

## **External Rapid Watershed Assessments – Matrix Data**

Rapid watershed assessments provide initial estimates of where conservation investments would best address the concerns of landowners, conservation districts, and other community organizations and stakeholders. These assessments help land-owners and local leaders set priorities and determine the best actions to achieve their goals.

The rapid assessment matrix summarizes, in tabular form, current and future resource conditions and their qualitative effect on primary resource concerns. The matrix also summarizes future resource conditions by cost, including: installation, annual operations, initial and annual management, and technical assistance.

The following matrix model was developed from Oregon NRCS, but has been customized to represent Missouri conditions and related economic figures. Input for the model was solicited from district conservationists from each watershed, who identified the resource concerns and typical conservation practice systems installed. As with any modeling effort, it is necessary to make assumptions and generalizations. However, these reports contain estimates from local and experienced field conservationists.

For the Sac River Watershed, the assessment is comprised of four separate land uses – in the following table, the pages in parenthesis show where the respective assessment summary matrices are located.

### **Land use characteristics used in Assessment Matrix development.**

Land Use	Watershed Total (acres)	Typical Unit Size (acres)	Estimated Participation* (%)
Cropland (p. 47-48)	92,359	50	3
Forestland (p. 49-50)	383,481	25	10
Grassland (p. 51-52)	704,712	60	13
Urban (p. 53-54)	12,370	5	5

\* Calculated Participation Rate = Future Treated Acres / (Current Base Acres + Current Progressive Acres)

The assessment matrix for each land use identified is presented as two tables.

**Assessment Information** – summarizes the practices at each treatment level, the quantities of practices for current benchmark conditions and projected future conditions. It also displays the four major resource concerns along with practice effects and adds a “systems rating” indicating the overall effectiveness of the conservation system used at each level.

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**Rapid Watershed Assessments Matrix – Continued**

**Conservation Systems** are identified by different conservation practices within **Treatment Levels**, as described below.

Baseline System – represents those landowners who typically are not participating in conservation programs.

Progressive System – is a level of conservation adoption that is leading to a full Resource Management System (RMS).

Resource Management System – is a system of conservation practices that address all the SWPA resource concerns typically seen for this land use in the watershed.

Each table includes the four highest priority **Resource Concerns** that typically must be dealt with for that particular land use in the watershed. Other resource concerns might be identified in the profile, but they will not be identified in the matrix. For each resource concern, a numerical **Practice Effect** rating is identified which is the default rating from the statewide Conservation Practice Physical Effects (CPPE) for both the selected resource concerns and conservation practices. The **System Rating** shown for each conservation system indicates the overall effectiveness of the conservation system used at each treatment level.

**Current Conditions and Future Conditions**, in terms of units of practices within the respective conservation systems, are shown for current benchmark conditions as well as for projected future conditions for each particular conservation practice that is identified within the resource concerns.

**Conservation Investment Information** – summarizes the installation, management, operation and maintenance costs, by practice and treatment level, for the projected future conditions by federal and private share of the costs. This table also includes the current benchmark and projected future conditions conservation status bars for the Progressive System and the Resource Management System.

**USDA Investment** costs are shown for each practice included within the different conservation systems.

Installation Costs are shown at a 50% cost-share rate.

Management Costs are shown for a 3-year period, at a 100% rate.

Technical Assistance Costs are shown at a 20% cost-share rate.

Total Present Value of Costs is the summation of all of the preceding costs, by conservation practice.

**Private Investment** costs are shown for each practice included within the different conservation systems.

Installation Costs are shown at a 50% cost-share rate.

Annual Operation and Management Costs are shown at a 100% rate.

Total Present Value of Costs is the summation of all of the preceding costs, by conservation practice.



