacrylamide (PAM) Erosion Control (ac.) 450	

WATERSHED NAME & CODE		EAST MISSOURI COTEAU - 10130106			LANDUSE ACRES		516,200			
LANDUSE TYPE		RANGELAND AND PASTURE			TYPICAL UNIT SIZE ACRES		100			
ASSESSMENT INFORMATION					CALCULATED PARTICIPATION		15%			
Conservation Systems by Treatment Level		Benchmark Conditions	Future Conditions			RESOURCE CONCERNS				
		Total Units	Existing Unchanged Units	New Treatment Units	Total Units	Soil Erosion – Sheet and Rill	Plant Condition – Noxious and Invasive Plants	Domestic Animals – Inadequate Quantities and Quality of Feed and Forage	Domestic Animals – Inadequate Stock Water	
Baseline					System Rating ->		2	1	3	3
Pasture & Hayland Planting (ac.) 512		3,355	2,852	0	2,852	4	2	5	0	
Pond (no.) 378		2,852	2,424	0	2,424	0	-1	0	5	
Total Acreage at Baseline		335,530	285,201	0	285,201					
Progressive					System Rating ->		2	1	4	5
Fence (ft.) 382		322,625	274,231	83,883	358,114	0	0	3	0	
Pasture & Hayland Planting (ac.) 512		2,581	2,529	336	2,865	4	2	5	0	
Pipeline (ft.) 516		258,100	219,385	67,106	286,491	0	0	0	5	
Pond (no.) 378		1,110	1,229	3	1,232	0	-1	0	5	
Pumping Plant (no.) 533		13	11	3	14	0	0	0	5	
Spring Development (no.) 574		3	2	1	3	0	0	2	4	
Water Well (no.) 642		26	22	7	29	0	0	2	5	
Watering Facility (no.) 614		116	99	30	129	1	0	3	5	
Total Acreage at Progressive Level		129,050	109,693	33,553	143,246					
RMS					System Rating ->		4	4	5	5
Fence (ft.) 382		258,100	306,494	132,276	438,770	0	0	3	0	
Pasture & Hayland Planting (ac.) 512		1,549	2,104	529	2,633	4	2	5	0	
Pest Management (ac.) 595		10,324	10,324	7,227	17,551	1	5	4	0	
Pipeline (ft.) 516		180,670	219,385	87,754	307,139	0	0	0	5	
Pond (no.) 378		444	753	2	755	0	-1	0	5	
Prescribed Grazing (ac.) 528		33,553	33,553	23,487	57,040	4	4	5	1	
Pumping Plant (no.) 533		5	7	2	9	0	0	0	5	
Range Planting (ac.) 550		155	155	108	263	4	4	5	0	
Spring Development (no.) 574		1	1	0	2	0	0	2	4	
Water Well (no.) 642		21	25	11	35	0	0	2	5	
Watering Facility (no.) 614		88	105	44	149	1	0	3	5	
Total Acreage at RMS Level		51,620	51,620	36,134	87,754					

Enter Watershed Variables Below

Watershed Name	<input type="text" value="West Missouri Coteau"/>	Watershed Code	<input type="text" value="10130106"/>	<input type="button" value="Help"/>	
Landuse Type	<input type="text" value="Hayland"/>	Landuse Acres	<input type="text" value="51,700"/>	Interest Rate	<input type="text" value="6%"/>
Typical Unit Size (ac)	<input type="text" value="40"/>	Percent TA of FA	<input type="text" value="20%"/>	Cost-Share Rate	<input type="text" value="50%"/>
<i>Estimated Time Frame = 5 years</i>	Participation Rate <small>(Based on Watershed Profile)</small>	<input type="text" value="10%"/>	COMPARE	<input type="text" value="10%"/>	Calculated Participation Rate <small>(Based on Projected Future Conditions)</small>
					<input type="button" value="Next"/>

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
Baseline	20%	10,340	Baseline	90%	9,306	Baseline	18%	9,306	9,306	0
			Progressive	5%	517					
			RMS	5%	517					
			<i>Must Total 100%</i>		<i>100%</i>					
Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
Progressive	30%	15,510	Progressive	90%	13,959	Progressive	28%	14,476	13,959	517
			RMS	10%	1,551					
			<i>Must Total 100%</i>		<i>100%</i>					
Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
RMS	50%	25,850	RMS	100%	25,850	RMS	54%	27,918	25,850	2,068
Grand Totals	100%	51,700					100%	51,700	49,115	2,585

DOCUMENTATION SECTION

PRACTICE FACTOR SHEET

Only shaded practices are in this analysis.

