12-8-2009

Ex. 279-US-429

Unknown

Stream: Sycan River
Site: SY-4 (Sycan River above Torrent Springs)
Date: 5/15/93
Habitat: Riffle **Flow:** High

(1) Level Loop Survey (BM & HP)

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	3.91	103.91		
HP1			4.12	99.79
HP2			4.62	99.29
HP3			4.38	99.53
TP				
HP3	4.14	103.47		
HP2			4.20	99.27
HP1			3.67	99.80
BM			3.47	100.00

Comment: Run & RF level loops were surveyed together. See field notes for details.

(2) Water Surface Elevation (WSE) Survey

	L/R WSE	Sta (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
TR1	LWE	11.4	103.47	6.52	0.00	96.95	96.98	653.7
	RWE			6.46	0.00	97.01		
TR2	LWE	22.8	103.47	6.52	0.00	96.95	96.99	
	RWE			6.45	0.00	97.02		
TR3	LWE	39.9	103.47	6.50	0.00	96.97	96.99	
	RWE			6.46	0.00	97.01		

Ave Q= 653.7

Note:
WSE slope = 0.04%

Date: 6/26/93
Habitat: Riffle **Flow:** Mid

(1) Level Loop Survey

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	6.45	106.45		
HP1			6.66	99.79
HP2			7.18	99.27
HP3			6.93	99.52
TP				
HP3	6.91	106.43		
HP2			7.16	99.27
HP1			6.64	99.79
BM			6.43	100.00

Comment:

(2) Water Surface Elevation (WSE) Survey

	L/R WSE	Sta (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
TR1	LWE	11.4	106.43	11.34	0.00	95.09	95.05	52.7
	RWE			11.42	0.00	95.01		
TR2	LWE	22.8	106.43	11.26	0.00	95.17	95.23	46.3
	RWE			11.15	0.00	95.28		
TR3	LWE	39.9	106.43	10.71	0.00	95.72	95.72	44.7
	RWE			10.71	0.00	95.72		

Ave Q (Riffle)= 47.9
Ave Q (Run)= 51.3
Ave Q(Run & Riffle)= 49.6

Note:
WSE slope = 2.35%

Date: 9/14/93
Habitat: Riffle **Flow:** Low

(1) Level Loop Survey

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	5.26	105.26		
HP3			5.74	99.52
HP2			6.00	99.26
HP1			5.47	99.79
TP				
HP1	4.83	104.62		
HP2			5.35	99.27
HP3			5.09	99.53
BM			4.62	100.00

Comment:

(2) Water Surface Elevation (WSE) Survey

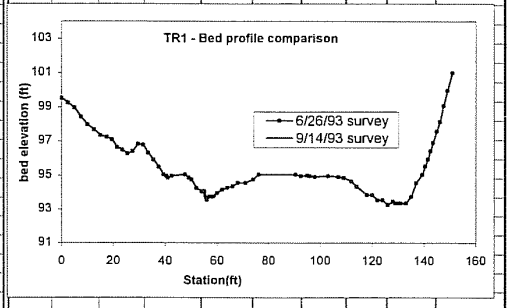
	L/R WSE	Sta (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
TR1	LWE	11.4	104.62	10.45	0.00	94.17	94.17	3.3
	RWE			10.46	0.00	94.16		
TR2	LWE	22.8	104.62	9.94	0.00	94.68	94.86	4.1
	RWE			9.58	0.00	95.04		
TR3	LWE	39.9	104.62	9.42	0.00	95.20	95.25	3.1
	RWE			9.32	0.00	95.30		

Ave Q (Riffle)= 3.5
Ave Q (Run)= 3.0
Ave Q(Run & Riffle)= 3.3

Note:
WSE slope = 3.81%

Stream:	Sycan River		15-May-93										26-Jun-93										14-Sep-93									
Site:	SY-4			Sta	FS	Ground	Depth	Vel (ft/s)			q			Sta	FS	Ground	Depth	Vel (ft/s)			q			Sta	FS	Ground	Depth	Vel (ft/s)			q	
Transect:	1			(ft)	(ft)	(ft)	(ft)	$V_{0.2\,0.6}$	$V_{0.8}$	Ave	(cfs)	substrate		(ft)	(ft)	(ft)	(ft)	$V_{0.2\,0.6}$	$V_{0.8}$	Ave	(cfs)	substrate		(ft)	(ft)	(ft)	(ft)	$V_{0.2\,0.6}$	$V_{0.8}$	Ave	(cfs)	substrate
Habitat:	Riffle		RWE	13.1			0.00	0.00		0.00	0.00		LWP	0.0	6.90	99.53						6.6	LWE	54.5		94.17	0.00	0.00		0.00	0.00	5.5
Survey	HI	Q		15.5			0.35	0.29		0.29	0.25			2.5	7.17	99.26						6.6		55.0		93.72	0.45	0.58		0.58	0.13	5.5
Date	(ft)	(cfs)		18			0.50	0.29		0.29	0.54			5.0	7.46	98.97						6.6		55.5		93.57	0.60	2.48		2.48	0.74	5.5
5/15/93	103.47	653.7		23			1.00	0.84		0.84	4.20			7.5	7.99	98.44						6.6		56.0		93.57	0.60	2.17		2.17	0.65	5.5
6/26/93	106.43	52.7		28			0.90	1.53		1.53	6.89			10.0	8.45	97.98						6.6		56.5		93.77	0.40	2.28		2.28	0.46	5.5
9/14/93	104.62	3.3		33			2.40	2.08		2.08	24.96			12.5	8.75	97.68						6.6		57.0		93.77	0.40	2.57		2.57	0.51	5.5
				38			2.90	2.25	0.22	1.24	17.91			15.0	9.08	97.35						6.6		57.5		93.77	0.40	1.22		1.22	0.24	5.5
				43			4.30	2.06	0.91	1.49	31.93			17.5	9.18	97.25						6.6		58.0		93.67	0.50	-0.14		-0.14	-0.04	5.5
				48			5.00	1.66	1.95	1.81	45.13			19.5	9.34	97.09						6.6		58.5		93.67	0.50	-0.08		-0.08	-0.02	5.5
				53			5.00	3.10	2.08	2.59	64.75			21.5	9.78	96.65						6.6		59.0		93.72	0.45	0.62		0.62	0.14	5.5
				58			4.70	3.12	1.82	2.47	58.05			23.5	9.93	96.50						6.6		59.5		93.92	0.25	2.32		2.32	0.29	5.5
				63			4.50	3.05	2.34	2.70	60.64			25.5	10.15	96.28						6.6		60.0		93.92	0.25	1.61		1.61	0.20	5.5
				68			4.10	3.44	2.75	3.10	63.45			27.5	10.03	96.40						1.1		60.5		93.97	0.20	0.21		0.21	0.03	5.5
				73			3.70	3.53	2.88	3.21	59.29			29.5	9.60	96.83						1.1	RWE	61.5		94.17	0.00	0.00		0.00	0.00	5.5
				78			4.10	3.37	2.77	3.07	62.94			31.5	9.65	96.78						1.1										
				83			4.30	3.05	2.43	2.74	58.91			33.5	10.10	96.33						1.1										
				88			4.00	3.23	1.21	2.22	44.40			35.5	10.52	95.91						1.1										
				93			2.55	3.05	2.14	2.60	26.47			37.5	10.94	95.49						1.1										
				96			2.30	1.85		1.85	10.64		LWE	39.3		95.05	0.00	0.00		0.00	0.00	1.1										
				98			1.75	1.16		1.16	5.08			40.5		94.95	0.10	0.00		0.00	0.00	9.9										
				101			1.55	0.53		0.53	2.46			41.0		94.85	0.20	0.00		0.00	0.00	9.9										
				104			1.65	0.97		0.97	4.00		RWE	42.5		94.95	0.10	0.00		0.00	0.00	1.1										
				106			1.00	0.41		0.41	0.82		LWE	47.6		95.05	0.00	0.00		0.00	0.00	1.1										
				108			1.10	0.00		0.00	0.00			49.0		94.85	0.20	-0.01		-0.01	0.00	9.9										
			LWE	109.0			0.00	0.00		0.00	0.00			50.0		94.75	0.30	0.18		0.18	0.08	9.9										
														52.0		94.25	0.80	0.50		0.50	0.80	9.9										
														54.0		94.05	1.00	0.86		0.86	1.29	5.5										
														55.0		94.05	1.00	4.54		4.54	4.54	5.5										
														56.0		93.55	1.50	4.36		4.36	6.54	5.5										
														57.0		93.75	1.30	3.96		3.96	5.15	5.5										
														58.0		93.75	1.30	3.38		3.38	6.59	5.5										
														60.0		93.95	1.10	3.00		3.00	6.60	5.5										
														62.0		94.15	0.90	0.83		0.83	1.49	5.5										
														64.0		94.25	0.80	1.31		1.31	2.10	5.5										
														66.0		94.35	0.70	0.30		0.30	0.42	5.5										
														68.0		94.55	0.50	-0.01		-0.01	-0.01	5.5										
														71.0		94.55	0.50	-0.06		-0.06	-0.09	5.5										
														74.0		94.75	0.30	-0.02		-0.02	-0.02	5.5										
													RWE	76.2		95.05	0.00	0.00		0.00	0.00	5.5										
													LWE	90.5		95.05	0.00	0.00		0.00	0.00	6.6										
														92.5		94.95	0.10	0.15		0.15	0.02	6.6										
														95.0		95.00	0.05					6.6										
														96.0		94.95	0.10	0.63		0.63	0.06	6.6										
														98.0		94.90	0.15	0.65		0.65	0.34	6.6										
														103.0		94.95	0.10	0.85		0.85	0.38	6.6										
														107.0		94.90	0.15	0.96		0.96	0.43	9.9										
														109.0		94.85	0.20	0.01		0.01	0.01	9.9										
														112.0		94.65	0.40	0.03		0.03	0.03	9.9										
														114.0		94.35	0.70	0.02		0.02	0.04	9.9										
														118.0		93.85	1.20	0.04		0.04	0.14	9.9										
														120.0		93.85	1.20	0.26		0.26	0.62	6.6										
														122.0		93.55	1.50	0.25		0.25	0.75	6.6										
														124.0		93.55	1.50	0.87		0.87	2.61	6.6										
														126.0		93.25	1.80	0.92		0.92	3.31	6.6										
														128.0		93.45	1.60	0.21		0.21	0.50	6.6										
														129.0		93.35	1.70	0.84		0.84	1.43	6.6										
														130.0		93.35	1.70	2.72		2.72	4.62	6.6										
														131.0		93.35	1.70	0.84		0.84	2.14	6.6										
														133.0		93.35	1.70	-0.09		-0.09	-0.31	9.9										
														135.0		93.75	1.30	-0.01		-0.01	-0.03	9.9										
														137.0		94.55	0.50	0.05		0.05	0.05	9.9										
													RWE	139.3		95.05	0.00	0.00		0.00	0.00	1.1										
														140.5	10.90	95.53						1.1										
														141.5	10.49	95.94						1.1										
														142.5	10.00	96.43						1.1										
														143.5	9.51	96.92						1.1										
														145.0	8.84	97.59						1.1										

This is not profile. This is the Q-transect for both Run and Riffle habitats.



