

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).

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.

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.

Elm - 10160004

Projected Conservation Program Participation & Costs*

Land Uses	Participation Rate	Acres Treated	Installation Costs		
			Federal		Private
			Cost Share	Technical Assistance	
Cropland	13%	48,944	\$356,000	\$169,000	\$356,000
Grazingland	10%	28,197	\$444,000	\$103,000	\$444,000
Hayland	5%	1,095	\$4,000	\$3,000	\$4,000
HQ	8%	1,629	\$792,000	\$159,000	\$792,000
Wildlife/CRP	5%	5,106	\$132,000	\$28,000	\$132,000

*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

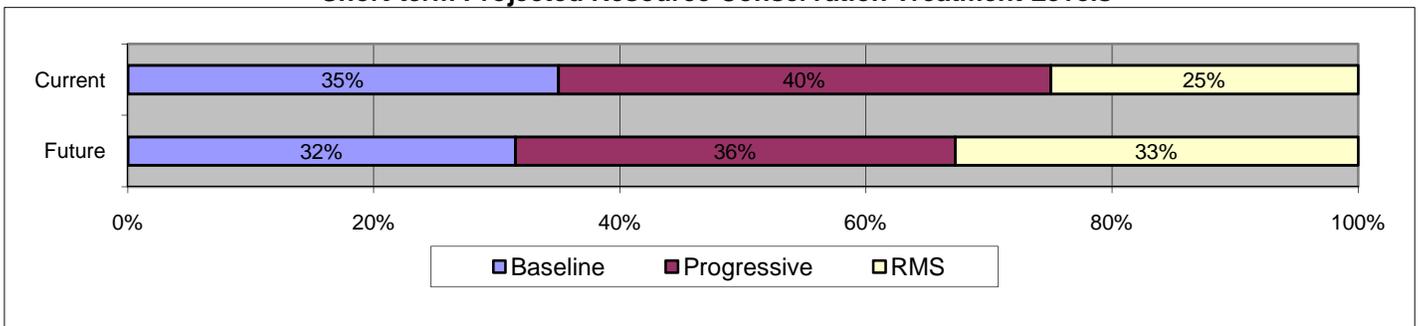
Resource Concerns:

- 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; Cover Crop; Early Successional Habitat Development/Management; Irrigation System, Sprinkler; 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; Underground Outlet; Upland Wildlife Habitat Management; Windbreak/Shelterbreak Establishment.

Short-term Projected Resource Conservation Treatment Levels



Rangeland/ Pastureland

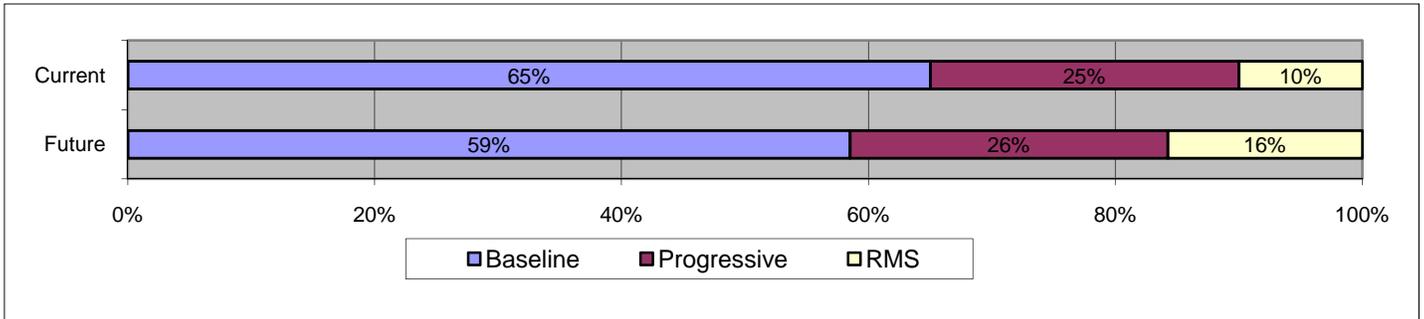
Resource Concerns:

- 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:

- Access Control; Fence; Pasture & Hayland Planting; Pipeline; Pond; Prescribed Burning; Prescribed Grazing; Pumping Plant; Range Planting; Spring Development; Stream Crossing; Water Well; Watering Facility.

Short-term Projected Resource Conservation Treatment Levels



Hayland

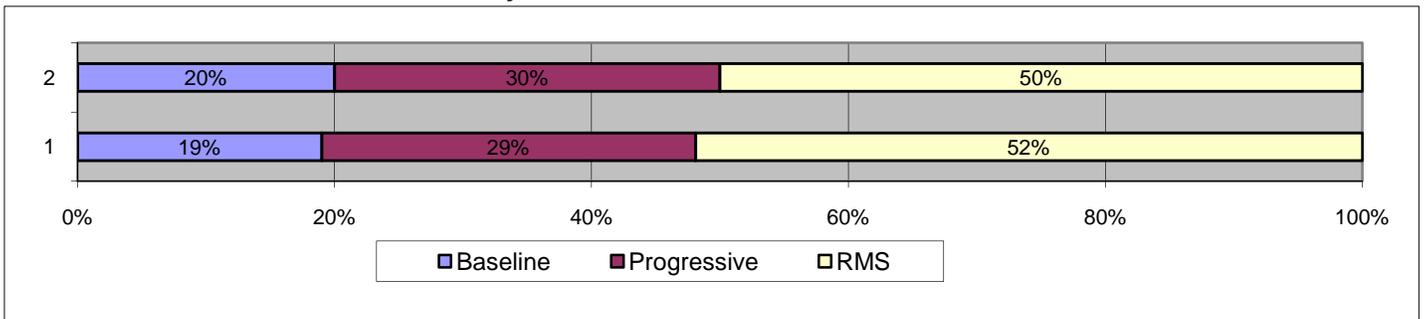
Resource Concerns:

