

11-10-2008

Ex. 280-US-443

Unknown

Follow this and additional works at: <https://digitalcommons.law.uidaho.edu/klamath>

Recommended Citation

Unknown, "Ex. 280-US-443" (2008). *In re Klamath River (Klamath Tribe)*. 175.
<https://digitalcommons.law.uidaho.edu/klamath/175>

This Expert Report is brought to you for free and open access by the Hedden-Nicely at Digital Commons @ UIdaho Law. It has been accepted for inclusion in In re Klamath River (Klamath Tribe) by an authorized administrator of Digital Commons @ UIdaho Law. For more information, please contact annablaine@uidaho.edu.

Stream: Sprague River
Site: 646
Habitat: Rifle
Date: 5/19/2000

Level Loop					
	BS	HI	FS	Elev	
BM	4.67	104.67		100.00	
TR-10			6.73	97.94	
TR-9			6.38	98.29	
TR-8			4.87	99.80	
TR-7			5	99.67	
TR-6			5.84	98.83	
TR-5			7.6	97.07	
TR-4			7.65	97.02	
TR-3			6.03	98.64	
TR-2			5.04	99.63	
TR-1		104.57	5.22	99.45	
TR-2			4.95	99.62	
TR-3			5.94	98.63	
TR-4			7.56	97.01	
TR-5			7.5	97.07	
TR-6			5.75	98.82	
TR-7			4.91	99.66	
TR-8			4.78	99.79	
TR-9			6.29	98.28	
TR-10			6.63	97.94	
BM			4.58	99.99	

Meter ID: NA
Propeller ID: NA

Level Loop					
	BS	HI	FS	Elev	
BM	4.52	104.52		100.00	
TR-10			6.58	97.94	
TR-9			6.23	98.29	
TR-8			4.72	99.80	
TR-7			4.85	99.67	
TR-6			5.7	98.82	
TR-5			7.44	97.08	
TR-4			7.5	97.02	
TR-3			5.88	98.64	
TR-2			4.89	99.63	
TR-1		104.2	5.06	99.46	
TR-2			4.56	99.64	
TR-3			5.55	98.65	
TR-4			7.17	97.03	
TR-5			7.12	97.08	
TR-6			5.37	98.83	
TR-7			4.52	99.68	
TR-8			4.39	99.81	
TR-9			5.91	98.29	
TR-10			6.25	97.95	
BM			4.2	100.00	

Habitat: Rifle
Date: 10/5/2000

Level Loop					
	BS	HI	FS	Elev	
BM	4.64	104.64		100.00	
TR-10			6.70	97.94	
TR-9			6.35	98.29	
TR-8			4.83	99.81	
TR-7			4.96	99.68	
TR-6			5.81	98.83	
TR-5			7.56	97.08	
TR-4			7.62	97.02	
TR-3			6.00	98.64	
TR-2			5.00	99.64	
TR-1		102.95	5.19	99.45	
TR-2			3.31	99.64	
TR-3			4.31	98.64	
TR-4			5.94	97.01	
TR-5			5.88	97.07	
TR-6			4.12	98.83	
TR-7			3.27	99.66	
TR-8			3.14	99.81	
TR-9			4.66	98.29	
TR-10			5.01	97.94	
BM			2.95	100.00	

Meter ID: NA
Propeller ID: NA

Habitat: Rifle
Date: 6/13/2002

Level Loop					
	BS	HI	FS	Elev	
BM	4.3	104.30		100.00	
TR-10			6.36	97.94	
TR-9			6.01	98.29	
TR-8			4.56	99.74	
TR-7			4.62	99.68	
TR-6			5.46	98.84	
TR-5			7.27	97.03	
TR-4			5.65	98.65	
TR-3			4.65	99.65	
TR-2		104.21	4.84	99.46	
TR-1			4.58	99.63	
TR-2			5.57	98.64	
TR-3			7.19	97.02	
TR-4			5.38	98.83	
TR-5			4.54	99.67	
TR-6			4.48	99.73	
TR-7			5.92	98.29	
TR-8			6.28	97.93	
TR-9			4.21	100.00	
BM			4.21	100.00	