Sac River - 10290106  
8 – Digit Hydrologic Unit Profile and  
Resource Assessment Matrix



WATERSHED NAME & CODE		SAC RIVER - 10290106			LANDUSE ACRES		92,359		
LANDUSE TYPE		CROPLAND			TYPICAL UNIT SIZE ACRES		50		
ASSESSMENT INFORMATION					ESTIMATED PARTICIPATION		3%		
CONSERVATION SYSTEMS BY TREATMENT LEVELS		CURRENT CONDITIONS	FUTURE CONDITIONS		RESOURCE CONCERNS				
		Total Units	Existing Unchanged Units	New Treatment Units	Total Units	Soil Erosion – Sheet and Rill	Soil Erosion – Classic Gully	Water Quantity – Inefficient Water Use on Nonirrigated Land	Water Quality – Harmful Levels of Pesticides in Surface Water
<b>Baseline System</b>		<b>System Rating -&gt;</b>			<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>	
<b>Total Acreage at Baseline Level</b>		<b>23,090</b>	<b>20,781</b>	<b>0</b>	<b>20,781</b>				
Conservation Crop Rotation (ac.) 328		23,090	20,781	0	20,781	4	1	2	2
Grassed Waterway (ac.) 412		1,154	1,039	0	1,039	0	4	0	2
Terrace (ft.) 600		3,001,668	2,701,501	0	2,701,501	5	2	3	3
<b>Progressive System</b>		<b>System Rating -&gt;</b>			<b>4</b>	<b>3</b>	<b>3</b>	<b>4</b>	
<b>Total Acreage at Progressive Level</b>		<b>46,180</b>	<b>46,180</b>	<b>2,309</b>	<b>48,488</b>				
Conservation Crop Rotation (ac.) 328		46,180	48,488	0	48,488	4	1	2	2
Grassed Waterway (ac.) 412		2,309	2,424	0	2,424	0	4	0	2
Nutrient Management (ac.) 590		46,180	46,180	2,309	48,488	0	0	0	0
Residue and Tillage Management, No-Till/Strip Till/Direct Seed (ac.) 329		46,180	46,180	2,309	48,488	5	1	4	5
Terrace (ft.) 600		6,003,335	6,303,502	0	6,303,502	5	2	3	3
<b>Resource Management System (RMS)</b>		<b>System Rating -&gt;</b>			<b>5</b>	<b>3</b>	<b>3</b>	<b>5</b>	
<b>Total Acreage at RMS Level</b>		<b>23,090</b>	<b>23,090</b>	<b>0</b>	<b>23,090</b>				
Conservation Crop Rotation (ac.) 328		23,090	23,090	0	23,090	4	1	2	2
Filter Strip (ac.) 393		924	924	0	924	3	0	0	3
Grassed Waterway (ac.) 412		1,154	1,154	0	1,154	0	4	0	2
Nutrient Management (ac.) 590		23,090	23,090	0	23,090	0	0	0	0
Pest Management (ac.) 595		23,090	23,090	0	23,090	0	0	1	5
Residue and Tillage Management, No-Till/Strip Till/Direct Seed (ac.) 329		23,090	23,090	0	23,090	5	1	4	5
Terrace (ft.) 600		3,001,668	3,001,668	0	3,001,668	5	2	3	3



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WATERSHED NAME & CODE		SAC RIVER - 10290106				LANDUSE ACRES		92,359	
LANDUSE TYPE		CROPLAND				TYPICAL UNIT SIZE ACRES		50	
CONSERVATION INVESTMENT INFORMATION						ESTIMATED PARTICIPATION		3%	
CONSERVATION SYSTEMS BY TREATMENT LEVELS	FUTURE	USDA INVESTMENT				PRIVATE INVESTMENT			
	New Treatment Units	Installation Cost	Management Cost - 3 yrs	Technical Assistance	Total Present Value Cost	Installation Cost	Annual O & M + Mgt Costs	Total Present Value Cost	
		50%	100%	20%		50%	100%		
<b>Progressive System Acres Treated</b>	<b>2308.975</b>								
Conservation Crop Rotation (ac.) 328	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Grassed Waterway (ac.) 412	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Nutrient Management (ac.) 590	2,309	\$0	\$87,764	\$17,553	\$95,751	\$0	\$29,255	\$45,033	
Residue and Tillage Management, No-Till/Strip Till/Direct Seed (ac.) 329	2,309	\$0	\$125,585	\$25,117	\$137,014	\$0	\$41,862	\$64,440	
Terrace (ft.) 600	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	<b>Subtotal</b>	<b>\$0</b>	<b>\$213,349</b>	<b>\$42,670</b>	<b>\$232,765</b>	<b>\$0</b>	<b>\$71,116</b>	<b>\$109,473</b>	
<b>Resource Management System (RMS) Acres Treated</b>	<b>0</b>								
Conservation Crop Rotation (ac.) 328	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Filter Strip (ac.) 393	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Grassed Waterway (ac.) 412	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Nutrient Management (ac.) 590	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Pest Management (ac.) 595	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Residue and Tillage Management, No-Till/Strip Till/Direct Seed (ac.) 329	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Terrace (ft.) 600	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	<b>Subtotal</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
<b>TOTAL ACRES TREATED / ESTIMATED TREATMENT COSTS</b>	<b>2308.975</b>	<b>\$0</b>	<b>\$213,349</b>	<b>\$42,670</b>	<b>\$232,765</b>	<b>\$0</b>	<b>\$71,116</b>	<b>\$109,473</b>	