Stream:	Sycan River	15-May-93									26-Jun-93									14-Sep-93								
Site:	SY-4		Sta	FS	Ground	Depth	Vel (ft/s)			q			Sta	FS	Ground	Depth	Vel (ft/s)			q			Sta	FS	Ground	Depth	Vel (ft/s)			q	
Transect:	1		(ft)	(ft)	(ft)	(ft)	$V_{0.2\,0.6}$	$V_{0.8}$	Ave	(cfs)	substrate		(ft)	(ft)	(ft)	(ft)	$V_{0.2\,0.6}$	$V_{0.8}$	Ave	(cfs)	substrate		(ft)	(ft)	(ft)	(ft)	$V_{0.2\,0.6}$	$V_{0.8}$	Ave	(cfs)	substrate
													146.2	8.28	98.15						1.1									
													147.6	7.35	99.08						1.1									
													149.0	6.45	99.98						1.1									
												RWP	151.0	5.43	101.00						1.1									

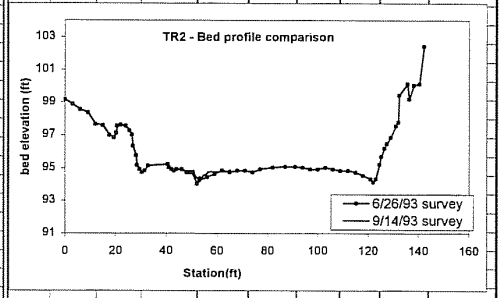
Stream:	Sycan River
Site:	SY-4
Transect:	2
Habitat:	Riffle

Survey Date	HI (ft)	Q (cfs)
5/15/93	103.47	
6/26/93	106.43	46.3
9/14/93	104.62	4.1

15-May-93									
	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s) $V_{0.2\,0.6}$	Vel (ft/s) $V_{0.8}$	Vel (ft/s) Ave	q (cfs)	substrate

26-Jun-93									
	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s) $V_{0.2\,0.6}$	Vel (ft/s) $V_{0.8}$	Vel (ft/s) Ave	q (cfs)	substrate
LWP	0.0	7.27	99.16						6.7
	3.0	7.55	98.88						6.7
	6.0	7.88	98.55						6.7
	9.0	8.06	98.37						6.7
	12.0	8.77	97.66						6.7
	15.0	8.84	97.59						6.7
	17.6	9.45	96.98						6.7
	19.3	9.58	96.85						6.7
	20.3	9.30	97.13						6.7
	20.6	8.88	97.55						1.1
	22.0	8.80	97.63						1.1
	24.0	8.87	97.56						1.1
	25.5	9.16	97.27						1.1
	26.5	9.41	97.02						1.1
	26.9	10.09	96.34						1.1
	28.1	10.66	95.77						1.1
LWE	28.5		95.18	0.05	0.00		0.00	0.00	1.1
	29.5		94.93	0.30	0.00		0.00	0.00	9.9
	30.5		94.73	0.50	0.00		0.00	0.00	9.9
	31.5		94.83	0.40	0.00		0.00	0.00	9.9
RWE	32.9		95.13	0.10	0.00		0.00	0.00	9.9
LWE	40.5		95.23	0.00	0.00		0.00	0.00	9.9
	41.0		95.03	0.20	-0.01		-0.01	0.00	9.9
	42.0		94.93	0.30	0.85		0.85	0.26	9.9
	43.0		94.83	0.40	0.61		0.61	0.24	9.9
	44.0		94.93	0.30	-0.01		-0.01	0.00	9.9
	46.0		94.93	0.30	0.03		0.03	0.02	9.9
	48.0		94.73	0.50	2.20		2.20	1.65	9.9
	49.0		94.73	0.50	1.51		1.51	0.76	9.9
	50.0		94.73	0.50	1.61		1.61	1.21	9.9
	52.0		94.03	1.20	3.95		3.95	7.11	6.6
	53.0		94.23	1.00	3.48		3.48	6.96	6.6
	56.0		94.43	0.80	1.67		1.67	4.01	6.6
	59.0		94.63	0.60	0.66		0.66	1.18	6.6
	62.0		94.83	0.40	0.78		0.78	0.94	6.6
	65.0		94.73	0.50	0.35		0.35	0.53	6.6
	68.0		94.83	0.40	0.19		0.19	0.23	9.9
	71.0		94.83	0.40	1.45		1.45	1.74	9.9
	74.0		94.73	0.50	0.75		0.75	1.13	9.9
	77.0		94.93	0.30	0.36		0.36	0.43	9.9
	82.0		95.03	0.20	0.03		0.03	0.03	6.6
	87.0		95.08	0.15	0.82		0.82	0.55	6.6
	91.0		95.08	0.15	0.72		0.72	0.38	6.6
	94.0		95.03	0.20	0.77		0.77	0.46	6.6
	97.0		94.93	0.30	0.59		0.59	0.53	6.6
	100.0		94.93	0.30	0.62		0.62	0.56	6.6
	103.0		95.03	0.20	0.17		0.17	0.10	6.6
	106.0		94.93	0.30	0.42		0.42	0.38	6.6
	109.0		94.83	0.40	0.11		0.11	0.14	6.6
	112.0		94.83	0.40	0.60		0.60	0.72	6.6
	115.0		94.73	0.50	0.40		0.40	0.60	6.6
	118.0		94.53	0.70	1.10		1.10	2.31	9.9
	121.0		94.33	0.90	1.93		1.93	3.47	9.9
	122.0		94.13	1.10	3.15		3.15	3.47	9.9
	123.0		94.33	0.90	3.56		3.56	4.17	9.9
RWE	124.6		95.23	0.00	0.00		0.00	0.00	1.1
	125.3	10.74	95.69						1.1
	126.5	10.23	96.20						1.1
	127.5	9.95	96.48						1.1
	129.0	9.57	96.86						1.1
	131.0	8.88	97.55						7.7
	132.0	8.65	97.78						7.7
	132.3	6.98	99.45						7.7
	135.6	6.30	100.13						7.7
	136.2	7.24	99.19						7.7
	138.1	6.38	100.05						7.7
	140.3	6.30	100.13						3.3
RWP	142.1	4.02	102.41						3.3

14-Sep-93									
	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s) $V_{0.2\,0.6}$	Vel (ft/s) $V_{0.8}$	Vel (ft/s) Ave	q (cfs)	substrate
LWE	50.5		94.86	0.00	0.00		0.00	0.00	6.6
	51.0		94.56	0.30	0.45		0.45	0.10	6.6
	52.0		94.36	0.50	2.84		2.84	1.07	6.6
	52.5		94.36	0.50	2.60		2.60	0.65	6.6
	53.0		94.46	0.40	2.25		2.25	0.45	6.6
	53.5		94.36	0.50	2.43		2.43	0.61	6.6
	54.0		94.41	0.45	0.53		0.53	0.12	6.6
	54.5		94.51	0.35	1.06		1.06	0.19	6.6
	55.0		94.56	0.30	1.76		1.76	0.26	6.6
	55.5		94.56	0.30	1.45		1.45	0.22	6.6
	56.0		94.66	0.20	1.12		1.12	0.11	6.6
	56.5		94.76	0.10	0.75		0.75	0.06	6.6
	57.5		94.76	0.10	0.48		0.48	0.05	6.6
	58.5		94.76	0.10	0.34		0.34	0.04	6.6
	60.0		94.76	0.10	0.33		0.33	0.04	6.6
	61.0		94.76	0.10	0.60		0.60	0.06	6.6
	62.0		94.76	0.10	0.85		0.85	0.09	6.6
	63.0		94.76	0.10	0.14		0.14	0.01	6.6
	64.0		94.76	0.10	0.20		0.20	0.01	6.6
RWE	65.3		94.86	0.00	0.00		0.00	0.00	6.6



Stream:	Sycan River
Site:	SY-4
Transect:	3
Habitat:	Riffle

Survey Date	HI (ft)	Q (cfs)
5/15/93	103.47	
6/26/93	106.43	44.7
9/14/93	104.62	3.1

15-May-93

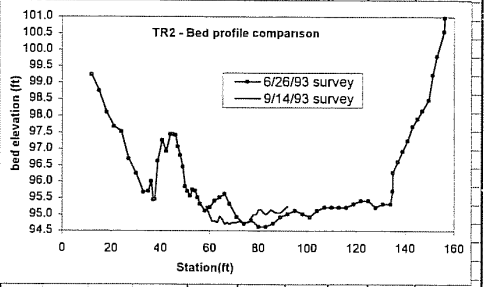
Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s) $V_{0.2\,0.6}$	Vel (ft/s) $V_{0.8}$	Vel (ft/s) Ave	q (cfs)	substrate

26-Jun-93

	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s) $V_{0.2\,0.6}$	Vel (ft/s) $V_{0.8}$	Vel (ft/s) Ave	q (cfs)	substrate
LWP	12.0	7.19	99.24						6.7
	15.0	7.67	98.76						6.7
	18.0	8.32	98.11						6.7
	21.0	8.75	97.68						6.7
	24.0	8.91	97.52						1.1
	27.0	9.73	96.70						1.1
	30.0	10.18	96.25						1.1
	33.0	10.76	95.67						1.1
	35.0	10.72	95.71						1.1
	36.2	10.42	96.01						1.1
	37.1	10.98	95.45						1.1
	37.7	10.97	95.46						1.1
	38.9	9.80	96.63						1.1
	40.7	9.17	97.26						1.1
	42.3	9.50	96.93						1.1
	44.0	8.99	97.44						1.1
	45.0	8.99	97.44						1.1
	46.0	9.01	97.42						1.1
	47.0	9.36	97.07						1.1
	48.0	9.63	96.80						1.1
	49.0	9.98	96.45						1.1
	50.0	10.58	95.85						1.1
	51.0	10.72	95.71						1.1
	52.0	10.86	95.57						1.1
	53.0	10.68	95.75						1.1
LWE	54.0		95.72	0.00	0.00		0.00	0.00	1.1
	55.0		95.52	0.20	-0.04		-0.04	-0.01	9.9
	56.0		95.32	0.40	0.14		0.14	0.08	9.9
	58.0		95.12	0.60	0.37		0.37	0.44	9.9
	60.0		95.22	0.50	0.12		0.12	0.12	6.6
	62.0		95.42	0.30	0.01		0.01	0.01	6.6
	64.0		95.52	0.20	0.18		0.18	0.07	5.5
	66.0		95.62	0.10	0.00		0.00	0.00	5.5
	68.0		95.32	0.40	0.43		0.43	0.43	5.5
	71.0		94.92	0.80	1.48		1.48	3.55	5.5
	74.0		94.72	1.00	1.30		1.30	3.90	5.5
	77.0		94.82	0.90	1.53		1.53	4.13	3.3
	80.0		94.62	1.10	1.83		1.83	6.04	9.9
	83.0		94.62	1.10	1.68		1.68	5.54	6.6
	86.0		94.72	1.00	0.63		0.63	1.89	6.6
	89.0		94.92	0.80	-0.05		-0.05	-0.12	6.6
	92.0		95.02	0.70	1.64		1.64	3.44	6.6
	95.0		95.12	0.60	0.52		0.52	0.94	6.6
	98.0		95.02	0.70	0.95		0.95	2.00	6.6
	101.0		94.92	0.80	1.24		1.24	2.98	6.6
	104.0		95.12	0.60	1.49		1.49	2.68	6.6
	107.0		95.22	0.50	1.24		1.24	0.93	6.6
	110.0		95.22	0.50	1.44		1.44	1.08	6.6
	113.0		95.22	0.50	1.13		1.13	0.85	6.6
	116.0		95.22	0.50	1.10		1.10	0.83	6.6
	119.0		95.32	0.40	0.81		0.81	0.49	9.9
	122.0		95.42	0.30	2.00		2.00	0.90	9.9
	125.0		95.42	0.30	1.25		1.25	0.56	9.9
	128.0		95.22	0.50	1.13		1.13	0.85	9.9
	131.0		95.32	0.40	0.11		0.11	0.07	7.7
	134.0		95.32	0.40	0.05		0.05	0.03	7.7
RWE	134.9		95.72	0.00	0.00		0.00	0.00	7.7
	135.0	10.15	96.28						7.7
	137.0	9.82	96.61						7.7
	139.0	9.50	96.93						7.7
	141.0	9.18	97.25						7.7
	143.0	8.75	97.68						7.7
	145.0	8.51	97.92						7.7
	147.0	8.28	98.15						7.7
	149.6	7.95	98.48						7.7
	151.3	7.19	99.24						7.7
	153.0	6.62	99.81						7.7
	155.8	5.87	100.56						7.7
RWP	156.0	5.46	100.97						7.7

14-Sep-93

	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s) $V_{0.2\,0.6}$	Vel (ft/s) $V_{0.8}$	Vel (ft/s) Ave	q (cfs)	substrate
LWE	58.5		95.25	0.00	0.00		0.00	0.00	1.1
	60.0		94.95	0.30	0.03		0.03	0.01	6.6
	61.0		94.80	0.45	0.04		0.04	0.02	6.6
	62.0		94.80	0.45	0.30		0.30	0.14	6.6
	63.0		94.75	0.50	0.22		0.22	0.11	6.6
	64.0		94.95	0.30	0.73		0.73	0.22	5.5
	65.0		94.85	0.40	0.51		0.51	0.20	5.5
	66.0		94.70	0.55	0.67		0.67	0.37	5.5
	67.0		94.75	0.50	0.62		0.62	0.31	5.5
	68.0		94.70	0.55	0.64		0.64	0.35	5.5
	69.0		94.75	0.50	0.64		0.64	0.32	5.5
	70.0		94.75	0.50	0.58		0.58	0.29	5.5
	71.0		94.75	0.50	0.53		0.53	0.27	5.5
	72.0		94.80	0.45	0.30		0.30	0.14	5.5
	73.0		94.75	0.50	0.30		0.30	0.15	5.5
	74.0		94.75	0.50	0.31		0.31	0.16	5.5
	75.0		94.75	0.50	0.11		0.11	0.06	5.5
	76.0		94.75	0.50	0.02		0.02	0.01	3.3
	77.0		94.90	0.35	-0.01		-0.01	0.00	3.3
	78.0		95.00	0.25	0.00		0.00	0.00	3.3
	79.0		95.00	0.25	0.02		0.02	0.01	9.9
	80.0		95.15	0.10	0.00		0.00	0.00	9.9
	81.0		95.15	0.10	-0.03		-0.03	0.00	9.9
	82.0		95.05	0.20	-0.01		-0.01	0.00	9.9
	83.0		95.00	0.25	0.00		0.00	0.00	6.6
	84.0		95.05	0.20	0.01		0.01	0.00	6.6
	85.0		95.15	0.10	-0.02		-0.02	0.00	6.6
	87.0		95.05	0.20	0.01		0.01	0.00	6.6
	89.0		95.05	0.20	0.01		0.01	0.00	6.6
RWE	92.0		95.25	0.00	0.00		0.00	0.00	



