Enter Watershed Variables Below

Watershed Name	*Cannon River*	Watershed Code	*0704002*		Help
Landuse Type	*Row Crops*	Landuse Acres	*568,858*	Interest Rate	*5%*
Typical Unit Size (ac)	*80*	Percent TA of FA	*20%*	Cost-Share Rate	*50%*

Estimated Time Frame = 5 years

Participation Rate *(Based on Watershed Profile)* [ ] COMPARE 17% **Calculated Participation Rate** *(Based on Projected Future Conditions)* Next

Current Conditions			Projected Change			Projected Future Condition				
								Acres		
System	Percent	Acres	System	Percent	Acres	System	Percent	Total	Static	Treated
Baseline	*68%*	386,823	Baseline	*80%*	309,459	Baseline	54%	309,459	309,459	0
			Progressive	*15%*	58,024					
			RMS	*5%*	19,341					
			Must Total 100%	*100%*						

Current Conditions			Projected Change			Projected Future Condition				
								Acres		
System	Percent	Acres	System	Percent	Acres	System	Percent	Total	Static	Treated
Progressive	*30%*	170,657	Progressive	*90%*	153,592	Progressive	37%	211,615	153,592	58,024
			RMS	*10%*	17,066					
			Must Total 100%	*100%*						

Current Conditions			0			Projected Future Condition				
								Acres		
System	Percent	Acres	System	Percent	Acres	System	Percent	Total	Static	Treated
RMS	*2%*	11,377	RMS	100%	11,377	RMS	8%	47,784	11,377	36,407
Grand Totals	**100%**	**568,858**					**100%**	**568,858**	**474,428**	**94,430**

DOCUMENTATION SECTION

Use an "x" to place conservation practices in each treatment level. Click the "Next" Button to move forward. Help		Conservation Treatment Levels		
Practices from CPPE Tool Output	**Code**	**Base**	**Prog**	**RMS**
Conservation Crop Rotation (ac.) 328	328	x	x	x
Filter Strip (ac.) 393	393			x
Grade Stabilization Structure (no.) 410	410			x
Grassed Waterway (ac.) 412	412		x	x
Nutrient Management (ac.) 590	590			x
Pest Management (ac.) 595	595			x
Residue and Tillage Management, Mulch Till (ac.) 329B	329B		x	x
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329A	329A			x
Residue Management, Seasonal (ac.) 344	344	x		
Restoration and Management of Declining Habitats (ac.) 643	643			x
Subsurface Drain (ft.) 606	606	x	x	x
Terrace (ft.) 600	600			x
Underground Outlet (ft.) 620	620	x	x	x
Upland Wildlife Habitat Management (ac.) 645	645			x
Water & Sediment Control Basin (no.) 638	638		x	x
Wetland Restoration (ac.) 657	657			x

DOCUMENTATION SECTION

Back

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)

