1-14-2009

Ex. 279-US-432

Unknown

Stream: Sycan River
Site: SY-5
Date: 4/12/2004
Habitat: Run **Flow:** Mid

(1) Level Loop Survey (BM & HP)

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
HP3 run	2.82	101.58		98.76
HP2			2.20	99.38
BM			2.78	98.80
HP1			1.69	99.89
TP				
HP1	1.39	101.28		
BM			2.48	98.80
HP2			1.91	99.37
HP3			2.53	98.75

Comment: Surveyed relative to HP3

(2) Water Surface Elevation (WSE) Survey

TR	River Station L/R bank (ft)	River Station Ave (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
1-L	0	0	101.60	6.02	0.57	96.15	96.15	
1-R	0			8.78	3.32	96.14		
2-L	70	68	101.60	5.71	0.32	96.21	96.20	175.3
2-R	65			6.53	1.12	96.19		
3-L	105	96	101.60	5.65	0.29	96.24	96.23	
3-R	86.3			5.94	0.55	96.21		
							Ave Q=	175.3

Note: HI for survey should be 101.60
WSE slope = 0.084%

(3) Meter and propeller ID for Velocity Correction

Meter ID: 0068
Propeller ID: na

Date: 5/3/2005
Habitat: Run **Flow:** High

(1) Level Loop Survey

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	2.39	101.19		98.80
HP3			2.43	98.76
HP2			1.80	99.39
HP1			1.30	99.89
TP				
HP1	1.03	100.92		
HP2			1.53	99.39
HP3			2.15	98.77
BM			2.11	98.81

Comment: BM elev is 98.80, not 100

(2) Water Surface Elevation (WSE) Survey

TR	River Station L/R bank (ft)	River Station Ave (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
1-L	0	0	100.92	4.68		96.24	96.25	
1-R	0			4.67		96.25		217.4
2-L	70	68	100.92	4.60		96.32	96.32	
2-R	65			4.61		96.31		206.8
3-L	105	96	100.92	4.57		96.35	96.35	
3-R	86.3			4.58		96.34		207.1
							Ave Q=	210.5

Note:
WSE slope = 0.105%

(3) Meter and propeller ID for Velocity Correction

Meter ID: 0068
Propeller ID: na

Date: 6/25/2004
Habitat: Run **Flow:** Low

(1) Level Loop Survey

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	3.82	102.62		98.80
HP1			2.73	99.89
HP2			3.24	99.38
HP3			3.87	98.75
TP				
HP3	3.90	102.65		
HP2			3.28	99.37
HP1			2.77	99.88
BM			3.86	98.79

Comment:

(2) Water Surface Elevation (WSE) Survey

TR	River Station L/R bank (ft)	River Station Ave (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
1-L	0	0	102.65	7.59	0.00	95.06	95.06	
1-R	0			7.59	0.00	95.06		11
2-L	70	68	102.65	7.54	0.00	95.11	95.11	
2-R	65			7.55	0.00	95.10		6.6
3-L	105	96	102.65	7.51	0.00	95.14	95.14	
3-R	86.3			7.51	0.00	95.14		5.9
							Ave Q=	7.87

Note:
WSE slope = 0.084%

(3) Meter and propeller ID for Velocity Correction

Meter ID: 0068
Propeller ID: na

Date: 5/13/2004
Habitat: Run **Flow:**

(1) Level Loop Survey

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	2.47	101.27		98.80
HP1			1.39	99.88
HP2			1.90	99.37
HP3			2.52	98.75
TP				
HP3	2.57	101.32		
HP2			1.94	99.38
HP1			1.44	99.88
BM			2.52	98.80

Comment: BM elev is 98.80, not 100

(2) Water Surface Elevation (WSE) Survey

TR	River Station L/R bank (ft)	River Station Ave (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
1-L	0	0	101.32	6.69	1.54	96.17	96.17	
1-R	0			8.39	3.24	96.17		0.0
2-L	70	68	101.32	6.16	1.07	96.23	96.22	
2-R	65			6.47	1.36	96.21		0.0
3-L	105	96	101.32	5.74	0.69	96.27	96.26	
3-R	86.3			6.47	1.40	96.25		0.0
							Ave Q=	0.00

Note: HI should be 101.32
WSE slope = 0.094%

(3) Meter and propeller ID for Velocity Correction

Meter ID: 0068
Propeller ID: na

Trip to use in calibration flow(1,2,3)= 3

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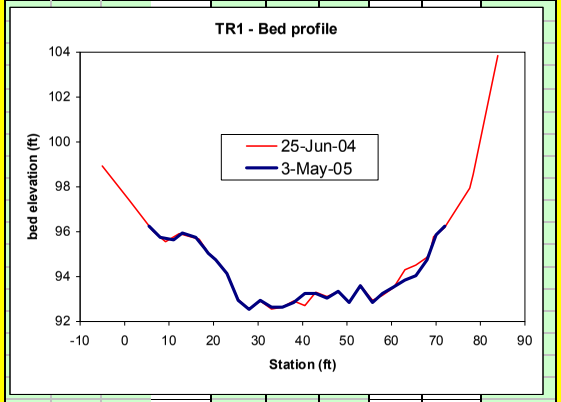
Stream:	Sycan River		12-Apr-04										3-May-05										25-Jun-04									
Site:	SY-5			Sta	FS	Ground	Depth	Vel (ft/s)			q			Sta	FS	Ground	Depth	Vel (ft/s)			q			Sta	FS	Ground	Depth	Vel (ft/s)			q	
Transect:	1			(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	Ave	(cfs)	substrate		(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	Ave	(cfs)	substrate		(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	Ave	(cfs)	substrate
Habitat:	Run																							-5.0	3.72	98.93						1.2
																							RWP	1.0	5.24	97.41						1.2
Survey	HI	Q											RWE	5.5		96.25	0.00	0.00		0.00	0.00			6.4	6.62	96.03						1.2
Date	(ft)	(cfs)												8.0		95.75	0.50	0.01		0.02	0.02			9.2	7.10	95.55						2.1
4/12/2004	101.60													11.0		95.65	0.60	0.01		0.02	0.02			12.3	6.73	95.92						1.2
5/3/2005	100.92	217.4												13.0		95.95	0.30	0.01		0.02	0.01			16.8	6.99	95.66						2.1
6/25/2004	102.65	11.1												16.0		95.75	0.50	0.01		0.02	0.02		RWE	18.8		95.06	0.00	0.00		0.00	0.00	2.1
														18.0		95.25	1.00	-0.15		-0.22	-0.31			20.5		94.76	0.30	0.00		0.01	0.00	1.2
														18.8		95.05	1.20	-0.15		-0.22	-0.33		*	23.0		94.14	0.92	0.04		0.04	0.09	1.2
														20.5		94.75	1.50	-0.06		-0.09	-0.29		*	25.5		92.98	2.08	0.04		0.04	0.21	1.2
														23.0		94.15	2.10	-0.04		-0.06	-0.33			28.0		92.54	2.52	0.02	0.05	0.05	0.34	1.5
														25.5		92.95	3.30	0.18	0.06	0.17	1.43			30.5		92.91	2.15	0.02		0.03	0.17	1.5
														28.0		92.55	3.70	0.36	0.36	0.45	4.19		*	33.0		92.56	2.50	0.02	0.06	0.04	0.25	1.5
														30.5		92.95	3.30	1.45	0.24	1.00	8.26			35.5		92.64	2.42	0.07		0.11	0.66	5.1
														33.0		92.65	3.60	1.99	0.59	1.50	13.48			38.0		92.91	2.15	0.05		0.08	0.42	5.1
														35.5		92.65	3.60	2.06	0.58	1.53	13.78			40.5		92.71	2.35	0.12		0.18	1.07	5.1
														38.0		92.85	3.40	2.29	1.16	1.99	16.92			43.0		93.31	1.75	0.03		0.05	0.20	5.1
														40.5		93.25	3.00	2.64	1.53	2.40	18.02			45.5		93.11	1.95	0.11		0.17	0.83	5.1
														43.0		93.25	3.00	2.61	1.88	2.58	19.38			48.0		93.34	1.72	0.14		0.21	0.89	5.6
														45.5		93.05	3.20	2.38	1.41	2.19	17.48			50.5		92.86	2.20	0.32		0.41	2.24	6.5
														48.0		93.35	2.90	2.56	1.94	2.59	18.77			53.0		93.61	1.45	0.20		0.28	1.05	7.5
														50.5		92.85	3.40	2.44	1.27	2.14	18.19			55.7		92.94	2.12	0.22		0.30	1.59	7.5
														53.0		93.60	2.65	2.39	1.50	2.24	15.45			58.0		93.16	1.90	0.10		0.16	0.71	1.5
														55.7		92.85	3.40	2.23	1.07	1.90	16.19			60.5		93.51	1.55	0.05		0.08	0.30	1.2
														58.0		93.25	3.00	1.69	0.75	1.42	10.21		*	63.0		94.31	0.75	0.02		0.02	0.04	1.2
														60.5		93.55	2.70	1.60	0.96	1.48	10.02		*	65.5		94.51	0.55	0.02		0.02	0.03	1.6
														63.0		93.85	2.40	0.89		1.04	6.23			68.0		94.86	0.20	0.00		0.01	0.00	1.6
														65.5		94.05	2.20	1.62		1.87	10.30		LWE	68.6		95.06	0.00	0.00		0.00	0.00	1.6
														68.0		94.75	1.50	0.04		0.06	0.15			69.5	6.87	95.78						1.6
														68.6		95.10	1.15	0.09		0.14	0.16			71.9	6.47	96.18						1.6
														70.0		95.87	0.38	0.02		0.03	0.02		LWP	77.6	4.70	97.95						6.3
													LWE	72.0		96.25	0.00	0.00		0.00	0.00			78.4	**	98.55						3.1
																								83.9	**	103.85						1.3