Meter ID: NA
Propeller ID: NA

WSE Survey

Dist	River	Sta	BS	HI	FS	Rod	Depth	WSE	Ave	Q
(ft)		(ft)	(ft)	(ft)	(ft)	Depth	(ft)	(ft)	WSE	(cfs)
TR-10	53.0	406.2		104.57	9.43	0.90	96.04	96.03	96.03	396.2
TR-9	49.0	353.2			9.82	1.26	96.01	96.04		
TR-8	46.0	304.2			9.46	0.95	96.06	96.04		
TR-7	42.7	258.2			9.76	1.20	96.01	96.01		
TR-6	42.4	215.5			10.29	1.73	96.01	96.03		
TR-5	43.4	173.1			9.74	1.19	96.02	96.01		
TR-4	39.0	129.7	5.62	102.63	10.68	2.11	96.00	96.01		
TR-3	46.0	90.7	7.56	101.97	9.55	1.00	96.02	96.02		
TR-2	44.7	44.7	6.96	104.67	10.01	1.46	96.02	96.02		
TR-1	0.0	0.0	7.55	104.67	9.67	1.14	96.04	96.03		

Average Q (cfs) = 396.2

WSE Survey

Dist	River	Sta	BS	HI	FS	Rod	Depth	WSE	Ave	Q
(ft)		(ft)	(ft)	(ft)	(ft)	Depth	(ft)	(ft)	WSE	(cfs)
TR-10	53.0	406.2	3.58	103.59	8.98	0.35	95.06	95.07	95.07	132.7
TR-9	49.0	353.2	3.59	103.59	9.22	0.70	95.07	95.06		
TR-8	46.0	304.2		103.59	9.28	0.75	95.06	95.06	95.06	139.1
TR-7	42.7	258.2		103.59	9.39	0.85	95.06	95.06		
TR-6	42.4	215.5	5.30	104.13	10.47	0.00	95.63	95.61	95.61	129.7
TR-5	43.4	173.1		104.13	10.42	0.00	95.63	95.61		
TR-4	39.0	129.7	5.54	102.55	10.42	0.00	95.68	95.66	95.66	137.5
TR-3	46.0	90.7	102.55	7.69	0.19	95.05	95.05	95.05	95.05	139.1
TR-2	44.7	44.7	102.55	7.89	0.38	95.04	95.04	95.04	95.04	84.7
TR-1	0.0	0.0	102.55	7.89	0.38	95.04	95.04	95.04	95.04	105.5

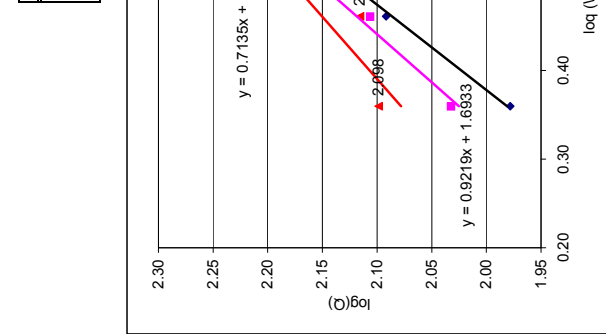
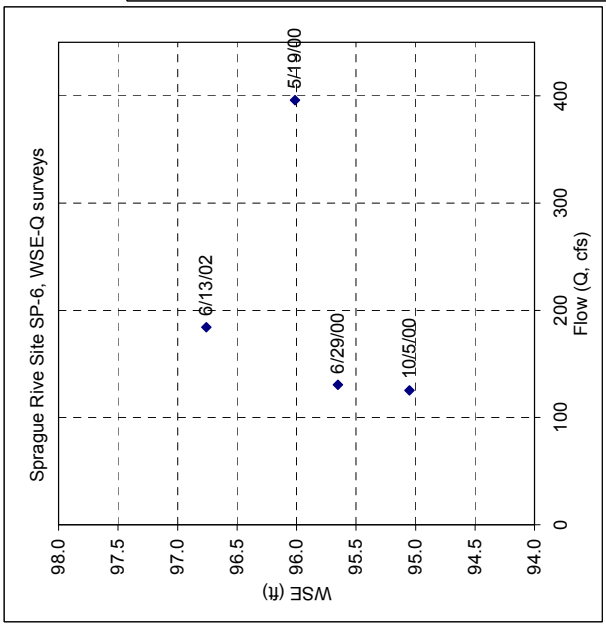
Average Q (cfs) = 128.4