- 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

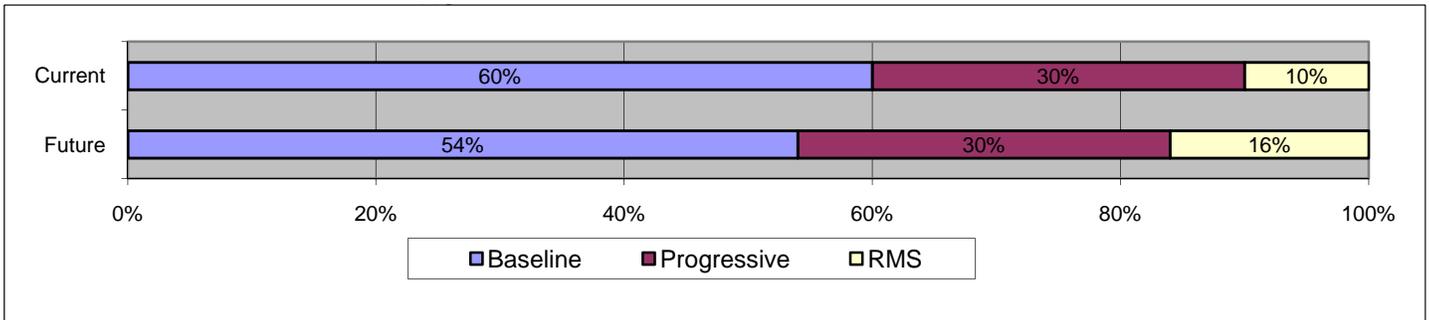
Resource Concerns:

- 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; Dike; Diversion; 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

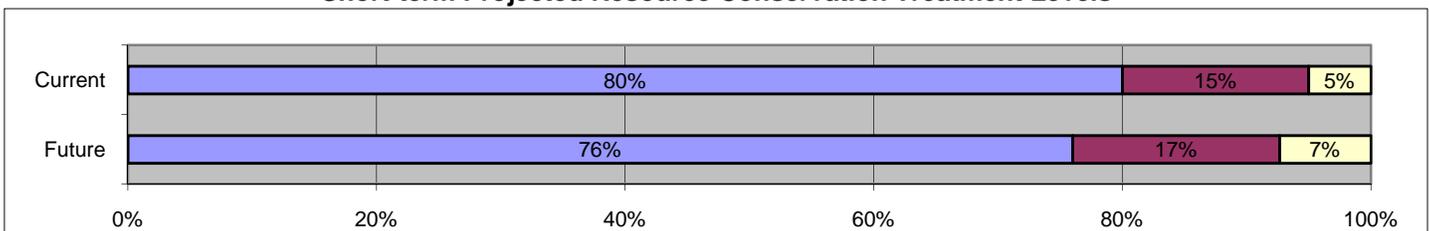
Resource Concerns:

- 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; Upland Wildlife Habitat Management; 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="Elm"/>	Watershed Code	<input type="text" value="10160004"/>	<input type="button" value="Help"/>	
Landuse Type	<input type="text" value="Cropland"/>	Landuse Acres	<input type="text" value="515,200"/>	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%"/>
Estimated Time Frame = 5 years	Participation Rate (Based on Watershed Profile)	<input type="text" value="13%"/>	COMPARE	<input type="text" value="13%"/>	Calculated Participation Rate (Based on Projected Future Conditions)
					<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	35%	180,320	Baseline	90%	162,288	Baseline	32%	162,288	162,288	0
			Progressive	5%	9,016					
			RMS	5%	9,016					

Must Total 100% 100%

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
Progressive	40%	206,080	Progressive	85%	175,168	Progressive	36%	184,184	175,168	9,016
			RMS	15%	30,912					

Must Total 100% 100%

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
RMS	25%	128,800	RMS	100%	128,800	RMS	33%	168,728	128,800	39,928

Grand Totals	100%	515,200					100%	515,200	466,256	48,944
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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)

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Next

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	10.0%	x 50.0%	x 100.0%	PERCENT of TU	Conservation Crop Rotation (ac.) 328	
329	0.0%	x 10.0%	x 27.0%	PERCENT of TU	Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	
340	0.0%	0.0%	x 0.2%	PERCENT of TU	Cover Crop (ac.) 340	
344	x 10.0%	x 87.0%	x 66.0%	PERCENT of TU	Residue Management, Seasonal (ac.) 344	
345	0.0%	x 3.0%	x 7.0%	PERCENT of TU	Residue and Tillage Management, Mulch Till (ac.) 345	
380	x 400	x 425	x 450	FEET per TU	Windbreak/Shelterbreak Establishment (ft.) 380	
442	0.0%	0.0%	x 0.3%	PERCENT of TU	Irrigation System, Sprinkler (ac.) 442	
449	0.0%	0.0%	x 0.3%	PERCENT of TU	Irrigation Water Management (ac.) 449	
484	x 0.1%	x 0.2%	x 0.2%	PERCENT of TU	Mulching (ac.) 484	
590	0.0%	x 25.0%	x 70.0%	PERCENT of TU	Nutrient Management (ac.) 590	
595	0.0%	x 25.0%	x 60.0%	PERCENT of TU	Pest Management (ac.) 595	
610	0.0%	0.0%	x 0.4%	PERCENT of TU	Salinity and Sodic Soil Management (ac.) 610	
610	100.0%	100.0%	x 100.0%	PERCENT of TU	Toxic Salt Reduction (ac.) 610	
620	0	0	x 1	FEET per TU	Underground Outlet (ft.) 620	
645	x 5.0%	x 10.0%	x 20.0%	PERCENT of TU	Upland Wildlife Habitat Management (ac.) 645	
647	0.0%	0.0%	x 9.0%	PERCENT of TU	Early Successional Habitat Development/Management (ac.) 647	
412	0.0%	0.1%	0.1%	PERCENT of TU	Grassed Waterway (ac.) 412	
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	