*estimated vel.
** could'nt read rod, estimated

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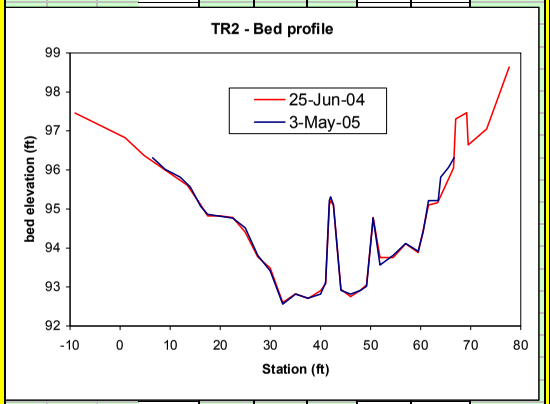
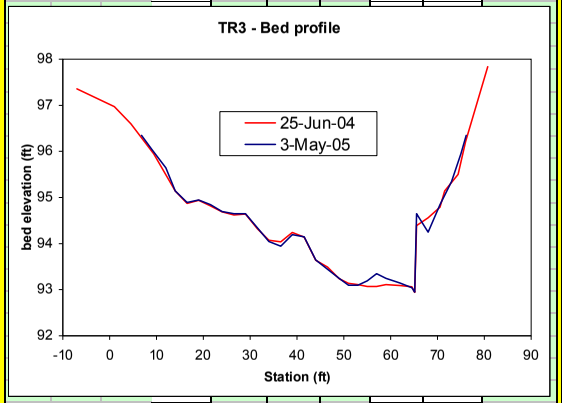
Stream:	Sycan River		12-Apr-04										3-May-05										25-Jun-04									
Site:	SY-5			Sta	FS	Ground	Depth	Vel (ft/s)			q			Sta	FS	Ground	Depth	Vel (ft/s)			q			Sta	FS	Ground	Depth	Vel (ft/s)			q	
Transect:	2			(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	Ave	(cfs)	substrate		(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	Ave	(cfs)	substrate		(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	Ave	(cfs)	substrate
Habitat:	Run																															
			LWE	23.5		96.20	0.00	0.00		0.00	0.00													-9.0	5.19	97.46						3.1
				25.0		95.95	0.25	0.00		0.00	0.00		RWE	6.5		96.32	0.00	0.00		0.00	0.00		RWP	1.0	5.82	96.83						1.3
Survey	HI	Q		28.0		95.80	0.40	0.23		0.31	0.37			9.0		96.02	0.30	0.01		0.02	0.01			4.8	6.28	96.37						1.2
Date	(ft)	(cfs)		31.0		95.70	0.50	0.89		1.04	1.56			12.0		95.82	0.50	0.01		0.02	0.02			13.4	7.04	95.61						1.2
4/12/2004	101.60	175.3		34.0		95.60	0.60	2.15		2.47	3.71			14.0		95.57	0.75	0.05		0.08	0.12		RWE	16.1	7.55	95.10	0.00	0.00		0.00	0.00	2.1
5/3/2005	100.92	206.8		36.0		95.20	1.00	1.67		1.93	3.86			16.1		95.07	1.25	0.59		0.70	1.54		*	17.5		94.83	0.28	0.01		0.01	0.01	1.2
6/25/2004	102.65	6.6		38.0		94.90	1.30	2.61		3.00	7.80			17.5		94.87	1.45	0.70		0.83	2.34		*	20.0		94.83	0.28	0.02		0.02	0.01	1.2
				40.0		94.20	2.00	2.32		2.67	10.67			20.0		94.82	1.50	1.17		1.36	5.10		*	22.5		94.79	0.32	0.03		0.03	0.02	1.2
				42.0		94.10	2.10	2.55		2.93	12.32			22.5		94.77	1.55	1.33		1.54	5.98			25.0		94.41	0.70	0.01		0.02	0.03	1.2
				44.0		93.70	2.50	2.18	3.94	3.52	4.40			25.0		94.52	1.80	1.70		1.96	8.84			27.5		93.78	1.33	0.07		0.11	0.36	1.2
				43.0		94.00	2.20	2.83		3.25	3.58			27.5		93.82	2.50	1.87	0.90	1.60	10.01			30.0		93.49	1.62	0.01		0.02	0.06	1.2
				45.0		93.70	2.50	2.29	3.71	3.45	17.25			30.0		93.42	2.90	2.06	0.83	1.67	12.12			32.5		92.61	2.50	0.04	0.16	0.15	0.92	6.1
				47.0		93.80	2.40	3.24		3.73	17.88			32.5		92.57	3.75	2.17	1.82	2.30	21.54			35.0		92.83	2.28	0.07		0.11	0.62	6.1
				49.0		93.90	2.30	3.22		3.70	17.03			35.0		92.82	3.50	2.49	1.09	2.07	18.07			37.5		92.71	2.40	0.12		0.18	1.09	5.6
				51.0		94.10	2.10	2.53		2.91	18.33			37.5		92.72	3.60	2.64	0.69	1.93	17.34			40.0		92.91	2.20	0.10		0.16	0.60	5.6
				55.0		94.50	1.70	2.37		2.73	18.53			40.0		92.82	3.50	2.50	0.72	1.86	11.41			41.0		93.09	2.02	0.05		0.08	0.14	7.4
				59.0		94.50	1.70	1.60		1.85	12.58			41.8		95.11	0.00	0.00		0.00	0.00			41.0		93.12	3.20	1.78	0.01	1.03	2.98			42.0		95.21	-0.10					7.7
				63.0		94.95	1.25	1.60		1.85	9.25			41.8		95.22	1.10	0.84		0.98	0.54			42.6		95.11	0.00	0.00		0.00	0.00	7.7
				67.0		94.80	1.40	0.73		0.86	4.82			42.0		95.32	1.00	1.02		1.19	0.47			44.1		92.94	2.17	0.03		0.05	0.17	7.5
				71.0		95.30	0.90	1.38		1.60	5.76			42.6		95.12	1.20	2.19		2.52	3.17			46.0		92.76	2.35	0.25		0.33	1.53	6.5
				75.0		95.40	0.80	1.07		1.24	3.98			44.1		92.92	3.40	2.01	-0.31	0.96	5.54			48.0		92.93	2.18	0.03		0.05	0.16	6.5
				79.0		95.65	0.55	0.23		0.31	0.69			46.0		92.82	3.50	2.69	2.18	2.80	19.11			49.2		93.06	2.05	0.03		0.05	0.12	7.6
				83.0		95.80	0.40	0.07		0.11	0.17			48.0		92.92	3.40	2.59	1.59	2.41	13.10			50.5		94.79	0.32	0.29		0.37	0.16	7.7
				87.0		95.85	0.35	0.26		0.34	0.60			49.2		93.02	3.30	2.39	0.72	1.80	7.42			51.9		93.76	1.35	0.03		0.05	0.13	7.1
				93.0		95.75	0.45	0.05		0.08	0.16			50.5		94.77	1.55	2.31		2.66	5.56			54.5		93.76	1.35	0.04		0.06	0.21	1.2
				96.0		95.95	0.25	0.00		0.00	0.00			51.9		93.57	2.75	2.20	0.87	1.77	9.75			57.0		94.11	1.00	0.03		0.05	0.12	1.2
			RWE	99.0		96.20	0.00	0.00		0.00	0.00			54.5		93.82	2.50	1.68	1.37	1.76	11.25			59.5		93.89	1.22	0.02		0.03	0.07	7.1
														57.0		94.12	2.20	0.85		0.99	5.47		*	60.5		94.46	0.65	0.03		0.03	0.02	7.1
														59.5		93.92	2.40	0.88		1.03	4.31		LWE	61.6	7.55	95.10	0.00	0.00		0.00	0.00	1.2
														60.5		94.42	1.90	0.68		0.81	1.61			63.4	7.49	95.16						6.7
														61.6		95.22	1.10	1.02		1.19	1.96			66.6	6.60	96.05						7.1
														63.5		95.22	1.10	0.06		0.09	0.12			67.0	5.34	97.31						7.7
														64.0		95.82	0.50	0.05		0.08	0.04			69.2	5.18	97.47						7.7
														65.6		96.07	0.25	0.01		0.02	0.01			69.5	6.01	96.64						7.1
													LWE	66.7		96.32	0.00	0.00		0.00	0.00			73.2	5.60	97.05						7.1
																							LWP	77.7	4.01	98.64						3.1