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        Sycane  River SY_4 06/26/93
Riffle                    MID                                          TRANSECT 1
IOC       1101100100001000101000
QARD   3.3
QARD   5.0
QARD   8.0
QARD  12.0
QARD  20.0
QARD  30.0
QARD  40.0
QARD  49.6
QARD  60.0
QARD  70.0
QARD  80.0
QARD  90.0
QARD 100.0
QARD 110.0
QARD 120.0
QARD 130.0
QARD 140.0
QARD 150.0
QARD 160.0
QARD 170.0
QARD 180.0
QARD 200.0
QARD 220.0
QARD 250.0
QARD 300.0
QARD 350.0
QARD 400.0
QARD 500.0
QARD 600.0
QARD 653.7
XSEC1000.0      0.00 1.0      93.25    0.0235
    1000.0  0.0 99.5  2.5 99.3  5.0 99.0  7.5 98.4 10.0 98.0 12.5 97.7
    1000.0 15.0 97.4 17.5 97.3 19.5 97.1 21.5 96.7 23.5 96.5 25.5 96.3
    1000.0 27.5 96.4 29.5 96.8 31.5 96.8 33.5 96.3 35.5 95.9 37.5 95.5
    1000.0 39.3 95.1 40.5 95.0 41.0 94.9 42.5 95.0 47.6 95.1 49.0 94.9
    1000.0 50.0 94.8 52.0 94.3 54.0 94.1 55.0 94.1 56.0 93.6 57.0 93.8
    1000.0 58.0 93.8 60.0 94.0 62.0 94.2 64.0 94.3 66.0 94.4 68.0 94.6
    1000.0 71.0 94.6 74.0 94.8 76.2 95.1 90.5 95.1 92.5 95.0 95.0 95.0
    1000.0 96.0 95.0 98.0 94.9103.0 95.0107.0 94.9109.0 94.9112.0 94.7
    1000.0114.0 94.4118.0 93.9120.0 93.9122.0 93.6124.0 93.6126.0 93.3
    1000.0128.0 93.5129.0 93.4130.0 93.4131.0 93.4133.0 93.4135.0 93.8
    1000.0137.0 94.6139.3 95.1140.5 95.5141.5 95.9142.5 96.4143.5 96.9
    1000.0145.0 97.6146.2 98.2147.6 99.1149.0100.0151.0101.0
NS  1000.0       6.6        6.6        6.6        6.6        6.6        6.6
NS  1000.0       6.6        6.6        6.6        6.6        6.6        6.6
NS  1000.0       1.1        1.1        1.1        1.1        1.1        1.1
NS  1000.0       1.1        9.9        9.9        1.1  0.2   1.1 0.2    9.9
NS  1000.0 0.25  9.9 0.16   9.9 0.1    5.5 .065   5.5 .072   5.5 .072   5.5
NS  1000.0       5.5        5.5        5.5        5.5        5.5 0.3    5.5
NS  1000.0 0.3   5.5 0.15   5.5 0.15   5.5 0.15   6.6 0.12   6.6 0.06   6.6
NS  1000.0       6.6 0.05   6.6 0.05   6.6        9.9 0.55   9.9 0.55   9.9
NS  1000.0 0.55  9.9 0.55   9.9 0.55   6.6 0.55   6.6        6.6        6.6
NS  1000.0 0.4   6.6        6.6 0.15   6.6        6.6 0.3    9.9 0.4    9.9
NS  1000.0 0.5   9.9        1.1        1.1        1.1        1.1        1.1
NS  1000.0       1.1        1.1        1.1        1.1        1.1
WSL 1000.0     94.16      94.24      94.34      94.43      94.53      94.64
WSL 1000.0     94.75      95.05      95.19      95.25      95.30      95.35
WSL 1000.0     95.40      95.45      95.49      95.53      95.58      95.61
WSL 1000.0     95.65      95.69      95.73      95.80      95.87      95.96
WSL 1000.0     96.11      96.24      96.39      96.65      96.87      96.98
CAL11000.0     95.05       49.6
VEL11000.0
VEL11000.0                               0.00 0.00 0.00 0.00 0.00-0.01
VEL11000.0 0.18 0.50 0.86 4.54 4.36 3.96 3.38 3.00 0.83 1.31 0.30-0.01
VEL11000.0-0.06-0.02 0.00 0.00 0.15      0.63 0.65 0.85 0.96 0.01 0.03
VEL11000.0 0.02 0.04 0.26 0.25 0.87 0.92 0.21 0.84 2.72 0.84-0.09-0.01
VEL11000.0 0.05 0.00
CAL21000.0     94.17        3.3
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
CAL31000.0     96.98      653.7
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
ENDJ
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        Sycane  River SY_4 06/26/93
Riffle                      MID                                     TRANSECT 2
IOC       11011001000010001010 00
QARD   3.3
QARD   5.0
QARD   8.0
QARD  12.0
QARD  20.0
QARD  30.0
QARD  40.0
QARD  49.6
QARD  60.0
QARD  70.0
QARD  80.0
QARD  90.0
QARD 100.0
QARD 110.0
QARD 120.0
QARD 130.0
QARD 140.0
QARD 150.0
QARD 160.0
QARD 170.0
QARD 180.0
QARD 200.0
QARD 220.0
QARD 250.0
QARD 300.0
QARD 350.0
QARD 400.0
QARD 500.0
QARD 600.0
QARD 653.7
XSEC1000.0      0.00 1.0     94.03   0.0235
    1000.0  0.0 99.2  3.0 98.9  6.0 98.6  9.0 98.4 12.0 97.7 15.0 97.6
    1000.0 17.6 97.0 19.3 96.9 20.3 97.1 20.6 97.6 22.0 97.6 24.0 97.6
    1000.0 25.5 97.3 26.5 97.0 26.9 96.3 28.1 95.8 28.5 95.2 29.5 94.9
    1000.0 30.5 94.7 31.5 94.8 32.9 95.1 40.5 95.2 41.0 95.0 42.0 94.9
    1000.0 43.0 94.8 44.0 94.9 46.0 94.9 48.0 94.7 49.0 94.7 50.0 94.7
    1000.0 52.0 94.0 53.0 94.2 56.0 94.4 59.0 94.6 62.0 94.8 65.0 94.7
    1000.0 68.0 94.8 71.0 94.8 74.0 94.7 77.0 94.9 82.0 95.0 87.0 95.1
    1000.0 91.0 95.1 94.0 95.0 97.0 94.9100.0 94.9103.0 95.0106.0 94.9
    1000.0109.0 94.8112.0 94.8115.0 94.7118.0 94.5121.0 94.3122.0 94.1
    1000.0123.0 94.3124.6 95.2125.3 95.7126.5 96.2127.5 96.5129.0 96.9
    1000.0131.0 97.6132.0 97.8132.3 99.5135.6100.1136.2 99.2138.1100.1
    1000.0140.3100.1142.1102.4
NS  1000.0       6.7       6.7       6.7       6.7       6.7       6.7
NS  1000.0       6.7       6.7       6.7       1.1       1.1       1.1
NS  1000.0       1.1       1.1       1.1       1.1       1.1 1.00  9.9
NS  1000.0 1.00  9.9 1.00  9.9 1.00  9.9 0.30  9.9 0.3   9.9       9.9
NS  1000.0       9.9 0.60  9.9 0.60  9.9 0.5   9.9       9.9       9.9
NS  1000.0 0.10  6.6 0.10  6.6       6.6       6.6       6.6       6.6
NS  1000.0 0.45  9.9       9.9       9.9       9.9 0.25  6.6       6.6
NS  1000.0       6.6       6.6       6.6       6.6 0.30  6.6       6.6
NS  1000.0 0.35  6.6       6.6       6.6       9.9       9.9 0.09  9.9
NS  1000.0 0.080 9.9       1.1       1.1       1.1       1.1       1.1
NS  1000.0       7.7       7.7       7.7       7.7       7.7       7.7
NS  1000.0       3.3       3.3
WSL 1000.0     94.86     94.87     94.91     94.92     95.02     95.07
WSL 1000.0     95.13     95.23     95.33     95.39     95.44     95.50
WSL 1000.0     95.54     95.59     95.63     95.67     95.72     95.75
WSL 1000.0     95.79     95.82     95.86     95.93     95.99     96.07
WSL 1000.0     96.21     96.33     96.46     96.69     96.89     96.99
CAL11000.0     95.23      49.6
VEL11000.0
VEL11000.0                      0.00 0.01 0.01 0.01 0.01 0.01-0.01 0.85
VEL11000.0 0.61-0.01 0.03 2.20 1.51 1.61 3.95 3.48 1.67 0.66 0.78 0.35
VEL11000.0 0.19 1.45 0.75 0.36 0.03 0.82 0.72 0.77 0.59 0.62 0.17 0.42
VEL11000.0 0.11 0.60 0.40 1.10 1.93 3.15 3.56 0.00
VEL11000.0
CAL21000.0     94.86       3.3
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
CAL31000.0     96.99     653.7
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
ENDJ
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        Sycane  River SY_4 06/26/93
Riffle                      MID                                   TRANSECT 3
IOC       11011001000001000101000
QARD   3.3
QARD   5.0
QARD   8.0
QARD  12.0
QARD  20.0
QARD  30.0
QARD  40.0
QARD  49.6
QARD  60.0
QARD  70.0
QARD  80.0
QARD  90.0
QARD 100.0
QARD 110.0
QARD 120.0
QARD 130.0
QARD 140.0
QARD 150.0
QARD 160.0
QARD 170.0
QARD 180.0
QARD 200.0
QARD 220.0
QARD 250.0
QARD 300.0
QARD 350.0
QARD 400.0
QARD 500.0
QARD 600.0
QARD 653.7
XSEC1000.0      0.00 1.0     94.62   0.0235
    1000.0 12.0 99.2 15.0 98.8 18.0 98.1 21.0 97.7 24.0 97.5 27.0 96.7
    1000.0 30.0 96.3 33.0 95.7 35.0 95.7 36.2 96.0 37.1 95.5 37.7 95.5
    1000.0 38.9 96.6 40.7 97.3 42.3 96.9 44.0 97.4 45.0 97.4 46.0 97.4
    1000.0 47.0 97.1 48.0 96.8 49.0 96.5 50.0 95.9 51.0 95.7 52.0 95.6
    1000.0 53.0 95.8 54.0 95.7 55.0 95.5 56.0 95.3 58.0 95.1 60.0 95.2
    1000.0 62.0 95.4 64.0 95.5 66.0 95.6 68.0 95.3 71.0 94.9 74.0 94.7
    1000.0 77.0 94.8 80.0 94.6 83.0 94.6 86.0 94.7 89.0 94.9 92.0 95.0
    1000.0 95.0 95.1 98.0 95.0101.0 94.9104.0 95.1107.0 95.2110.0 95.2
    1000.0113.0 95.2116.0 95.2119.0 95.3122.0 95.4125.0 95.4128.0 95.2
    1000.0131.0 95.3134.0 95.3134.9 95.7135.0 96.3137.0 96.6139.0 96.9
    1000.0141.0 97.3143.0 97.7145.0 97.9147.0 98.2149.6 98.5151.3 99.2
    1000.0153.0 99.8155.8100.6156.0101.0
NS  1000.0       6.7       6.7       6.7       6.7       1.1       1.1
NS  1000.0       1.1       1.1       1.1       1.1       1.1       1.1
NS  1000.0       1.1       1.1       1.1       1.1       1.1       1.1
NS  1000.0       1.1       1.1       1.1       1.1       1.1       1.1
NS  1000.0       1.1       1.1 1.00  9.9       9.9       9.9       6.6
NS  1000.0 0.5   6.6       5.5       5.5       5.5       5.5       5.5
NS  1000.0       3.3       9.9       6.6       6.6 0.45  6.6 0.15  6.6
NS  1000.0       6.6       6.6       6.6       6.6       6.6       6.6
NS  1000.0       6.6       6.6 0.12  9.9 0.07  9.9       9.9       9.9
NS  1000.0 0.20  7.7 0.40  7.7       7.7       7.7       7.7       7.7
NS  1000.0       7.7       7.7       7.7       7.7       7.7       7.7
NS  1000.0       7.7       7.7       7.7
WSL 1000.0     95.25     95.26     95.35     95.43     95.53     95.61
WSL 1000.0     95.68     95.72     95.78     95.84     95.89     95.94
WSL 1000.0     95.98     96.03     96.07     96.11     96.14     96.17
WSL 1000.0     96.21     96.23     96.26     96.32     96.37     96.43
WSL 1000.0     96.53     96.61     96.69     96.82     96.94     97.00
CAL11000.0     95.72      49.6
VEL11000.0
VEL11000.0
VEL11000.0      0.00-0.04 0.14 0.37 0.12 0.01 0.18 0.00 0.43 1.48 1.30
VEL11000.0 1.53 1.83 1.68 0.63-0.05 1.64 0.52 0.95 1.24 1.49 1.24 1.44
VEL11000.0 1.13 1.10 0.81 2.00 1.25 1.13 0.11 0.05 0.00
VEL11000.0
CAL21000.0     95.25       3.3
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
CAL31000.0     96.99     653.7
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
ENDJ
```

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        Sycane  River SY_4 06/26/93
Riffle                      MID                                    TRANSECT 1
IOC       01100000000000000000
QARD   3.3
QARD   5.0
QARD   8.0
QARD  12.0
QARD  20.0
QARD  30.0
QARD  40.0
QARD  49.6
QARD  60.0
QARD  70.0
QARD  80.0
QARD  90.0
QARD 100.0
QARD 110.0
QARD 120.0
QARD 130.0
QARD 140.0
QARD 150.0
QARD 160.0
QARD 170.0
QARD 180.0
QARD 200.0
QARD 220.0
QARD 250.0
QARD 300.0
QARD 350.0
QARD 400.0
QARD 500.0
QARD 600.0
QARD 653.7
XSEC1000.0      0.00 1.0     93.25   0.0235
    1000.0  0.0 99.5  2.5 99.3  5.0 99.0  7.5 98.4 10.0 98.0 12.5 97.7
    1000.0 15.0 97.4 17.5 97.3 19.5 97.1 21.5 96.7 23.5 96.5 25.5 96.3
    1000.0 27.5 96.4 29.5 96.8 31.5 96.8 33.5 96.3 35.5 95.9 37.5 95.5
    1000.0 39.3 95.1 40.5 95.0 41.0 94.9 42.5 95.0 47.6 95.1 49.0 94.9
    1000.0 50.0 94.8 52.0 94.3 54.0 94.1 55.0 94.1 56.0 93.6 57.0 93.8
    1000.0 58.0 93.8 60.0 94.0 62.0 94.2 64.0 94.3 66.0 94.4 68.0 94.6
    1000.0 71.0 94.6 74.0 94.8 76.2 95.1 90.5 95.1 92.5 95.0 95.0 95.0
    1000.0 96.0 95.0 98.0 94.9103.0 95.0107.0 94.9109.0 94.9112.0 94.7
    1000.0114.0 94.4118.0 93.9120.0 93.9122.0 93.6124.0 93.6126.0 93.3
    1000.0128.0 93.5129.0 93.4130.0 93.4131.0 93.4133.0 93.4135.0 93.8
    1000.0137.0 94.6139.3 95.1140.5 95.5141.5 95.9142.5 96.4143.5 96.9
    1000.0145.0 97.6146.2 98.2147.6 99.1149.0100.0151.0101.0
NS  1000.0       6.6       6.6       6.6       6.6       6.6       6.6
NS  1000.0       6.6       6.6       6.6       6.6       6.6       6.6
NS  1000.0       1.1       1.1       1.1       1.1       1.1       1.1
NS  1000.0       1.1       9.9       9.9       1.1       1.1       9.9
NS  1000.0       9.9       9.9       5.5       5.5       5.5       5.5
NS  1000.0       5.5       5.5       5.5       5.5       5.5       5.5
NS  1000.0       5.5       5.5       5.5       6.6       6.6       6.6
NS  1000.0       6.6       6.6       6.6       9.9       9.9       9.9
NS  1000.0       9.9       9.9       6.6       6.6       6.6       6.6
NS  1000.0       6.6       6.6       6.6       6.6       9.9       9.9
NS  1000.0       9.9       1.1       1.1       1.1       1.1       1.1
NS  1000.0       1.1       1.1       1.1       1.1       1.1
CALQ1000.0     95.05      49.6     -2.50
ENDJ
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        Sycane  River SY_4 06/26/93
Riffle                      MID                                    TRANSECT 1
IOC       01100000000000000000
QARD   3.3
QARD   5.0
QARD   8.0
QARD  12.0
QARD  20.0
QARD  30.0
QARD  40.0
QARD  49.6
QARD  60.0
QARD  70.0
QARD  80.0
QARD  90.0
QARD 100.0
QARD 110.0
QARD 120.0
QARD 130.0
QARD 140.0
QARD 150.0
QARD 160.0
QARD 170.0
QARD 180.0
QARD 200.0
QARD 220.0
QARD 250.0
QARD 300.0
QARD 350.0
QARD 400.0
QARD 500.0
QARD 600.0
QARD 653.7
XSEC1000.0      0.00 1.0     93.25   0.0235
    1000.0  0.0 99.5  2.5 99.3  5.0 99.0  7.5 98.4 10.0 98.0 12.5 97.7
    1000.0 15.0 97.4 17.5 97.3 19.5 97.1 21.5 96.7 23.5 96.5 25.5 96.3
    1000.0 27.5 96.4 29.5 96.8 31.5 96.8 33.5 96.3 35.5 95.9 37.5 95.5
    1000.0 39.3 95.1 40.5 95.0 41.0 94.9 42.5 95.0 47.6 95.1 49.0 94.9
    1000.0 50.0 94.8 52.0 94.3 54.0 94.1 55.0 94.1 56.0 93.6 57.0 93.8
    1000.0 58.0 93.8 60.0 94.0 62.0 94.2 64.0 94.3 66.0 94.4 68.0 94.6
    1000.0 71.0 94.6 74.0 94.8 76.2 95.1 90.5 95.1 92.5 95.0 95.0 95.0
    1000.0 96.0 95.0 98.0 94.9103.0 95.0107.0 94.9109.0 94.9112.0 94.7
    1000.0114.0 94.4118.0 93.9120.0 93.9122.0 93.6124.0 93.6126.0 93.3
    1000.0128.0 93.5129.0 93.4130.0 93.4131.0 93.4133.0 93.4135.0 93.8
    1000.0137.0 94.6139.3 95.1140.5 95.5141.5 95.9142.5 96.4143.5 96.9
    1000.0145.0 97.6146.2 98.2147.6 99.1149.0100.0151.0101.0
NS  1000.0       6.6       6.6       6.6       6.6       6.6       6.6
NS  1000.0       6.6       6.6       6.6       6.6       6.6       6.6
NS  1000.0       1.1       1.1       1.1       1.1       1.1       1.1
