

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.

Grand - 10130303

Projected Conservation Program Participation & Costs*

Land Uses	Participation Rate	Acres Treated	Installation Costs			
			Total	Federal		Private
				Cost Share	Technical Assistance	
Cropland	15%	27,191	\$571,000	\$146,000	\$571,000	
Grazingland	20%	188,838	\$1,615,000	\$339,000	\$1,615,000	
Hayland	10%	4,555	\$2,000	\$3,000	\$2,000	
HQ	3%	317	\$207,000	\$42,000	\$207,000	
Wildlife/CRP	2%	1,614	\$84,000	\$19,000	\$84,000	

*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

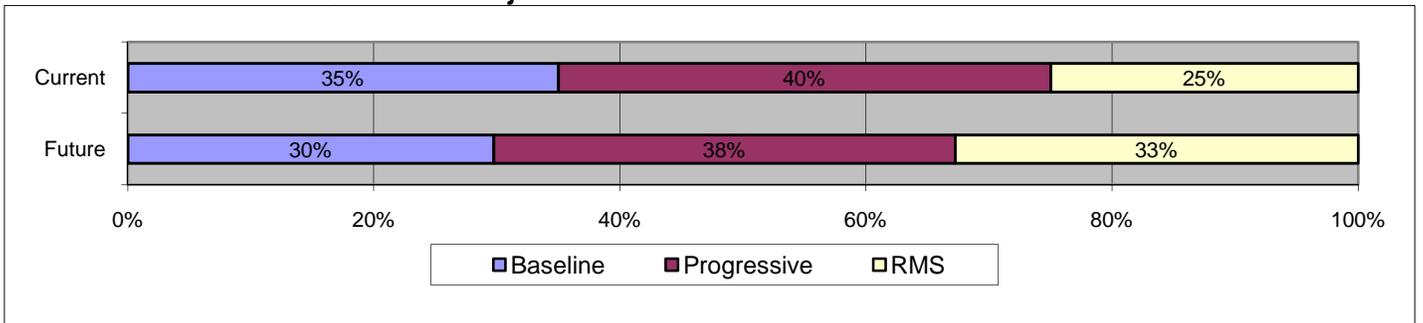
Resource Concerns:

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

Conservation Practices Evaluated:

- ; Access Control; Conservation Cover; Conservation Crop Rotation; Cover Crop; Mulching; Nutrient Management; Pest Management; Residue and Tillage Management, Mulch Till; Residue Management, No-Till/Strip Till/Direct Seed; Residue Management, Seasonal; Upland Wildlife Habitat Management; Windbreak/Shelterbreak Establishment.

Short-term Projected Resource Conservation Treatment Levels



Rangeland/ Pastureland

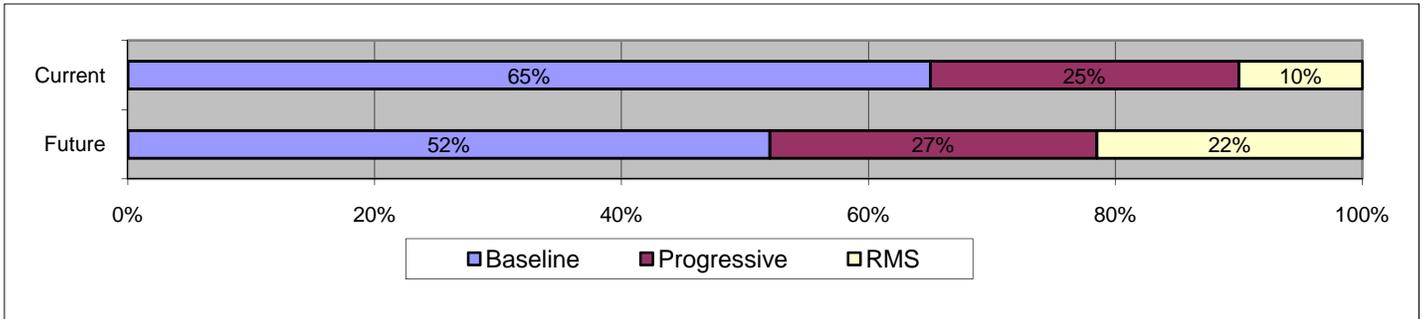
Resource Concerns:

- 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; Pest Management; Pipeline; Pond; Prescribed Grazing; Pumping Plant; Range Planting; Water Well; Watering Facility.

Short-term Projected Resource Conservation Treatment Levels



Hayland

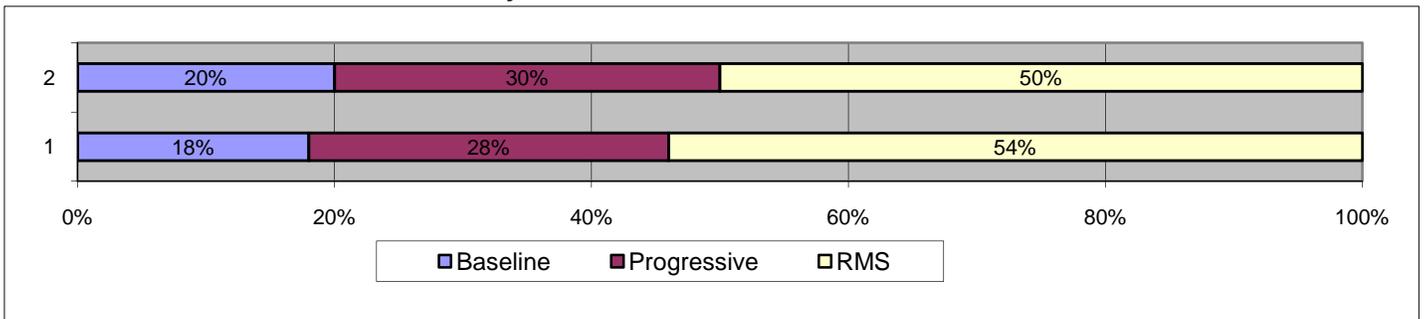
Resource Concerns:

- 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

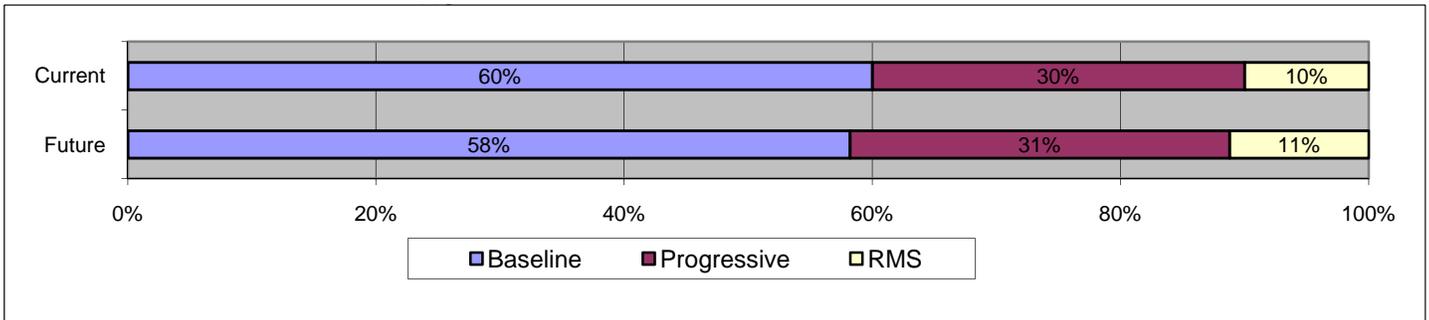
Resource Concerns:

- 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; Mulching; Waste Utilization; Windbreak/Shelterbreak Establishment;
- Windbreak/Shelterbreak Renovation.

Short-term Projected Resource Conservation Treatment Levels



Wildlife/ CRP

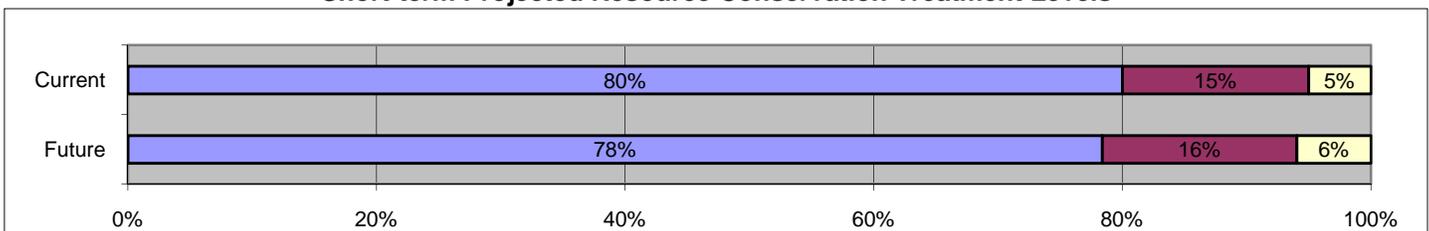
Resource Concerns:

- 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; Mulching; Pest Management; Upland Wildlife Habitat Management;
- Windbreak/Shelterbreak Establishment.

Short-term Projected Resource Conservation Treatment Levels



Enter Watershed Variables Below

Watershed Name	<input type="text" value="Grand"/>	Watershed Code	<input type="text" value="10130303"/>	<input type="button" value="Help"/>	
Landuse Type	<input type="text" value="Cropland"/>	Landuse Acres	<input type="text" value="241,700"/>	Interest Rate	<input type="text" value="6%"/>
Typical Unit Size (ac)	<input type="text" value="120"/>	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="15%"/>	COMPARE	<input type="text" value="15%"/>	Calculated Participation Rate <small>(Based on Projected Future Conditions)</small>

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
Baseline	35%	84,595	Baseline	85%	71,906	Baseline	30%	71,906	71,906	0
			Progressive	10%	8,460					
			RMS	5%	4,230					
<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%	96,680	Progressive	85%	82,178	Progressive	38%	90,638	82,178	8,460
			RMS	15%	14,502					
<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%	60,425	RMS	100%	60,425	RMS	33%	79,157	60,425	18,732
Grand Totals	100%	241,700					100%	241,700	214,509	27,191