Discharge data only, not on one of the transects



* estimated vel.

Stream:	Sycan River		12-Apr-04									3-May-05									25-Jun-04									
Site:	SY-5			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:	3			(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:	Run																							-7.0	5.29	97.36						1.3
																							RWP	1.0	5.68	96.97						1.3
Survey	HI	Q											RWE	6.8		96.35	0.00	0.00		0.00	0.00			4.5	6.05	96.60						1.3
Date	(ft)	(cfs)												9.0		96.05	0.30	0.01		0.02	0.01			9.4	6.70	95.95						1.2
4/12/2004	101.60													12.0		95.65	0.70	0.01		0.02	0.03		RWE	14.0		95.14	0.00	0.00		0.00	0.00	2.1
5/3/2005	100.92	207.1												14.0		95.15	1.20	0.20		0.28	0.75		*	16.5		94.87	0.27	0.03		0.03	0.02	1.2
6/25/2004	102.65	5.9												16.5		94.90	1.45	0.34		0.43	1.56		*	19.0		94.94	0.20	0.03		0.03	0.02	1.2
														19.0		94.95	1.40	0.56		0.67	2.34			21.5		94.82	0.32	0.03		0.05	0.04	1.2
														21.5		94.85	1.50	0.89		1.04	3.89		*	24.0		94.69	0.45	0.03		0.03	0.03	1.2
														24.0		94.70	1.65	1.14		1.32	5.46			26.5		94.62	0.52	0.02		0.03	0.04	1.2
														26.5		94.65	1.70	1.45		1.68	7.14		*	29.0		94.64	0.50	0.03		0.03	0.04	1.2
														29.0		94.65	1.70	1.51		1.75	7.43		*	31.5		94.32	0.82	0.02		0.02	0.04	1.2
														31.5		94.35	2.00	1.79		2.07	10.33			34.0		94.07	1.07	0.05		0.08	0.21	1.2
														34.0		94.05	2.30	1.83		2.11	12.14		*	36.5		94.04	1.10	0.02		0.02	0.06	1.2
														36.5		93.95	2.40	2.23		2.56	15.39			39.0		94.24	0.90	0.03		0.05	0.11	1.2
														39.0		94.20	2.15	2.28		2.62	14.09			41.5		94.14	1.00	0.03		0.05	0.12	1.2
														41.5		94.15	2.20	2.07		2.38	13.10			44.0		93.64	1.50	0.06		0.09	0.35	1.2
														44.0		93.65	2.70	2.72	0.91	2.09	14.13			46.5		93.49	1.65	0.10		0.16	0.64	1.2
														46.5		93.45	2.90	2.83	0.82	2.11	15.28			49.0		93.24	1.90	0.04		0.06	0.27	5.1
														49.0		93.25	3.10	3.12	1.03	2.39	16.69		*	51.0		93.14	2.00	0.05		0.05	0.20	5.1
														51.0		93.10	3.25	3.13	-0.12	1.71	11.11		*	53.0		93.11	2.03	0.05		0.05	0.20	5.1
														53.0		93.10	3.25	2.48	1.18	2.11	13.72			55.0		93.07	2.07	0.44		0.54	2.23	5.1
														55.0		93.20	3.15	2.71	2.01	2.72	17.11			57.0		93.07	2.07	0.23		0.31	1.29	5.6
														57.0		93.35	3.00	1.70	0.20	1.12	6.72			59.0		93.11	2.03	0.00		0.01	0.00	4.1
														59.0		93.25	3.10	-0.06	-0.33	-0.26	-1.98			62.0		93.09	2.05	0.00		0.01	0.00	5.4
														62.0		93.15	3.20	0.09	0.17	0.19	1.68		*	64.5		93.06	2.08	0.01		0.01	0.03	7.6
														64.5		93.05	3.30	1.18	0.79	1.15	5.88		*	65.1		92.94	2.20	0.01		0.01	0.01	7.6
														65.1		92.95	3.40	1.47	0.01	0.86	1.46			65.5		94.39	0.75	0.00		0.01	0.00	7.7
														65.5		94.65	1.70	1.42		1.64	4.05			68.0		94.56	0.58	0.00		0.01	0.00	7.7
														68.0		94.25	2.10	0.97		1.13	5.93			70.5		94.79	0.35	0.00		0.01	0.00	1.2
														70.5		94.85	1.50	0.32		0.41	1.07		LWE	71.5		95.14	0.00	0.00		0.00	0.00	2.1
														71.5		95.05	1.30	0.25		0.33	0.54			74.4	7.15	95.50						2.1
														73.0		95.35	1.00	0.01		0.02	0.03			76.0	6.44	96.21						1.2
														75.0		95.95	0.40	0.01		0.02	0.01		LWP	80.7	4.81	97.84						1.3
													LWE	76.1		96.35	0.00	0.00		0.00	0.00											