WATERSHED NAME & CODE		ELM - 10160004			LANDUSE ACRES		515,200	
LANDUSE TYPE		CROPLAND			TYPICAL UNIT SIZE ACRES		80	
ASSESSMENT INFORMATION					CALCULATED PARTICIPATION		13%	
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	5	4	3
Conservation Cover (ac.) 327	1,803	1,623	0	1,623	5	5	5	3
Mulching (ac.) 484	180	162	0	162	4	4	4	4
Residue Management, Seasonal (ac.) 344	18,032	16,229	0	16,229	0	2	2	1
Upland Wildlife Habitat Management (ac.) 645	9,016	8,114	0	8,114	3	3	3	3
Windbreak/Shelterbreak Establishment (ft.) 380	901,600	811,440	0	811,440	0	5	0	1
Total Acreage at Baseline	180,320	162,288	0	162,288				
Progressive				System Rating ->	5	5	5	5
Conservation Cover (ac.) 327	20,608	17,607	811	18,418	5	5	5	3
Conservation Crop Rotation (ac.) 328	103,040	87,584	4,508	92,092	3	3	3	2
Mulching (ac.) 484	309	272	5	276	4	4	4	4
Nutrient Management (ac.) 590	51,520	43,792	2,254	46,046	0	0	0	5
Pest Management (ac.) 595	51,520	43,792	2,254	46,046	1	1	1	5
Residue and Tillage Management, Mulch Till (ac.) 345	6,182	5,255	270	5,526	4	4	4	2
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	20,608	17,517	902	18,418	5	5	4	4
Residue Management, Seasonal (ac.) 344	179,290	153,298	6,942	160,240	0	2	2	1
Upland Wildlife Habitat Management (ac.) 645	20,608	17,968	451	18,418	3	3	3	3
Windbreak/Shelterbreak Establishment (ft.) 380	1,094,800	975,660	2,818	978,478	0	5	0	1
Total Acreage at Progressive Level	206,080	175,168	9,016	184,184				
RMS				System Rating ->	5	5	5	5
Conservation Cover (ac.) 327	32,200	35,381	6,801	42,182	5	5	5	3
Conservation Crop Rotation (ac.) 328	128,800	144,256	24,472	168,728	3	3	3	2
Cover Crop (ac.) 340	193	193	60	253	4	4	3	2
Early Successional Habitat Development/Management (ac.) 647	11,592	11,592	3,594	15,186	0	0	0	0
Irrigation System, Sprinkler (ac.) 442	386	386	120	506	0	3	0	1
Irrigation Water Management (ac.) 449	386	386	120	506	0	3	0	4
Mulching (ac.) 484	258	313	24	337	4	4	4	4
Nutrient Management (ac.) 590	90,160	97,888	20,222	118,110	0	0	0	5
Pest Management (ac.) 595	77,280	85,008	16,229	101,237	1	1	1	5
Residue and Tillage Management, Mulch Till (ac.) 345	9,016	9,943	1,868	11,811	4	4	4	2
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	34,776	37,867	7,689	45,557	5	5	4	4
Residue Management, Seasonal (ac.) 344	85,008	106,312	5,049	111,360	0	2	2	1
Salinity and Sodic Soil Management (ac.) 610	515	515	160	675	4	4	4	2
Underground Outlet (ft.) 620	1,208	1,208	374	1,582	1	0	4	-1
Upland Wildlife Habitat Management (ac.) 645	25,760	29,302	4,444	33,746	3	3	3	3
Windbreak/Shelterbreak Establishment (ft.) 380	724,500	933,800	15,295	949,095	0	5	0	1
Total Acreage at RMS Level	128,800	128,800	39,928	168,728				

WATERSHED NAME & CODE	ELM - 10160004				LANDUSE ACRES		515,200	
LANDUSE TYPE	CROPLAND				TYPICAL UNIT SIZE ACRES		80	
CONSERVATION COST TABLE					CALCULATED PARTICIPATION		13%	
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	811	\$30,429	\$0	\$6,086	\$36,515	\$30,429	\$1,826	\$38,120
Conservation Crop Rotation (ac.) 328	4,508	\$0	\$0	\$4,508	\$4,508	\$0	\$22,540	\$34,697
Mulching (ac.) 484	5	\$2,479	\$0	\$496	\$2,975	\$2,479	\$0	\$2,479
Nutrient Management (ac.) 590	2,254	\$0	\$0	\$2,254	\$2,254	\$0	\$11,270	\$17,348
Pest Management (ac.) 595	2,254	\$0	\$0	\$2,254	\$2,254	\$0	\$11,270	\$17,348
Residue and Tillage Management, Mulch Till (ac.) 345	270	\$0	\$0	\$541	\$541	\$0	\$2,705	\$4,164
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	902	\$0	\$0	\$2,705	\$2,705	\$0	\$13,524	\$20,818
Residue Management, Seasonal (ac.) 344	6,942	\$0	\$0	\$6,942	\$6,942	\$0	\$34,712	\$53,433
Upland Wildlife Habitat Management (ac.) 645	451	\$0	\$0	\$451	\$451	\$0	\$2,254	\$3,470
Windbreak/Shelterbreak Establishment (ft.) 380	2,818	\$1,761	\$0	\$352	\$2,113	\$1,761	\$35	\$1,909
Subtotal	9,016	\$34,669	\$0	\$26,589	\$61,258	\$34,669	\$100,135	\$193,787
RMS								
Conservation Cover (ac.) 327	6,801	\$255,024	\$0	\$51,005	\$306,029	\$255,024	\$15,301	\$319,479
Conservation Crop Rotation (ac.) 328	24,472	\$0	\$0	\$24,472	\$24,472	\$0	\$122,360	\$188,355
Cover Crop (ac.) 340	60	\$0	\$0	\$898	\$898	\$0	\$4,492	\$6,915
Early Successional Habitat Development/Management (ac.) 647	3,594	\$26,951	\$0	\$5,390	\$32,342	\$26,951	\$0	\$26,951
Irrigation System, Sprinkler (ac.) 442	120	\$41,924	\$0	\$8,385	\$50,309	\$41,924	\$1,677	\$48,988
Irrigation Water Management (ac.) 449	120	\$0	\$0	\$120	\$120	\$0	\$599	\$922
Mulching (ac.) 484	24	\$13,460	\$0	\$2,692	\$16,152	\$13,460	\$0	\$13,460
Nutrient Management (ac.) 590	20,222	\$0	\$0	\$20,222	\$20,222	\$0	\$101,108	\$155,641
Pest Management (ac.) 595	16,229	\$0	\$0	\$16,229	\$16,229	\$0	\$81,144	\$124,909
Residue and Tillage Management, Mulch Till (ac.) 345	1,868	\$0	\$0	\$3,735	\$3,735	\$0	\$18,676	\$28,749
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	7,689	\$0	\$0	\$23,068	\$23,068	\$0	\$115,340	\$177,549
Residue Management, Seasonal (ac.) 344	5,049	\$0	\$0	\$5,049	\$5,049	\$0	\$25,245	\$38,861
Salinity and Sodic Soil Management (ac.) 610	160	\$7,986	\$0	\$1,597	\$9,583	\$7,986	\$799	\$11,349
Underground Outlet (ft.) 620	374	\$1,123	\$0	\$225	\$1,348	\$1,123	\$22	\$1,218
Upland Wildlife Habitat Management (ac.) 645	4,444	\$0	\$0	\$4,444	\$4,444	\$0	\$22,218	\$34,201
Windbreak/Shelterbreak Establishment (ft.) 380	15,295	\$9,559	\$0	\$1,912	\$11,471	\$9,559	\$191	\$10,365
Subtotal	39,928	\$356,027	\$0	\$169,442	\$525,469	\$356,027	\$509,173	\$1,187,912
Grand Total	48,944	\$390,697	\$0	\$196,031	\$586,727	\$390,697	\$609,308	\$1,381,700