Next

Code	BASE		PROG		RMS		SHORT NOTE *TU = Typical Unit Size*	Practice Name (Help)
328	x	90.0%	x	99.0%	x	100.0%	PERCENT of TU	Conservation Crop Rotation (ac.) 328
344	x	60.0%		100.0%		100.0%	PERCENT of TU	Residue Management, Seasonal (ac.) 344
393		10.0%		1.0%	x	0.5%	PERCENT of TU	Filter Strip (ac.) 393
410		1		1	x	0.13	NUMBER per TU	Grade Stabilization Structure (no.) 410
412		1.0%	x	0.25%	x	0.5%	PERCENT of TU	Grassed Waterway (ac.) 412
590		100.0%		10.0%	x	100.0%	PERCENT of TU	Nutrient Management (ac.) 590
595		100.0%		8.0%	x	100.0%	PERCENT of TU	Pest Management (ac.) 595
600		5,000		50	x	75	FEET per TU	Terrace (ft.) 600
606	x	16,000	x	32,000	x	32,000	FEET per TU	Subsurface Drain (ft.) 606
620	x	20	x	30	x	30	FEET per TU	Underground Outlet (ft.) 620
638		1	x	0.8	x	1.0	NUMBER per TU	Water & Sediment Control Basin (no.) 638
643		100.0%		100.0%	x	1.2%	PERCENT of TU	Restoration and Management of Declining Habitats (ac.) 643
645		100.0%		7.0%	x	2.5%	PERCENT of TU	Upland Wildlife Habitat Management (ac.) 645
657		100.0%		100.0%	x	1.0%	PERCENT of TU	Wetland Restoration (ac.) 657
329A		100.0%		1.0%	x	20.0%	PERCENT of TU	Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329A
329B		100.0%	x	20.0%	x	40.0%	PERCENT of TU	Residue and Tillage Management, Mulch Till (ac.) 329B
330		100.0%		4.0%		8.0%	PERCENT of TU	Contour Farming (ac.) 330
332		100.0%		100.0%		100.0%	PERCENT of TU	Contour Buffer Strips (ac.) 332
340		100.0%		100.0%		1.0%	PERCENT of TU	Cover Crop (ac.) 340
342		5.0%		1.0%		2.0%	PERCENT of TU	Critical Area Planting (ac.) 342
351		1		1		1	NUMBER per TU	Well Decommissioning (no.) 351
386		1,000		1,000		1,000	FEET per TU	Field Border (ft.) 386
391		25.0%		25.0%		25.0%	PERCENT of TU	Riparian Forest Buffer (ac.) 391
580		500		500		500	FEET per TU	Streambank & Shoreline Protection (ft.) 580
585		100.0%		100.0%		1.0%	PERCENT of TU	Stripcropping (ac.) 585
633		100.0%		100.0%		10.0%	PERCENT of TU	Waste Utilization (ac.) 633
327		10.0%		10.0%		10.0%	PERCENT of TU	Conservation Cover (ac.) 327
362		500		500		25	FEET per TU	Diversion (ft.) 362
380		500		500		500	FEET per TU	Windbreak/Shelterbreak Establishment (ft.) 380
644		100.0%		100.0%		1.0%	PERCENT of TU	Wetland Wildlife Habitat Management (ac.) 644

WATERSHED NAME & CODE	CANNON RIVER - 0704002	LANDUSE ACRES	568,858
LANDUSE TYPE	ROW CROPS	TYPICAL UNIT SIZE ACRES	80
ASSESSMENT INFORMATION		ESTIMATED PARTICIPATION	17%

