

Stream Profile and Substrate Data

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South Arkansas Watershed Assessment, 2012-2013

Stream Profile Data

Site Name: E06 (LTUA Map #7)

Transect	1/ Linear Distance along Channel (m)	Horizontal Distance (m)									
		DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10
1	B 0 + 00			17.5	20	18.5	16.5	18.5	18	16	15.5
	W			9.5	13.5	13.5	12	13.5	13	11	10
2	B 0 + 05	26.5	29	27.5	27	28	24.5	23	21	19.5	16
	W	14.5	18	17.5	18	18.5	13.5	11.5	8.5	5.5	1
3	B 0 + 11		4.5	10	15	15	15.5	16	12.5	11	13
	W		0	1.5	7.5	7.5	6.5	7	4	2	2
4	B 0 + 12	0	11.5	15.5	19.5	20	17.5	19	19	17.5	17
	W	0	0	1.5	6	7	5	7.5	8	7	7.5
5	B 0 + 18		5.5	16.5	19	16	19	19.5	19.5	20	20
	W		0	4	8	5	9	9.5	9	9	9
6	B 0 + 34		8	14.5	16	19	17.5	22	22	22	18.5
	W		0	3	5	7	5	10	9	8.5	4
7	B 0 + 38		2	9.5	14.5	17	19	26	28	25.5	26
	W		0	0	0	1	2	9	11	8	7.5
8	B 0 + 45		3.5	8	10	13	15	15	19	19.5	20
	W		0	0	0	0	0	1	5.5	6	6.5
9	B 0 + 53.5		5.5	5	6	8	11.5	12.5	11.5	14	15.5
	W		0	0	0	0	2	3	3	5	6.5
10	B 0 + 68		5	16	17	18	18.5	18.5	20.5	23	24.5
	W		0	0	0	2	3	3	5	7	8
11	B 0 + 90		3	8	13	13	17	19.5			
	W		0	0	0	0	0	1			

1/ "B" = ground level, stream bottom; "W" = depth of water

	DP11	DP12	DP13	DP14	DP15	DP16	DP17	DP18	DP19	DP20	DP21	DP22	DP23
5.0													
5.5	15	14	11	10	7.5	6.5	7	8	7	6	5.5	7	8.5
6.0	9.5	8	5	3	0	0	0	0	0	0	0	0	0
6.5	14.5	12	11	10.5	8.5	10.5	11.5	11	9.5	9			
7.0	0	0	0	0	0	0	0	0	0	0			
7.5	15.5	13	12	13	11.5	12	12	11	10.5	11.5	12	12.5	13
8.0	6	5	3	4	2.5	3	3	1	0	0	0	0	0
8.5	16.5	15	15.5	15	13.5	14.5	14	14.5	14.5	11.5	11.5	12	10.5
9.0	6.5	6	6.5	6	5	6	4	5	5	2.5	2	2.5	1.5
9.5	19	18	19	19	21	21	22.5	22	21				
10.0	7.5	6	6	5.5	6	5.5	5.5	4.5	3				
10.5	18	15.5	16.5	15.5									
11.0	3	1	2	0									
	26.5	27.5	26	25	24	20.5	16.5	16.5					
	7	8	6	4.5	3	0	0	0					
	20	22	21	19	19	19	22	19.5	15.5	13			
	6.5	7	7	4	3.5	5.5	7.5	5	1	0			
	17	18.5	18.5	19	20.5	20	20.5	19	18	16	15.5	11	
	7	9	8.5	8	9	7.5	7	5.5	3.5	1	0	0	
	24	24	27	26	24	22.5	12	6					
	8	6	8	7	4	2	0	0					

11.5 12.0 12.5 13.0 13.5

DP24 DP25 DP26 DP27 DP28

8
0

13 12 10 7.5 7.5
0 0 0 0 0
10.5 10.5 6 4
0.5 0.5 0 0

South Arkansas Watershed Assessment, 2012-2013

Stream Profile Data

Site Name: E06 (LTUA Map #7)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
count	bankfull width (cm)	max depth (cm)	width / depth ratio	bankfull width (m)	2x max depth (cm)	flood-prone width (m)	entrenchment ratio	
22	1,100	50.8	21.7	11.0	101.6	19.7	30.7	2.8
20	1,000	73.7	13.6	10.0	147.3	27.1	37.1	3.7
27	1,350	40.6	33.2	13.5	81.3	19.7	33.2	2.5
27	1,350	50.8	26.6	13.5	101.6	22.1	35.6	2.6
18	900	57.2	15.7	9.0	114.3	23.0	32.0	3.6
13	650	55.9	11.6	6.5	111.8	23.8	30.3	4.7
17	850	71.1	12.0	8.5	142.2	23.8	32.3	3.8
19	950	55.9	17.0	9.5	111.8	21.3	30.8	3.2
21	1,050	52.1	20.2	10.5	104.1	6.6	17.1	1.6
17	850	27.0	31.5	8.5	54.0	4.1	12.6	1.5
average width / depth ratio			20.3	average entrenchment ratio			3.0	