Sac River - 10290106  
 8 – Digit Hydrologic Unit Profile and  
 Resource Assessment Matrix



WATERSHED NAME & CODE		SAC RIVER - 10290106			LANDUSE ACRES		383,481	
LANDUSE TYPE		FORESTLAND			TYPICAL UNIT SIZE ACRES		25	
ASSESSMENT INFORMATION					ESTIMATED PARTICIPATION		10%	
CONSERVATION SYSTEMS BY TREATMENT LEVELS	CURRENT 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	Fish and Wildlife – Inadequate Food	Fish and Wildlife – Inadequate Cover/Shelter
<b>Baseline System</b>		<b>System Rating -&gt;</b>			<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>
<b>Total Acreage at Baseline Level</b>		<b>345,133</b>	<b>310,620</b>	<b>0</b>	<b>310,620</b>			
Forest Stand Improvement (ac.) 666	345,133	310,620	0	310,620	3	5	3	3
<b>Progressive System</b>		<b>System Rating -&gt;</b>			<b>3</b>	<b>4</b>	<b>3</b>	<b>3</b>
<b>Total Acreage at Progressive Level</b>		<b>23,009</b>	<b>21,858</b>	<b>34,513</b>	<b>56,372</b>			
Brush Management (ac.) 314	3,451	3,279	5,177	8,456	3	3	3	3
Fence (ft.) 382	920,354	874,337	1,380,532	2,254,868	0	0	0	0
Forest Stand Improvement (ac.) 666	23,009	56,372	0	56,372	3	5	3	3
Use Exclusion (ac.) 472	21,858	20,765	32,788	53,553	2	4	3	3
<b>Resource Management System (RMS)</b>		<b>System Rating -&gt;</b>			<b>4</b>	<b>5</b>	<b>3</b>	<b>4</b>
<b>Total Acreage at RMS Level</b>		<b>15,339</b>	<b>15,339</b>	<b>1,150</b>	<b>16,490</b>			
Brush Management (ac.) 314	1,534	1,649	0	1,649	3	3	3	3
Fence (ft.) 382	613,570	659,587	0	659,587	0	0	0	0
Forest Stand Improvement (ac.) 666	15,339	16,490	0	16,490	3	5	3	3
Tree/Shrub Establishment (ac.) 612	1,534	1,534	115	1,649	5	5	3	4
Tree/Shrub Site Preparation (ac.) 490	1,534	1,534	115	1,649	-1	5	0	0
Use Exclusion (ac.) 472	14,572	15,665	0	15,665	2	4	3	3