Modify the formula for each Base, Prog, RMS to enter feet, no. or acres for each practice factor.

Please enter appropriate factor for each level of treatment (Baseline, Progressive, & RMS)



Code	BASE	PROG	RMS	SHORT NOTE <i>TU = Typical Unit Size</i>	Practice Name
511	0.0%	0.0%	x 100.0%	PERCENT of TU	Forage Harvest Management (ac.) 511
512	x 1.0%	x 5.0%	x 10.0%	PERCENT of TU	Pasture & Hayland Planting (ac.) 512
590	0.0%	0.0%	x 75.0%	PERCENT of TU	Nutrient Management (ac.) 590
595	0.0%	0.0%	x 100.0%	PERCENT of TU	Pest Management (ac.) 595
430	0	15	40	FEET per TU	Irrigation Water Conveyance, Pipeline (ft.) 430
442	0.0%	0.0%	0.1%	PERCENT of TU	Irrigation System, Sprinkler (ac.) 442
449	0.0%	0.0%	10.0%	PERCENT of TU	Irrigation Water Management (ac.) 449
388	300	300	300	FEET per TU	Irrigation Field Ditch (ft.) 388
443	0.0%	0.0%	5.0%	PERCENT of TU	Irrigation System, Surface and Subsurface (ac.) 443
606	0	0	0	FEET per TU	Subsurface Drain (ft.) 606
378	1	0	0	NUMBER per TU	Pond (no.) 378
382	1,000	2,500	7,500	FEET per TU	Fence (ft.) 382
516	0	5,000	10,000	FEET per TU	Pipeline (ft.) 516
528	25.0%	50.0%	100.0%	PERCENT of TU	Prescribed Grazing (ac.) 528
533	0	1	1	NUMBER per TU	Pumping Plant (no.) 533
550	0.0%	0.0%	10.0%	PERCENT of TU	Range Planting (ac.) 550
574	1	1	1	NUMBER per TU	Spring Development (no.) 574
614	1	3	5	NUMBER per TU	Watering Facility (no.) 614
642	0	1	1	NUMBER per TU	Water Well (no.) 642
314	10.0%	20.0%	40.0%	PERCENT of TU	Brush Management (ac.) 314
410	0	0	1	NUMBER per TU	Grade Stabilization Structure (no.) 410
548	0.0%	0.0%	10.0%	PERCENT of TU	Grazing Land Mechanical Treatment (ac.) 548
561	0.0%	0.0%	5.0%	PERCENT of TU	Heavy Use Area Protection (ac.) 561
575	5.0%	5.0%	5.0%	PERCENT of TU	Animal Trails and Walkways (ac.) 575
328	100.0%	100.0%	100.0%	PERCENT of TU	Conservation Crop Rotation (ac.) 328
353	1	1	1	NUMBER per TU	Monitoring Well (no.) 353
412	5.0%	5.0%	5.0%	PERCENT of TU	Grassed Waterway (ac.) 412
560	500	500	500	FEET per TU	Access Road (ft.) 560
702	1	1	1	NUMBER per TU	Agrichemical Handling Facility (no.) 702
311	30.0%	30.0%	30.0%	PERCENT of TU	Alley Cropping (ac.) 311