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	5.0%	x 25.0%	x 50.0%	PERCENT of TU	Conservation Cover (ac.) 327	
328	0.0%	4.0%	x 13.0%	PERCENT of TU	Conservation Crop Rotation (ac.) 328	
329	0.0%	x 2.0%	x 7.0%	PERCENT of TU	Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	
340	0.0%	0.0%	x 5.0%	PERCENT of TU	Cover Crop (ac.) 340	
344	x 10.0%	x 90.0%	83.0%	PERCENT of TU	Residue Management, Seasonal (ac.) 344	
345	x 5.0%	x 7.0%	x 10.0%	PERCENT of TU	Residue and Tillage Management, Mulch Till (ac.) 345	
380	x 100	x 200	x 350	FEET per TU	Windbreak/Shelterbreak Establishment (ft.) 380	
472	x 0.0%	x 5.0%	x 10.0%	PERCENT of TU	Access Control (ac.) 472	
484	x 1.0%	x 2.0%	x 5.0%	PERCENT of TU	Mulching (ac.) 484	
590	0.0%	x 20.0%	x 40.0%	PERCENT of TU	Nutrient Management (ac.) 590	
595	0.0%	x 5.0%	x 25.0%	PERCENT of TU	Pest Management (ac.) 595	
645	5.0%	x 10.0%	x 20.0%	PERCENT of TU	Upland Wildlife Habitat Management (ac.) 645	
412	0.0%	0.1%	0.1%	PERCENT of TU	Grassed Waterway (ac.) 412	
442	0.0%	0.0%	2.0%	PERCENT of TU	Irrigation System, Sprinkler (ac.) 442	
449	0.0%	0.0%	7.0%	PERCENT of TU	Irrigation Water Management (ac.) 449	
600	0	0	5	FEET per TU	Terrace (ft.) 600	
620	0	0	1	FEET per TU	Underground Outlet (ft.) 620	
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	

WATERSHED NAME & CODE		GRAND - 10130303			LANDUSE ACRES		241,700	
LANDUSE TYPE		CROPLAND			TYPICAL UNIT SIZE ACRES		120	
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	Soil Erosion – Wind	Soil Erosion – Ephemeral Gully	Water Quality – Excessive Nutrients and Organics in Surface Water
Baseline				System Rating ->	3	4	3	3
Access Control (ac.) 472	0	0	0	0	2	2	2	4
Mulching (ac.) 484	846	719	0	719	4	4	4	4
Residue and Tillage Management, Mulch Till (ac.) 345	4,230	3,595	0	3,595	4	4	4	2
Residue Management, Seasonal (ac.) 344	8,460	7,191	0	7,191	0	2	2	1
Windbreak/Shelterbreak Establishment (ft.) 380	70,496	59,921	0	59,921	0	5	0	1
Total Acreage at Baseline	84,595	71,906	0	71,906				
Progressive				System Rating ->	5	5	5	5
Access Control (ac.) 472	4,834	4,109	423	4,532	2	2	2	4
Conservation Cover (ac.) 327	24,170	20,545	2,115	22,659	5	5	5	3
Mulching (ac.) 484	1,934	1,728	85	1,813	4	4	4	4
Nutrient Management (ac.) 590	19,336	16,436	1,692	18,128	0	0	0	5
Pest Management (ac.) 595	4,834	4,109	423	4,532	1	1	1	5
Residue and Tillage Management, Mulch Till (ac.) 345	6,768	6,175	169	6,345	4	4	4	2
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	1,934	1,644	169	1,813	5	5	4	4
Residue Management, Seasonal (ac.) 344	87,012	74,806	6,768	81,574	0	2	2	1
Upland Wildlife Habitat Management (ac.) 645	9,668	8,218	846	9,064	3	3	3	3
Windbreak/Shelterbreak Establishment (ft.) 380	161,133	144,013	7,050	151,063	0	5	0	1
Total Acreage at Progressive Level	96,680	82,178	8,460	90,638				
RMS				System Rating ->	5	5	5	5
Access Control (ac.) 472	6,043	6,768	1,148	7,916	2	2	2	4
Conservation Cover (ac.) 327	30,213	33,838	5,740	39,578	5	5	5	3
Conservation Crop Rotation (ac.) 328	7,855	7,855	2,435	10,290	3	3	3	2
Cover Crop (ac.) 340	3,021	3,021	937	3,958	4	4	3	2
Mulching (ac.) 484	3,021	3,354	604	3,958	4	4	4	4
Nutrient Management (ac.) 590	24,170	27,070	4,592	31,663	0	0	0	5
Pest Management (ac.) 595	15,106	15,831	3,958	19,789	1	1	1	5
Residue and Tillage Management, Mulch Till (ac.) 345	6,043	7,269	647	7,916	4	4	4	2
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	4,230	4,520	1,021	5,541	5	5	4	4
Upland Wildlife Habitat Management (ac.) 645	12,085	13,535	2,296	15,831	3	3	3	3
Windbreak/Shelterbreak Establishment (ft.) 380	176,240	203,934	26,939	230,874	0	5	0	1
Total Acreage at RMS Level	60,425	60,425	18,732	79,157				