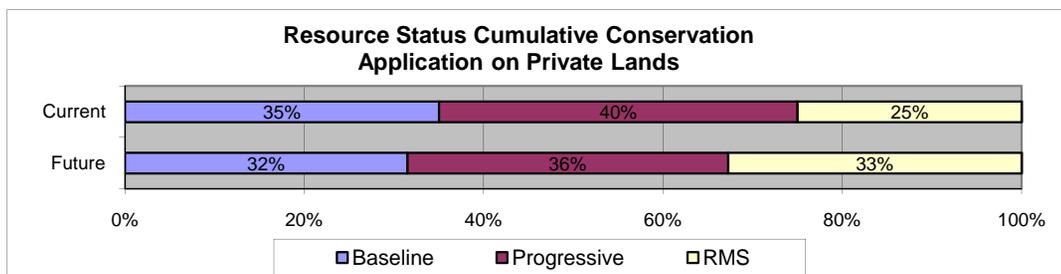


Chart Refers To	
Landuse Type	CROPLAND
Calculated Participation Rate	13%

Average PV Costs per Ac		
System	Federal	Private
Prog	\$6.79	\$21.49
RMS	\$13.16	\$29.75

WATERSHED NAME & CODE		ELM - 10160004				LANDUSE ACRES			515,200	
LANDUSE TYPE		CROPLAND				LOCAL UNIT SIZE ACRES			80	
POSSIBLE SOURCES OF FUNDING						MATCHED PARTICIPATION			13%	
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	811	X								
Conservation Crop Rotation (ac.) 328	4,508	X								
Mulching (ac.) 484	5	X	X			X				
Nutrient Management (ac.) 590	2,254	X								
Pest Management (ac.) 595	2,254	X	X	X	X					
Residue and Tillage Management, Mulch Till (ac.) 345	270	X								
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	902	X								
Residue Management, Seasonal (ac.) 344	6,942	X								
Upland Wildlife Habitat Management (ac.) 645	451	X	X			X				
Windbreak/Shelterbreak Establishment (ft.) 380	2,818	X	X			X				
New Treatment Acreage	9,016									
RMS										
Conservation Cover (ac.) 327	6,801	X								
Conservation Crop Rotation (ac.) 328	24,472	X								
Cover Crop (ac.) 340	60	X								
Early Successional Habitat Development/Management (ac.) 647	3,594	X	X	X	X					
Irrigation System, Sprinkler (ac.) 442	120	X	X							
Irrigation Water Management (ac.) 449	120	X	X							
Mulching (ac.) 484	24	X	X			X				
Nutrient Management (ac.) 590	20,222	X								
Pest Management (ac.) 595	16,229	X	X	X	X					
Residue and Tillage Management, Mulch Till (ac.) 345	1,868	X								
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	7,689	X								
Residue Management, Seasonal (ac.) 344	5,049	X								
Salinity and Sodic Soil Management (ac.) 610	160	X	X							
Underground Outlet (ft.) 620	374	X	X			X				
Upland Wildlife Habitat Management (ac.) 645	4,444	X	X			X				
Windbreak/Shelterbreak Establishment (ft.) 380	15,295	X	X			X				

Enter Watershed Variables Below

Watershed Name	<input type="text" value="Elm"/>	Watershed Code	<input type="text" value="10160004"/>	<input type="button" value="Help"/>	
Landuse Type	<input type="text" value="Rangeland and Pasture"/>	Landuse Acres	<input type="text" value="313,300"/>	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%"/>
Estimated Time Frame = 5 years	Participation Rate	<input type="text" value="13%"/>	COMPARE	<input type="text" value="10%"/>	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	65%	203,645	Baseline	90%	183,281	Baseline	59%	183,281	183,281	0
			Progressive	5%	10,182					
			RMS	5%	10,182					
<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	25%	78,325	Progressive	90%	70,493	Progressive	26%	80,675	70,493	10,182
			RMS	10%	7,833					
<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%	31,330	RMS	100%	31,330	RMS	16%	49,345	31,330	18,015
Grand Totals	100%	313,300					100%	313,300	285,103	28,197

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
338	0.0%	0.0%	x 0.7%	PERCENT of TU	Prescribed Burning (ac.) 338
378	x 1	x 1	1	NUMBER per TU	Pond (no.) 378
382	x 500	x 1,000	x 2,200	FEET per TU	Fence (ft.) 382
472	0.0%	0.0%	x 2.0%	PERCENT of TU	Access Control (ac.) 472
512	x 1.0%	x 2.0%	x 4.0%	PERCENT of TU	Pasture & Hayland Planting (ac.) 512
516	0	x 200	x 300	FEET per TU	Pipeline (ft.) 516
528	0.0%	x 25.0%	x 75.0%	PERCENT of TU	Prescribed Grazing (ac.) 528
533	0	x 0	x 0	NUMBER per TU	Pumping Plant (no.) 533
550	0.0%	x 0.1%	x 0.2%	PERCENT of TU	Range Planting (ac.) 550
574	0	0	x 0	NUMBER per TU	Spring Development (no.) 574
578	0	0	x 50	FEET per TU	Stream Crossing 578
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
595	0.0%	10.0%	20.0%	PERCENT of TU	Pest Management (ac.) 595
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