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WATERSHED NAME & CODE		SAC RIVER - 10290106				LANDUSE ACRES		383,481	
LANDUSE TYPE		FORESTLAND				TYPICAL UNIT SIZE ACRES		25	
CONSERVATION INVESTMENT INFORMATION						ESTIMATED PARTICIPATION		10%	
CONSERVATION SYSTEMS BY TREATMENT LEVELS	FUTURE	USDA INVESTMENT				PRIVATE INVESTMENT			
	New Treatment Units	Installation Cost	Management Cost - 3 yrs	Technical Assistance	Total Present Value Cost	Installation Cost	Annual O & M + Mgt Costs	Total Present Value Cost	
		50%	100%	20%		50%	100%		
<b>Progressive System Acres Treated</b>	<b>34513.29</b>								
Brush Management (ac.) 314	5,177	\$229,574	\$0	\$45,915	\$275,489	\$229,574	\$4,591	\$248,915	
Fence (ft.) 382	1,380,532	\$1,007,788	\$0	\$201,558	\$1,209,346	\$1,007,788	\$100,779	\$1,432,305	
Forest Stand Improvement (ac.) 666	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Use Exclusion (ac.) 472	32,788	\$81,969	\$0	\$16,394	\$98,363	\$81,969	\$4,918	\$102,686	
	<b>Subtotal</b>	<b>\$1,319,331</b>	<b>\$0</b>	<b>\$263,866</b>	<b>\$1,583,197</b>	<b>\$1,319,331</b>	<b>\$110,288</b>	<b>\$1,783,906</b>	
<b>Resource Management System (RMS) Acres Treated</b>	<b>1150.443</b>								
Brush Management (ac.) 314	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Fence (ft.) 382	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Forest Stand Improvement (ac.) 666	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Tree/Shrub Establishment (ac.) 612	115	\$18,752	\$0	\$3,750	\$22,503	\$18,752	\$0	\$18,752	
Tree/Shrub Site Preparation (ac.) 490	115	\$0	\$15,459	\$3,092	\$16,865	\$0	\$5,153	\$7,932	
Use Exclusion (ac.) 472	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	<b>Subtotal</b>	<b>\$18,752</b>	<b>\$15,459</b>	<b>\$6,842</b>	<b>\$39,368</b>	<b>\$18,752</b>	<b>\$5,153</b>	<b>\$26,684</b>	
<b>TOTAL ACRES TREATED / ESTIMATED TREATMENT COSTS</b>	<b>35663.733</b>	<b>\$1,338,083</b>	<b>\$15,459</b>	<b>\$270,708</b>	<b>\$1,622,565</b>	<b>\$1,338,083</b>	<b>\$115,441</b>	<b>\$1,810,590</b>	



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WATERSHED NAME & CODE		SAC RIVER - 10290106			LANDUSE ACRES		704,712	
LANDUSE TYPE		GRASSLAND			TYPICAL UNIT SIZE ACRES		60	
ASSESSMENT INFORMATION PART 1					ESTIMATED PARTICIPATION		13%	
CONSERVATION SYSTEMS BY TREATMENT LEVELS	CURRENT 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
<b>Baseline System</b>	<b>System Rating -&gt;</b>				<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>
<b>Total Acreage at Baseline Level</b>	<b>387,592</b>	<b>329,453</b>	<b>0</b>	<b>329,453</b>				
Fence (ft.) 382	38,759,160	32,945,286	0	32,945,286	0	0	0	0
Pasture and Hay Planting (ac.) 512	387,592	329,453	0	329,453	4	4	5	0
Pond (no.) 378	6,460	5,491	0	5,491	0	0	0	5
<b>Progressive System</b>	<b>System Rating -&gt;</b>				<b>5</b>	<b>4</b>	<b>5</b>	<b>5</b>
<b>Total Acreage at Progressive Level</b>	<b>211,414</b>	<b>194,501</b>	<b>46,511</b>	<b>241,012</b>				
Brush Management (ac.) 314	31,712	29,175	6,977	36,152	3	4	4	0
Critical Area Planting (ac.) 342	10,571	9,725	2,326	12,051	5	4	1	0
Fence (ft.) 382	31,712,040	33,826,176	2,325,550	36,151,726	0	0	0	0
Forage Harvest Management (ac.) 511	211,414	194,501	46,511	241,012	3	4	4	0
Pasture and Hay Planting (ac.) 512	211,414	241,012	0	241,012	4	4	5	0
Pipeline (ft.) 516	7,047,120	6,483,350	1,550,366	8,033,717	0	0	0	5
Pond (no.) 378	3,524	4,017	0	4,017	0	0	0	5
Prescribed Grazing (ac.) 528	211,414	194,501	46,511	241,012	4	4	5	0
Watering Facility (no.) 614	3,524	3,242	775	4,017	2	0	3	5