* estimated vel.

```
        Sycane  River SY_5 06/25/91
RUN                          LOW                                    TRANSECT 1
IOC       1101100000001000101000
QARD   3.0
QARD   6.0
QARD   8.3
QARD  14.0
QARD  20.0
QARD  25.0
QARD  30.0
QARD  35.0
QARD  40.0
QARD  45.0
QARD  50.0
QARD  55.0
QARD  60.0
QARD  65.0
QARD  70.0
QARD  75.0
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 175.3
QARD 180.0
QARD 190.0
QARD 208.5
XSEC   0.0      0.00 1.0     92.54   0.00084
       0.0 -5.0 98.9  1.0 97.4  6.4 96.0  9.2 95.6 12.3 95.9 16.8 95.7
       0.0 18.8 95.1 20.5 94.8 23.0 94.1 25.5 93.0 28.0 92.5 30.5 92.9
       0.0 33.0 92.6 35.5 92.6 38.0 92.9 40.5 92.7 43.0 93.3 45.5 93.1
       0.0 48.0 93.3 50.5 92.9 53.0 93.6 55.7 92.9 58.0 93.2 60.5 93.5
       0.0 63.0 94.3 65.5 94.5 68.0 94.9 68.6 95.1 69.5 95.8 71.9 96.2
       0.0 77.6 97.9 78.4 98.6 83.9103.8
NS     0.0       1.2       1.2       1.2       2.1       1.2       2.1
NS     0.0       2.1 1.2   1.2       1.2       1.2       1.5 1.5   1.5
NS     0.0 1.4   1.5       5.1       5.1       5.1 0.7   5.1       5.1
NS     0.0       5.6 0.25  6.5       7.5       7.5       1.5 0.5   1.2
NS     0.0 0.6   1.2 0.6   1.6 0.6   1.6       1.6       1.6       1.6
NS     0.0       6.3       3.1       1.3
CAL1   0.0     95.06       8.3
VEL1   0.0                                0.00 0.01 0.04 0.04 0.05 0.03
VEL1   0.0 0.04 0.11 0.08 0.18 0.05 0.17 0.21 0.41 0.28 0.30 0.16 0.08
VEL1   0.0 0.02 0.02 0.01 0.00
CAL2   0.0     96.15     175.3
VEL2   0.0
VEL2   0.0
VEL2   0.0
CAL3   0.0     96.25     208.5
VEL3   0.0
VEL3   0.0
VEL3   0.0
ENDJ
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        Sycane  River SY_5 06/25/91
RUN                          LOW                                    TRANSECT 2
IOC       11011000000001000101000
QARD   3.0
QARD   6.0
QARD   8.3
QARD  14.0
QARD  20.0
QARD  25.0
QARD  30.0
QARD  35.0
QARD  40.0
QARD  45.0
QARD  50.0
QARD  55.0
QARD  60.0
QARD  65.0
QARD  70.0
QARD  75.0
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 175.3
QARD 180.0
QARD 190.0
QARD 208.5
XSEC   0.0      0.00 1.0     92.61   0.00084
       0.0 -9.0 97.5  1.0 96.8  4.8 96.4 13.4 95.6 16.1 95.1 17.5 94.8
       0.0 20.0 94.8 22.5 94.8 25.0 94.4 27.5 93.8 30.0 93.5 32.5 92.6
       0.0 35.0 92.8 37.5 92.7 40.0 92.9 41.0 93.1 41.8 95.1 42.0 95.2
       0.0 42.6 95.1 44.1 92.9 46.0 92.8 48.0 92.9 49.2 93.1 50.5 94.8
       0.0 51.9 93.8 54.5 93.8 57.0 94.1 59.5 93.9 60.5 94.5 61.6 95.1
       0.0 63.4 95.2 66.6 96.1 67.0 97.3 69.2 97.5 69.5 96.6 73.2 97.1
       0.0 77.7 98.6
NS     0.0       3.1       1.3       1.2       1.2       2.1       1.2
NS     0.0       1.2       1.2       1.2       1.2 0.5   1.2       6.1
NS     0.0       6.1       5.6       5.6       7.4       7.7       7.7
NS     0.0       7.7 0.5   7.5 .4    6.5       6.5       7.6 .8    7.7
NS     0.0       7.1       1.2       1.2       7.1       7.1       1.2
NS     0.0       6.7       7.1       7.7       7.7       7.1       7.1
NS     0.0       3.1
CAL1   0.0     95.11       8.3
VEL1   0.0                     0.00 0.01 0.02 0.03 0.02 0.11 0.02 0.15
VEL1   0.0 0.11 0.18 0.16 0.08 0.00      0.00 0.05 0.33 0.05 0.05 0.37
VEL1   0.0 0.05 0.06 0.05 0.03 0.03 0.00
VEL1   0.0
CAL2   0.0     96.20     175.3
VEL2   0.0
VEL2   0.0
VEL2   0.0
VEL2   0.0
CAL3   0.0     96.32     208.5
VEL3   0.0
VEL3   0.0
VEL3   0.0
VEL3   0.0
ENDJ
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        Sycane  River SY_5 06/25/91
RUN                          LOW                                    TRANSECT 3
IOC       1101100000001000101000
QARD   3.0
QARD   6.0
QARD   8.3
QARD  14.0
QARD  20.0
QARD  25.0
QARD  30.0
QARD  35.0
QARD  40.0
QARD  45.0
QARD  50.0
QARD  55.0
QARD  60.0
QARD  65.0
QARD  70.0
QARD  75.0
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 175.3
QARD 180.0
QARD 190.0
QARD 208.5
XSEC   0.0      0.00 1.0     92.94   0.00084
       0.0 -7.0 97.4  1.0 97.0  4.5 96.6  9.4 95.9 14.0 95.1 16.5 94.9
       0.0 19.0 94.9 21.5 94.8 24.0 94.7 26.5 94.6 29.0 94.6 31.5 94.3
       0.0 34.0 94.1 36.5 94.0 39.0 94.2 41.5 94.1 44.0 93.6 46.5 93.5
       0.0 49.0 93.2 51.0 93.1 53.0 93.1 55.0 93.1 57.0 93.1 59.0 93.1
       0.0 62.0 93.1 64.5 93.1 65.1 92.9 65.5 94.4 68.0 94.6 70.5 94.8
       0.0 71.5 95.1 74.4 95.5 76.0 96.2 80.7 97.8
NS     0.0       1.3       1.3       1.3       1.2       2.1       1.2
NS     0.0       1.2       1.2       1.2       1.2       1.2       1.2
NS     0.0       1.2 0.8   1.2       1.2       1.2       1.2       1.2
NS     0.0 0.4   5.1 .4    5.1 0.4   5.1 0.40  5.1 .4    5.6 1.    4.1
NS     0.0 1.    5.4 1.    7.6 1.5   7.6 1.5   7.7       7.7       1.2
NS     0.0       2.1       2.1       1.2       1.3
CAL1   0.0     95.14       8.3
VEL1   0.0                     0.00 0.03 0.03 0.05 0.03 0.03 0.03 0.02
VEL1   0.0 0.08 0.02 0.05 0.05 0.09 0.16 0.06 0.05 0.05 0.54 0.31 0.01
VEL1   0.0 0.01 0.01 0.01 0.01 0.01 0.01 0.00
CAL2   0.0     96.23     175.3
VEL2   0.0
VEL2   0.0
VEL2   0.0
CAL3   0.0     96.35     208.5
VEL3   0.0
VEL3   0.0
VEL3   0.0
ENDJ
```

Stream: Sycan River
Site: SY_5
Date: 4/12/2004
Habitat: Riffle **Flow:** Mid

(1) Level Loop Survey (BM & HP)

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	2.59	102.59		100.00
HP3			3.57	99.02
HP2			3.43	99.16
HP1			2.11	100.48
TP				
HP1	2.22	102.70		
HP2			3.54	99.16
HP3			3.69	99.01
BM			2.70	100.00