WATERSHED NAME & CODE		GRAND - 10130303				LANDUSE ACRES		241,700	
LANDUSE TYPE		CROPLAND				TYPICAL UNIT SIZE ACRES		120	
CONSERVATION COST TABLE						CALCULATED PARTICIPATION		15%	
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									
Access Control (ac.) 472	423	\$2,538	\$0	\$508	\$3,045	\$2,538	\$152	\$3,179	
Conservation Cover (ac.) 327	2,115	\$79,308	\$0	\$15,862	\$95,169	\$79,308	\$4,758	\$99,352	
Mulching (ac.) 484	85	\$46,527	\$0	\$9,305	\$55,833	\$46,527	\$0	\$46,527	
Nutrient Management (ac.) 590	1,692	\$0	\$0	\$1,692	\$1,692	\$0	\$8,459	\$13,022	
Pest Management (ac.) 595	423	\$0	\$0	\$423	\$423	\$0	\$2,115	\$3,256	
Residue and Tillage Management, Mulch Till (ac.) 345	169	\$0	\$0	\$338	\$338	\$0	\$1,692	\$2,604	
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	169	\$0	\$0	\$508	\$508	\$0	\$2,538	\$3,907	
Residue Management, Seasonal (ac.) 344	6,768	\$0	\$0	\$6,768	\$6,768	\$0	\$33,838	\$52,089	
Upland Wildlife Habitat Management (ac.) 645	846	\$0	\$0	\$846	\$846	\$0	\$4,230	\$6,511	
Windbreak/Shelterbreak Establishment (ft.) 380	7,050	\$4,406	\$0	\$881	\$5,287	\$4,406	\$88	\$4,777	
Subtotal	8,460	\$132,779	\$0	\$37,130	\$169,909	\$132,779	\$57,871	\$235,224	
RMS									
Access Control (ac.) 472	1,148	\$6,888	\$0	\$1,378	\$8,266	\$6,888	\$413	\$8,629	
Conservation Cover (ac.) 327	5,740	\$215,264	\$0	\$43,053	\$258,317	\$215,264	\$12,916	\$269,670	
Conservation Crop Rotation (ac.) 328	2,435	\$0	\$0	\$2,435	\$2,435	\$0	\$12,176	\$18,743	
Cover Crop (ac.) 340	937	\$0	\$0	\$14,049	\$14,049	\$0	\$70,244	\$108,130	
Mulching (ac.) 484	604	\$332,338	\$0	\$66,468	\$398,805	\$332,338	\$0	\$332,338	
Nutrient Management (ac.) 590	4,592	\$0	\$0	\$4,592	\$4,592	\$0	\$22,962	\$35,346	
Pest Management (ac.) 595	3,958	\$0	\$0	\$3,958	\$3,958	\$0	\$19,789	\$30,463	
Residue and Tillage Management, Mulch Till (ac.) 345	647	\$0	\$0	\$1,293	\$1,293	\$0	\$6,465	\$9,953	
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	1,021	\$0	\$0	\$3,064	\$3,064	\$0	\$15,318	\$23,579	
Upland Wildlife Habitat Management (ac.) 645	2,296	\$0	\$0	\$2,296	\$2,296	\$0	\$11,481	\$17,673	
Windbreak/Shelterbreak Establishment (ft.) 380	26,939	\$16,837	\$0	\$3,367	\$20,205	\$16,837	\$337	\$18,256	
Subtotal	18,732	\$571,327	\$0	\$145,952	\$717,279	\$571,327	\$172,100	\$872,779	
Grand Total	27,191	\$704,106	\$0	\$183,082	\$887,189	\$704,106	\$229,971	\$1,108,003	

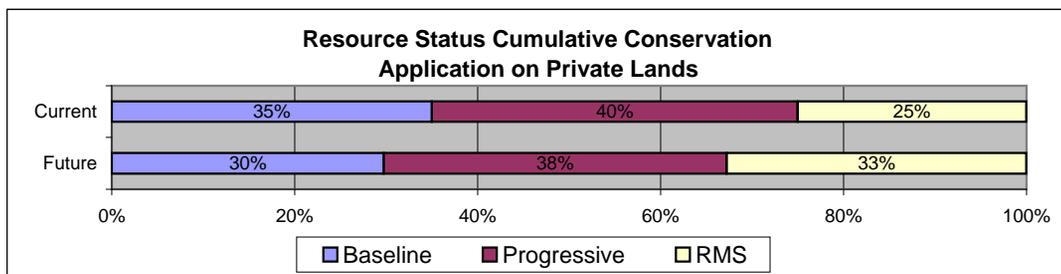


Chart Refers To	
Landuse Type	CROPLAND
Calculated Participation Rate	15%

Average PV Costs per Ac		
System	Federal	Private
Prog	\$20.09	\$27.81
RMS	\$38.29	\$46.59

WATERSHED NAME & CODE		GRAND - 10130303				LANDUSE ACRES			241,700
LANDUSE TYPE		CROPLAND				LOCAL UNIT SIZE ACRES			120
POSSIBLE SOURCES OF FUNDING						MATCHED PARTICIPATION			15%
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	423	X							
Conservation Cover (ac.) 327	2,115	X							
Mulching (ac.) 484	85	X	X		X				
Nutrient Management (ac.) 590	1,692	X							
Pest Management (ac.) 595	423	X	X	X	X				
Residue and Tillage Management, Mulch Till (ac.) 345	169	X							
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	169	X							
Residue Management, Seasonal (ac.) 344	6,768	X							
Upland Wildlife Habitat Management (ac.) 645	846	X	X		X				
Windbreak/Shelterbreak Establishment (ft.) 380	7,050	X	X		X				
New Treatment Acreage	8,460								
RMS									
Access Control (ac.) 472	1,148	X							
Conservation Cover (ac.) 327	5,740	X							
Conservation Crop Rotation (ac.) 328	2,435	X							
Cover Crop (ac.) 340	937	X							
Mulching (ac.) 484	604	X	X		X				
Nutrient Management (ac.) 590	4,592	X							
Pest Management (ac.) 595	3,958	X	X	X	X				
Residue and Tillage Management, Mulch Till (ac.) 345	647	X							
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329	1,021	X							
Upland Wildlife Habitat Management (ac.) 645	2,296	X	X		X				
Windbreak/Shelterbreak Establishment (ft.) 380	26,939	X	X		X				