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WATERSHED NAME & CODE		SAC RIVER - 10290106			LANDUSE ACRES		704,712	
LANDUSE TYPE		GRASSLAND			TYPICAL UNIT SIZE ACRES		60	
ASSESSMENT INFORMATION PART 2					ESTIMATED PARTICIPATION		13%	
CONSERVATION SYSTEMS BY TREATMENT LEVELS	CURRENT 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
<b>Resource Management System (RMS)</b>	<b>System Rating -&gt;</b>				<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>
<b>Total Acreage at RMS Level</b>	<b>105,707</b>	<b>105,707</b>	<b>28,541</b>	<b>134,248</b>				
Brush Management (ac.) 314	10,571	12,262	1,163	13,425	3	4	4	0
Critical Area Planting (ac.) 342	5,285	6,131	581	6,712	5	4	1	0
Fence (ft.) 382	19,379,580	23,079,318	1,532,749	24,612,067	0	0	0	0
Forage Harvest Management (ac.) 511	95,136	110,358	10,465	120,823	3	4	4	0
Heavy Use Area Protection (ac.) 561	5,285	5,285	1,427	6,712	3	4	0	0
Nutrient Management (ac.) 590	95,136	95,136	25,687	120,823	0	0	4	0
Pasture and Hay Planting (ac.) 512	95,136	120,823	0	120,823	4	4	5	0
Pest Management (ac.) 595	105,707	105,707	28,541	134,248	0	5	4	0
Pipeline (ft.) 516	4,668,717	5,232,487	696,784	5,929,271	0	0	0	5
Pond (no.) 378	1,762	2,237	0	2,237	0	0	0	5
Prescribed Grazing (ac.) 528	95,136	110,358	10,465	120,823	4	4	5	0
Riparian Forest Buffer (ac.) 391	10,571	10,571	2,854	13,425	2	4	0	0
Tree/Shrub Establishment (ac.) 612	10,571	10,571	2,854	13,425	5	4	2	0
Tree/Shrub Site Preparation (ac.) 490	10,571	10,571	2,854	13,425	-1	4	0	0
Use Exclusion (ac.) 472	10,571	10,571	2,854	13,425	2	4	4	1
Water Well (no.) 642	1,762	1,762	476	2,237	2	0	2	5
Watering Facility (no.) 614	1,762	2,044	194	2,237	2	0	3	5