WATERSHED NAME & CODE		ELM - 10160004			LANDUSE ACRES		313,300	
LANDUSE TYPE		RANGELAND AND PASTURE			TYPICAL UNIT SIZE ACRES		100	
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 – Noxious and Invasive Plants	Domestic Animals – Inadequate Quantities and Quality of Feed and Forage	Domestic Animals – Inadequate Stock Water
Baseline	System Rating ->				2	1	4	3
Fence (ft.) 382	1,018,225	916,403	0	916,403	0	0	3	0
Pasture & Hayland Planting (ac.) 512	2,036	1,833	0	1,833	4	2	5	0
Pond (no.) 378	1,731	1,558	0	1,558	0	-1	0	5
Total Acreage at Baseline	203,645	183,281	0	183,281				
Progressive	System Rating ->				4	3	5	5
Fence (ft.) 382	783,250	755,836	50,911	806,748	0	0	3	0
Pasture & Hayland Planting (ac.) 512	1,567	1,512	102	1,613	4	2	5	0
Pipeline (ft.) 516	156,650	140,985	20,365	161,350	0	0	0	5
Pond (no.) 378	705	721	5	726	0	-1	0	5
Prescribed Grazing (ac.) 528	19,581	17,623	2,546	20,169	4	4	5	1
Pumping Plant (no.) 533	8	7	1	8	0	0	0	5
Range Planting (ac.) 550	78	70	10	81	4	4	5	0
Water Well (no.) 642	16	14	2	16	0	0	2	5
Watering Facility (no.) 614	78	70	10	81	1	0	3	5
Total Acreage at Progressive Level	78,325	70,493	10,182	80,675				
RMS	System Rating ->				4	4	5	5
Access Control (ac.) 472	627	627	360	987	2	4	4	0
Fence (ft.) 382	689,260	818,496	267,088	1,085,585	0	0	3	0
Pasture & Hayland Planting (ac.) 512	1,253	1,512	462	1,974	4	2	5	0
Pipeline (ft.) 516	93,990	109,655	38,379	148,034	0	0	0	5
Prescribed Burning (ac.) 338	219	219	126	345	3	4	5	0
Prescribed Grazing (ac.) 528	23,498	25,456	11,553	37,009	4	4	5	1
Pumping Plant (no.) 533	3	4	1	5	0	0	0	5
Range Planting (ac.) 550	63	70	28	99	4	4	5	0
Spring Development (no.) 574	5	5	3	7	0	0	2	4
Stream Crossing (ft.) 578	15,665	15,665	9,007	24,672	0	0	3	3
Water Well (no.) 642	13	14	6	20	0	0	2	5
Watering Facility (no.) 614	63	70	28	99	1	0	3	5
Total Acreage at RMS Level	31,330	31,330	18,015	49,345				

WATERSHED NAME & CODE		ELM - 10160004				LANDUSE ACRES		313,300	
LANDUSE TYPE		RANGELAND AND PASTURE				TYPICAL UNIT SIZE ACRES		100	
CONSERVATION COST TABLE						CALCULATED PARTICIPATION		10%	
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									
Fence (ft.) 382	50,911	\$25,456	\$0	\$5,091	\$30,547	\$25,456	\$1,018	\$29,745	
Pasture & Hayland Planting (ac.) 512	102	\$3,055	\$0	\$611	\$3,666	\$3,055	\$61	\$3,312	
Pipeline (ft.) 516	20,365	\$20,365	\$0	\$4,073	\$24,437	\$20,365	\$815	\$23,796	
Pond (no.) 378	5	\$15,273	\$0	\$3,055	\$18,328	\$15,273	\$1,527	\$21,707	
Prescribed Grazing (ac.) 528	2,546	\$0	\$0	\$2,546	\$2,546	\$0	\$12,728	\$19,593	
Pumping Plant (no.) 533	1	\$1,782	\$0	\$356	\$2,138	\$1,782	\$71	\$2,082	
Range Planting (ac.) 550	10	\$509	\$0	\$102	\$611	\$509	\$10	\$552	
Water Well (no.) 642	2	\$15,273	\$0	\$3,055	\$18,328	\$15,273	\$305	\$16,560	
Watering Facility (no.) 614	10	\$8,655	\$0	\$1,731	\$10,386	\$8,655	\$519	\$10,842	
Subtotal	10,182	\$90,367	\$0	\$20,619	\$110,987	\$90,367	\$17,055	\$128,189	
RMS									
Access Control (ac.) 472	360	\$2,162	\$0	\$432	\$2,594	\$2,162	\$130	\$2,708	
Fence (ft.) 382	267,088	\$133,544	\$0	\$26,709	\$160,253	\$133,544	\$5,342	\$156,046	
Pasture & Hayland Planting (ac.) 512	462	\$13,864	\$0	\$2,773	\$16,636	\$13,864	\$277	\$15,031	
Pipeline (ft.) 516	38,379	\$38,379	\$0	\$7,676	\$46,055	\$38,379	\$1,535	\$44,846	
Prescribed Burning (ac.) 338	126	\$1,576	\$0	\$315	\$1,892	\$1,576	\$32	\$1,709	
Prescribed Grazing (ac.) 528	11,553	\$0	\$0	\$11,553	\$11,553	\$0	\$57,765	\$88,920	
Pumping Plant (no.) 533	1	\$1,782	\$0	\$356	\$2,138	\$1,782	\$71	\$2,082	
Range Planting (ac.) 550	28	\$1,410	\$0	\$282	\$1,692	\$1,410	\$28	\$1,529	
Spring Development (no.) 574	3	\$4,729	\$0	\$946	\$5,675	\$4,729	\$95	\$5,127	
Stream Crossing (ft.) 578	9,007	\$90,074	\$0	\$18,015	\$108,089	\$90,074	\$1,801	\$97,662	
Water Well (no.) 642	6	\$42,296	\$0	\$8,459	\$50,755	\$42,296	\$846	\$45,859	
Watering Facility (no.) 614	28	\$23,967	\$0	\$4,793	\$28,761	\$23,967	\$1,438	\$30,025	
Subtotal	18,015	\$353,782	\$0	\$82,309	\$436,092	\$353,782	\$69,360	\$491,544	
Grand Total	28,197	\$444,150	\$0	\$102,928	\$547,078	\$444,150	\$86,415	\$619,733	