NS  1000.0       1.1       9.9       9.9       1.1       1.1       9.9
NS  1000.0       9.9       9.9       5.5       5.5       5.5       5.5
NS  1000.0       5.5       5.5       5.5       5.5       5.5       5.5
NS  1000.0       5.5       5.5       5.5       6.6       6.6       6.6
NS  1000.0       6.6       6.6       6.6       9.9       9.9       9.9
NS  1000.0       9.9       9.9       6.6       6.6       6.6       6.6
NS  1000.0       6.6       6.6       6.6       6.6       9.9       9.9
NS  1000.0       9.9       1.1       1.1       1.1       1.1       1.1
NS  1000.0       1.1       1.1       1.1       1.1       1.1
CALQ1000.0     96.98     653.7     -0.20
ENDJ
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        Sycane  River SY_4 06/26/93
RUN                          MID
PARD    30      1.00      0        1.000
QARD   3.3     94.16               5.800     5.800
QARD   5.0     94.24               4.000     4.000
QARD   8.0     94.34               3.000     3.000
QARD  12.0     94.43               2.000     2.000
QARD  20.0     94.53               1.750     1.750
QARD  30.0     94.64               1.400     1.400
QARD  40.0     94.75               1.200     1.200
QARD  49.6     95.05               1.000     1.000
QARD  60.0     95.19               0.990     0.990
QARD  70.0     95.25               0.980     0.980
QARD  80.0     95.30               0.970     0.970
QARD  90.0     95.35               0.960     0.960
QARD 100.0     95.40               0.950     0.950
QARD 110.0     95.45               0.940     0.940
QARD 120.0     95.49               0.920     0.920
QARD 130.0     95.53               0.910     0.910
QARD 140.0     95.58               0.900     0.900
QARD 150.0     95.61               0.890     0.890
QARD 160.0     95.65               0.880     0.880
QARD 170.0     95.69               0.870     0.870
QARD 180.0     95.73               0.860     0.860
QARD 200.0     95.80               0.840     0.840
QARD 220.0     95.87               0.820     0.820
QARD 250.0     95.96               0.780     0.780
QARD 300.0     96.11               0.730     0.730
QARD 350.0     96.24               0.680     0.680
QARD 400.0     96.39               0.620     0.620
QARD 500.0     96.65               0.520     0.520
QARD 600.0     96.87               0.410     0.410
QARD 653.7     96.98               0.350     0.350
FFFFTFFFF                                                                **
      11.4  0.0 99.5  2.5 99.3  5.0 99.0  7.5 98.4 10.0 98.0 12.5 97.7
      11.4 15.0 97.4 17.5 97.3 19.5 97.1 21.5 96.7 23.5 96.5 25.5 96.3
      11.4 27.5 96.4 29.5 96.8 31.5 96.8 33.5 96.3 35.5 95.9 37.5 95.5
      11.4 39.3 95.1 40.5 95.0 41.0 94.9 42.5 95.0 47.6 95.1 49.0 94.9
      11.4 50.0 94.8 52.0 94.3 54.0 94.1 55.0 94.1 56.0 93.6 57.0 93.8
      11.4 58.0 93.8 60.0 94.0 62.0 94.2 64.0 94.3 66.0 94.4 68.0 94.6
      11.4 71.0 94.6 74.0 94.8 76.2 95.1 90.5 95.1 92.5 95.0 95.0 95.0
      11.4 96.0 95.0 98.0 94.9103.0 95.0107.0 94.9109.0 94.9112.0 94.7
      11.4114.0 94.4118.0 93.9120.0 93.9122.0 93.6124.0 93.6126.0 93.3
      11.4128.0 93.5129.0 93.4130.0 93.4131.0 93.4133.0 93.4135.0 93.8
      11.4137.0 94.6139.3 95.1140.5 95.5141.5 95.9142.5 96.4143.5 96.9
      11.4145.0 97.6146.2 98.2147.6 99.1149.0100.0151.0101.0
      11.4 0.13  0.0     0.13   2.5     0.13   5.0     0.13   7.5            *
      11.4 0.13 10.0     0.13  12.5     0.13  15.0     0.13  17.5            *
      11.4 0.13 19.5     0.13  21.5     0.13  23.5     0.13  25.5            *
      11.4 0.13 27.5     0.13  29.5     0.13  31.5     0.13  33.5            *
      11.4 0.13 35.5     0.13  37.5     0.13  39.3     0.13  40.5            *
      11.4 0.13 41.0     0.13  42.5     0.13  47.6     0.13  49.0            *
      11.4 0.13 50.0     0.13  52.0     0.13  54.0     0.13  55.0            *
      11.4 0.13 56.0     0.13  57.0     0.13  58.0     0.13  60.0            *
      11.4 0.13 62.0     0.13  64.0     0.13  66.0     0.13  68.0            *
      11.4 0.13 71.0     0.13  74.0     0.13  76.2     0.13  90.5            *
      11.4 0.13 92.5     0.13  95.0     0.13  96.0     0.13  98.0            *
      11.4 0.13103.0     0.13 107.0     0.13 109.0     0.13 112.0            *
      11.4 0.13114.0     0.13 118.0     0.13 120.0     0.13 122.0            *
      11.4 0.13124.0     -.13 126.0     0.13 128.0     0.13 129.0            *
      11.4 0.13130.0     0.13 131.0     0.13 133.0     0.13 135.0            *
      11.4 0.13137.0     0.13 139.3     0.13 140.5     0.13 141.5            *
      11.4 0.13142.5     0.13 143.5     0.13 145.0     0.13 146.2            *
      11.4 0.13147.6     0.13 149.0     0.13 151.0                           *
      22.8  0.0 99.2  3.0 98.9  6.0 98.6  9.0 98.4 12.0 97.7 15.0 97.6
      22.8 17.6 97.0 19.3 96.9 20.3 97.1 20.6 97.6 22.0 97.6 24.0 97.6
      22.8 25.5 97.3 26.5 97.0 26.9 96.3 28.1 95.8 28.5 95.2 29.5 94.9
      22.8 30.5 94.7 31.5 94.8 32.9 95.1 40.5 95.2 41.0 95.0 42.0 94.9
      22.8 43.0 94.8 44.0 94.9 46.0 94.9 48.0 94.7 49.0 94.7 50.0 94.7
      22.8 52.0 94.0 53.0 94.2 56.0 94.4 59.0 94.6 62.0 94.8 65.0 94.7
      22.8 68.0 94.8 71.0 94.8 74.0 94.7 77.0 94.9 82.0 95.0 87.0 95.1
      22.8 91.0 95.1 94.0 95.0 97.0 94.9100.0 94.9103.0 95.0106.0 94.9
      22.8109.0 94.8112.0 94.8115.0 94.7118.0 94.5121.0 94.3122.0 94.1
      22.8123.0 94.3124.6 95.2125.3 95.7126.5 96.2127.5 96.5129.0 96.9
      22.8131.0 97.6132.0 97.8132.3 99.5135.6100.1136.2 99.2138.1100.1
      22.8140.3100.1142.1102.4
      22.8 0.13  0.0     0.13   3.0     0.13   6.0     0.13   9.0            *
      22.8 0.13 12.0     0.13  15.0     0.13  17.6     0.13  19.3            *
      22.8 0.13 20.3     0.13  20.6     0.13  22.0     0.13  24.0            *
      22.8 0.13 25.5     0.13  26.5     0.13  26.9     0.13  28.1            *
      22.8 0.13 28.5     0.13  29.5     0.13  30.5     0.13  31.5            *
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      22.8 0.13 32.9     0.13  40.5     0.13  41.0     0.13  42.0            *
      22.8 0.13 43.0     0.13  44.0     0.13  46.0     0.13  48.0            *
      22.8 0.13 49.0     0.13  50.0     -.13  52.0     0.13  53.0            *
      22.8 0.13 56.0     0.13  59.0     0.13  62.0     0.13  65.0            *
      22.8 0.13 68.0     0.13  71.0     0.13  74.0     0.13  77.0            *
      22.8 0.13 82.0     0.13  87.0     0.13  91.0     0.13  94.0            *
      22.8 0.13 97.0     0.13 100.0     0.13 103.0     0.13 106.0            *
      22.8 0.13109.0     0.13 112.0     0.13 115.0     0.13 118.0            *
      22.8 0.13121.0     0.13 122.0     0.13 123.0     0.13 124.6            *
      22.8 0.13125.3     0.13 126.5     0.13 127.5     0.13 129.0            *
      22.8 0.13131.0     0.13 132.0     0.13 132.3     0.13 135.6            *
      22.8 0.13136.2     0.13 138.1     0.13 140.3     0.13 142.1            *
ENDJ
ENDR
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        Sycane  River SY_4 06/26/93
RUN                          MID
PARD     30      1.00      0        1.000
QARD    3.3     94.86                2.900     2.900
QARD    5.0     94.87                2.000     2.000
QARD    8.0     94.91                1.800     1.800
QARD   12.0     94.92                1.630     1.630
QARD   20.0     95.02                1.400     1.400
QARD   30.0     95.07                1.200     1.200
QARD   40.0     95.13                1.100     1.100
QARD   49.6     95.23                1.000     1.000
QARD   60.0     95.33                0.990     0.990
QARD   70.0     95.39                0.970     0.970
QARD   80.0     95.44                0.960     0.960
QARD   90.0     95.50                0.950     0.950
QARD  100.0     95.54                0.930     0.930
QARD  110.0     95.59                0.920     0.920
QARD  120.0     95.63                0.910     0.910
QARD  130.0     95.67                0.900     0.900
QARD  140.0     95.72                0.880     0.880
QARD  150.0     95.75                0.870     0.870
QARD  160.0     95.79                0.860     0.860
QARD  170.0     95.82                0.840     0.840
QARD  180.0     95.86                0.830     0.830
QARD  200.0     95.93                0.810     0.810
QARD  220.0     95.99                0.780     0.780
QARD  250.0     96.07                0.740     0.740
QARD  300.0     96.21                0.680     0.680
QARD  350.0     96.33                0.610     0.610
QARD  400.0     96.46                0.550     0.550
QARD  500.0     96.69                0.420     0.420
QARD  600.0     96.89                0.290     0.290
QARD  653.7     96.99                0.220     0.220
FFFFTFFFF                                                              **
      22.8  0.0 99.2  3.0 98.9  6.0 98.6  9.0 98.4 12.0 97.7 15.0 97.6
      22.8 17.6 97.0 19.3 96.9 20.3 97.1 20.6 97.6 22.0 97.6 24.0 97.6
      22.8 25.5 97.3 26.5 97.0 26.9 96.3 28.1 95.8 28.5 95.2 29.5 94.9
      22.8 30.5 94.7 31.5 94.8 32.9 95.1 40.5 95.2 41.0 95.0 42.0 94.9
      22.8 43.0 94.8 44.0 94.9 46.0 94.9 48.0 94.7 49.0 94.7 50.0 94.7
      22.8 52.0 94.0 53.0 94.2 56.0 94.4 59.0 94.6 62.0 94.8 65.0 94.7
      22.8 68.0 94.8 71.0 94.8 74.0 94.7 77.0 94.9 82.0 95.0 87.0 95.1
      22.8 91.0 95.1 94.0 95.0 97.0 94.9100.0 94.9103.0 95.0106.0 94.9
      22.8109.0 94.8112.0 94.8115.0 94.7118.0 94.5121.0 94.3122.0 94.1
      22.8123.0 94.3124.6 95.2125.3 95.7126.5 96.2127.5 96.5129.0 96.9
      22.8131.0 97.6132.0 97.8132.3 99.5135.6100.1136.2 99.2138.1100.1
      22.8140.3100.1142.1102.4
      22.8 0.16  0.0     0.16   3.0     0.16   6.0     0.16   9.0            *
      22.8 0.16 12.0     0.16  15.0     0.16  17.6     0.16  19.3            *
      22.8 0.16 20.3     0.16  20.6     0.16  22.0     0.16  24.0            *
      22.8 0.16 25.5     0.16  26.5     0.16  26.9     0.16  28.1            *
      22.8 0.16 28.5     0.16  29.5     0.16  30.5     0.16  31.5            *
      22.8 0.16 32.9     0.16  40.5     0.16  41.0     0.16  42.0            *
      22.8 0.16 43.0     0.16  44.0     0.16  46.0     0.16  48.0            *
      22.8 0.16 49.0     0.16  50.0     0.16  52.0     0.16  53.0            *
      22.8 0.16 56.0     0.16  59.0     0.16  62.0     0.16  65.0            *
      22.8 0.16 68.0     0.16  71.0     0.16  74.0     0.16  77.0            *
      22.8 0.16 82.0     0.16  87.0     0.16  91.0     0.16  94.0            *
      22.8 0.16 97.0     0.16 100.0     0.16 103.0     0.16 106.0            *
      22.8 0.16109.0     0.16 112.0     0.16 115.0     0.16 118.0            *
      22.8 0.16121.0     0.16 122.0     0.16 123.0     0.16 124.6            *
      22.8 0.16125.3     0.16 126.5     0.16 127.5     0.16 129.0            *
      22.8 0.16131.0     0.16 132.0     0.16 132.3     0.16 135.6            *
      22.8 0.16136.2     0.16 138.1     0.16 140.3     0.16 142.1            *
      39.9 12.0 99.2 15.0 98.8 18.0 98.1 21.0 97.7 24.0 97.5 27.0 96.7
      39.9 30.0 96.3 33.0 95.7 35.0 95.7 36.2 96.0 37.1 95.5 37.7 95.5
      39.9 38.9 96.6 40.7 97.3 42.3 96.9 44.0 97.4 45.0 97.4 46.0 97.4
      39.9 47.0 97.1 48.0 96.8 49.0 96.5 50.0 95.9 51.0 95.7 52.0 95.6
      39.9 53.0 95.8 54.0 95.7 55.0 95.5 56.0 95.3 58.0 95.1 60.0 95.2
      39.9 62.0 95.4 64.0 95.5 66.0 95.6 68.0 95.3 71.0 94.9 74.0 94.7
      39.9 77.0 94.8 80.0 94.6 83.0 94.6 86.0 94.7 89.0 94.9 92.0 95.0
      39.9 95.0 95.1 98.0 95.0101.0 94.9104.0 95.1107.0 95.2110.0 95.2
      39.9113.0 95.2116.0 95.2119.0 95.3122.0 95.4125.0 95.4128.0 95.2
      39.9131.0 95.3134.0 95.3134.9 95.7135.0 96.3137.0 96.6139.0 96.9
      39.9141.0 97.3143.0 97.7145.0 97.9147.0 98.2149.6 98.5151.3 99.2
      39.9153.0 99.8155.8100.6156.0101.0
      39.9 0.17 12.0     0.17  15.0     0.17  18.0     0.17  21.0            *
      39.9 0.17 24.0     0.17  27.0     0.17  30.0     0.17  33.0            *
      39.9 0.17 35.0     0.17  36.2     0.17  37.1     0.17  37.7            *
      39.9 0.17 38.9     0.17  40.7     0.17  42.3     0.17  44.0            *
      39.9 0.17 45.0     0.17  46.0     0.17  47.0     0.17  48.0            *
      39.9 0.17 49.0     0.17  50.0     0.17  51.0     0.17  52.0            *
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      39.9 0.17 53.0     0.17  54.0     0.17  55.0     0.17  56.0          *
      39.9 0.17 58.0     0.17  60.0     0.17  62.0     0.17  64.0          *
      39.9 0.17 66.0     0.17  68.0     0.17  71.0     0.17  74.0          *
      39.9 0.17 77.0     -.17  80.0     0.17  83.0     0.17  86.0          *
      39.9 0.17 89.0     0.17  92.0     0.17  95.0     0.17  98.0          *
      39.9 0.17101.0     0.17 104.0     0.17 107.0     0.17 110.0          *
      39.9 0.17113.0     0.17 116.0     0.17 119.0     0.17 122.0          *
      39.9 0.17125.0     0.17 128.0     0.17 131.0     0.17 134.0          *
      39.9 0.17134.9     0.17 135.0     0.17 137.0     0.17 139.0          *
      39.9 0.17141.0     0.17 143.0     0.17 145.0     0.17 147.0          *
      39.9 0.17149.6     0.17 151.3     0.17 153.0     0.17 155.8          *
      39.9 0.17156.0                                                       *
ENDJ
ENDR
[]
```