WSE Survey

Dist	River	Sta	BS	HI	FS	Rod	Depth	WSE	Ave	Q
(ft)		(ft)	(ft)	(ft)	(ft)	Depth	(ft)	(ft)	WSE	(cfs)
TR-10	53.0	406.2	4.24	104.24	7.46	0.00	96.78	96.77	96.77	163.6
TR-9	49.0	353.2	4.10	104.10	7.34	0.00	96.78	96.78	96.78	185.6
TR-8	46.0	304.2		104.39	7.46	0.00	96.78	96.78	96.78	192.9
TR-7	42.7	258.2		104.39	7.46	0.00	96.78	96.77	96.77	195.5
TR-6	42.4	215.5	7.47	104.50	7.34	0.00	96.77	96.76	96.76	197.8
TR-5	43.4	173.1	5.56	104.39	7.48	0.00	96.76	96.76	96.76	190.6
TR-4	39.0	129.7	5.67	104.50	7.48	0.00	96.75	96.76	96.76	193.9
TR-3	46.0	90.7	7.48	104.50	7.48	0.00	96.75	96.76	96.76	182.8
TR-2	44.7	44.7	7.49	104.50	7.49	0.00	96.75	96.75	96.75	182.1
TR-1	0.0	0.0	7.5	104.50	7.49	0.00	96.74	96.74	96.74	157.9

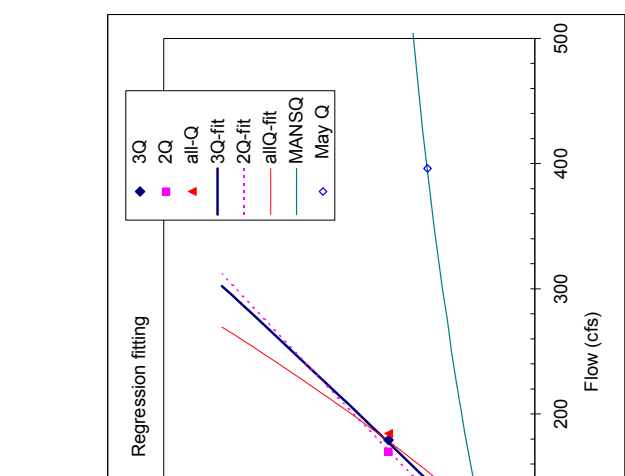
Average Q (cfs) = 164.3

date	WSE	Q	V-D TR
5/19/2000	96.01	396.2	1 TR
6/29/2000	96.65	130.5	10 TRs
10/5/2000	95.05	125.4	10 TRs
6/13/2002	96.76	184.3	10 TRs

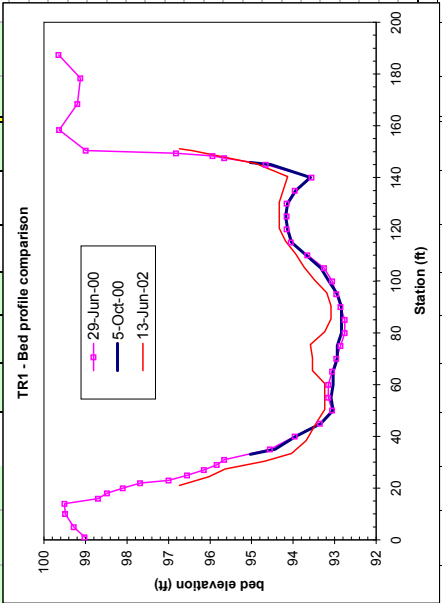


Date	all-Q	log(all-Q)	3Q	log(3Q)	SZF(ft)	2Q	log(2Q)	WSE	log(wse)
6/29/2000	130.5	2.116	127.7	2.106	92.76	123.5	2.092	95.65	0.461
10/5/2000	125.4	2.098	107.7	2.032	95.1	197.8	1.978	95.05	0.360
6/13/2002	184.3	2.265	179.2	2.253	170.0	2.230	96.76	0.602	