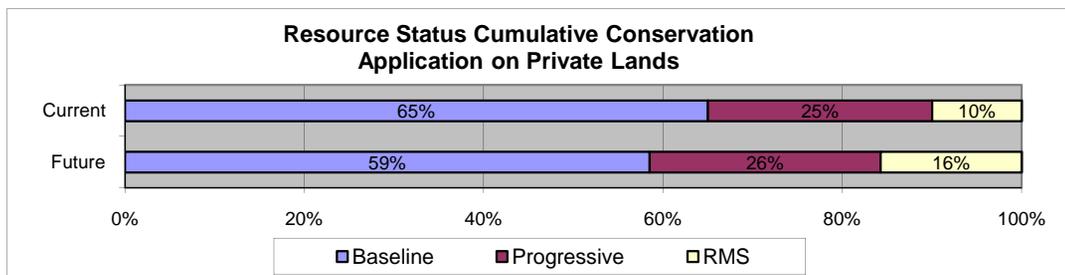


Chart Refers To	
Landuse Type	RANGELAND AND PASTURE
Calculated Participation Rate	10%

Average PV Costs per Ac		
System	Federal	Private
Prog	\$10.90	\$12.59
RMS	\$24.21	\$27.29

Enter Watershed Variables Below

Watershed Name	<input type="text" value="Elm"/>	Watershed Code	<input type="text" value="10160004"/>	<input type="button" value="Help"/>	
Landuse Type	<input type="text" value="Hayland"/>	Landuse Acres	<input type="text" value="43,800"/>	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="4%"/>	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	20%	8,760	Baseline	95%	8,322	Baseline	19%	8,322	8,322	0
			Progressive	3%	263					
			RMS	2%	175					
			<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%	13,140	Progressive	95%	12,483	Progressive	29%	12,746	12,483	263
			RMS	5%	657					
			<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%	21,900	RMS	100%	21,900	RMS	52%	22,732	21,900	832
Grand Totals	100%	43,800					100%	43,800	42,705	1,095

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 10.0%	x 20.0%	PERCENT of TU	Pasture & Hayland Planting (ac.) 512
590	0.0%	0.0%	x 100.0%	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		ELM - 10160004			LANDUSE ACRES		43,800	
LANDUSE TYPE		HAYLAND			TYPICAL UNIT SIZE ACRES		40	
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	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	88	83	0	83	4	5	2	5
Total Acreage at Baseline	8,760	8,322	0	1				
Progressive	System Rating ->				2	3	1	3
Pasture & Hayland Planting (ac.) 512	1,314	1,251	24	1,275	4	5	2	5
Total Acreage at Progressive Level	13,140	12,483	263	12,746				
RMS	System Rating ->				3	5	4	4
Forage Harvest Management (ac.) 511	21,900	21,900	832	22,732	3	4	3	4
Nutrient Management (ac.) 590	21,900	21,900	832	22,732	0	3	0	4
Pasture & Hayland Planting (ac.) 512	4,380	4,447	99	4,546	4	5	2	5
Pest Management (ac.) 595	21,900	21,900	832	22,732	1	5	5	4
Total Acreage at RMS Level	21,900	21,900	832	22,732				

WATERSHED NAME & CODE		ELM - 10160004				LANDUSE ACRES		43,800	
LANDUSE TYPE		HAYLAND				TYPICAL UNIT SIZE ACRES		40	
CONSERVATION COST TABLE						CALCULATED PARTICIPATION		5%	
		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		24	\$710	\$0	\$142	\$851	\$710	\$14	\$769
Subtotal		263	\$710	\$0	\$142	\$851	\$710	\$14	\$769
RMS									
Forage Harvest Management (ac.) 511		832	\$0	\$0	\$832	\$832	\$0	\$4,161	\$6,405
Nutrient Management (ac.) 590		832	\$0	\$0	\$832	\$832	\$0	\$4,161	\$6,405
Pasture & Hayland Planting (ac.) 512		99	\$2,970	\$0	\$594	\$3,564	\$2,970	\$59	\$3,220
Pest Management (ac.) 595		832	\$0	\$0	\$832	\$832	\$0	\$4,161	\$6,405
Subtotal		832	\$2,970	\$0	\$3,091	\$6,060	\$2,970	\$12,542	\$22,436
Grand Total		1,095	\$3,679	\$0	\$3,232	\$6,912	\$3,679	\$12,557	\$23,205

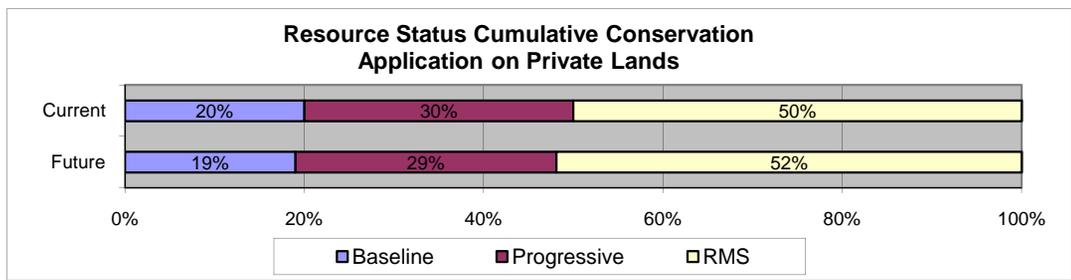


Chart Refers To	
Landuse Type	HAYLAND
Calculated Participation Rate	5%

Average PV Costs per Ac		
System	Federal	Private
Prog	\$3.24	\$2.93
RMS	\$7.28	\$26.96

WATERSHED NAME & CODE		ELM - 10160004						LANDUSE ACRES			43,800
LANDUSE TYPE		HAYLAND						TYPICAL UNIT SIZE ACRES			40
POSSIBLE SOURCES OF FUNDING							CALCULATED PARTICIPATION				5%
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	24	X	X		X						
New Treatment Acreage	263										
RMS											
Forage Harvest Management (ac.) 511	832	X									
Nutrient Management (ac.) 590	832	X									
Pasture & Hayland Planting (ac.) 512	99	X	X		X						
Pest Management (ac.) 595	832	X	X	X	X						
New Treatment Acreage	832										