Stream: Sycan River (Sycan River above Torrent Springs)
Site: SY-4
Date: 5/15/93
Habitat: Run **Flow:** High

(1) Level Loop Survey (BM & HP)

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	3.91	103.91		
HP1			4.87	99.04
HP2			4.03	99.88
HP3			4.58	99.33
TP HP3	4.14	103.47		
HP2			4.59	98.88
HP1			4.43	99.04
BM			3.47	100.00

Comment:

(2) Water Surface Elevation (WSE) Survey

	L/R WSE	Sta (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
TR1	LWE	106	103.47	5.67	0.00	97.80	97.81	653.7
	RWE			5.66	0.00	97.81		
TR2	LWE	133.5	103.47	5.65	0.00	97.82	97.84	
	RWE			5.61	0.00	97.86		
TR3	LWE	189.7	103.47	5.60	0.00	97.87	97.84	
	RWE			5.67	0.00	97.80		

Ave Q= 653.7

Note:
WSE slope = 0.036%

Date: 6/26/93
Habitat: Run **Flow:** Mid

(1) Level Loop Survey

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	6.45	106.45		
HP1			6.66	99.79
HP2			7.18	99.27
HP3			6.93	99.52
TP HP3	6.91	106.43		
HP2			7.16	99.27
HP1			6.64	99.79
BM			6.43	100.00

Comment: This is Riffle's level loop

(2) Water Surface Elevation (WSE) Survey

	L/R WSE	Sta (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
TR1	LWE	106	104.03	7.45	0.00	96.58	96.58	48.8
	RWE			7.46	0.00	96.57		
TR2	LWE	133.5	104.03	7.42	0.00	96.61	96.61	50.0
	RWE			7.43	0.00	96.60		
TR3	LWE	189.7	104.03	7.45	0.00	96.58	96.59	55.3
	RWE			7.44	0.00	96.59		

Ave Q(Run)= 51.3
Ave Q(Riffle)= 47.9
Ave Q(Run & Riffle)= 49.6

Note:
WSE slope = 0.012%

Date: 9/14/93
Habitat: Run **Flow:** Low

(1) Level Loop Survey

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	3.91	103.91		
HP1			4.87	99.04
HP2			5.03	98.88
HP3			4.58	99.33
TP HP3	4.44	103.77		
HP2			4.91	98.86
HP1			4.73	99.04
BM			3.78	99.99

Comment:

(2) Water Surface Elevation (WSE) Survey
HI=

	L/R WSE	Sta (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
TR1	LWE	106	103.77	8.22	0.00	95.55	95.56	3.4
	RWE			8.20	0.00	95.57		
TR2	LWE	133.5	103.77	8.19	0.00	95.58	95.58	2.0
	RWE			8.20	0.00	95.57		
TR3	LWE	189.7	103.77	8.17	0.00	95.60	95.60	3.8
	RWE			8.18	0.00	95.59		