Comment: Turning pt. on HP-1

(2) Water Surface Elevation (WSE) Survey

TR	River Station L/R bank (ft)	River Station Ave (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
1-L	0	0	102.70	6.60	0.22	96.32	96.34	
1-R	0			7.31	0.97	96.36		
2-L	43	32	102.70	7.12	0.85	96.43	96.40	175.3
2-R	21			7.11	0.78	96.37		
3-L	123	106	102.70	6.77	0.59	96.52	96.55	
3-R	89			6.31	0.19	96.58		
							Ave Q=	175.3

Note:
WSE slope = 0.198%

(3) Meter and propeller ID for Velocity Correction

Meter ID: 0068
Propeller ID: na

Date: 6/25/2004
Habitat: Riffle **Flow:** Low

(1) Level Loop Survey

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	1.20	101.20		100.00
HP1			0.72	100.48
HP2			2.04	99.16
HP3			2.17	99.03
TP				
HP3	2.24	101.27		
HP2			2.11	99.16
HP1			0.79	100.48
BM			1.26	100.01

Comment:

(2) Water Surface Elevation (WSE) Survey

TR	River Station L/R bank (ft)	River Station Ave (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
1-L	0	0	101.27	5.99	0.00	95.28	95.28	10.6
1-R	0				0.00			
2-L	43	32	101.27	5.92	0.00	95.35	95.35	6.8
2-R	21				0.00			
3-L	123	106	101.27	5.85	0.00	95.42	95.42	9.5
3-R	89				0.00			
							Ave Q=	9.0

Note:
WSE slope = 0.132%

(3) Meter and propeller ID for Velocity Correction

Meter ID: 0068
Propeller ID: NA

Date: 5/3/2005
Habitat: Riffle **Flow:** High

(1) Level Loop Survey

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	2.55	102.55		100.00
HP1			2.06	100.49
HP2			3.39	99.16
HP3			3.52	99.03
TP				
HP3				
HP2				
HP1				
BM				

Comment: Half loop shot.

(2) Water Surface Elevation (WSE) Survey

TR	River Station L/R bank (ft)	River Station Ave (ft)	HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)	
1-L	0	0	102.55	6.11	0.00	96.44	96.44	212	212
1-R	0			6.12	0.00	96.43			212
2-L	43	32	102.55	6.03	0.00	96.52	96.51	201	201
2-R	21			6.06	0.00	96.49			201
3-L	123	106	102.55	5.94	0.00	96.61	96.64	207	207
3-R	89			5.88	0.00	96.67			207
							Ave Q=	206.6	

Note:
WSE slope = 0.193%

(3) Meter and propeller ID for Velocity Correction

Meter ID: 0068
Propeller ID: NA

Trip to use in calibration flow(1,2,3)= 2

Ex. 279-US-432
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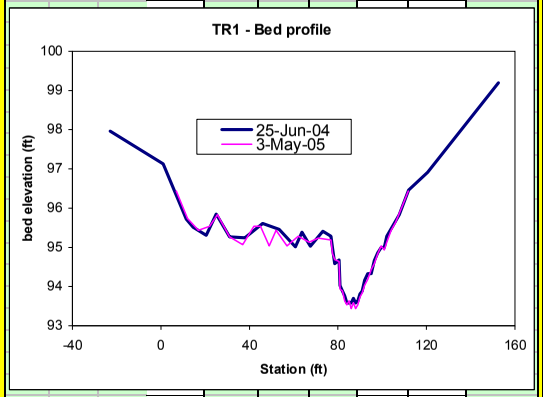
Stream: Sycan River
Site: SY_5
Transect: 1
Habitat: Riffle

Survey Date	HI (ft)	Q (cfs)
4/12/2004	102.70	
6/25/2004	101.27	10.6
5/3/2005	102.55	211.8



12-Apr-04

	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

25-Jun-04

	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
	-23.0	3.31	97.96						4.3
RWP	1.0	4.14	97.13						4.3
	11.5	5.55	95.72						2.4
	14.5	5.76	95.51						2.1
	20.5	5.96	95.31						2.1
	25.0	5.42	95.85						2.1
	31.0	6.00	95.27						2.1
	38.0	6.03	95.24						2.1
	46.0	5.66	95.61						2.1
	53.4	5.81	95.46						2.1
	60.8	6.26	95.01						1.2
	63.8	5.88	95.39						1.2
	67.6	6.24	95.03						1.2
	73.2	5.86	95.41						1.2
RWE	76.8		95.28	0.00	0.00		0.00	0.00	1.2
	77.5		94.98	0.30	0.00		0.01	0.00	2.1
	78.5		94.58	0.70	0.04		0.06	0.07	7.2
	80.5		94.68	0.60	0.02		0.03	0.02	7.2
	81.0		94.03	1.25	0.06		0.09	0.09	2.1
	82.0		93.88	1.40	0.08		0.12	0.17	2.1
	83.0		93.76	1.52	0.05		0.08	0.12	2.4
	84.0		93.58	1.70	0.18		0.25	0.43	4.3
	85.0		93.58	1.70	0.69		0.82	1.39	4.3
	86.0		93.58	1.70	1.52		1.76	2.99	4.5
	87.0		93.70	1.58	1.20		1.39	2.20	4.5
	88.0		93.58	1.70	1.07		1.24	2.12	4.5
	89.0		93.63	1.65	0.22		0.30	0.50	4.3
	90.0		93.81	1.47	0.13		0.20	0.29	4.3
*	91.0		93.88	1.40	0.03		0.03	0.04	4.3
*	92.0		94.16	1.12	0.03		0.03	0.04	2.1
	93.5		94.33	0.95	0.04		0.06	0.09	7.2
*	95.0		94.33	0.95	0.03		0.03	0.04	2.1
*	96.5		94.66	0.62	0.03		0.03	0.03	2.1
*	98.0		94.86	0.42	0.02		0.02	0.01	2.1
	99.5		95.00	0.28	0.00		0.01	0.00	2.1
	101.0		95.00	0.28	0.00		0.01	0.00	2.1
LWE	102.1		95.28	0.00	0.00		0.00	0.00	1.2
	107.7	5.44	95.83						2.1
	112.0	4.81	96.46						1.3
LWP	120.6	4.36	96.91						1.3
	152.6	2.07	99.20						1.3