Enter Watershed Variables Below

Watershed Name	<input type="text" value="Elm"/>	Watershed Code	<input type="text" value="10160004"/>	<input type="button" value="Help"/>	
Landuse Type	<input type="text" value="Headquarters - Farmstead"/>	Landuse Acres	<input type="text" value="18,100"/>	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="8%"/>	COMPARE	<input type="text" value="10%"/>	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%	10,860	Baseline	90%	9,774	Baseline	54%	9,774	9,774	0
			Progressive	5%	543					
			RMS	5%	543					
<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%	5,430	Progressive	90%	4,887	Progressive	30%	5,430	4,887	543
			RMS	10%	543					
<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%	1,810	RMS	100%	1,810	RMS	16%	2,896	1,810	1,086
Grand Totals	100%	18,100					100%	18,100	16,471	1,629

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	1.0%	x 1.3%	x 1.5%	PERCENT of TU	Critical Area Planting (ac.) 342
356	0	0	x 65	FEET per TU	Dike (ft.) 356
362	0	0	x 75	FEET per TU	Diversion (ft.) 362
380	x 500	x 550	x 600	FEET per TU	Windbreak/Shelterbreak Establishment (ft.) 380
484	x 1.0%	x 2.0%	x 3.0%	PERCENT of TU	Mulching (ac.) 484
561	0.0%	x 5.0%	x 15.0%	PERCENT of TU	Heavy Use Area Protection (ac.) 561
633	0.0%	x 25.0%	x 75.0%	PERCENT of TU	Waste Utilization (ac.) 633
650	x 100	x 250	x 600	FEET per TU	Windbreak/Shelterbreak Renovation (ft.) 650
350	0	0	0	NUMBER per TU	Sediment Basin (no.) 350
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



WATERSHED NAME & CODE		ELM - 10160004			LANDUSE ACRES		18,100					
LANDUSE TYPE		HEADQUARTERS - FARMSTEAD			TYPICAL UNIT SIZE ACRES		15					
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	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	2	2	1
Dike (ft.) 356		0	0	0	0	0	0	0	0			
Mulching (ac.) 484		109	98	0	98	1	4	2	0			
Windbreak/Shelterbreak Establishment (ft.) 380		362,000	325,800	0	325,800	2	1	2	2			
Windbreak/Shelterbreak Renovation (ft.) 650		72,400	65,160	0	65,160	2	2	1	2			
Total Acreage at Baseline		10,860	9,774	0	9,774							
Progressive					System Rating ->				2	4	2	3
Dike (ft.) 356		0	0	0	0	0	0	0	0			
Critical Area Planting (ac.) 342		68	61	7	68	1	3	1	0			
Heavy Use Area Protection (ac.) 561		272	244	27	272	1	5	2	1			
Mulching (ac.) 484		109	103	5	109	1	4	2	0			
Waste Utilization (ac.) 633		1,358	1,222	136	1,358	2	3	0	4			
Windbreak/Shelterbreak Establishment (ft.) 380		199,100	197,290	1,810	199,100	2	1	2	2			
Windbreak/Shelterbreak Renovation (ft.) 650		90,500	85,070	5,430	90,500	2	2	1	2			
Total Acreage at Progressive Level		5,430	4,887	543	5,430							
RMS					System Rating ->				3	5	3	2
Critical Area Planting (ac.) 342		27	34	10	43	1	3	1	0			
Dike (ft.) 356		7,843	7,843	4,706	12,549	0	0	0	0			
Diversion (ft.) 362		9,050	9,050	5,430	14,480	0	0	2	0			
Heavy Use Area Protection (ac.) 561		272	299	136	434	1	5	2	1			
Mulching (ac.) 484		54	71	16	87	1	4	2	0			
Waste Storage Facility (no.) 313		19	19	12	31	3	4	0	-2			
Waste Utilization (ac.) 633		1,358	1,493	679	2,172	2	3	0	4			
Windbreak/Shelterbreak Establishment (ft.) 380		72,400	110,410	5,430	115,840	2	1	2	2			
Windbreak/Shelterbreak Renovation (ft.) 650		72,400	85,070	30,770	115,840	2	2	1	2			
Total Acreage at RMS Level		1,810	1,810	1,086	2,896							

WATERSHED NAME & CODE		ELM - 10160004				LANDUSE ACRES			18,100
LANDUSE TYPE		HEADQUARTERS - FARMSTEAD				LOCAL UNIT SIZE ACRES			15
POSSIBLE SOURCES OF FUNDING		ELM - 10160004				MATCHED PARTICIPATION			10%
Conservation Systems by Treatment Level	FUTURE	FARM BILL				OTHERS			NOTES/COMMENTS
	New Treatment Units	CTA	EQIP	WRP	WHIP	Fed	State	Local	
Progressive									
Dike (ft.) 356	0	X	X		X				
Critical Area Planting (ac.) 342	7	X	X		X				
Heavy Use Area Protection (ac.) 561	27	X	X						
Mulching (ac.) 484	5	X	X		X				
Waste Utilization (ac.) 633	136	X							
Windbreak/Shelterbreak Establishment (ft.) 380	1,810	X	X		X				
Windbreak/Shelterbreak Renovation (ft.) 650	5,430	X	X		X				
New Treatment Acreage	543								
RMS									
Critical Area Planting (ac.) 342	10	X	X		X				
Dike (ft.) 356	4,706	X	X		X				
Diversion (ft.) 362	5,430	X	X						
Heavy Use Area Protection (ac.) 561	136	X	X						
Mulching (ac.) 484	16	X	X		X				
Waste Storage Facility (no.) 313	12	X	X						
Waste Utilization (ac.) 633	679	X							
Windbreak/Shelterbreak Establishment (ft.) 380	5,430	X	X		X				
Windbreak/Shelterbreak Renovation (ft.) 650	30,770	X	X		X				
New Treatment Acreage	1,086								