Ave Q(Run)= 3.0
Ave Q(Riffle)= 3.5
Ave Q(Run & Riffle)= 3.3

Note:
WSE slope = 0.042%

Stream:	Sycan River
Site:	SY-4
Transect:	1
Habitat:	Run

Survey Date	HI (ft)	Q (cfs)
5/15/93	103.47	653.7
6/26/93	104.03	48.8
9/14/93	103.77	3.4

15-May-93

	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s) $V_{0.2\,0.6}$	Vel (ft/s) $V_{0.8}$	Vel (ft/s) Ave	q (cfs)	substrate
RWE	13.1			0.00	0.00		0.00	0.00	
	15.5			0.35	0.29		0.29	0.25	
	18			0.50	0.29		0.29	0.54	
	23			1.00	0.84		0.84	4.20	
	28			0.90	1.53		1.53	6.89	
	33			2.40	2.08		2.08	24.96	
	38			2.90	2.25	0.22	1.24	17.91	
	43			4.30	2.06	0.91	1.49	31.93	
	48			5.00	1.66	1.95	1.81	45.13	
	53			5.00	3.10	2.08	2.59	64.75	
	58			4.70	3.12	1.82	2.47	58.05	
	63			4.50	3.05	2.34	2.70	60.64	
	68			4.10	3.44	2.75	3.10	63.45	
	73			3.70	3.53	2.88	3.21	59.29	
	78			4.10	3.37	2.77	3.07	62.94	
	83			4.30	3.05	2.43	2.74	58.91	
	88			4.00	3.23	1.21	2.22	44.40	
	93			2.55	3.05	2.14	2.60	26.47	
	96			2.30	1.85		1.85	10.64	
	98			1.75	1.16		1.16	5.08	
	101			1.55	0.53		0.53	2.46	
	104			1.65	0.97		0.97	4.00	
	106			1.00	0.41		0.41	0.82	
	108			1.10	0.00		0.00	0.00	
LWE	109.0			0.00	0.00		0.00	0.00	

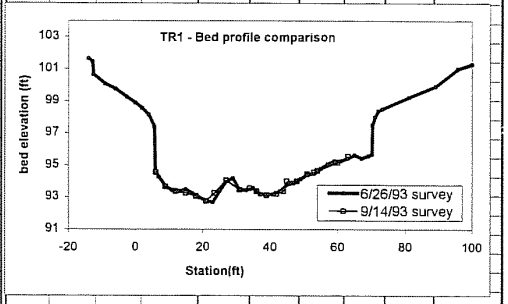
This is not profile. This is the Q-transect.

26-Jun-93

	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s) $V_{0.2\,0.6}$	Vel (ft/s) $V_{0.8}$	Vel (ft/s) Ave	q (cfs)	substrate
	-14.0	2.40	101.63						1.1
	-12.9	2.59	101.44						1.1
	-12.6	3.37	100.66						1.1
	-9.0	3.97	100.06						1.1
	-6.0	4.27	99.76						1.1
	-2.5	4.78	99.25						1.1
	0.0	5.15	98.88						1.1
	2.0	5.47	98.56						1.1
	4.0	5.89	98.14						1.1
	5.7	6.63	97.40						1.1
LWE	5.9	9.42	94.61	1.85	0.01		0.01	0.01	1.1
	7.0		94.28	2.30	0.01		0.01	0.04	3.3
	9.0		93.68	2.90	0.14	-0.09	0.03	0.15	3.3
	11.0		93.43	3.15	0.27	0.12	0.20	1.23	8.8
	13.0		93.38	3.20	0.44	0.11	0.28	1.76	8.8
	15.0		93.48	3.10	0.35	0.29	0.32	1.98	8.8
	17.0		93.23	3.35	0.37	0.29	0.33	2.21	8.8
	19.0		92.98	3.60	0.50	0.42	0.46	3.31	8.8
	21.0		92.78	3.80	0.08	0.42	0.25	1.90	8.6
	23.0		92.68	3.90	0.04	0.21	0.13	0.98	8.6
	25.0		93.38	3.20	-0.01	-0.02	-0.02	-0.10	8.6
	27.0		93.98	2.60	0.02	-0.01	0.01	0.03	5.5
	29.0		94.18	2.40	0.08		0.08	0.38	5.5
	31.0		93.43	3.15	0.52	0.07	0.30	1.86	5.5
	33.0		93.43	3.15	0.46	0.20	0.33	2.08	5.5
	35.0		93.58	3.00	0.08	0.13	0.11	0.63	5.5
	37.0		93.18	3.40	0.00	0.42	0.21	1.43	5.5
	39.0		93.18	3.40	0.67	0.35	0.51	3.47	6.6
	41.0		93.18	3.40	0.76	0.48	0.62	4.22	6.8
	43.0		93.38	3.20	0.58	0.61	0.60	3.81	6.8
	45.0		93.78	2.80	0.67	0.68	0.68	3.78	8.8
	47.0		93.88	2.70	0.81	0.60	0.71	3.81	8.6
	49.0		94.13	2.45	0.51		0.51	2.50	8.6
	51.0		94.43	2.15	0.58		0.58	2.49	8.6
	53.0		94.48	2.10	0.38		0.38	1.60	8.8
	55.0		94.78	1.80	0.38		0.38	1.37	9.8
	57.0		95.08	1.50	0.35		0.35	1.05	9.9
	59.0		95.28	1.30	0.13		0.13	0.34	9.9
	61.0		95.28	1.30	0.09		0.09	0.23	9.9
	63.0		95.43	1.15	0.04		0.04	0.09	9.8
	65.0		95.63	0.95	0.02		0.02	0.04	1.1
	67.0		95.43	1.15	0.03		0.03	0.07	1.1
	69.0		95.58	1.00	0.01		0.01	0.02	1.1
RWE	70.1		95.68	0.90	0.03		0.03	0.01	1.1
	70.2	6.52	97.51						1.1
	71.0	6.04	97.99						1.1
	72.0	5.65	98.38						1.1
RWP	73.2	5.52	98.51						1.1
	81.0	4.81	99.22						1.1
	89.0	4.12	99.91						1.1
	95.7	3.03	101.00						1.1
	100.0	2.75	101.28						1.1

14-Sep-93

	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s) $V_{0.2\,0.6}$	Vel (ft/s) $V_{0.8}$	Vel (ft/s) Ave	q (cfs)	substrate
LWE	6.1		94.56	1.00	0.01		0.01	0.01	3.3
	9.0		93.66	1.90	0.01		0.01	0.06	3.3
	12.0		93.36	2.20	0.05		0.05	0.33	8.8
	15.0		93.26	2.30	0.04		0.04	0.28	8.8
	18.0		93.06	2.50	0.02	0.03	0.03	0.19	8.8
	21.0		92.76	2.80	0.06	0.07	0.07	0.50	8.6
	23.5		93.26	2.30	0.06		0.06	0.41	8.6
	27.0		94.06	1.50	0.03		0.03	0.17	5.5
	31.0		93.46	2.10	0.04		0.04	0.29	5.5
	34.0		93.56	2.00	-0.01		-0.01	-0.05	5.5
	36.0		93.36	2.20	0.01		0.01	0.06	5.5
	39.0		93.11	2.45	0.01		0.01	0.07	6.6
	42.0		93.21	2.35	0.02		0.02	0.12	6.8
	44.0		93.36	2.20	0.08		0.08	0.26	8.6
	45.0		94.01	1.55	0.12		0.12	0.37	8.8
	48.0		94.01	1.55	0.05		0.05	0.23	8.6
	51.0		94.46	1.10	0.01		0.01	0.03	8.6
	53.0		94.56	1.00	0.01		0.01	0.02	8.8
	54.0		94.66	0.90	-0.01		-0.01	-0.03	9.8
	60.0		95.16	0.40	0.02		0.02	0.04	9.9
RWE	63.0		95.56	0.00	0.00		0.00	0.00	9.8



Stream: Sycan River
Site: SY-4
Transect: 3
Habitat: Run

Survey Date	HI (ft)	Q (cfs)
5/15/93	103.47	
6/26/93	104.03	55.3
9/14/93	103.77	3.8

15-May-93

	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s) $V_{0.2\,0.6}$	Vel (ft/s) $V_{0.8}$	Vel (ft/s) Ave	q (cfs)	substrate

26-Jun-93

	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s) $V_{0.2\,0.6}$	Vel (ft/s) $V_{0.8}$	Vel (ft/s) Ave	q (cfs)	substrate
	-4.7	4.06	99.97						7.1
LWP	12.0	4.95	99.08						7.1
	12.4	4.46	99.57						7.1
	14.0	4.44	99.59						7.1
	14.4	4.74	99.29						7.1
	15.2	5.28	98.75						7.1
	17.9	5.32	98.71						7.1
	18.6	4.25	99.78						7.1
	20.3	6.02	98.01						7.1
	22.0	6.50	97.53						7.1
	23.0	6.61	97.42						7.1
	24.0	6.62	97.41						7.1
	25.0	6.73	97.30						7.7
	26.0	6.75	97.28						7.7
	27.2	7.10	96.93						7.7
	28.0	7.30	96.73						7.7
	29.0	7.20	96.83						7.7
	30.0	7.13	96.90						7.7
	30.8	6.02	98.01						7.7
	31.8	6.60	97.43						7.7
LEW	31.9		96.44	0.15	0.00		0.00	0.00	7.7
	33.0		96.54	0.05	0.00		0.00	0.00	7.7
LWS	35.5		93.79	2.80	0.19	0.00	0.10	0.51	7.1
	36.8		93.89	2.70	0.15	0.06	0.11	1.35	8.8
	45.0		92.79	3.80	0.22	0.13	0.18	3.39	8.7
	47.0		92.69	3.90	0.25	-0.03	0.11	0.86	8.7
	49.0		93.39	3.20	0.28	0.11	0.20	1.25	8.7
	51.0		93.39	3.20	0.13	0.05	0.09	0.58	8.7
	53.0		92.89	3.70	0.29	0.40	0.35	2.55	6.8
	55.0		92.69	3.90	0.73	0.31	0.52	4.06	6.8
	57.0		92.69	3.90	0.70	0.12	0.41	3.20	6.8
	59.0		93.09	3.50	1.12	0.65	0.89	6.20	6.8
	61.0		93.29	3.30	0.82	0.73	0.78	5.12	6.8
	63.0		93.59	3.00	1.00	0.59	0.80	4.77	6.8
	65.0		93.59	3.00	0.91	0.71	0.81	4.86	6.8
	67.0		93.89	2.70	1.37	1.39	1.38	7.45	6.8
	69.0		93.99	2.60	0.95	1.08	1.02	5.28	6.8
	71.0		94.14	2.45	0.71		0.71	3.48	6.8
	73.0		94.24	2.35	0.22		0.22	1.03	6.8
	75.0		94.49	2.10	0.06		0.06	0.25	18.9
	77.0		94.59	2.00	-0.08		-0.08	-0.32	8.9
	79.0		94.74	1.85	-0.10		-0.10	-0.37	8.9
	81.0		94.99	1.60	-0.06		-0.06	-0.19	9.8
	83.0		95.29	1.30	-0.03		-0.03	-0.06	9.8
	84.0		95.59	1.00	0.04		0.04	0.04	1.3
	85.0		96.09	0.50	-0.01		-0.01	0.00	1.3
REW	85.8		96.59	0.00	0.00		0.00	0.00	1.3
	86.0	7.04	96.99						1.3
	86.7	6.83	97.20						1.3
	89.0	6.15	97.88						1.3
	91.0	5.87	98.16						1.3
	93.0	5.50	98.53						1.3
	95.0	5.24	98.79						1.3
	98.0	4.75	99.28						1.3
	101.0	4.18	99.85						1.3
	104.0	3.62	100.41						1.3
	107.0	2.96	101.07						1.3
	111.0	2.15	101.88						1.3
	115.0	1.29	102.74						1.3
	119.0	0.93	103.10						1.3
	123.2	0.36	103.67						1.3
RWP	133.9								1.3

14-Sep-93

	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s) $V_{0.2\,0.6}$	Vel (ft/s) $V_{0.8}$	Vel (ft/s) Ave	q (cfs)	substrate
LWE	23.5		95.60	0.00	0.00		0.00	0.00	7.1
	24.0		93.90	1.70	0.02		0.02	0.03	8.8
	25.0		93.90	1.70	0.02		0.02	0.16	8.8
	33.5		92.60	3.00	0.07	0.03	0.05	0.83	8.7
	36.0		93.60	2.00	0.03		0.03	0.17	8.7
	39.0		93.40	2.20	0.02		0.02	0.13	8.7
	42.0		92.70	2.90	-0.02	0.02	0.00	0.00	6.8
	45.0		92.80	2.80	0.01	0.05	0.03	0.25	6.8
	48.0		93.20	2.40	0.09		0.09	0.54	6.8
	50.0		93.30	2.30	0.09		0.09	0.41	6.8
	52.0		93.50	2.10	0.08		0.08	0.34	6.8
	54.0		93.70	1.90	0.10		0.10	0.38	6.8
	56.0		93.90	1.70	0.06		0.06	0.26	6.8
	59.0		94.10	1.50	0.05		0.05	0.19	6.8
	61.0		94.30	1.30	0.04		0.04	0.13	6.8
	64.0		94.60	1.00	0.02		0.02	0.06	8.9
	67.0		94.70	0.90	-0.02		-0.02	-0.05	8.9
	70.0		95.10	0.50	-0.02		-0.02	-0.03	9.8
RWE	72.0		95.60	0.00	0.00		0.00	0.00	1.3