WATERSHED NAME & CODE		WEST MISSOURI COTEAU - 10130106			LANDUSE ACRES		51,700	
LANDUSE TYPE		HAYLAND			TYPICAL UNIT SIZE ACRES		40	
ASSESSMENT INFORMATION					CALCULATED PARTICIPATION		10%	
Conservation Systems by Treatment Level	Benchmark Conditions	Future Conditions			RESOURCE CONCERNS			
	Total Units	Existing Unchanged Units	New Treatment Units	Total Units	Soil Erosion – Sheet and Rill	Plant Condition – Productivity, Health and Vigor	Plant Condition – Noxious and Invasive Plants	Plant Condition – Forage Quality and Palatability
Baseline	System Rating ->				2	3	1	3
Pasture & Hayland Planting (ac.) 512	103	93	0	93	4	5	2	5
Total Acreage at Baseline	10,340	9,306	0	1				
Progressive	System Rating ->				2	3	1	3
Pasture & Hayland Planting (ac.) 512	776	703	21	724	4	5	2	5
Total Acreage at Progressive Level	15,510	13,959	517	14,476				
RMS	System Rating ->				3	5	4	4
Forage Harvest Management (ac.) 511	25,850	25,850	2,068	27,918	3	4	3	4
Nutrient Management (ac.) 590	19,388	19,388	1,551	20,939	0	3	0	4
Pasture & Hayland Planting (ac.) 512	2,585	2,668	124	2,792	4	5	2	5
Pest Management (ac.) 595	25,850	25,850	2,068	27,918	1	5	5	4
Total Acreage at RMS Level	25,850	25,850	2,068	27,918				

WATERSHED NAME & CODE		WEST MISSOURI COTEAU - 10130106				LANDUSE ACRES		51,700	
LANDUSE TYPE		HAYLAND				TYPICAL UNIT SIZE ACRES		40	
CONSERVATION COST TABLE						CALCULATED PARTICIPATION		10%	
		FUTURE	FEDERAL				PRIVATE		
Conservation Systems by Treatment Level		New Treatment Units	Installation Cost 50%	Management Cost - 3 yrs 100%	Technical Assistance 20%	Total Present Value Cost	Installation Cost 50%	Annual O & M + Mgt Costs 100%	Total Present Value Cost
Progressive									
Pasture & Hayland Planting (ac.) 512		21	\$620	\$0	\$124	\$744	\$620	\$12	\$673
Subtotal		517	\$620	\$0	\$124	\$744	\$620	\$12	\$673
RMS									
Forage Harvest Management (ac.) 511		2,068	\$0	\$0	\$2,068	\$2,068	\$0	\$10,340	\$15,917
Nutrient Management (ac.) 590		1,551	\$0	\$0	\$1,551	\$1,551	\$0	\$7,755	\$11,938
Pasture & Hayland Planting (ac.) 512		124	\$3,722	\$0	\$744	\$4,467	\$3,722	\$74	\$4,036
Pest Management (ac.) 595		2,068	\$0	\$0	\$2,068	\$2,068	\$0	\$10,340	\$15,917
Subtotal		2,068	\$3,722	\$0	\$6,431	\$10,154	\$3,722	\$28,509	\$47,807
Grand Total		2,585	\$4,343	\$0	\$6,556	\$10,898	\$4,343	\$28,522	\$48,480

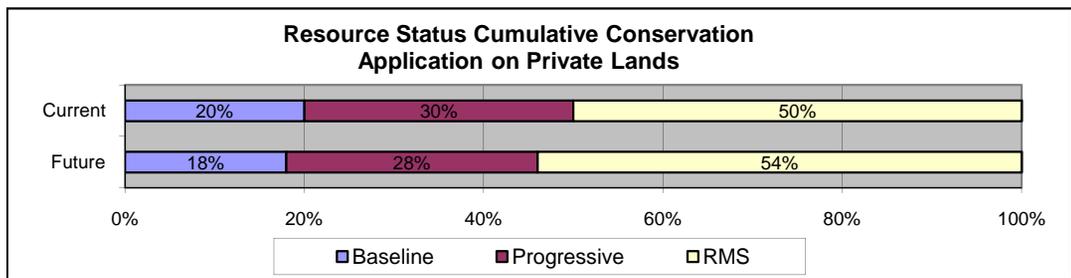


Chart Refers To	
Landuse Type	HAYLAND
Calculated Participation Rate	10%

Average PV Costs per Ac		
System	Federal	Private
Prog	\$1.44	\$1.30
RMS	\$4.91	\$23.12