Enter Watershed Variables Below

Watershed Name	<input type="text" value="Elm"/>	Watershed Code	<input type="text" value="10160004"/>	<input type="button" value="Help"/>	
Landuse Type	<input type="text" value="CRP - Wildlife Land"/>	Landuse Acres	<input type="text" value="107,500"/>	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%"/>
Estimated Time Frame = 5 years	Participation Rate	<input type="text" value="2%"/>	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	80%	86,000	Baseline	95%	81,700	Baseline	76%	81,700	81,700	0
			Progressive	3%	2,580					
			RMS	2%	1,720					
			<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%	16,125	Progressive	95%	15,319	Progressive	17%	17,899	15,319	2,580
			RMS	5%	806					
			<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%	5,375	RMS	100%	5,375	RMS	7%	7,901	5,375	2,526
Grand Totals	100%	107,500					100%	107,500	102,394	5,106

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	90.0%	PERCENT of TU	Conservation Cover (ac.) 327	
380	x	100	x	150	x	300	FEET per TU	Windbreak/Shelterbreak Establishment (ft.) 380	
393		0.0%		0.0%	x	6.0%	PERCENT of TU	Filter Strip (ac.) 393	
472	x	25.0%	x	40.0%	x	60.0%	PERCENT of TU	Access Control (ac.) 472	
484	x	1.0%	x	1.5%	x	2.0%	PERCENT of TU	Mulching (ac.) 484	
595		0.0%	x	0.0%	x	40.0%	PERCENT of TU	Pest Management (ac.) 595	
644		0.0%		0.0%	x	10.0%	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	10.0%	PERCENT of TU	Early Successional Habitat Development/Management (ac.) 647	
657		0.0%		0.0%	x	25.0%	PERCENT of TU	Wetland Restoration (ac.) 657	
390		0.0%		0.0%		4.0%	PERCENT of TU	Riparian Herbaceous Cover (ac.) 390	
658		0.0%		0.0%		0.0%	PERCENT of TU	Wetland Creation (ac.) 658	
659		0.0%		10.0%		0.1%	PERCENT of TU	Wetland Enhancement (ac.) 659	
391		0.0%		0.0%		1.2%	PERCENT of TU	Riparian Forest Buffer (ac.) 391	
643		0.0%		0.0%		4.0%	PERCENT of TU	Restoration and Management of Declining Habitats (ac.) 643	
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	
528		25.0%		50.0%		100.0%	PERCENT of TU	Prescribed Grazing (ac.) 528	

WATERSHED NAME & CODE		ELM - 10160004			LANDUSE ACRES		107,500	
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	5	4	3
Access Control (ac.) 472	21,500	20,425	0	20,425	4	3	3	0
Conservation Cover (ac.) 327	21,500	20,425	0	20,425	5	5	5	0
Mulching (ac.) 484	860	817	0	817	3	0	0	0
Upland Wildlife Habitat Management (ac.) 645	21,500	20,425	0	20,425	0	5	5	5
Windbreak/Shelterbreak Establishment (ft.) 380	430,000	408,500	0	408,500	0	3	0	0
Total Acreage at Baseline	86,000	81,700	0	1				
Progressive				System Rating ->	5	5	4	3
Access Control (ac.) 472	6,450	6,773	387	7,160	4	3	3	0
Conservation Cover (ac.) 327	8,063	8,304	645	8,949	5	5	5	0
Mulching (ac.) 484	242	256	13	268	3	0	0	0
Pest Management (ac.) 595	0	0	0	0	5	0	0	0
Upland Wildlife Habitat Management (ac.) 645	8,063	8,304	645	8,949	0	5	5	5
Windbreak/Shelterbreak Establishment (ft.) 380	120,938	127,791	6,450	134,241	0	3	0	0
Total Acreage at Progressive Level	16,125	15,319	2,580	17,899				
RMS				System Rating ->	4	5	5	5
Access Control (ac.) 472	3,225	3,978	763	4,741	4	3	3	0
Conservation Cover (ac.) 327	4,838	5,671	1,441	7,111	5	5	5	0
Early Successional Habitat Development/Management (ac.) 647	538	538	253	790	-2	2	0	0
Filter Strip (ac.) 393	323	323	152	474	0	2	1	2
Mulching (ac.) 484	108	137	21	158	3	0	0	0
Pest Management (ac.) 595	2,150	2,150	1,011	3,161	5	0	0	0
Upland Wildlife Habitat Management (ac.) 645	4,031	4,864	1,062	5,926	0	5	5	5
Wetland Restoration (ac.) 657	1,344	1,344	632	1,975	-1	4	4	4
Wetland Wildlife Habitat Management (ac.) 644	538	538	253	790	1	5	5	5
Windbreak/Shelterbreak Establishment (ft.) 380	80,625	95,272	23,247	118,519	0	3	0	0
Total Acreage at RMS Level	5,375	5,375	2,526	7,901				

WATERSHED NAME & CODE		ELM - 10160004				LANDUSE ACRES			107,500	
LANDUSE TYPE		CRP - WILDLIFE LAND				TYPICAL UNIT SIZE ACRES			20	
POSSIBLE SOURCES OF FUNDING						CALCULATED PARTICIPATION			5%	
Conservation Systems by Treatment Level		FUTURE	FARM BILL				OTHERS			NOTES/COMMENTS
		New Treatment Units	CTA	EQIP	WRP	WHIP	Fed	State	Local	
Progressive										
Access Control (ac.) 472	387	X								
Conservation Cover (ac.) 327	645	X								
Mulching (ac.) 484	13	X	X		X					
Pest Management (ac.) 595	0	X	X	X	X					
Upland Wildlife Habitat Management (ac.) 645	645	X	X		X					
Windbreak/Shelterbreak Establishment (ft.) 380	6,450	X	X		X					
New Treatment Acreage	2,580									
RMS										
Access Control (ac.) 472	763	X								
Conservation Cover (ac.) 327	1,441	X								
Early Successional Habitat Development/Management (ac.) 647	253	X	X	X	X					
Filter Strip (ac.) 393	152	X	X		X					
Mulching (ac.) 484	21	X	X		X					
Pest Management (ac.) 595	1,011	X	X	X	X					
Upland Wildlife Habitat Management (ac.) 645	1,062	X	X		X					
Wetland Restoration (ac.) 657	632	X	X		X					
Wetland Wildlife Habitat Management (ac.) 644	253	X	X		X					
Windbreak/Shelterbreak Establishment (ft.) 380	23,247	X	X		X					
New Treatment Acreage	2,526									