Pebble Count Data

Date: 11-1-12

Reach/Site Designation: Parcel E06 (LTUA Map 7)

Stream/Watershed: South Arkansas River

Legal: T.49N, R.7E, Sec. 2, SE¼
USGS 7.5' Quad Maysville, CO

Count Number	Size (mm)	Count Number	Size (mm)	Count Number	Size (mm)	Count Number	Size (mm)	Count Number	Size (mm)
1	130	21	150	41	78	61	180	81	105
2	104	22	23	42	62	62	84	82	64
3	78	23	90	43	145	63	120	83	160
4	43	24	75	44	120	64	122	84	41
5	69	25	60	45	130	65	69	85	135
6	45	26	90	46	108	66	170	86	350
7	62	27	20	47	46	67	70	87	240
8	100	28	80	48	220	68	113	88	105
9	120	29	15	49	71	69	84	89	124
10	89	30	90	50	74	70	73	90	90
11	89	31	94	51	62	71	38	91	33
12	46	32	92	52	82	72	100	92	120
13	57	33	107	53	390	73	120	93	170
14	48	34	62	54	88	74	96	94	115
15	3	35	50	55	48	75	63	95	90
16	230	36	54	56	89	76	39	96	0
17	100	37	49	57	81	77	81	97	18
18	45	38	51	58	120	78	140	98	110
19	130	39	104	59	27	79	110	99	73
20	41	40	62	60	140	80	107	100	240
								D₅₀ = 89 mm	

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South Arkansas Watershed Assessment, 2012-2013
 Stream Profile Data
 Site Name: F38 (LTUA Map #11)

Transect	1/ B W	Linear Distance along Channel (m)	Horizontal Distance (m)								
			DP1 2/ 6	DP2 0	DP3 19.5	DP4 19	DP5 26	DP6 28	DP7 25	DP8 21	DP9 18
1	B	0 + 00	6	0	19.5	19	26	28	25	21	18
2	B	0 + 05	6	6	20	19	13.5	16	13	9	5.5
3	B	0 + 9.5	2	0	8	8.5	10	9.5	7	7.5	7
4	B	0 + 16.5	7.5	0	13	21	20.5	19	18	17	16
5	B	0 + 22.5	5	0	7	13	14	17.5	17	5	5
6	B	0 + 30	6	0	10	13.5	16.5	20.5	22.5	25.5	27
7	B	0 + 36	4.5	0	8.5	10.5	15.5	22	24	24	25.5
8	B	0 + 43	3.5	0	11	22.5	24.5	22	2.5	3	4.5
9	B	0 + 49	6	0	15.5	19.5	22	23.5	26	29	28
	W		0	0	0	2	5	7	9.5	13	11.5

1/ "B" = ground level, stream bottom; "W" = depth of water

	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5
DP10	21	18	18	19	17	14.5	8.5	7	7	3	
	8	5.5	4	5	2.5	0	0	0	0	0	
	14.5	14.5	14.5	11.5	14	0					
	2	0	0	0	0	0					
	16.5	19.5	22.5	22.5	23.5	22	15.5	7			
	6	9.5	13	12.5	13.5	11	4	0			
	18	21	21.5	24	24	26	22				
	7	9.5	10	13	12	13	9				
	20.5	20	20.5	25	27	31.5	53	32			
	5	6	7	12	15	19.5	23	20			
	28	29	34	34	41.5	43.5	43	39			
	3	4	10	11	19	21	22	17			
	25	27	29	27	27	25					
	4	7.5	10.5	8.5	9	7					
	22	24	22	22.5	20	21.5	22	19	15.5	3.5	
	7	9.5	6.5	8	5.5	6.5	6.5	3.5	0	0	
	30	30	26.5	27.5	31	28	22	19	9		
	13	11.5	7	8	10	6	0	0	0		