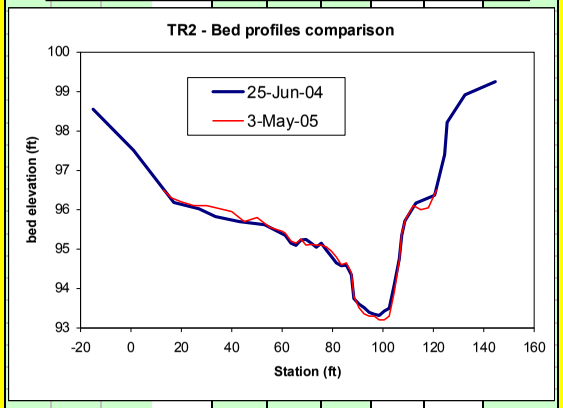
* - Estimated Velocity

3-May-05

	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	7.0		96.44	0.00	0.00		0.00	0.00	
	12.0		95.74	0.70	0.01		0.02	0.05	
	17.0		95.44	1.00	0.01		0.02	0.08	
	22.0		95.54	0.90	0.01		0.02	0.06	
	25.5		95.84	0.60	0.01		0.02	0.04	
	31.0		95.27	1.17	0.01		0.02	0.10	
	37.0		95.07	1.37	0.01		0.02	0.12	
	42.0		95.54	0.90	0.13		0.20	0.70	
	45.0		95.54	0.90	0.42		0.52	1.63	
	49.0		95.04	1.40	0.58		0.69	3.39	
	52.0		95.44	1.00	0.52		0.62	2.49	
	57.0		95.04	1.40	0.80		0.94	6.57	
	62.0		95.29	1.15	0.68		0.81	4.63	
	67.0		95.14	1.30	1.31		1.52	8.89	
	71.0		95.24	1.20	0.87		1.02	5.97	
	76.8		95.19	1.25	2.38		2.74	11.12	
	77.5		94.84	1.60	2.33		2.68	3.64	
	78.5		94.69	1.75	2.31		2.66	6.97	
	80.5		94.64	1.80	2.77		3.19	7.17	
	81.0		93.94	2.50	2.76	1.91	2.69	5.04	
	82.0		93.89	2.55	2.88	2.09	2.86	7.29	
	83.0		93.64	2.80	3.18	2.37	3.19	8.94	
	84.0		93.54	2.90	3.16	2.02	2.98	8.64	
	85.0		93.64	2.80	3.27	2.44	3.28	9.19	
	86.0		93.44	3.00	3.47	2.95	3.69	11.07	
	87.0		93.59	2.85	3.55	2.60	3.54	10.08	
	88.0		93.44	3.00	3.83	2.48	3.63	10.88	
	89.0		93.54	2.90	4.05	2.53	3.78	10.97	
	90.0		93.74	2.70	3.92	1.64	3.20	8.64	
	91.0		93.84	2.60	3.98	0.91	2.82	7.33	
	92.0		94.04	2.40	2.27		2.61	7.83	
	93.5		94.19	2.25	2.12		2.44	8.23	
	95.0		94.44	2.00	2.51		2.89	8.66	
	96.5		94.59	1.85	2.27		2.61	7.24	
	98.0		94.84	1.60	2.49		2.86	6.87	
	99.5		95.04	1.40	0.86		1.01	2.11	
	101.0		94.94	1.50	1.54		1.78	3.47	
	102.1		95.14	1.30	1.28		1.49	2.90	
	104.0		95.44	1.00	0.68		0.81	1.57	
	106.0		95.64	0.80	0.43		0.53	1.06	
	109.0		96.04	0.40	0.09		0.14	0.16	
LWE	111.8		96.44	0.00	0.00		0.00	0.00	

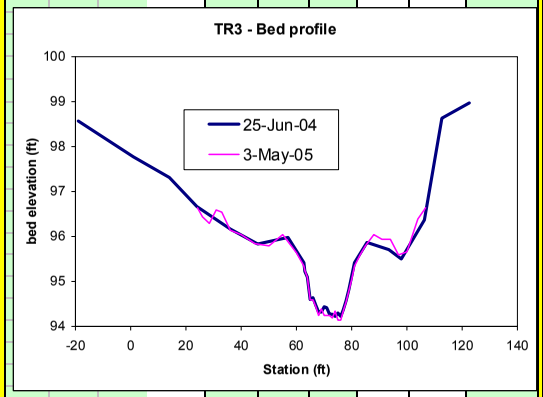
Stream:	Sycan River		12-Apr-04										25-Jun-04										3-May-05									
Site:	SY_5			Sta	FS	Ground	Depth	Vel (ft/s)			q			Sta	FS	Ground	Depth	Vel (ft/s)			q			Sta	FS	Ground	Depth	Vel (ft/s)			q	
Transect:	2			(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	Ave	(cfs)	substrate		(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	Ave	(cfs)	substrate		(ft)	(ft)	(ft)	(ft)	$V_{0.2/0.6}$	$V_{0.8}$	Ave	(cfs)	substrate
Habitat:	Riffle													-15.0	2.72	98.55						4.3										
			LWE	23.5		96.40	0.00	0.00		0.00	0.00		RWP	1.0	3.76	97.51						4.3										
Survey	HI	Q		25.0		96.15	0.25	0.00		0.00	0.00			17.0	5.08	96.19						1.2	RWE	12.8		96.51	0.00	0.00		0.00	0.00	
Date	(ft)	(cfs)		28.0		96.00	0.40	0.23		0.31	0.37			27.0	5.24	96.03						1.2		16.0		96.31	0.20	0.01		0.02	0.01	
4/12/2004	102.70	175.3		31.0		95.90	0.50	0.89		1.04	1.56			33.5	5.44	95.83						2.1		20.0		96.21	0.30	0.01		0.02	0.02	
6/25/2004	101.27	6.8		34.0		95.80	0.60	2.15		2.47	3.71			43.0	5.57	95.70						2.1		25.0		96.11	0.40	0.01		0.02	0.03	
5/3/2005	102.55	201.4		36.0		95.40	1.00	1.67		1.93	3.86			53.0	5.65	95.62						2.1		30.0		96.11	0.40	0.01		0.02	0.05	
				38.0		95.10	1.30	2.61		3.00	7.80		RWE	61.2		95.35	0.00	0.00		0.00	0.00	2.1		40.0		95.96	0.55	0.01		0.02	0.06	
				40.0		94.40	2.00	2.32		2.67	10.67			63.5		95.15	0.20	0.00		0.01	0.00	2.1		45.0		95.71	0.80	0.06		0.09	0.37	
				42.0		94.30	2.10	2.55		2.93	12.32			65.5		95.10	0.25	0.00		0.01	0.00	2.1		50.0		95.81	0.70	0.08		0.12	0.44	
				44.0		93.90	2.50	2.18	3.94	3.52	4.40			67.5		95.23	0.12	0.00		0.01	0.00	2.1		55.0		95.56	0.95	0.04		0.06	0.30	
				43.0		94.20	2.20	2.83		3.25	3.58			69.5		95.25	0.10	0.00		0.01	0.00	2.1		60.0		95.46	1.05	0.22		0.30	0.98	
				45.0		93.90	2.50	2.29	3.71	3.45	17.25		*	71.5		95.15	0.20	0.02		0.02	0.01	2.1		61.2		95.41	1.10	0.18		0.25	0.49	
				47.0		94.00	2.40	3.24		3.73	17.88		*	73.5		95.05	0.30	0.03		0.03	0.02	2.1		63.5		95.21	1.30	0.26		0.34	0.96	
				49.0		94.10	2.30	3.22		3.70	17.03		*	75.5		95.15	0.20	0.02		0.02	0.01	2.1		65.5		95.16	1.35	0.30		0.38	1.04	
				51.0		94.30	2.10	2.53		2.91	18.33		*	77.5		94.98	0.37	0.03		0.03	0.02	2.1		67.5		95.26	1.25	0.61		0.73	1.82	
				55.0		94.70	1.70	2.37		2.73	18.53		*	79.5		94.82	0.53	0.03		0.03	0.03	2.1		69.5		95.11	1.40	0.71		0.84	2.35	
				59.0		94.70	1.70	1.60		1.85	12.58			81.5		94.65	0.70	0.04		0.06	0.09	2.1		71.5		95.13	1.38	0.78		0.92	2.53	
				63.0		95.15	1.25	1.60		1.85	9.25			83.5		94.58	0.77	0.09		0.14	0.22	2.1		73.5		95.11	1.40	0.23		0.31	0.87	
				67.0		95.00	1.40	0.73		0.86	4.82			85.5		94.60	0.75	0.05		0.08	0.12	2.1		75.5		95.11	1.40	0.15		0.22	0.61	
				71.0		95.50	0.90	1.38		1.60	5.76			87.5		94.35	1.00	0.21		0.29	0.43	2.1		77.5		95.06	1.45	0.16		0.23	0.67	
				75.0		95.60	0.80	1.07		1.24	3.98			88.5		93.75	1.60	0.09		0.14	0.34	4.3		79.5		94.96	1.55	0.30		0.38	1.19	
				79.0		95.85	0.55	0.23		0.31	0.69			90.5		93.60	1.75	0.17		0.24	0.84	4.3		81.5		94.81	1.70	0.61		0.73	2.47	
				83.0		96.00	0.40	0.07		0.11	0.17			92.5		93.52	1.83	0.36		0.45	1.66	4.3		83.5		94.61	1.90	1.06		1.23	4.68	
				87.0		96.05	0.35	0.26		0.34	0.60			94.5		93.40	1.95	0.10		0.16	0.61	4.3		85.5		94.66	1.85	1.62		1.87	6.93	
				93.0		95.95	0.45	0.05		0.08	0.16			96.5		93.35	2.00	0.08		0.12	0.50	4.3		87.5		94.41	2.10	1.95		2.25	7.08	
				96.0		96.15	0.25	0.00		0.00	0.00			98.5		93.32	2.03	0.09		0.14	0.57	4.3		88.5		93.81	2.70	1.79	1.80	2.07	8.39	
			RWE	99.0		96.40	0.00	0.00		0.00	0.00			100.5		93.43	1.92	0.10		0.16	0.60	3.4		90.5		93.51	3.00	2.48	2.53	2.88	17.28	
														102.5		93.50	1.85	0.09		0.14	0.52	4.3		92.5		93.36	3.15	3.27	2.21	3.15	19.85	
														104.5		94.10	1.25	0.05		0.08	0.20	4.3		94.5		93.31	3.20	2.39	3.89	3.61	23.11	
													*	106.5		94.75	0.60	0.02		0.02	0.02	2.1		96.5		93.31	3.20	3.72	2.44	3.54	22.67	
													LWE	107.5		95.35	0.00	0.00		0.00	0.00	1.2		98.5		93.21	3.30	3.52	2.62	3.53	23.30	
														108.7	5.55	95.72						1.2		100.5		93.21	3.30	3.58	2.33	3.40	22.43	
														113.0	5.10	96.17						1.2		102.5		93.31	3.20	2.13	1.69	2.20	14.09	
														120.5	4.90	96.37						1.2		104.5		93.91	2.60	2.25	0.93	1.84	9.54	
														124.5	3.87	97.40						1.2		106.5		94.71	1.80	1.03		1.20	3.24	
														125.5	3.05	98.22						1.2		107.5		95.41	1.10	0.79		0.93	1.28	
													LWP	132.6	2.35	98.92						1.3		109.0		95.76	0.75	0.04		0.06	0.11	
														144.6	2.02	99.25								112.0		96.11	0.40	0.05		0.08	0.09	
																								115.0		96.01	0.50	0.01		0.02	0.02	
																								118.0		96.06	0.45	0.01		0.02	0.02	
																							LWE	121.2		96.51	0.00	0.00		0.00	0.00	