Enter Watershed Variables Below

Watershed Name	<input type="text" value="Grand"/>	Watershed Code	<input type="text" value="10130303"/>	<input type="button" value="Help"/>	
Landuse Type	<input type="text" value="Rangeland and Pasture"/>	Landuse Acres	<input type="text" value="1,049,100"/>	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 (Based on Watershed Profile)	<input type="text" value="20%"/>	COMPARE	<input type="text" value="20%"/>	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	65%	681,915	Baseline	80%	545,532	Baseline	52%	545,532	545,532	0
			Progressive	10%	68,192					
			RMS	10%	68,192					

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%	262,275	Progressive	80%	209,820	Progressive	27%	278,012	209,820	68,192
			RMS	20%	52,455					

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%	104,910	RMS	100%	104,910	RMS	22%	225,557	104,910	120,647

Grand Totals	100%	1,049,100					100%	1,049,100	860,262	188,838
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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		0	NUMBER per TU	Pond (no.) 378	
382	x	200	x	300	x	325	FEET per TU	Fence (ft.) 382	
472		0.0%		0.0%	x	0.5%	PERCENT of TU	Access Control (ac.) 472	
512		0.0%	x	1.3%	x	1.5%	PERCENT of TU	Pasture & Hayland Planting (ac.) 512	
516		0	x	400	x	650	FEET per TU	Pipeline (ft.) 516	
528		0.0%	x	0.0%	x	11.0%	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	
595		0.0%	x	0.0%	x	2.0%	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	
574		0		0		0	NUMBER per TU	Spring Development (no.) 574	
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	

WATERSHED NAME & CODE		GRAND - 10130303			LANDUSE ACRES		1,049,100	
LANDUSE TYPE		RANGELAND AND PASTURE			TYPICAL UNIT SIZE ACRES		100	
ASSESSMENT INFORMATION					CALCULATED PARTICIPATION		20%	
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 ->				0	0	1	3
Fence (ft.) 382	1,363,830	1,091,064	0	1,091,064	0	0	3	0
Pond (no.) 378	5,796	4,637	0	4,637	0	-1	0	5
Total Acreage at Baseline	681,915	545,532	0	545,532				
Progressive	System Rating ->				3	4	5	5
Fence (ft.) 382	786,825	765,843	68,192	834,035	0	0	3	0
Pasture & Hayland Planting (ac.) 512	3,278	2,623	852	3,475	4	2	5	0
Pest Management (ac.) 595	0	0	0	0	1	5	4	0
Pipeline (ft.) 516	1,049,100	839,280	272,766	1,112,046	0	0	0	5
Pond (no.) 378	2,232	2,365	1	2,366	0	-1	0	5
Prescribed Grazing (ac.) 528	0	0	0	0	4	4	5	1
Pumping Plant (no.) 533	52	42	14	56	0	0	0	5
Water Well (no.) 642	52	42	14	56	0	0	2	5
Watering Facility (no.) 614	262	210	68	278	1	0	3	5
Total Acreage at Progressive Level	262,275	209,820	68,192	278,012				
RMS	System Rating ->				4	5	5	5
Access Control (ac.) 472	525	525	603	1,128	2	4	4	0
Fence (ft.) 382	340,958	634,706	98,353	733,059	0	0	3	0
Pasture & Hayland Planting (ac.) 512	1,574	2,229	1,154	3,383	4	2	5	0
Pest Management (ac.) 595	2,098	2,098	2,413	4,511	1	5	4	0
Pipeline (ft.) 516	681,915	891,735	574,382	1,466,117	0	0	0	5
Prescribed Grazing (ac.) 528	11,540	11,540	13,271	24,811	4	4	5	1
Pumping Plant (no.) 533	42	52	38	90	0	0	0	5
Range Planting (ac.) 550	262	262	302	564	4	4	5	0
Water Well (no.) 642	31	42	26	68	0	0	2	5
Watering Facility (no.) 614	210	262	189	451	1	0	3	5
Total Acreage at RMS Level	104,910	104,910	120,647	225,557				