WATERSHED NAME & CODE		WEST MISSOURI COTEAU - 10130106						LANDUSE ACRES			51,700
LANDUSE TYPE		HAYLAND						TYPICAL UNIT SIZE ACRES			40
POSSIBLE SOURCES OF FUNDING							CALCULATED PARTICIPATION			10%	
Conservation Systems by Treatment Level		FUTURE	FARM BILL					OTHERS			NOTES/COMMENTS
		New Treatment Units	CTA	EQIP	WRP	WHIP	CSP	CRP/CREP	Fed	State	
Progressive											
Pasture & Hayland Planting (ac.) 512	21	X	X		X						
New Treatment Acreage	517										
RMS											
Forage Harvest Management (ac.) 511	2,068	X									
Nutrient Management (ac.) 590	1,551	X									
Pasture & Hayland Planting (ac.) 512	124	X	X		X						
Pest Management (ac.) 595	2,068	X	X	X	X						
New Treatment Acreage	2,068										

Enter Watershed Variables Below

Watershed Name	<input type="text" value="West Missouri Coteau"/>	Watershed Code	<input type="text" value="10130106"/>	<input type="button" value="Help"/>	
Landuse Type	<input type="text" value="Headquarters - Farmstead"/>	Landuse Acres	<input type="text" value="14,400"/>	Interest Rate	<input type="text" value="6%"/>
Typical Unit Size (ac)	<input type="text" value="15"/>	Percent TA of FA	<input type="text" value="20%"/>	Cost-Share Rate	<input type="text" value="50%"/>
Estimated Time Frame = 5 years	Participation Rate	<input type="text" value="3%"/>	COMPARE	<input type="text" value="5%"/>	Calculated Participation Rate
	<i>(Based on Watershed Profile)</i>			<i>(Based on Projected Future Conditions)</i>	
					<input type="button" value="Next"/>

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
Baseline	60%	8,640	Baseline	85%	7,344	Baseline	51%	7,344	7,344	0
			Progressive	3%	259					
			RMS	2%	173					
<i>Must Total 100%</i>			<i>90%</i>							
Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
Progressive	30%	4,320	Progressive	95%	4,104	Progressive	30%	4,363	4,104	259
			RMS	5%	216					
<i>Must Total 100%</i>			<i>100%</i>							
Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
RMS	10%	1,440	RMS	100%	1,440	RMS	13%	1,829	1,440	389
Grand Totals	100%	14,400					94%	13,536	12,888	648

DOCUMENTATION SECTION

PRACTICE FACTOR SHEET

Only shaded practices are in this analysis.

Modify the formula for each Base, Prog, RMS to enter feet, no. or acres for each practice factor.

Please enter appropriate factor for each level of treatment (Baseline, Progressive, & RMS)



Code	BASE	PROG	RMS	SHORT NOTE <i>TU = Typical Unit Size</i>	Practice Name
313	0	0	x 0	NUMBER per TU	Waste Storage Facility (no.) 313
342	0.0%	0.0%	x 7.0%	PERCENT of TU	Critical Area Planting (ac.) 342
380	x 500	x 750	x 1,000	FEET per TU	Windbreak/Shelterbreak Establishment (ft.) 380
484	x 1.0%	x 5.0%	x 10.0%	PERCENT of TU	Mulching (ac.) 484
561	0.0%	x 5.0%	x 75.0%	PERCENT of TU	Heavy Use Area Protection (ac.) 561
633	0.0%	0.0%	x 80.0%	PERCENT of TU	Waste Utilization (ac.) 633
650	x 100	x 200	x 375	FEET per TU	Windbreak/Shelterbreak Renovation (ft.) 650
350	0	0	0	NUMBER per TU	Sediment Basin (no.) 350
362	0	0	22	FEET per TU	Diversion (ft.) 362
317	0	0	0	NUMBER per TU	Composting Facility (no.) 317
590	0.0%	0.0%	15.0%	PERCENT of TU	Nutrient Management (ac.) 590
595	20.0%	40.0%	50.0%	PERCENT of TU	Pest Management (ac.) 595
328	100.0%	100.0%	100.0%	PERCENT of TU	Conservation Crop Rotation (ac.) 328
329	0.0%	15.0%	30.0%	PERCENT of TU	Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329
344	100.0%	40.0%	10.0%	PERCENT of TU	Residue Management, Seasonal (ac.) 344
345	0.0%	5.0%	10.0%	PERCENT of TU	Residue and Tillage Management, Mulch Till (ac.) 345
412		5.0%	5.0%	PERCENT of TU	Grassed Waterway (ac.) 412
585	0.0%	5.0%	10.0%	PERCENT of TU	Stripcropping (ac.) 585
378	1	0	0	NUMBER per TU	Pond (no.) 378
382	1,000	2,500	7,500	FEET per TU	Fence (ft.) 382
512	0.0%	10.0%	0.0%	PERCENT of TU	Pasture & Hayland Planting (ac.) 512
516	0	5,000	10,000	FEET per TU	Pipeline (ft.) 516
528	25.0%	50.0%	100.0%	PERCENT of TU	Prescribed Grazing (ac.) 528
533	0	1	1	NUMBER per TU	Pumping Plant (no.) 533
550	0.0%	0.0%	10.0%	PERCENT of TU	Range Planting (ac.) 550
574	1	1	1	NUMBER per TU	Spring Development (no.) 574
614	1	3	5	NUMBER per TU	Watering Facility (no.) 614
642	0	1	1	NUMBER per TU	Water Well (no.) 642
314	10.0%	20.0%	40.0%	PERCENT of TU	Brush Management (ac.) 314
410	0	0	1	NUMBER per TU	Grade Stabilization Structure (no.) 410