	CURRENT CONDITIONS	FUTURE CONDITIONS			RESOURCE CONCERNS			
CONSERVATION SYSTEMS BY TREATMENT LEVELS	Total Units	Existing Unchanged Units	New Treatment Units	Total Units	Soil Erosion – Ephemeral Gully	Water Quality – Excessive Nutrients and Organics in	Water Quality – Excessive Suspended Sediment and	Water Quality – Harmful Levels of Pathogens in Surface Water
Baseline System				**System Rating ->**	**1**	**0**	**2**	**-1**
Total Acreage at Baseline Level	**386,823**	**309,459**	**0**	**309,459**				
Conservation Crop Rotation (ac.) 328	348,141	278,513	0	278,513	1	1	1	1
Residue Management, Seasonal (ac.) 344	232,094	185,675	0	185,675	1	3	3	1
Subsurface Drain (ft.) 606	77,364,688	61,891,750	0	61,891,750	1	-2	1	-2
Underground Outlet (ft.) 620	96,706	77,365	0	77,365	1	-2	1	-2
Progressive System				**System Rating ->**	**4**	**1**	**3**	**0**
Total Acreage at Progressive Level	**170,657**	**153,592**	**58,024**	**211,615**				
Conservation Crop Rotation (ac.) 328	168,951	204,277	5,222	209,499	1	1	1	1
Grassed Waterway (ac.) 412	427	384	145	529	5	2	2	1
Residue and Tillage Management, Mulch Till (ac.) 329B	34,131	30,718	11,605	42,323	2	3	3	1
Subsurface Drain (ft.) 606	68,262,960	73,041,367	11,604,703	84,646,070	1	-2	1	-2
Underground Outlet (ft.) 620	63,997	72,103	7,253	79,356	1	-2	1	-2
Water & Sediment Control Basin (no.) 638	1,707	1,536	580	2,116	4	3	3	1
Resource Management System (RMS)				**System Rating ->**	**5**	**3**	**5**	**1**
Total Acreage at RMS Level	**11,377**	**11,377**	**36,407**	**47,784**				
Conservation Crop Rotation (ac.) 328	11,377	45,679	2,105	47,784	1	1	1	1
Filter Strip (ac.) 393	57	57	182	239	0	4	4	2
Grade Stabilization Structure (no.) 410	18	18	57	75	4	0	3	0
Grassed Waterway (ac.) 412	57	100	139	239	5	2	2	1
Nutrient Management (ac.) 590	11,377	11,377	36,407	47,784	0	5	0	0
Pest Management (ac.) 595	11,377	11,377	36,407	47,784	0	0	0	0
Residue and Tillage Management, Mulch Till (ac.) 329B	4,551	7,964	11,150	19,114	2	3	3	1
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329A	2,275	2,275	7,281	9,557	3	3	3	1
Restoration and Management of Declining Habitats (ac.) 643	137	137	437	573	3	0	0	0
Subsurface Drain (ft.) 606	4,550,864	15,245,394	3,868,234	19,113,629	1	-2	1	-2
Terrace (ft.) 600	10,666	10,666	34,131	44,798	3	2	2	2
Underground Outlet (ft.) 620	4,266	15,501	2,418	17,919	1	-2	1	-2
Upland Wildlife Habitat Management (ac.) 645	284	284	910	1,195	0	0	0	0
Water & Sediment Control Basin (no.) 638	142	313	284	597	4	3	3	1
Wetland Restoration (ac.) 657	114	114	364	478	1	2	3	2

Note: Estimates for Matrices are for general planning purposes only and not based on actual funding.

WATERSHED NAME & CODE	CANNON RIVER - 0704002	LANDUSE ACRES	568,858
LANDUSE TYPE	ROW CROPS	TYPICAL UNIT SIZE ACRES	80
CONSERVATION INVESTMENT INFORMATION		ESTIMATED PARTICIPATION	17%