WATERSHED NAME & CODE		GRAND - 10130303				LANDUSE ACRES		1,049,100	
LANDUSE TYPE		RANGELAND AND PASTURE				TYPICAL UNIT SIZE ACRES		100	
CONSERVATION COST TABLE						CALCULATED PARTICIPATION		20%	
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	68,192	\$34,096	\$0	\$6,819	\$40,915	\$34,096	\$1,364	\$39,841	
Pasture & Hayland Planting (ac.) 512	852	\$25,572	\$0	\$5,114	\$30,686	\$25,572	\$511	\$27,726	
Pest Management (ac.) 595	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Pipeline (ft.) 516	272,766	\$272,766	\$0	\$54,553	\$327,319	\$272,766	\$10,911	\$318,726	
Pond (no.) 378	1	\$2,046	\$0	\$409	\$2,455	\$2,046	\$205	\$2,907	
Prescribed Grazing (ac.) 528	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Pumping Plant (no.) 533	14	\$23,867	\$0	\$4,773	\$28,640	\$23,867	\$955	\$27,888	
Water Well (no.) 642	14	\$102,287	\$0	\$20,457	\$122,745	\$102,287	\$2,046	\$110,905	
Watering Facility (no.) 614	68	\$57,963	\$0	\$11,593	\$69,555	\$57,963	\$3,478	\$72,612	
Subtotal	68,192	\$518,596	\$0	\$103,719	\$622,316	\$518,596	\$19,469	\$600,605	
RMS									
Access Control (ac.) 472	603	\$3,619	\$0	\$724	\$4,343	\$3,619	\$217	\$4,534	
Fence (ft.) 382	98,353	\$49,177	\$0	\$9,835	\$59,012	\$49,177	\$1,967	\$57,463	
Pasture & Hayland Planting (ac.) 512	1,154	\$34,620	\$0	\$6,924	\$41,544	\$34,620	\$692	\$37,537	
Pest Management (ac.) 595	2,413	\$0	\$0	\$2,413	\$2,413	\$0	\$12,065	\$18,572	
Pipeline (ft.) 516	574,382	\$574,382	\$0	\$114,876	\$689,259	\$574,382	\$22,975	\$671,163	
Prescribed Grazing (ac.) 528	13,271	\$0	\$0	\$13,271	\$13,271	\$0	\$66,356	\$102,145	
Pumping Plant (no.) 533	38	\$66,093	\$0	\$13,219	\$79,312	\$66,093	\$2,644	\$77,230	
Range Planting (ac.) 550	302	\$15,081	\$0	\$3,016	\$18,097	\$15,081	\$302	\$16,351	
Water Well (no.) 642	26	\$192,772	\$0	\$38,554	\$231,327	\$192,772	\$3,855	\$209,013	
Watering Facility (no.) 614	189	\$160,512	\$0	\$32,102	\$192,615	\$160,512	\$9,631	\$201,080	
Subtotal	120,647	\$1,096,257	\$0	\$234,935	\$1,331,192	\$1,096,257	\$120,704	\$1,395,087	
Grand Total	188,838	\$1,614,853	\$0	\$338,655	\$1,953,508	\$1,614,853	\$140,172	\$1,995,692	

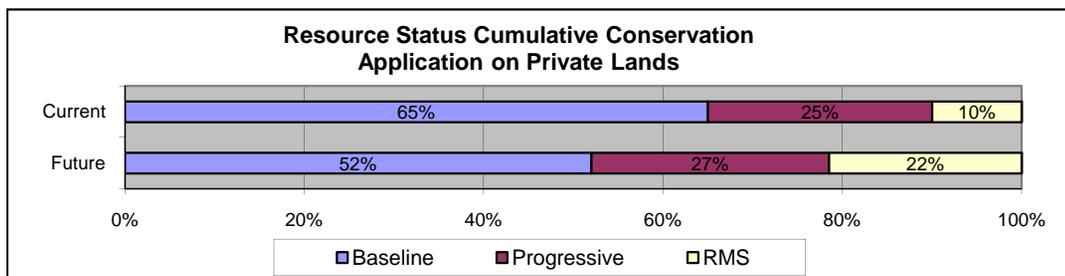


Chart Refers To	
Landuse Type	RANGELAND AND PASTURE
Calculated Participation Rate	20%

Average PV Costs per Ac		
System	Federal	Private
Prog	\$9.13	\$8.81
RMS	\$11.03	\$11.56

Enter Watershed Variables Below

Watershed Name	<input type="text" value="Grand"/>	Watershed Code	<input type="text" value="10130303"/>	<input type="button" value="Help"/>	
Landuse Type	<input type="text" value="Hayland"/>	Landuse Acres	<input type="text" value="91,100"/>	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%	18,220	Baseline		0	Baseline	--	0	0	0
			Progressive	5%	911					
			RMS	5%	911					

Must Total 100% 10%

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
Progressive	30%	27,330	Progressive	90%	24,597	Progressive	28%	25,508	24,597	911
			RMS	10%	2,733					

Must Total 100% 100%

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
RMS	50%	45,550	RMS	100%	45,550	RMS	54%	49,194	45,550	3,644

Grand Totals	100%	91,100					82%	74,702	70,147	4,555
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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
511	0.0%	x 5.0%	x 20.0%	PERCENT of TU	Forage Harvest Management (ac.) 511
512	x 1.0%	x 2.0%	x 3.0%	PERCENT of TU	Pasture & Hayland Planting (ac.) 512
590	0.0%	0.0%	x 5.0%	PERCENT of TU	Nutrient Management (ac.) 590
595	0.0%	0.0%	x 50.0%	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		GRAND - 10130303			LANDUSE ACRES		91,100	
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	182	0	0	0	4	5	2	5
Total Acreage at Baseline	18,220	0	0	0				
Progressive	System Rating ->				3	4	2	4
Forage Harvest Management (ac.) 511	1,367	1,230	46	1,275	3	4	3	4
Pasture & Hayland Planting (ac.) 512	547	501	9	510	4	5	2	5
Total Acreage at Progressive Level	27,330	24,597	911	25,508				
RMS	System Rating ->				3	5	4	4
Forage Harvest Management (ac.) 511	9,110	9,247	592	9,839	3	4	3	4
Nutrient Management (ac.) 590	2,278	2,278	182	2,460	0	3	0	4
Pasture & Hayland Planting (ac.) 512	1,367	1,430	46	1,476	4	5	2	5
Pest Management (ac.) 595	22,775	22,775	1,822	24,597	1	5	5	4
Total Acreage at RMS Level	45,550	45,550	3,644	49,194				