WATERSHED NAME & CODE		WEST MISSOURI COTEAU - 10130106			LANDUSE ACRES		14,400	
LANDUSE TYPE		HEADQUARTERS - FARMSTEAD			TYPICAL UNIT SIZE ACRES		15	
ASSESSMENT INFORMATION					CALCULATED PARTICIPATION		5%	
Conservation Systems by Treatment Level	Benchmark Conditions	Future Conditions			RESOURCE CONCERNS			
	Total Units	Existing Unchanged Units	New Treatment Units	Total Units	Water Quality – Excessive Nutrients and Organics in Groundwater	Water Quality – Excessive Nutrients and Organics in Surface Water	Water Quality – Excessive Suspended Sediment and Turbidity in Surface Water	Air Quality – Objectionable Odors
Baseline	System Rating ->				2	4	2	3
Heavy Use Area Protection (ac.) 561	0	0	0	0	1	5	2	1
Waste Utilization (ac.) 633	0	0	0	0	2	3	0	4
Mulching (ac.) 484	86	73	0	73	1	4	2	0
Windbreak/Shelterbreak Establishment (ft.) 380	288,000	244,800	0	244,800	2	1	2	2
Windbreak/Shelterbreak Renovation (ft.) 650	57,600	48,960	0	48,960	2	2	1	2
Total Acreage at Baseline	8,640	7,344	0	7,344				
Progressive	System Rating ->				2	4	2	3
Waste Utilization (ac.) 633	0	0	0	0	2	3	0	4
Heavy Use Area Protection (ac.) 561	216	205	13	218	1	5	2	1
Mulching (ac.) 484	216	208	10	218	1	4	2	0
Windbreak/Shelterbreak Establishment (ft.) 380	216,000	213,840	4,320	218,160	2	1	2	2
Windbreak/Shelterbreak Renovation (ft.) 650	57,600	56,448	1,728	58,176	2	2	1	2
Total Acreage at Progressive Level	4,320	4,104	259	4,363				
RMS	System Rating ->				3	5	2	2
Critical Area Planting (ac.) 342	101	101	27	128	1	3	1	0
Heavy Use Area Protection (ac.) 561	1,080	1,091	281	1,372	1	5	2	1
Mulching (ac.) 484	144	157	26	183	1	4	2	0
Waste Storage Facility (no.) 313	5	5	1	6	3	4	0	-2
Waste Utilization (ac.) 633	1,152	1,152	311	1,463	2	3	0	4
Windbreak/Shelterbreak Establishment (ft.) 380	96,000	112,560	9,360	121,920	2	1	2	2
Windbreak/Shelterbreak Renovation (ft.) 650	36,000	40,032	5,688	45,720	2	2	1	2
Total Acreage at RMS Level	1,440	1,440	389	1,829				