Stream: Sycan River
Site: SY-4
Transect: 2
Habitat: Run

Survey Date	HI (ft)	Q (cfs)
5/15/93	103.47	
6/26/93	104.03	50.0
9/14/93	103.77	2.0

15-May-93

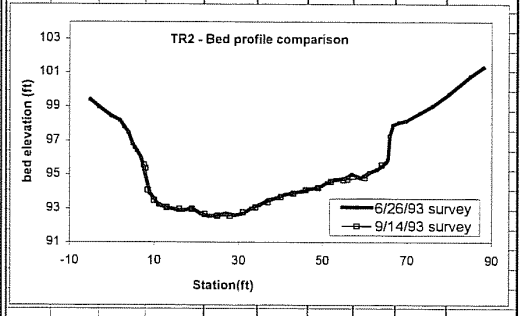
	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s) $V_{0.2\,0.6}$	Vel (ft/s) $V_{0.8}$	Vel (ft/s) Ave	q (cfs)	substrate

26-Jun-93

	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s) $V_{0.2\,0.6}$	Vel (ft/s) $V_{0.8}$	Vel (ft/s) Ave	q (cfs)	substrate
	-5.0	4.66	99.37						1.1
	-3.0	5.06	98.97						1.1
LWP	0.0	5.59	98.44						1.1
	2.0	5.86	98.17						1.1
	3.0	6.23	97.80						1.1
	4.0	6.56	97.47						1.1
	5.0	7.20	96.83						1.1
LWE	5.5		96.61	0.00	0.00		0.00	0.00	1.1
	6.0		96.41	0.20	0.00		0.00	0.00	1.1
	7.0		96.01	0.60	0.02		0.02	0.02	1.1
	9.0		93.91	2.70	0.01	0.03	0.02	0.11	8.8
	11.0		93.21	3.40	0.00	0.02	0.01	0.07	8.9
	13.0		93.06	3.55	0.08	-0.01	0.04	0.25	8.8
	15.0		92.96	3.65	0.06	0.09	0.08	0.55	8.6
	17.0		92.91	3.70	0.13	0.09	0.11	0.81	8.6
	19.0		93.01	3.60	0.15	0.14	0.15	1.04	8.6
	21.0		92.71	3.90	0.22	0.21	0.22	1.68	8.6
	23.0		92.56	4.05	0.40	0.12	0.26	2.11	8.6
	25.0		92.61	4.00	0.39	0.32	0.36	2.84	8.6
	27.0		92.71	3.90	0.34	0.25	0.30	2.30	8.6
	29.0		92.61	4.00	0.36	0.29	0.33	2.60	8.6
	31.0		92.71	3.90	0.40	0.32	0.36	2.81	8.6
	33.0		93.01	3.60	0.35	0.29	0.32	2.30	8.6
	35.0		93.21	3.40	0.73	0.51	0.62	4.22	8.6
	37.0		93.51	3.10	0.43	0.50	0.47	2.88	8.6
	39.0		93.61	3.00	0.59	0.64	0.62	3.69	8.6
	41.0		93.81	2.80	0.79	0.61	0.70	3.92	8.6
	43.0		93.91	2.70	0.76	0.49	0.63	3.38	8.6
	45.0		94.01	2.60	0.57	0.48	0.53	2.73	8.6
	47.0		94.16	2.45	0.54		0.54	2.65	8.6
	49.0		94.21	2.40	0.54		0.54	2.59	8.6
	51.0		94.51	2.10	0.39		0.39	1.64	8.6
	53.0		94.71	1.90	0.45		0.45	1.71	8.6
	55.0		94.76	1.85	0.28		0.28	1.04	8.6
	57.0		95.01	1.60	0.04		0.04	0.13	9.8
	59.0		94.81	1.80	-0.01		-0.01	-0.04	9.8
	61.0		95.11	1.50	-0.01		-0.01	-0.03	9.8
	63.0		95.31	1.30	0.01		0.01	0.02	9.8
	64.0		95.51	1.10	-0.01		-0.01	-0.01	9.8
	65.0		95.71	0.90	0.01		0.01	0.01	9.8
RWE	65.5		95.91	0.70	0.03		0.03	0.01	9.8
	65.9	6.75	97.28						1.3
	66.7	6.12	97.91						1.3
	68.0	5.98	98.05						1.3
	69.7	5.89	98.14						1.3
	73.0	5.43	98.60						1.3
	76.0	5.01	99.02						1.3
	80.0	4.29	99.74						1.3
	85.0	3.27	100.76						1.3
	88.0	2.74	101.29						1.3

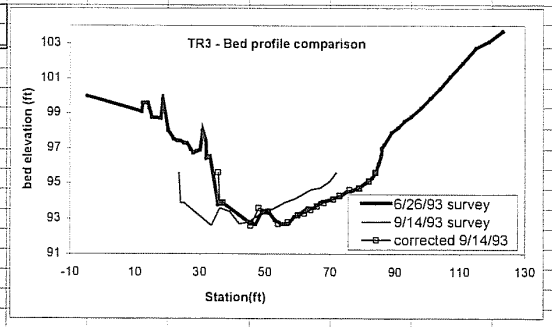
14-Sep-93

	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s) $V_{0.2\,0.6}$	Vel (ft/s) $V_{0.8}$	Vel (ft/s) Ave	q (cfs)	substrate
LWE	7.7		95.58	0.00	0.00		0.00	0.00	9.9
	8.0		95.38	0.20	-0.01		-0.01	0.00	7.7
	8.6		94.08	1.50	0.01		0.01	0.02	8.8
	10.0		93.48	2.10	0.01		0.01	0.05	8.9
	13.0		93.08	2.50	0.01	0.00	0.00	0.02	8.8
	16.0		92.98	2.60	0.03	-0.02	0.01	0.04	8.6
	19.0		92.98	2.60	-0.01	0.02	0.01	0.04	8.6
	22.0		92.68	2.90	0.01	0.01	0.01	0.09	8.6
	25.0		92.58	3.00	0.01	0.02	0.02	0.14	8.6
	28.0		92.58	3.00	0.04	0.03	0.03	0.29	8.6
	31.0		92.78	2.80	0.03	0.02	0.02	0.19	8.6
	34.0		93.08	2.50	0.06	0.03	0.05	0.34	8.6
	37.0		93.38	2.20	0.04		0.04	0.26	8.6
	40.0		93.68	1.90	0.02		0.02	0.11	8.6
	43.0		93.88	1.70	0.05		0.05	0.26	8.6
	46.0		94.08	1.50	0.03		0.03	0.14	8.6
	49.0		94.23	1.35	0.01		0.01	0.04	8.6
	52.0		94.58	1.00	0.01		0.01	0.03	8.6
	55.0		94.68	0.90	0.00		0.00	0.00	8.6
	56.0		94.73	0.85	0.01		0.01	0.02	9.8
	60.0		94.83	0.75	0.00		0.00	0.00	9.8
RWE	64.0		95.58	0.00	0.00		0.00	0.00	9.8



corrected 9/14/93

sta 12	Ground (ft)
35.5	95.60
36.0	93.90
37.0	93.90
45.5	92.60
48.0	93.60
51.0	93.40
54.0	92.70
57.0	92.80
60.0	93.20
62.0	93.30
64.0	93.50
66.0	93.70
68.0	93.90
71.0	94.10
73.0	94.30
76.0	94.60
79.0	94.70
82.0	95.10
84.0	95.60



Note : Need to add 12 ft to correct the 9/14/93 stationing to that of 6/26/93 surev