South Arkansas Watershed Assessment, 2012-2013
 Stream Profile Data
 Site Name: F38 (LTUA Map #11)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
count	bankfull width (cm)	max depth (cm)	width / depth ratio	bankfull width (m)	2x max depth (cm)	flood-prone width (m)	entrenchment ratio	
18	900	71.12	12.7	9	142.24	2.46	11.46	
14	700	50.8	13.8	7	101.6	3.28	10.28	
16	800	59.69	13.4	8	119.38	3.28	11.28	
15	750	66.04	11.4	7.5	132.08	1.64	9.14	
16	800	134.62	5.9	8	269.24	3.28	11.28	
16	800	110.49	7.2	8	220.98	2.46	10.46	
14	700	73.66	9.5	7	147.32	1.64	8.64	
18	900	66.04	13.6	9	132.08	4.1	13.1	
17	850	78.74	10.8	8.5	157.48	4.1	12.6	
average width / depth ratio:							10.9	average entrenchment ratio:
							1.4	

Pebble Count Data

Date: 11-12-12

Reach/Site Designation: Parcel F38 (LTUA Map 11)

Stream/Watershed: South Arkansas River

Legal: T.49N, R.9E, Sec. 5, SW¼
USGS 7.5' Quad Salida East, CO

Count Number	Size (mm)	Count Number	Size (mm)	Count Number	Size (mm)	Count Number	Size (mm)	Count Number	Size (mm)
1	0	21	90	41	135	61	120	81	60
2	0	22	90	42	80	62	80	82	90
3	60	23	140	43	95	63	25	83	135
4	0	24	100	44	105	64	95	84	170
5	140	25	120	45	140	65	75	85	0
6	0	26	220	46	30	66	80	86	110
7	40	27	55	47	200	67	90	87	30
8	70	28	100	48	180	68	10	88	130
9	280	29	180	49	220	69	20	89	190
10	190	30	120	50	100	70	55	90	125
11	200	31	90	51	135	71	120	91	85
12	70	32	70	52	140	72	115	92	130
13	70	33	65	53	80	73	50	93	120
14	100	34	30	54	95	74	35	94	180
15	55	35	90	55	160	75	90	95	100
16	110	36	170	56	200	76	140	96	90
17	55	37	145	57	0	77	0	97	160
18	100	38	140	58	75	78	50	98	105
19	130	39	130	59	75	79	95	99	280
20	70	40	95	60	100	80	135	100	170
								D₅₀ = 103 mm	

South Arkansas Watershed Assessment, 2012-2013
 Stream Profile Data
 Site Name: F52 (LTUA Map #11)

Transect	1/ B W	Linear Distance along Channel (m)	Horizontal Distance (m)										
			DP1	DP2	DP3	DP4	DP5	DP6	DP7	DP8	DP9	DP10	DP11
1	B	0 + 00	0	23	26	33	37	42	43	31	42	47	43
	W		0	4	7	14	18	23	35	11	24	28	24
2	B	0 + 08	0	37	43	42	40	44	42	45	41	38	37
	W		0	8	15	16	16	22	21	25	21	21	20
3	B	0 + 24	0	16	12	18	31	32	33	34	35	41	42
	W		0	0	0	0	11	13	16	15	16	22	25
4	B	0 + 31	0	11	23	28	32	53	60	50	42	41	32
	W		0	0	0	5	10	33	40	32	25	24	16
5	B	0 + 44	4	16	27	33	39	44	45	47	42	48	52
	W		0	0	0	2	9	16	18	19	16	21	28
6	B	0 + 60	0	28	29	32	33	35	32	35	36	36	30
	W		0	7	10	14	18	20	18	23	24	25	20
7	B	0 + 69	9	28	39	42	54	59	50	51	49	43	36
	W		0	0	11	15	30	36	29	30	29	28	16
8	B	0 + 77	0	44	45	54	50	50	49	48	41	40	41
	W		0	11	15	26	25	28	28	31	23	22	23
9	B	0 + 86	6	31	34	40	49	55	61	53	56	61	55
	W		0	0	0	0	10	19	26	19	23	32	23
10	B	1 + 00	54	50	51	51	47	33	40	36	42	35	38
	W		19	16	15	16	11	11	11	8	15	9	13
11	B	1 + 34	9	20	23	30	51	46	45	51	42	45	45
	W		0	0	0	0	14	15	18	24	18	22	22
12	B	1 + 44	10	18	32	24	11	27	47	56	54	50	50
	W		0	0	0	0	0	0	11	22	24	22	22
13	B	1 + 52	12	20	25	29	40	42	46	50	55	56	60
	W		0	0	0	0	9	14	19	25	29	32	38