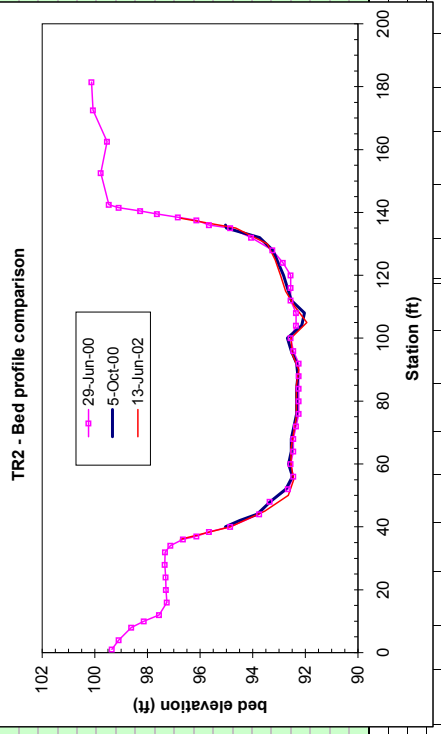
	WSE	3Q	2Q	all-Q
94.5	82.2	72.0		98.4
94.7	90.9	80.6		106.4
94.9	99.5	89.2		114.1
95.1	108.1	97.9		121.6
95.3	116.5	106.6		128.9
95.5	125.0	115.4		136.1
95.7	133.4	124.1		143.1
95.9	141.7	132.9		150.0
96.1	150.0	141.7		156.7
96.3	158.3	150.5		163.4
96.5	166.5	159.4		169.9
96.7	174.7	168.2		176.3
96.9	182.8	177.1		182.7
97.1	191.0	186.0		188.9
97.3	199.1	194.9		195.1
97.5	207.1	203.8		201.2
97.7	215.2	212.8		207.2
97.9	223.2	221.7		213.1
98.1	231.2	230.7		219.0
98.3	239.2	239.7		224.9
98.5	247.1	248.7		230.6
98.7	255.1	257.7		236.3
98.9	263.0	266.7		242.0
99.1	270.9	275.7		247.6
99.3	278.7	284.8		253.1
99.5	286.6	293.8		258.6
99.7	294.4	302.9		264.1
99.9	302.2	312.0		269.5