discharge transect data only, not on transect



Appeared to be a GOOD Q TRANSECT

Stream:	Sycan River		12-Apr-04										25-Jun-04										3-May-05									
Site:	SY_5			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:	3			(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																														
Survey Date	HI (ft)	Q (cfs)																													
4/12/2004	102.70													-19.0	2.70	98.57						4.3	RWE	24.2		96.64	0.00	0.00		0.00	0.00	4.2
6/25/2004	101.27	9.5											RWP	1.0	3.50	97.77						4.5		26.0		96.44	0.20	0.10		0.16	0.07	4.2
5/3/2005	102.55	206.7												14.0	3.96	97.31						5.4		28.5		96.29	0.35	0.33		0.42	0.37	4.2
														24.0	4.60	96.67						5.4		31.0		96.59	0.05	0.00		0.00	0.00	4.2
														36.0	5.10	96.17						6.5		33.0		96.54	0.10	0.51		0.61	0.15	4.7
														46.0	5.44	95.83						1.2		36.0		96.14	0.50	1.36		1.58	2.76	4.2
														57.0	5.29	95.98						1.2		40.0		96.04	0.60	1.66		1.92	5.18	2.4
													RWE	62.7		95.42	0.00	0.00		0.00	0.00	2.1		45.0		95.84	0.80	1.21		1.40	5.62	2.9
													*	63.0		95.22	0.20	0.03		0.03	0.00	2.1		50.0		95.79	0.85	1.52		1.76	7.48	2.9
														64.0		95.10	0.32	0.04		0.06	0.02	2.1		55.0		96.04	0.60	1.96		2.26	6.77	9.2
														65.0		94.60	0.82	0.09		0.14	0.12	2.1		60.0		95.64	1.00	2.27		2.61	10.05	9.2
														66.0		94.64	0.78	0.18		0.25	0.20	2.1		62.7		95.34	1.30	3.50		4.03	7.85	
														67.0		94.47	0.95	0.06		0.09	0.09	6.4		63.0		95.24	1.40	3.36		3.86	3.52	
														68.0		94.32	1.10	0.48		0.58	0.64	6.4		64.0		95.09	1.55	3.84		4.42	6.84	
														69.0		94.32	1.10	1.31		1.52	1.67	5.4		65.0		94.59	2.05	3.96		4.55	9.34	
														70.0		94.44	0.98	1.10		1.28	1.25	5.4		66.0		94.59	2.05	3.75		4.31	8.84	
														71.0		94.42	1.00	1.39		1.61	1.61	5.4		67.0		94.44	2.20	3.65		4.20	9.23	
														72.0		94.27	1.15	0.70		0.83	0.95	5.4		68.0		94.24	2.40	3.62		4.16	9.99	
														73.0		94.27	1.15	1.19		1.38	1.59	5.6		69.0		94.39	2.25	3.91		4.50	10.12	
														74.0		94.22	1.20	0.53		0.64	0.76	5.4		70.0		94.24	2.40	3.84		4.42	10.60	
														75.0		94.30	1.12	0.04		0.06	0.07	4.5		71.0		94.24	2.40	3.74		4.30	10.32	
														76.0		94.22	1.20	0.23		0.31	0.37	6.4		72.0		94.24	2.40	3.58		4.12	9.88	
														77.0		94.37	1.05	0.06		0.09	0.10	6.4		73.0		94.19	2.45	3.38		3.89	9.52	
													*	78.0		94.57	0.85	0.03		0.03	0.03	2.6		74.0		94.34	2.30	3.37		3.88	8.91	
													*	79.0		94.82	0.60	0.03		0.03	0.02	2.1		75.0		94.14	2.50	3.95	1.35	3.05	7.63	
														80.0		95.12	0.30	0.02		0.03	0.01	2.1		76.0		94.14	2.50	3.97	1.71	3.27	8.18	
													LWE	81.0		95.42	0.00	0.00		0.00	0.00	2.1		77.0		94.34	2.30	3.22		3.70	8.52	
														85.5	5.40	95.87						1.2		78.0		94.54	2.10	2.66		3.06	6.42	
														93.5	5.56	95.71						1.2		79.0		94.79	1.85	2.33		2.68	4.96	
														98.0	5.77	95.50						2.1		80.0		95.04	1.60	2.41		2.77	4.43	
														106.3	4.90	96.37						1.2		81.0		95.34	1.30	1.70		1.96	3.83	
													LWP	112.6	2.64	98.63								83.0		95.59	1.05	0.68		0.81	1.69	
														122.6	2.30	98.97								85.0		95.79	0.85	0.51		0.61	1.30	
																								88.0		96.04	0.60	0.08		0.12	0.22	
																								91.0		95.94	0.70	0.47		0.57	1.20	
																								94.0		95.94	0.70	0.22		0.30	0.63	
																								97.0		95.59	1.05	0.80		0.94	2.96	
																								100.0		95.66	0.98	0.26		0.34	1.18	
																								104.0		96.39	0.25	0.11		0.17	0.14	
																							LWE	106.8		96.64	0.00	0.00		0.00	0.00	



* estimated vel.