**Sac River - 10290106**  
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 Resource Assessment Matrix*



WATERSHED NAME & CODE	<b>SAC RIVER - 10290106</b>					LANDUSE ACRES	<b>704,712</b>		
LANDUSE TYPE	<b>GRASSLAND</b>					TYPICAL UNIT SIZE ACRES	<b>60</b>		
CONSERVATION INVESTMENT INFORMATION						ESTIMATED PARTICIPATION	<b>13%</b>		
CONSERVATION SYSTEMS BY TREATMENT LEVELS	FUTURE	USDA INVESTMENT				PRIVATE INVESTMENT			
	New Treatment Units	Installation Cost	Management Cost - 3 yrs	Technical Assistance	Total Present Value Cost	Installation Cost	Annual O & M + Mgt Costs	Total Present Value Cost	
		50%	100%	20%		50%	100%		
<b>Progressive System Acres Treated</b>	<b>46510.992</b>								
Brush Management (ac.) 314	6,977	\$309,379	\$0	\$61,876	\$371,255	\$309,379	\$6,188	\$335,444	
Critical Area Planting (ac.) 342	2,326	\$553,690	\$0	\$110,738	\$664,428	\$553,690	\$11,074	\$600,337	
Fence (ft.) 382	2,325,550	\$1,697,651	\$0	\$339,530	\$2,037,181	\$1,697,651	\$169,765	\$2,412,764	
Forage Harvest Management (ac.) 511	46,511	\$186,044	\$0	\$37,209	\$223,253	\$186,044	\$55,813	\$421,149	
Pasture and Hay Planting (ac.) 512	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Pipeline (ft.) 516	1,550,366	\$1,666,644	\$0	\$333,329	\$1,999,973	\$1,666,644	\$0	\$1,666,644	
Pond (no.) 378	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Prescribed Grazing (ac.) 528	46,511	\$204,648	\$0	\$40,930	\$245,578	\$204,648	\$0	\$204,648	
Watering Facility (no.) 614	775	\$352,077	\$0	\$70,415	\$422,492	\$352,077	\$14,083	\$411,400	
	<b>Subtotal</b>	<b>\$4,970,134</b>	<b>\$0</b>	<b>\$994,027</b>	<b>\$5,964,160</b>	<b>\$4,970,134</b>	<b>\$256,923</b>	<b>\$6,052,386</b>	
<b>Resource Management System (RMS) Acres Treated</b>	<b>28540.836</b>								
Brush Management (ac.) 314	1,163	\$51,563	\$0	\$10,313	\$61,876	\$51,563	\$1,031	\$55,907	
Critical Area Planting (ac.) 342	581	\$138,423	\$0	\$27,685	\$166,107	\$138,423	\$2,768	\$150,084	
Fence (ft.) 382	1,532,749	\$1,118,906	\$0	\$223,781	\$1,342,688	\$1,118,906	\$111,891	\$1,590,231	
Forage Harvest Management (ac.) 511	10,465	\$41,860	\$0	\$8,372	\$50,232	\$41,860	\$12,558	\$94,759	
Heavy Use Area Protection (ac.) 561	1,427	\$37,262,630	\$0	\$7,452,526	\$44,715,156	\$37,262,630	\$3,726,263	\$52,959,005	
Nutrient Management (ac.) 590	25,687	\$0	\$976,353	\$195,271	\$1,065,206	\$0	\$325,451	\$500,984	
Pasture and Hay Planting (ac.) 512	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Pest Management (ac.) 595	28,541	\$0	\$1,827,184	\$365,437	\$1,993,465	\$0	\$609,061	\$937,560	
Pipeline (ft.) 516	696,784	\$749,043	\$0	\$149,809	\$898,851	\$749,043	\$0	\$749,043	
Pond (no.) 378	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Prescribed Grazing (ac.) 528	10,465	\$46,046	\$0	\$9,209	\$55,255	\$46,046	\$0	\$46,046	
Riparian Forest Buffer (ac.) 391	2,854	\$465,216	\$0	\$93,043	\$558,259	\$465,216	\$9,304	\$504,409	
Tree/Shrub Establishment (ac.) 612	2,854	\$465,216	\$0	\$93,043	\$558,259	\$465,216	\$0	\$465,216	
Tree/Shrub Site Preparation (ac.) 490	2,854	\$0	\$383,503	\$76,701	\$418,404	\$0	\$127,834	\$196,782	
Use Exclusion (ac.) 472	2,854	\$7,135	\$0	\$1,427	\$8,562	\$7,135	\$428	\$8,939	
Water Well (no.) 642	476	\$711,533	\$0	\$142,307	\$853,839	\$711,533	\$28,461	\$831,422	
Watering Facility (no.) 614	194	\$88,019	\$0	\$17,604	\$105,623	\$88,019	\$3,521	\$102,850	
	<b>Subtotal</b>	<b>\$41,145,589</b>	<b>\$3,187,041</b>	<b>\$8,866,526</b>	<b>\$52,851,781</b>	<b>\$41,145,589</b>	<b>\$4,958,573</b>	<b>\$59,193,235</b>	
<b>TOTAL ACRES TREATED / ESTIMATED TREATMENT COSTS</b>	<b>75051.828</b>	<b>\$46,115,723</b>	<b>\$3,187,041</b>	<b>\$9,860,553</b>	<b>\$58,815,942</b>	<b>\$46,115,723</b>	<b>\$5,215,496</b>	<b>\$65,245,621</b>	

WATERSHED NAME & CODE		SAC RIVER - 10290106			LANDUSE ACRES		12,370		
LANDUSE TYPE		HIGH AND LOW INTENSITY URBAN			TYPICAL UNIT SIZE ACRES		5		
ASSESSMENT INFORMATION					ESTIMATED PARTICIPATION		5%		
CONSERVATION SYSTEMS BY TREATMENT LEVELS	CURRENT CONDITIONS	FUTURE CONDITIONS			RESOURCE CONCERNS				
	Total Units	Existing Unchanged Units	New Treatment Units	Total Units	Soil Erosion – Road, Roadsides and Construction Sites	Soil Condition – Compaction	Water Quality – Excessive Suspended Sediment and Turbidity in Surface Water	Water Quality – Harmful Levels of Pathogens in Surface Water	
<b>Baseline System</b>		<b>System Rating -&gt;</b>			<b>3</b>	<b>1</b>	<b>2</b>	<b>0</b>	
<b>Total Acreage at Baseline Level</b>		<b>11,133</b>	<b>10,576</b>	<b>0</b>	<b>10,576</b>				
Critical Area Planting (ac.) 342		557	529	0	529	5	3	4	1
<b>Progressive System</b>		<b>System Rating -&gt;</b>			<b>3</b>	<b>1</b>	<b>2</b>	<b>0</b>	
<b>Total Acreage at Progressive Level</b>		<b>619</b>	<b>588</b>	<b>557</b>	<b>1,144</b>				
Critical Area Planting (ac.) 342		31	57	0	57	5	3	4	1
Diversion (ft.) 362		61,850	58,758	55,665	114,423	2	0	2	1
<b>Resource Management System (RMS)</b>		<b>System Rating -&gt;</b>			<b>4</b>	<b>2</b>	<b>3</b>	<b>2</b>	
<b>Total Acreage at RMS Level</b>		<b>619</b>	<b>619</b>	<b>31</b>	<b>649</b>				
Critical Area Planting (ac.) 342		31	32	0	32	5	3	4	1
Diversion (ft.) 362		61,850	64,943	0	64,943	2	0	2	1
Mulching (ac.) 484		93	93	5	97	4	2	2	1
Tree/Shrub Establishment (ac.) 612		31	31	2	32	2	2	4	3
Tree/Shrub Site Preparation (ac.) 490		31	31	2	32	0	-1	-1	0