Enter Watershed Variables Below

Watershed Name	<input type="text" value="West Missouri Coteau"/>	Watershed Code	<input type="text" value="10130106"/>	<input type="button" value="Help"/>	
Landuse Type	<input type="text" value="CRP - Wildlife Land"/>	Landuse Acres	<input type="text" value="150,300"/>	Interest Rate	<input type="text" value="6%"/>
Typical Unit Size (ac)	<input type="text" value="20"/>	Percent TA of FA	<input type="text" value="20%"/>	Cost-Share Rate	<input type="text" value="50%"/>
<i>Estimated Time Frame = 5 years</i>	Participation Rate <small>(Based on Watershed Profile)</small>	<input type="text" value="1%"/>	COMPARE	<input type="text" value="5%"/>	Calculated Participation Rate <small>(Based on Projected Future Conditions)</small>
					<input type="button" value="Next"/>

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
Baseline	80%	120,240	Baseline	95%	114,228	Baseline	76%	114,228	114,228	0
			Progressive	3%	3,607					
			RMS	2%	2,405					
			<i>Must Total 100%</i>		<i>100%</i>					

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
Progressive	15%	22,545	Progressive	95%	21,418	Progressive	17%	25,025	21,418	3,607
			RMS	5%	1,127					
			<i>Must Total 100%</i>		<i>100%</i>					

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
RMS	5%	7,515	RMS	100%	7,515	RMS	7%	11,047	7,515	3,532

Grand Totals	100%	150,300					100%	150,300	143,161	7,139
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DOCUMENTATION SECTION

PRACTICE FACTOR SHEET

Only shaded practices are in this analysis.

Modify the formula for each Base, Prog, RMS to enter feet, no. or acres for each practice factor.

Please enter appropriate factor for each level of treatment (Baseline, Progressive, & RMS)



Code	BASE		PROG		RMS		SHORT NOTE <i>TU = Typical Unit Size</i>	Practice Name	Help
327	x	25.0%	x	50.0%	x	100.0%	PERCENT of TU	Conservation Cover (ac.) 327	
380	x	50	x	80	x	160	FEET per TU	Windbreak/Shelterbreak Establishment (ft.) 380	
390		0.0%		0.0%	x	0.5%	PERCENT of TU	Riparian Herbaceous Cover (ac.) 390	
391		0.0%		0.0%	x	0.1%	PERCENT of TU	Riparian Forest Buffer (ac.) 391	
393		0.0%		0.0%	x	4.0%	PERCENT of TU	Filter Strip (ac.) 393	
472		30.0%	x	50.0%	x	75.0%	PERCENT of TU	Access Control (ac.) 472	
484	x	1.0%	x	1.4%	x	1.8%	PERCENT of TU	Mulching (ac.) 484	
595		0.0%		0.0%	x	20.0%	PERCENT of TU	Pest Management (ac.) 595	
643		0.0%	x	1.0%	x	5.0%	PERCENT of TU	Restoration and Management of Declining Habitats (ac.) 643	
644		0.0%		0.0%	x	50.0%	PERCENT of TU	Wetland Wildlife Habitat Management (ac.) 644	
645	x	25.0%	x	50.0%	x	75.0%	PERCENT of TU	Upland Wildlife Habitat Management (ac.) 645	
647		0.0%		0.0%	x	8.0%	PERCENT of TU	Early Successional Habitat Development/Management (ac.) 647	
657		0.0%		0.0%	x	17.0%	PERCENT of TU	Wetland Restoration (ac.) 657	
659		0.0%		0.0%	x	1.0%	PERCENT of TU	Wetland Enhancement (ac.) 659	
328		5.0%		50.0%		90.0%	PERCENT of TU	Conservation Crop Rotation (ac.) 328	
658		0.0%		0.0%		0.0%	PERCENT of TU	Wetland Creation (ac.) 658	
422		0		0		3	FEET per TU	Hedgerow Planting (ft.) 422	
614		0		0		0	NUMBER per TU	Watering Facility (no.) 614	
511		0.0%		30.0%		100.0%	PERCENT of TU	Forage Harvest Management (ac.) 511	
512		100.0%		100.0%		100.0%	PERCENT of TU	Pasture & Hayland Planting (ac.) 512	
590		0.0%		0.0%		1.0%	PERCENT of TU	Nutrient Management (ac.) 590	
430		0		15		40	FEET per TU	Irrigation Water Conveyance, Pipeline (ft.) 430	
442		0.0%		0.0%		0.1%	PERCENT of TU	Irrigation System, Sprinkler (ac.) 442	
449		0.0%		0.0%		10.0%	PERCENT of TU	Irrigation Water Management (ac.) 449	
388		300		300		300	FEET per TU	Irrigation Field Ditch (ft.) 388	
443		0.0%		0.0%		5.0%	PERCENT of TU	Irrigation System, Surface and Subsurface (ac.) 443	
606		0		0		0	FEET per TU	Subsurface Drain (ft.) 606	
378		1		0		0	NUMBER per TU	Pond (no.) 378	
382		1,000		2,500		7,500	FEET per TU	Fence (ft.) 382	
516		0		5,000		10,000	FEET per TU	Pipeline (ft.) 516	