CONSERVATION SYSTEMS BY TREATMENT LEVELS	FUTURE	USDA INVESTMENT				PRIVATE INVESTMENT		
	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 System Acres Treated	**58,024**							
Conservation Crop Rotation (ac.) 328	5,222	$0	$626,654	$125,331	$694,176	$0	$208,885	$335,517
Grassed Waterway (ac.) 412	145	$137,493	$0	$27,499	$164,991	$137,493	$5,500	$161,303
Residue and Tillage Management, Mulch Till (ac.) 329B	11,605	$0	$522,212	$104,442	$578,480	$0	$174,071	$279,597
Subsurface Drain (ft.) 606	11,604,703	$52,221,164	$0	$10,444,233	$62,665,397	$52,221,164	$3,133,270	$65,786,583
Underground Outlet (ft.) 620	7,253	$147,017	$0	$29,403	$176,421	$147,017	$8,821	$185,208
Water & Sediment Control Basin (no.) 638	580	$1,740,705	$0	$348,141	$2,088,847	$1,740,705	$104,442	$2,192,886
	Subtotal	**$54,246,379**	**$1,148,866**	**$11,079,049**	**$66,368,311**	**$54,246,379**	**$3,634,988**	**$68,941,094**
Resource Management System (RMS) Acres Treated	**36,407**							
Conservation Crop Rotation (ac.) 328	2,105	$0	$252,573	$50,515	$279,788	$0	$84,191	$135,230
Filter Strip (ac.) 393	182	$7,081	$0	$1,416	$8,497	$7,081	$283	$8,307
Grade Stabilization Structure (no.) 410	57	$426,644	$0	$85,329	$511,972	$426,644	$8,533	$463,586
Grassed Waterway (ac.) 412	139	$132,101	$0	$26,420	$158,521	$132,101	$5,284	$154,978
Nutrient Management (ac.) 590	36,407	$0	$600,714	$120,143	$665,441	$0	$200,238	$321,628
Pest Management (ac.) 595	36,407	$0	$600,714	$120,143	$665,441	$0	$200,238	$321,628
Residue and Tillage Management, Mulch Till (ac.) 329B	11,150	$0	$501,733	$100,347	$555,794	$0	$167,244	$268,633
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329A	7,281	$0	$655,324	$131,065	$725,935	$0	$218,441	$350,867
Restoration and Management of Declining Habitats (ac.) 643	437	$170,022	$0	$34,004	$204,026	$170,022	$3,400	$184,744
Subsurface Drain (ft.) 606	3,868,234	$17,407,055	$0	$3,481,411	$20,888,466	$17,407,055	$1,044,423	$21,928,861
Terrace (ft.) 600	34,131	$59,730	$0	$11,946	$71,676	$59,730	$0	$59,730
Underground Outlet (ft.) 620	2,418	$49,006	$0	$9,801	$58,807	$49,006	$2,940	$61,736
Upland Wildlife Habitat Management (ac.) 645	910	$89,515	$0	$17,903	$107,419	$89,515	$0	$89,515
Water & Sediment Control Basin (no.) 638	284	$853,287	$0	$170,657	$1,023,944	$853,287	$51,197	$1,074,944
Wetland Restoration (ac.) 657	364	$1,092,207	$0	$218,441	$1,310,649	$1,092,207	$21,844	$1,186,781
	Subtotal	**$20,286,647**	**$2,611,058**	**$4,579,541**	**$27,236,375**	**$20,286,647**	**$2,008,258**	**$26,611,169**
TOTAL ACRES TREATED / ESTIMATED TREATMENT COSTS	**7326.89104**	**$74,533,027**	**$3,759,924**	**$15,658,590**	**$93,604,686**	**$74,533,027**	**$5,643,246**	**$95,552,262**

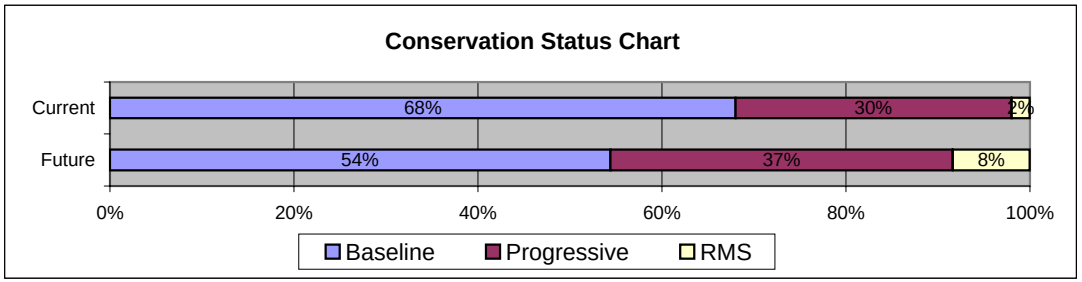

Chart Refers To	
Landuse Type	ROW CROPS
Estimated Participation Rate	17%

Average PV Costs per Ac		
System	Federal	Private
Prog	$1,144	$1,188
RMS	$748	$731

Estimated FTE per Year	31.3

Note: Estimates for Matrices are for general planning purposes only and not based on actual funding.

WATERSHED NAME & CODE	CANNON RIVER - 0704002	LANDUSE ACRES	568,858
LANDUSE TYPE	ROW CROPS	TYPICAL UNIT SIZE ACRES	80
POSSIBLE SOURCES OF FUNDING		ESTIMATED PARTICIPATION	17%