WATERSHED NAME & CODE		GRAND - 10130303				LANDUSE ACRES		91,100	
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									
Forage Harvest Management (ac.) 511		46	\$0	\$0	\$46	\$46	\$0	\$228	\$351
Pasture & Hayland Planting (ac.) 512		9	\$273	\$0	\$55	\$328	\$273	\$5	\$296
Subtotal		911	\$273	\$0	\$100	\$374	\$273	\$233	\$647
RMS									
Forage Harvest Management (ac.) 511		592	\$0	\$0	\$592	\$592	\$0	\$2,961	\$4,558
Nutrient Management (ac.) 590		182	\$0	\$0	\$182	\$182	\$0	\$911	\$1,402
Pasture & Hayland Planting (ac.) 512		46	\$1,367	\$0	\$273	\$1,640	\$1,367	\$27	\$1,482
Pest Management (ac.) 595		1,822	\$0	\$0	\$1,822	\$1,822	\$0	\$9,110	\$14,023
Subtotal		3,644	\$1,367	\$0	\$2,870	\$4,236	\$1,367	\$13,009	\$21,465
Grand Total		4,555	\$1,640	\$0	\$2,970	\$4,610	\$1,640	\$13,242	\$22,112

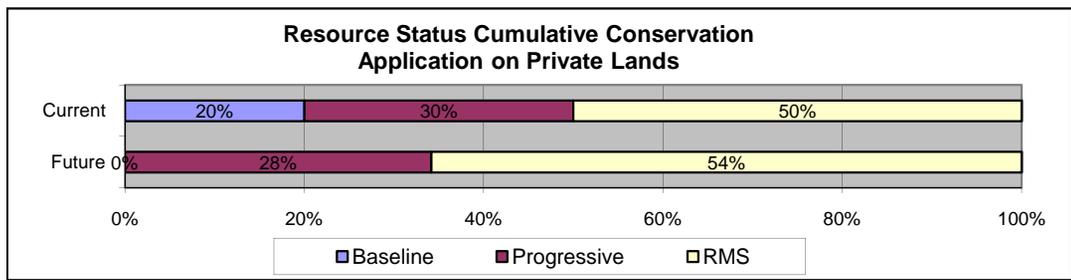


Chart Refers To	
Landuse Type	HAYLAND
Calculated Participation Rate	10%

Average PV Costs per Ac		
System	Federal	Private
Prog	\$0.41	\$0.71
RMS	\$1.16	\$5.89

Enter Watershed Variables Below

Watershed Name	<input type="text" value="Grand"/>	Watershed Code	<input type="text" value="10130303"/>	<input type="button" value="Help"/>	
Landuse Type	<input type="text" value="Headquarters - Farmstead"/>	Landuse Acres	<input type="text" value="13,200"/>	Interest Rate	<input type="text" value="6%"/>
Typical Unit Size (ac)	<input type="text" value="25"/>	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="3%"/>	COMPARE	<input type="text" value="3%"/>	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	60%	7,920	Baseline	97%	7,682	Baseline	58%	7,682	7,682	0
			Progressive	2%	158					
			RMS	1%	79					
			<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%	3,960	Progressive	98%	3,881	Progressive	31%	4,039	3,881	158
			RMS	2%	79					
			<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%	1,320	RMS	100%	1,320	RMS	11%	1,478	1,320	158
Grand Totals	100%	13,200					100%	13,200	12,883	317

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 1	NUMBER per TU	Waste Storage Facility (no.) 313
342	0.0%	3.0%	x 8.0%	PERCENT of TU	Critical Area Planting (ac.) 342
380	x 500	x 750	x 1,200	FEET per TU	Windbreak/Shelterbreak Establishment (ft.) 380
484	x 5.0%	x 10.0%	x 15.0%	PERCENT of TU	Mulching (ac.) 484
633	0.0%	0.0%	x 100.0%	PERCENT of TU	Waste Utilization (ac.) 633
650	0	x 100	x 250	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
561	0.0%	0.0%	0.1%	PERCENT of TU	Heavy Use Area Protection (ac.) 561
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		GRAND - 10130303			LANDUSE ACRES	13,200		
LANDUSE TYPE		HEADQUARTERS - FARMSTEAD			TYPICAL UNIT SIZE ACRES	25		
ASSESSMENT INFORMATION					CALCULATED PARTICIPATION	3%		
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 ->				1	2	1	1
Mulching (ac.) 484	396	384	0	384	1	4	2	0
Windbreak/Shelterbreak Establishment (ft.) 380	158,400	153,648	0	153,648	2	1	2	2
Total Acreage at Baseline	7,920	7,682	0	7,682				
Progressive	System Rating ->				2	2	2	1
Mulching (ac.) 484	396	396	8	404	1	4	2	0
Windbreak/Shelterbreak Establishment (ft.) 380	118,800	119,592	1,584	121,176	2	1	2	2
Windbreak/Shelterbreak Renovation (ft.) 650	15,840	15,523	634	16,157	2	2	1	2
Total Acreage at Progressive Level	3,960	3,881	158	4,039				
RMS	System Rating ->				3	4	2	2
Critical Area Planting (ac.) 342	106	106	13	118	1	3	1	0
Mulching (ac.) 484	198	210	12	222	1	4	2	0
Waste Storage Facility (no.) 313	26	26	3	30	3	4	0	-2
Waste Utilization (ac.) 633	1,320	1,320	158	1,478	2	3	0	4
Windbreak/Shelterbreak Establishment (ft.) 380	63,360	67,320	3,643	70,963	2	1	2	2
Windbreak/Shelterbreak Renovation (ft.) 650	13,200	13,517	1,267	14,784	2	2	1	2
Total Acreage at RMS Level	1,320	1,320	158	1,478				