WATERSHED NAME & CODE		WEST MISSOURI COTEAU - 10130106			LANDUSE ACRES		150,300	
LANDUSE TYPE		CRP - WILDLIFE LAND			TYPICAL UNIT SIZE ACRES		20	
ASSESSMENT INFORMATION					CALCULATED PARTICIPATION		5%	
Conservation Systems by Treatment Level	Benchmark Conditions	Future Conditions			RESOURCE CONCERNS			
	Total Units	Existing Unchanged Units	New Treatment Units	Total Units	Plant Condition – Noxious and Invasive Plants	Fish and Wildlife – Inadequate Cover/Shelter	Fish and Wildlife – Habitat Fragmentation	Fish and Wildlife – T & E Fish/Wildlife Species: Listed or Proposed under ESA
Baseline				System Rating ->	4	4	4	3
Conservation Cover (ac.) 327	30,060	28,557	0	28,557	5	5	5	0
Mulching (ac.) 484	1,202	1,142	0	1,142	3	0	0	0
Upland Wildlife Habitat Management (ac.) 645	30,060	28,557	0	28,557	0	5	5	5
Windbreak/Shelterbreak Establishment (ft.) 380	300,600	285,570	0	285,570	0	3	0	0
Total Acreage at Baseline	120,240	114,228	0	1				
Progressive				System Rating ->	4	5	5	4
Access Control (ac.) 472	11,273	10,709	1,804	12,512	4	3	3	0
Conservation Cover (ac.) 327	11,273	11,611	902	12,512	5	5	5	0
Mulching (ac.) 484	316	336	14	350	3	0	0	0
Restoration and Management of Declining Habitats (ac.) 643	225	214	36	250	4	2	3	4
Upland Wildlife Habitat Management (ac.) 645	11,273	11,611	902	12,512	0	5	5	5
Windbreak/Shelterbreak Establishment (ft.) 380	90,180	94,689	5,411	100,100	0	3	0	0
Total Acreage at Progressive Level	22,545	21,418	3,607	25,025				
RMS				System Rating ->	4	5	5	5
Access Control (ac.) 472	5,636	6,200	2,085	8,285	4	3	3	0
Conservation Cover (ac.) 327	7,515	8,680	2,367	11,047	5	5	5	0
Early Successional Habitat Development/Management (ac.) 647	601	601	283	884	-2	2	0	0
Filter Strip (ac.) 393	301	301	141	442	0	2	1	2
Mulching (ac.) 484	135	175	24	199	3	0	0	0
Pest Management (ac.) 595	1,503	1,503	706	2,209	5	0	0	0
Restoration and Management of Declining Habitats (ac.) 643	376	387	165	552	4	2	3	4
Riparian Forest Buffer (ac.) 391	8	8	4	11	4	3	3	2
Riparian Herbaceous Cover (ac.) 390	38	38	18	55	0	0	3	2
Upland Wildlife Habitat Management (ac.) 645	5,636	6,801	1,484	8,285	0	5	5	5
Wetland Enhancement (ac.) 659	75	75	35	110	-1	3	4	4
Wetland Restoration (ac.) 657	1,278	1,278	600	1,878	-1	4	4	4
Wetland Wildlife Habitat Management (ac.) 644	3,758	3,758	1,766	5,524	1	5	5	5
Windbreak/Shelterbreak Establishment (ft.) 380	60,120	70,641	17,735	88,376	0	3	0	0
Total Acreage at RMS Level	7,515	7,515	3,532	11,047				