CONSERVATION SYSTEMS BY TREATMENT LEVELS	FUTURE	USDA INVESTMENT						OTHERS			NOTES/COMMENTS
	New Treatment Units	CTA	EQIP	WRP	WHIP	CSP	CRP/ CREP	Fed	State	Local	
Progressive System Acres Treated	**58,024**										
Conservation Crop Rotation (ac.) 328	5,222	X	X								
Grassed Waterway (ac.) 412	145	X	X		X	X					
Residue and Tillage Management, Mulch Till (ac.) 329B	11,605	X	X								
Subsurface Drain (ft.) 606	11,604,703	X									
Underground Outlet (ft.) 620	7,253	X									
Water & Sediment Control Basin (no.) 638	580	X	X	X	X	X					
Resource Management System (RMS) Acres Treated	**36,407**										
Conservation Crop Rotation (ac.) 328	2,105	X	X								
Filter Strip (ac.) 393	182	X									
Grade Stabilization Structure (no.) 410	57	X									
Grassed Waterway (ac.) 412	139	X	X		X	X					
Nutrient Management (ac.) 590	36,407	X	X		X	X					
Pest Management (ac.) 595	36,407	X	X	X							
Residue and Tillage Management, Mulch Till (ac.) 329B	11,150	X	X								
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329A	7,281	X	X								
Restoration and Management of Declining Habitats (ac.) 643	437	X									
Subsurface Drain (ft.) 606	3,868,234	X									
Terrace (ft.) 600	34,131	X	X	X	X	X					
Underground Outlet (ft.) 620	2,418	X									
Upland Wildlife Habitat Management (ac.) 645	910	X	X	X	X						
Water & Sediment Control Basin (no.) 638	284	X	X	X	X	X					
Wetland Restoration (ac.) 657	364	X		X							

Note: Estimates for Matrices are for general planning purposes only and not based on actual funding.

DOCUMENTATION SECTION

Rapid Assessment Tool Data

								Resource Concerns:			
Conservation Practice	**Code**	**Units**	**Installation Cost**	**Life**	**O&M Factor**	**Total Annual Cost**		**Soil Erosion – Ephemeral Gully**	**Water Quality – Excessive Nutrients and Organics in Surface Water**	**Water Quality – Excessive Suspended Sediment and Turbidity in Surface Water**	**Water Quality – Harmful Levels of Pathogens in Surface Water**
Conservation Crop Rotation (ac.) 328	328	Ac	$40.00	1	0.00	$40.00		1	1	1	1
Filter Strip (ac.) 393	393	Ac	$77.80	10	0.02	$11.63		0	4	4	2
Grade Stabilization Structure (no.) 410	410	No	$15,000.00	10	0.01	$2,092.57		4	0	3	0
Grassed Waterway (ac.) 412	412	Ac	$1,895.68	10	0.02	$283.41		5	2	2	1
Nutrient Management (ac.) 590	590	Ac	$5.50	1	0.00	$5.50		0	5	0	0
Pest Management (ac.) 595	595	Ac	$5.50	1	0.00	$5.50		0	0	0	0
Residue and Tillage Management, Mulch Till (ac.) 329B	329B	Ac	$15.00	1	0.00	$15.00		2	3	3	1
Residue Management, No-Till/Strip Till/Direct Seed (ac.) 329A	329A	Ac	$30.00	1	0.00	$30.00		3	3	3	1
Residue Management, Seasonal (ac.) 344	344	Ac	$5.00	1	0.00	$5.00		1	3	3	1
Restoration and Management of Declining Habitats (ac.) 643	643	Ac	$778.34	15	0.01	$82.77		3	0	0	0
Subsurface Drain (ft.) 606	606	Ft	$9.00	20	0.03	$0.99		1	-2	1	-2
Terrace (ft.) 600	600	Ft	$3.50	10	0.00	$0.45		3	2	2	2
Underground Outlet (ft.) 620	620	Ft	$40.54	10	0.03	$6.47		1	-2	1	-2
Upland Wildlife Habitat Management (ac.) 645	645	Ac	$196.70	3	0.00	$72.23		0	0	0	0
Water & Sediment Control Basin (no.) 638	638	No	$6,000.00	10	0.03	$957.03		4	3	3	1
Wetland Restoration (ac.) 657	657	Ac	$6,000.00	15	0.01	$638.05		1	2	3	2