Enter Watershed Variables Below

Watershed Name	<input type="text" value="Grand"/>	Watershed Code	<input type="text" value="10130303"/>	<input type="button" value="Help"/>	
Landuse Type	<input type="text" value="CRP - Wildlife Land"/>	Landuse Acres	<input type="text" value="92,200"/>	Interest Rate	<input type="text" value="6%"/>
Typical Unit Size (ac)	<input type="text" value="50"/>	Percent TA of FA	<input type="text" value="20%"/>	Cost-Share Rate	<input type="text" value="50%"/>
Estimated Time Frame = 5 years	Participation Rate <small>(Based on Watershed Profile)</small>	<input type="text" value="1%"/>	COMPARE	<input type="text" value="2%"/>	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%	73,760	Baseline		0	Baseline	--	0	0	0
			Progressive	1%	738					
			RMS	1%	738					
			<i>Must Total 100%</i>		2%					

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
Progressive	15%	13,830	Progressive	99%	13,692	Progressive	16%	14,429	13,692	738
			RMS	1%	138					
			<i>Must Total 100%</i>		100%					

Current Conditions			Projected Change			Projected Future Condition				
System	Percent	Acres	System	Percent	Acres	System	Percent	Acres		
								Total	Static	Treated
RMS	5%	4,610	RMS	100%	4,610	RMS	6%	5,486	4,610	876
Grand Totals	100%	92,200					22%	19,915	18,302	1,614

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	75.0%	x	100.0%	PERCENT of TU	Conservation Cover (ac.) 327	
380	x	100	x	500	x	1,000	FEET per TU	Windbreak/Shelterbreak Establishment (ft.) 380	
393		0.0%	x	5.0%	x	10.0%	PERCENT of TU	Filter Strip (ac.) 393	
472	x	0.0%	x	25.0%	x	90.0%	PERCENT of TU	Access Control (ac.) 472	
484		1.0%		2.5%	x	5.0%	PERCENT of TU	Mulching (ac.) 484	
595		0.0%	x	25.0%	x	75.0%	PERCENT of TU	Pest Management (ac.) 595	
645		0.0%	x	25.0%	x	100.0%	PERCENT of TU	Upland Wildlife Habitat Management (ac.) 645	
390		0.0%		0.0%		4.0%	PERCENT of TU	Riparian Herbaceous Cover (ac.) 390	
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	
644		0.0%		5.0%		20.0%	PERCENT of TU	Wetland Wildlife Habitat Management (ac.) 644	
657		0.0%		0.0%		14.0%	PERCENT of TU	Wetland Restoration (ac.) 657	
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	
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	
533		0		1		1	NUMBER per TU	Pumping Plant (no.) 533	

WATERSHED NAME & CODE		GRAND - 10130303			LANDUSE ACRES		92,200	
LANDUSE TYPE		CRP - WILDLIFE LAND			TYPICAL UNIT SIZE ACRES		50	
ASSESSMENT INFORMATION					CALCULATED PARTICIPATION		2%	
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	0
Access Control (ac.) 472	0	0	0	0	4	3	3	0
Conservation Cover (ac.) 327	18,440	0	0	0	5	5	5	0
Windbreak/Shelterbreak Establishment (ft.) 380	147,520	0	0	0	0	3	0	0
Total Acreage at Baseline	73,760	0	0	0				
Progressive				System Rating ->	4	5	4	3
Access Control (ac.) 472	3,458	3,423	184	3,607	4	3	3	0
Conservation Cover (ac.) 327	10,373	10,453	369	10,822	5	5	5	0
Filter Strip (ac.) 393	692	685	37	721	0	2	1	2
Pest Management (ac.) 595	3,458	3,423	184	3,607	5	0	0	0
Upland Wildlife Habitat Management (ac.) 645	3,458	3,423	184	3,607	0	5	5	5
Windbreak/Shelterbreak Establishment (ft.) 380	138,300	138,392	5,901	144,293	0	3	0	0
Total Acreage at Progressive Level	13,830	13,692	738	14,429				
RMS				System Rating ->	5	5	4	3
Access Control (ac.) 472	4,149	4,184	754	4,937	4	3	3	0
Conservation Cover (ac.) 327	4,610	4,898	588	5,486	5	5	5	0
Filter Strip (ac.) 393	461	468	81	549	0	2	1	2
Mulching (ac.) 484	231	231	44	274	3	0	0	0
Pest Management (ac.) 595	3,458	3,492	622	4,114	5	0	0	0
Upland Wildlife Habitat Management (ac.) 645	4,610	4,645	841	5,486	0	5	5	5
Windbreak/Shelterbreak Establishment (ft.) 380	92,200	95,058	14,660	109,718	0	3	0	0
Total Acreage at RMS Level	4,610	4,610	876	5,486				