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        Sycane  River SY_5 06/25/91
RIFFLE                      LOW                                    TRANSECT 1
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QARD   6.0
QARD   8.3
QARD  14.0
QARD  20.0
QARD  25.0
QARD  30.0
QARD  35.0
QARD  40.0
QARD  45.0
QARD  50.0
QARD  55.0
QARD  60.0
QARD  65.0
QARD  70.0
QARD  75.0
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 175.3
QARD 180.0
QARD 190.0
QARD 208.5
XSEC   0.0      0.00 1.0     93.58   0.00132
       0.0 -2.3 98.0  1.0 97.1 11.5 95.7 14.5 95.5 20.5 95.3 25.0 95.8
       0.0 31.0 95.3 38.0 95.2 46.0 95.6 53.4 95.5 60.8 95.0 63.8 95.4
       0.0 67.6 95.0 73.2 95.4 76.8 95.3 77.5 95.0 78.5 94.6 80.5 94.7
       0.0 81.0 94.0 82.0 93.9 83.0 93.8 84.0 93.6 85.0 93.6 86.0 93.6
       0.0 87.0 93.7 88.0 93.6 89.0 93.6 90.0 93.8 91.0 93.9 92.0 94.2
       0.0 93.5 94.3 95.0 94.3 96.5 94.7 98.0 94.9 99.5 95.0101.0 95.0
       0.0102.1 95.3107.7 95.8112.0 96.5120.6 96.9125.6 99.2
NS     0.0       4.3       4.3       2.4       2.1       2.1       2.1
NS     0.0       2.1       2.1       2.1       2.1       1.2       1.2
NS     0.0       1.2       1.2  .15  1.2 .12   2.1  .10  7.2 .09   7.2
NS     0.0 .08   2.1 .04   2.1  .03  2.4 .03   4.3 .030  4.3 .03   4.5
NS     0.0       4.5       4.5  .07  4.3 .08   4.3  .10  4.3 .12   2.1
NS     0.0 .12   7.2 .12   2.1  .15  2.1 .15   2.1       2.1       2.1
NS     0.0       1.2       2.1       1.3       1.3       1.3
CAL1   0.0     95.28       8.3
VEL1   0.0
VEL1   0.0           0.00 0.01 0.06 0.03 0.09 0.12 0.08 0.25 0.82 1.76
VEL1   0.0 1.39 1.24 0.30 0.20 0.03 0.03 0.06 0.03 0.03 0.02 0.01 0.01
VEL1   0.0 0.00
CAL2   0.0     96.34     175.3
VEL2   0.0
VEL2   0.0
VEL2   0.0
VEL2   0.0
CAL3   0.0     96.44     208.5
VEL3   0.0
VEL3   0.0
VEL3   0.0
VEL3   0.0
ENDJ
```

```
        Sycane  River SY_5 06/25/91
RIFFLE                      LOW                                TRANSECT 2
IOC       1101100000001000101000
QARD   3.0
QARD   6.0
QARD   8.3
QARD  14.0
QARD  20.0
QARD  25.0
QARD  30.0
QARD  35.0
QARD  40.0
QARD  45.0
QARD  50.0
QARD  55.0
QARD  60.0
QARD  65.0
QARD  70.0
QARD  75.0
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 175.3
QARD 180.0
QARD 190.0
QARD 208.5
XSEC   0.0      0.00 1.0     93.58   0.00132
       0.0-15.0 98.6  1.0 97.5 17.0 96.2 27.0 96.0 33.5 95.8 43.0 95.7
       0.0 53.0 95.6 61.2 95.3 63.5 95.2 65.5 95.1 67.5 95.2 69.5 95.2
       0.0 71.5 95.2 73.5 95.1 75.5 95.2 77.5 95.0 79.5 94.8 81.5 94.7
       0.0 83.5 94.6 85.5 94.6 87.5 94.3 88.5 93.7 90.5 93.6 92.5 93.5
       0.0 94.5 93.4 96.5 93.3 98.5 93.3100.5 93.4102.5 93.5104.5 94.1
       0.0106.5 94.7107.5 95.3108.7 95.7113.0 96.2120.5 96.4124.5 97.4
       0.0125.5 98.2132.6 98.9144.6 99.2
NS     0.0       4.3       4.3       1.2       1.2       2.1       2.1
NS     0.0       2.1       2.1  .8   2.1  .8   2.1 .8    2.1  .8   2.1
NS     0.0       2.1       2.1       2.1       2.1 1.0   2.1       2.1
NS     0.0 .50   2.1       2.1       2.1       4.3       4.3  .25  4.3
NS     0.0       4.3       4.3       4.3       3.4       4.3  .6   4.3
NS     0.0 .6    2.1       1.2       1.2       1.2       1.2       1.2
NS     0.0       1.2       1.3       1.3
CAL1   0.0     95.35       8.3
VEL1   0.0                                  0.00 0.01 0.01 0.01 0.01
VEL1   0.0 0.02 0.03 0.02 0.03 0.03 0.06 0.14 0.08 0.29 0.14 0.24 0.45
VEL1   0.0 0.16 0.12 0.14 0.16 0.14 0.08 0.02 0.00
VEL1   0.0
CAL2   0.0     96.40     175.3
VEL2   0.0
VEL2   0.0
VEL2   0.0
VEL2   0.0
CAL3   0.0     96.51     208.5
VEL3   0.0
VEL3   0.0
VEL3   0.0
VEL3   0.0
ENDJ
```

```
        Sycane  River SY_5 06/25/91
RIFFLE                      LOW                                    TRANSECT 3
IOC       11011000000001000101000
QARD   3.0
QARD   6.0
QARD   8.3
QARD  14.0
QARD  20.0
QARD  25.0
QARD  30.0
QARD  35.0
QARD  40.0
QARD  45.0
QARD  50.0
QARD  55.0
QARD  60.0
QARD  65.0
QARD  70.0
QARD  75.0
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 175.3
QARD 180.0
QARD 190.0
QARD 208.5
XSEC   0.0      0.00 1.0     94.22   0.00132
       0.0-19.0 98.6  1.0 97.8 14.0 97.3 24.0 96.7 36.0 96.2 46.0 95.8
       0.0 57.0 96.0 62.7 95.4 63.0 95.2 64.0 95.1 65.0 94.6 66.0 94.6
       0.0 67.0 94.5 68.0 94.3 69.0 94.3 70.0 94.4 71.0 94.4 72.0 94.3
       0.0 73.0 94.3 74.0 94.2 75.0 94.3 76.0 94.2 77.0 94.4 78.0 94.6
       0.0 79.0 94.8 80.0 95.1 81.0 95.4 85.5 95.9 93.5 95.7 98.0 95.5
       0.0106.3 96.4112.6 98.6122.6 99.0
NS     0.0       4.3       4.5       5.4       5.4       6.5       1.2
NS     0.0       1.2       2.1 .07   2.1 .07   2.1 .07   2.1 .05   2.1
NS     0.0 .06   6.4 .05   6.4       5.4       5.4       5.4       5.4
NS     0.0       5.6       5.4       4.5       6.4       6.4 .5    2.6
NS     0.0 .5    2.1       2.1       2.1       1.2       1.2       2.1
NS     0.0       1.2       1.2       1.2
CAL1   0.0     95.42       8.3
VEL1   0.0                                     0.00 0.03 0.06 0.14 0.25
VEL1   0.0 0.09 0.58 1.52 1.28 1.61 0.83 1.38 0.64 0.06 0.31 0.09 0.03
VEL1   0.0 0.03 0.03 0.00
CAL2   0.0     96.55     175.3
VEL2   0.0
VEL2   0.0
VEL2   0.0
CAL3   0.0     96.64     208.5
VEL3   0.0
VEL3   0.0
VEL3   0.0
ENDJ
```