Sac River - 10290106  
 8 – Digit Hydrologic Unit Profile and  
 Resource Assessment Matrix



WATERSHED NAME & CODE		SAC RIVER - 10290106				LANDUSE ACRES		12,370	
LANDUSE TYPE		HIGH AND LOW INTENSITY URBAN				TYPICAL UNIT SIZE ACRES		5	
CONSERVATION INVESTMENT INFORMATION						ESTIMATED PARTICIPATION		5%	
CONSERVATION SYSTEMS BY TREATMENT LEVELS	FUTURE	USDA INVESTMENT				PRIVATE INVESTMENT			
	New Treatment Units	Installation Cost	Management Cost - 3 yrs	Technical Assistance	Total Present Value Cost	Installation Cost	Annual O & M + Mgt Costs	Total Present Value Cost	
		50%	100%	20%		50%	100%		
<b>Progressive System Acres Treated</b>	<b>556.65</b>								
Critical Area Planting (ac.) 342	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Diversion (ft.) 362	55,665	\$47,872	\$0	\$9,574	\$57,446	\$47,872	\$1,915	\$55,938	
	<b>Subtotal</b>	<b>\$47,872</b>	<b>\$0</b>	<b>\$9,574</b>	<b>\$57,446</b>	<b>\$47,872</b>	<b>\$1,915</b>	<b>\$55,938</b>	
<b>Resource Management System (RMS) Acres Treated</b>	<b>30.925</b>								
Critical Area Planting (ac.) 342	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Diversion (ft.) 362	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Mulching (ac.) 484	5	\$0	\$1,392	\$278	\$1,518	\$0	\$464	\$714	
Tree/Shrub Establishment (ac.) 612	2	\$252	\$0	\$50	\$302	\$252	\$0	\$252	
Tree/Shrub Site Preparation (ac.) 490	2	\$0	\$208	\$42	\$227	\$0	\$69	\$107	
	<b>Subtotal</b>	<b>\$252</b>	<b>\$1,599</b>	<b>\$370</b>	<b>\$2,047</b>	<b>\$252</b>	<b>\$533</b>	<b>\$1,073</b>	
<b>TOTAL ACRES TREATED / ESTIMATED TREATMENT COSTS</b>	<b>587.575</b>	<b>\$48,124</b>	<b>\$1,599</b>	<b>\$9,945</b>	<b>\$59,494</b>	<b>\$48,124</b>	<b>\$2,448</b>	<b>\$57,011</b>	

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## Footnotes / Bibliography

All data is provided “as is”. There are no warranties, expressed or implied, including the warranty of fitness for a particular purpose, accompanying this document. Use for general planning purposes only.

Some data that was provided was given for areas that do not match up perfectly with the watershed. For these areas, such as county wide and census data, figures were adjusted by percent of the HUC in the area.

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Land Slope Map:

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Land Use / Land Cover Map:

2005 Land Use Land Cover. Map Layer. MoRAP, 2005.**Page 22**

Land Use / Land Cover Pie Chart:

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Land Use / Land Cover Graph:

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Highly Erodible Lands Map:

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Data queried from NRCS Soil data being served by the Missouri Cooperative Soil Survey at

<http://www.soilsurvey.org>**Page 27**

Prime Farmlands Map:

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