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        Sycane  River SY_4 06/26/93
RUN                             MID                                     TRANSECT 1
IOC       1101100000001000101000
QARD   3.3
QARD   5.0
QARD   8.0
QARD  12.0
QARD  20.0
QARD  30.0
QARD  40.0
QARD  49.6
QARD  60.0
QARD  70.0
QARD  80.0
QARD  90.0
QARD 100.0
QARD 110.0
QARD 120.0
QARD 130.0
QARD 140.0
QARD 150.0
QARD 160.0
QARD 170.0
QARD 180.0
QARD 200.0
QARD 220.0
QARD 250.0
QARD 300.0
QARD 350.0
QARD 400.0
QARD 500.0
QARD 600.0
QARD 653.7
XSEC1000.0      0.00 1.0     92.68   0.00012
    1000.0-14.0101.6-12.9101.4-12.6100.7 -9.0100.1 -6.0 99.8 -2.5 99.3
    1000.0  0.0 98.9  2.0 98.6  4.0 98.1  5.7 97.4  5.9 94.6  7.0 94.3
    1000.0  9.0 93.7 11.0 93.4 13.0 93.4 15.0 93.5 17.0 93.2 19.0 93.0
    1000.0 21.0 92.8 23.0 92.7 25.0 93.4 27.0 94.0 29.0 94.2 31.0 93.4
    1000.0 33.0 93.4 35.0 93.6 37.0 93.2 39.0 93.2 41.0 93.2 43.0 93.4
    1000.0 45.0 93.8 47.0 93.9 49.0 94.1 51.0 94.4 53.0 94.5 55.0 94.8
    1000.0 57.0 95.1 59.0 95.3 61.0 95.3 63.0 95.4 65.0 95.6 67.0 95.4
    1000.0 69.0 95.6 70.1 95.7 70.2 97.5 71.0 98.0 72.0 98.4 73.2 98.5
    1000.0 81.0 99.2 89.0 99.9 95.7101.0100.0101.3
NS  1000.0       1.1       1.1       1.1       1.1       1.1       1.1
NS  1000.0       1.1       1.1       1.1 0.4   1.1 0.3   1.1 0.3   3.3
NS  1000.0 0.3   3.3       8.8       8.8       8.8       8.8       8.8
NS  1000.0       8.6       8.6  0.3  8.6 0.2   5.5 0.2   5.5       5.5
NS  1000.0       5.5 0.1   5.5       5.5       6.6       6.8       6.8
NS  1000.0 .055  8.8 .055  8.6       8.6       8.6       8.8       9.8
NS  1000.0       9.9 0.08  9.9 0.1   9.9 0.12  9.8  0.16 1.1 0.2   1.1
NS  1000.0 0.2   1.1 0.2   1.1 .2    1.1  .2   1.1  .2   1.1       1.1
NS  1000.0       1.1       1.1       1.1       1.1
CAL11000.0     96.58      49.6
VEL11000.0                                                      0.01 0.01
VEL11000.0 0.03 0.20 0.28 0.32 0.33 0.46 0.25 0.13-0.02 0.01 0.08 0.30
VEL11000.0 0.33 0.11 0.21 0.51 0.62 0.60 0.68 0.71 0.51 0.58 0.38 0.38
VEL11000.0 0.35 0.13 0.09 0.04 0.02 0.03 0.01 0.03
VEL11000.0
CAL21000.0     95.56       3.3
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
CAL31000.0     97.81     653.7
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
ENDJ
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        Sycane  River SY_4 06/26/93
RUN                          MID                                    TRANSECT 2
IOC       1101100000001000101000
QARD   3.3
QARD   5.0
QARD   8.0
QARD  12.0
QARD  20.0
QARD  30.0
QARD  40.0
QARD  49.6
QARD  60.0
QARD  70.0
QARD  80.0
QARD  90.0
QARD 100.0
QARD 110.0
QARD 120.0
QARD 130.0
QARD 140.0
QARD 150.0
QARD 160.0
QARD 170.0
QARD 180.0
QARD 200.0
QARD 220.0
QARD 250.0
QARD 300.0
QARD 350.0
QARD 400.0
QARD 500.0
QARD 600.0
QARD 653.7
XSEC1000.0      0.00 1.0     92.68   0.00012
    1000.0 -5.0 99.4 -3.0 99.0  0.0 98.4  2.0 98.2  3.0 97.8  4.0 97.5
    1000.0  5.0 96.8  5.5 96.6  6.0 96.4  7.0 96.0  9.0 93.9 11.0 93.2
    1000.0 13.0 93.1 15.0 93.0 17.0 92.9 19.0 93.0 21.0 92.7 23.0 92.6
    1000.0 25.0 92.6 27.0 92.7 29.0 92.6 31.0 92.7 33.0 93.0 35.0 93.2
    1000.0 37.0 93.5 39.0 93.6 41.0 93.8 43.0 93.9 45.0 94.0 47.0 94.2
    1000.0 49.0 94.2 51.0 94.5 53.0 94.7 55.0 94.8 57.0 95.0 59.0 94.8
    1000.0 61.0 95.1 63.0 95.3 64.0 95.5 65.0 95.7 65.5 95.9 65.9 97.3
    1000.0 66.7 97.9 68.0 98.1 69.7 98.1 73.0 98.6 76.0 99.0 80.0 99.7
    1000.0 85.0100.8 88.0101.3
NS  1000.0       1.1       1.1       1.1       1.1       1.1
NS  1000.0       1.1       1.1       1.1 0.5   1.1 0.5   8.8 0.5   8.9
NS  1000.0 0.5   8.8       8.6       8.6       8.6       8.6       8.6
NS  1000.0       8.6       8.6       8.6 0.09  8.6 0.09  8.6 0.07  8.6
NS  1000.0       8.6 .055  8.6 .055  8.6       8.6       8.6       8.6
NS  1000.0       8.6       8.6       8.6       8.6 0.1   9.8 0.2   9.8
NS  1000.0 0.3   9.8 0.5   9.8 0.5   9.8 0.5   9.8 0.5   9.8       1.3
NS  1000.0       1.3       1.3       1.3       1.3       1.3       1.3
NS  1000.0       1.3       1.3
CAL11000.0     96.61      49.6
VEL11000.0                                        0.00 0.01 0.02 0.02 0.01
VEL11000.0 0.04 0.08 0.11 0.15 0.22 0.26 0.36 0.30 0.33 0.36 0.32 0.62
VEL11000.0 0.47 0.62 0.70 0.63 0.53 0.54 0.54 0.39 0.45 0.28 0.04-0.01
VEL11000.0-0.01 0.01-0.01 0.01 0.03
VEL11000.0
CAL21000.0     95.58       3.3
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
VEL21000.0
CAL31000.0     97.84     653.7
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
VEL31000.0
ENDJ
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         Sycane  River SY_4 06/26/93
 RUN                          MID                                        TRANSECT 3
 IOC        1101100100001000101000
 QARD   3.3
 QARD   5.0
 QARD   8.0
 QARD  12.0
 QARD  20.0
 QARD  30.0
 QARD  40.0
 QARD  49.6
 QARD  60.0
 QARD  70.0
 QARD  80.0
 QARD  90.0
 QARD 100.0
 QARD 110.0
 QARD 120.0
 QARD 130.0
 QARD 140.0
 QARD 150.0
 QARD 160.0
 QARD 170.0
 QARD 180.0
 QARD 200.0
 QARD 220.0
 QARD 250.0
 QARD 300.0
 QARD 350.0
 QARD 400.0
 QARD 500.0
 QARD 600.0
 QARD 653.7
 XSEC1000.0      0.00 1.0      92.69   0.00012
     1000.0 -4.7100.0 12.0 99.1 12.4 99.6 14.0 99.6 14.4 99.3 15.2 98.8
     1000.0 17.9 98.7 18.6 99.8 20.3 98.0 22.0 97.5 23.0 97.4 24.0 97.4
     1000.0 25.0 97.3 26.0 97.3 27.2 96.9 28.0 96.7 29.0 96.8 30.0 96.9
     1000.0 30.8 98.0 31.8 97.4 31.9 96.4 33.0 96.5 35.5 93.8 36.8 93.9
     1000.0 45.0 92.8 47.0 92.7 49.0 93.4 51.0 93.4 53.0 92.9 55.0 92.7
     1000.0 57.0 92.7 59.0 93.1 61.0 93.3 63.0 93.6 65.0 93.6 67.0 93.9
     1000.0 69.0 94.0 71.0 94.1 73.0 94.2 75.0 94.5 77.0 94.6 79.0 94.7
     1000.0 81.0 95.0 83.0 95.3 84.0 95.6 85.0 96.1 85.8 96.6 86.0 97.0
     1000.0 86.7 97.2 89.0 97.9 91.0 98.2 93.0 98.5 95.0 98.8 98.0 99.3
     1000.0101.0 99.9104.0100.4107.0101.1111.0101.9115.0102.7119.0103.1
     1000.0123.2103.7
 NS  1000.0       7.1        7.1        7.1        7.1        7.1        7.1
 NS  1000.0       7.1        7.1        7.1        7.1        7.1        7.1
 NS  1000.0       7.7        7.7        7.7        7.7        7.7        7.7
 NS  1000.0       7.7        7.7        7.7        7.7        7.1        8.8
 NS  1000.0       8.7 .2     8.7        8.7 .15    8.7        6.8        6.8
 NS  1000.0       6.8        6.8        6.8        6.8        6.8 .035   6.8
 NS  1000.0 .036  6.8        6.8  .08   6.8 0.1    8.9 0.15   8.9 0.2    8.9
 NS  1000.0 0.2   9.8 0.2    9.8  0.2   1.3 0.2    1.3 0.2    1.3 0.2    1.3
 NS  1000.0       1.3        1.3        1.3        1.3        1.3        1.3
 NS  1000.0       1.3        1.3        1.3        1.3        1.3        1.3
 NS  1000.0       1.3
 WSL 1000.0     95.59      95.72      95.88      96.03      96.22      96.38
 WSL 1000.0     96.50      96.59      96.67      96.74      96.80      96.85
 WSL 1000.0     96.90      96.94      96.98      97.02      97.06      97.09
 WSL 1000.0     97.12      97.15      97.18      97.23      97.28      97.34
 WSL 1000.0     97.43      97.52      97.60      97.72      97.82      97.87
 CAL11000.0     96.59       49.6
 VEL11000.0
 VEL11000.0                                          0.01 0.01 0.10 0.11
 VEL11000.0 0.18 0.11 0.20 0.09 0.35 0.52 0.41 0.89 0.78 0.80 0.81 1.38
 VEL11000.0 1.02 0.71 0.22 0.06-0.08-0.10-0.06-0.03 0.04-0.01 0.00
 VEL11000.0
 VEL11000.0
 CAL21000.0     95.60        3.3
 VEL21000.0
 VEL21000.0
 VEL21000.0
 VEL21000.0
 VEL21000.0
 VEL21000.0
 CAL31000.0     97.84      653.7
 VEL31000.0
 VEL31000.0
 VEL31000.0
 VEL31000.0
 VEL31000.0
 VEL31000.0
 ENDJ
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        Sycane  River SY_4 06/26/93
RUN                          MID
PARD    30       1.00       0         1.000
QARD   3.3      95.59                  2.000      2.000
QARD   5.0      95.72                  1.800      1.800
QARD   8.0      95.88                  1.590      1.590
QARD  12.0      96.03                  1.430      1.430
QARD  20.0      96.22                  1.250      1.250
QARD  30.0      96.38                  1.130      1.130
QARD  40.0      96.50                  1.050      1.050
QARD  49.6      96.59                  1.000      1.000
QARD  60.0      96.67                  0.940      0.940
QARD  70.0      96.74                  0.900      0.900
QARD  80.0      96.80                  0.870      0.870
QARD  90.0      96.85                  0.850      0.850
QARD 100.0      96.90                  0.820      0.820
QARD 110.0      96.94                  0.800      0.800
QARD 120.0      96.98                  0.780      0.780
QARD 130.0      97.02                  0.770      0.770
QARD 140.0      97.06                  0.750      0.750
QARD 150.0      97.09                  0.740      0.740
QARD 160.0      97.12                  0.730      0.730
QARD 170.0      97.15                  0.720      0.720
QARD 180.0      97.18                  0.710      0.710
QARD 200.0      97.23                  0.690      0.690
QARD 220.0      97.28                  0.670      0.670
QARD 250.0      97.34                  0.650      0.650
QARD 300.0      97.43                  0.620      0.620
QARD 350.0      97.51                  0.590      0.590
QARD 400.0      97.59                  0.570      0.570
QARD 500.0      97.71                  0.540      0.540
QARD 600.0      97.81                  0.510      0.510
QARD 653.7      97.86                  0.500      0.500
FFFFTFFFF                                                                **
     133.5 -5.0 99.4 -3.0 99.0  0.0 98.4  2.0 98.2  3.0 97.8  4.0 97.5
     133.5  5.0 96.8  5.5 96.6  6.0 96.4  7.0 96.0  9.0 93.9 11.0 93.2
     133.5 13.0 93.1 15.0 93.0 17.0 92.9 19.0 93.0 21.0 92.7 23.0 92.6
     133.5 25.0 92.6 27.0 92.7 29.0 92.6 31.0 92.7 33.0 93.0 35.0 93.2
     133.5 37.0 93.5 39.0 93.6 41.0 93.8 43.0 93.9 45.0 94.0 47.0 94.2
     133.5 49.0 94.2 51.0 94.5 53.0 94.7 55.0 94.8 57.0 95.0 59.0 94.8
     133.5 61.0 95.1 63.0 95.3 64.0 95.5 65.0 95.7 65.5 95.9 65.9 97.3
     133.5 66.7 97.9 68.0 98.1 69.7 98.1 73.0 98.6 76.0 99.0 80.0 99.7
     133.5 85.0100.8 88.0101.3
     133.5 0.05 -5.0     0.05  -3.0     0.05   0.0     0.05   2.0            *
     133.5 0.05  3.0     0.05   4.0     0.05   5.0     0.05   5.5            *
     133.5 0.05  6.0     0.05   7.0     0.05   9.0     0.05  11.0            *
     133.5 0.05 13.0     0.05  15.0     0.05  17.0     0.05  19.0            *
     133.5 0.05 21.0     0.05  23.0     0.05  25.0     0.05  27.0            *
     133.5 -.05 29.0     0.05  31.0     0.05  33.0     0.05  35.0            *
     133.5 0.05 37.0     0.05  39.0     0.05  41.0     0.05  43.0            *
     133.5 0.05 45.0     0.05  47.0     0.05  49.0     0.05  51.0            *
     133.5 0.05 53.0     0.05  55.0     0.05  57.0     0.05  59.0            *
     133.5 0.05 61.0     0.05  63.0     0.05  64.0     0.05  65.0            *
     133.5 0.05 65.5     0.05  65.9     0.05  66.7     0.05  68.0            *
     133.5 0.05 69.7     0.05  73.0     0.05  76.0     0.05  80.0            *
     133.5 0.05 85.0     0.05  88.0                                          *
     189.7 -4.7100.0 12.0 99.1 12.4 99.6 14.0 99.6 14.4 99.3 15.2 98.8
     189.7 17.9 98.7 18.6 99.8 20.3 98.0 22.0 97.5 23.0 97.4 24.0 97.4
     189.7 25.0 97.3 26.0 97.3 27.2 96.9 28.0 96.7 29.0 96.8 30.0 96.9
     189.7 30.8 98.0 31.8 97.4 31.9 96.4 33.0 96.5 35.5 93.8 36.8 93.9
     189.7 45.0 92.8 47.0 92.7 49.0 93.4 51.0 93.4 53.0 92.9 55.0 92.7
     189.7 57.0 92.7 59.0 93.1 61.0 93.3 63.0 93.6 65.0 93.6 67.0 93.9
     189.7 69.0 94.0 71.0 94.1 73.0 94.2 75.0 94.5 77.0 94.6 79.0 94.7
     189.7 81.0 95.0 83.0 95.3 84.0 95.6 85.0 96.1 85.8 96.6 86.0 97.0
     189.7 86.7 97.2 89.0 97.9 91.0 98.2 93.0 98.5 95.0 98.8 98.0 99.3
     189.7101.0 99.9104.0100.4107.0101.1111.0101.9115.0102.7119.0103.1
     189.7123.2103.7
     189.7 0.05 -4.7     0.05  12.0     0.05  12.4     0.05  14.0            *
     189.7 0.05 14.4     0.05  15.2     0.05  17.9     0.05  18.6            *
     189.7 0.05 20.3     0.05  22.0     0.05  23.0     0.05  24.0            *
     189.7 0.05 25.0     0.05  26.0     0.05  27.2     0.05  28.0            *
     189.7 0.05 29.0     0.05  30.0     0.05  30.8     0.05  31.8            *
     189.7 0.05 31.9     0.05  33.0     0.05  35.5     0.05  36.8            *
     189.7 0.05 45.0     -.05  47.0     0.05  49.0     0.05  51.0            *
     189.7 0.05 53.0     0.05  55.0     0.05  57.0     0.05  59.0            *
     189.7 0.05 61.0     0.05  63.0     0.05  65.0     0.05  67.0            *
     189.7 0.05 69.0     0.05  71.0     0.05  73.0     0.05  75.0            *
     189.7 0.05 77.0     0.05  79.0     0.05  81.0     0.05  83.0            *
     189.7 0.05 84.0     0.05  85.0     0.05  85.8     0.05  86.0            *
     189.7 0.05 86.7     0.05  89.0     0.05  91.0     0.05  93.0            *
     189.7 0.05 95.0     0.05  98.0     0.05 101.0     0.05 104.0            *
     189.7 0.05107.0     0.05 111.0     0.05 115.0     0.05 119.0            *
     189.7 0.05123.2                                                        *
ENDJ
ENDR
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