1/"B" = height from bankfull to stream bottom; "W" = depth of water

	DP12	DP13	DP14	DP15	DP16	DP17	DP18	DP19	DP20	DP21	DP22	DP23	DP24	DP25
5.5	49	40	40	45	43	41	41	7						
6.0	34	18	20	22	20	15	13	0						
6.5	46	38	42	44	47	44	38							
7.0	28	17	20	18	19	13	3							
7.5	37	41	42	38	41	41	40	50	42	40	4			
8.0	20	24	25	20	21	19	18	25	16	11	0			
8.5	40	35	33	39	39	49	45	42	39	41	21			
9.0	23	19	17	23	24	30	25	20	17	17	0			
9.5	45	42	45	44	45	53	54	46	51	48	40	32		
10.0	14	16	19	19	19	24	24	14	17	12	3	0		
10.5	28	31	29	35	28	33	36	37	41	37				
11.0	17	19	18	20	17	13	14	11	13	7				
11.5	41	39	34	35	42	37	30	15						
12.0	19	15	9	9	13	6	0	0						
	44	43	38	40	37	31	14	12	13	14	6			
	24	21	13	13	7	0	0	0	0	0	0			
	57	54	52	48	47	47	49	41	30	11				
	24	21	18	15	9	8	8	0	0	0				
	42	43	41	47	47	64	51	50	38	20				
	18	16	16	23	18	37	22	20	6	0				
	34	35	35	34	34	39	40	43	49	50	56	50	59	
	11	11	12	10	10	15	14	15	20	20	23	26	23	
	48	49	46	45	42	42	47	43	40	37	42	49	38	
	22	26	23	23	19	22	25	21	17	11	16	18	6	20
	69	72	70	69	58	57	21	5						
	44	50	46	44	32	31	0	0						

South Arkansas Watershed Assessment, 2012-2013

Stream Profile Data

Site Name: F52 (LTUA Map #11)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
count	bankfull width (cm)	max depth (cm)	width / depth ratio	bankfull width (m)	2x max depth (cm)	flood-prone width (m)	entrenchment ratio
19	950	49	19.4	9.5	98	28.7	4.02
18	900	47	19.1	9	94	28.7	4.19
22	1,100	50	22.0	11	100	23.78	3.16
22	1,100	60	18.3	11	120	22.14	3.01
23	1,150	54	21.3	11.5	108	18.86	2.64
21	1,050	41	25.6	10.5	82	4.92	1.47
19	950	59	16.1	9.5	118	9.84	2.04
22	1,100	54	20.4	11	108	9.02	1.82
21	1,050	61	17.2	10.5	122	6.56	1.62
21	1,050	64	16.4	10.5	128	5.74	1.55
24	1,200	59	20.3	12	118	1.64	1.14
25	1,250	56	22.3	12.5	112	4.92	1.39
19	950	72	13.2	9.5	144	8.2	1.86
average width / depth ratio:			19.4	average entrenchment ratio:			2.3

Pebble Count Data

Date: 12-5-12

Reach/Site Designation: Parcel F52 (LTUA Map 11)

Stream/Watershed: South Arkansas River

Legal: T.49N, R.9E, Sec. 4, SW¼
USGS 7.5' Quad Salida East, CO

Count Number	Size (mm)	Count Number	Size (mm)	Count Number	Size (mm)	Count Number	Size (mm)	Count Number	Size (mm)
1	0	21	90	41	135	61	120	81	60
2	0	22	90	42	80	62	80	82	90
3	60	23	140	43	95	63	25	83	135
4	0	24	100	44	105	64	95	84	170
5	140	25	120	45	140	65	75	85	0
6	0	26	220	46	30	66	80	86	110
7	40	27	55	47	200	67	90	87	30
8	70	28	100	48	180	68	10	88	130
9	280	29	180	49	220	69	20	89	190
10	190	30	120	50	100	70	55	90	125
11	200	31	90	51	135	71	120	91	85
12	70	32	70	52	140	72	115	92	130
13	70	33	65	53	80	73	50	93	120
14	100	34	30	54	95	74	35	94	180
15	55	35	90	55	160	75	90	95	100
16	110	36	170	56	200	76	140	96	90
17	55	37	145	57	0	77	0	97	160
18	100	38	140	58	75	78	50	98	105
19	130	39	130	59	75	79	95	99	280
20	70	40	95	60	100	80	135	100	170
								D₅₀ = 97.5 mm	