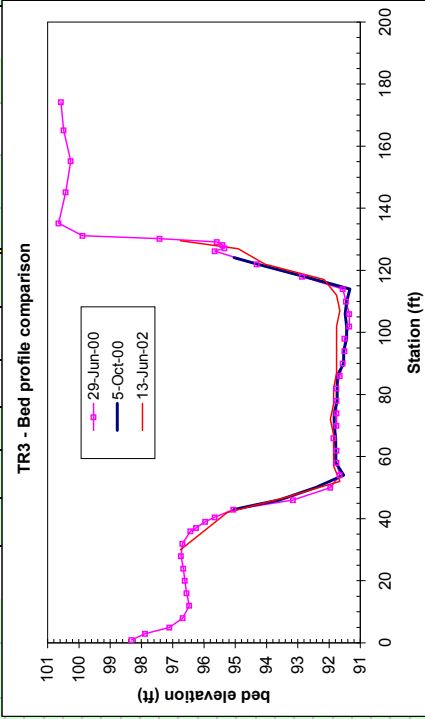
Stream: Sprague River		29-Jun-00			5-Oct-00			13-Jun-02									
Survey	HI-R	HI-L	O	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	q (cfs)	subs.	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	q (cfs)	subs.
Date	(ft)	(ft)	(cfs)					V _{0.2/0.6}	Ave								
6/29/2000	104.67	105.82	128.2	1.0	5.65	99.02				1.1							
10/5/2000			105.5	5.0	5.39	99.28				1.1							
6/13/2002			157.9	10.0	5.18	99.49				1.1							
				14.0	5.17	99.50				1.1							
				16.0	5.97	98.78				1.1							
				20.0	6.57	98.10				1.1							
				22.0	6.99	97.68				1.1							
				23.0	7.67	97.00				1.1							
				25.0	8.12	96.55				1.1							
				27.0	8.52	96.15				1.1							
				29.0	8.83	95.84				1.1							
				REW	31.0	95.66	0.00	0.00	0.00	1.3							
					40.0	93.96	1.70	0.33	1.63	3.1	33.0	95.04	0.00	0.00	0.00	0.00	0.00
					45.0	93.36	2.30	0.15	1.28	1.2	35.0	94.44	0.60	0.00	0.00	0.00	0.00
					50.0	93.06	2.60	0.34	3.91	1.2	40.0	93.94	1.10	0.00	0.00	0.00	0.00
					55.0	93.16	2.50	0.95	10.86	4.1	45.0	93.34	1.70	0.56	0.55	4.68	1.2
					60.0	93.16	2.50	0.97	11.06	4.3	50.0	93.04	2.00	0.66	0.66	6.60	4.1
					65.0	93.06	2.60	0.82	10.06	4.3	55.0	93.09	1.95	0.64	0.64	6.24	4.3
					70.0	92.96	2.70	0.91	11.75	4.3	60.0	93.04	2.00	0.57	0.57	5.70	4.3
					75.0	92.86	2.80	0.91	11.97	4.3	65.0	92.94	2.10	0.64	0.64	6.40	4.3
					80.0	92.76	2.90	0.83	11.31	4.3	70.0	92.94	2.10	0.57	0.57	5.99	4.3
					85.0	92.76	2.90	0.80	10.88	4.3	75.0	92.94	2.10	0.78	0.78	8.19	4.3
					90.0	92.86	2.80	0.78	10.33	4.1	80.0	92.84	2.20	0.83	0.83	9.13	4.3
					100.0	92.96	2.70	0.67	7.90	4.1	85.0	92.84	2.20	0.82	0.82	9.02	4.3
					105.0	93.26	2.40	0.46	5.64	4.1	90.0	92.84	2.20	0.91	0.91	10.01	4.1
					110.0	93.66	2.00	-0.01	-0.10	4.1	95.0	92.94	2.10	0.50	0.50	5.25	4.1
					120.0	94.16	1.50	0.00	0.00	4.3	100.0	93.14	1.90	0.56	0.56	5.32	4.1
					125.0	94.16	1.50	0.00	0.02	4.3	105.0	93.34	1.70	0.62	0.62	5.27	4.1
					130.0	94.16	1.50	0.10	0.75	4.3	110.0	93.34	1.70	0.62	0.62	5.27	4.1
					135.0	93.96	1.70	0.00	0.00	3.1	115.0	93.69	1.35	0.91	0.91	6.14	4.1
					140.0	93.56	2.10	0.17	1.79	1.3	120.0	94.04	1.00	0.60	0.60	3.00	4.3
					145.0	94.66	1.00	0.00	0.00	1.2	125.0	94.19	0.85	0.42	0.42	1.79	4.3
					LEW	147.5	95.66	0.00	0.00	1.2	130.0	94.14	0.90	0.91	0.91	4.10	4.3
										1.1	145.0	94.54	0.50	0.12	0.12	0.17	1.2
										1.1	148.4	9.88	95.94	0.00	0.00	0.00	0.00
										1.1	149.4	9.00	96.82	0.00	0.00	0.00	0.00
										1.1	150.4	6.83	98.99	0.00	0.00	0.00	0.00
										1.1	158.4	6.19	99.63	0.00	0.00	0.00	0.00
										1.1	168.4	6.63	99.19	0.00	0.00	0.00	0.00
										1.1	178.4	6.70	99.12	0.00	0.00	0.00	0.00
										1.1	187.4	6.17	99.65	0.00	0.00	0.00	0.00
										1.1							
										1.1							
										1.1							
										1.1							



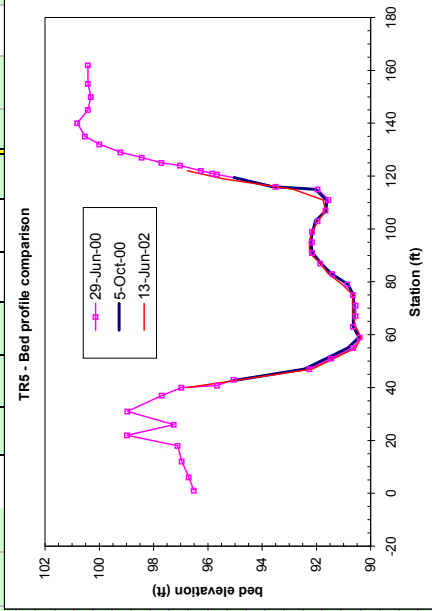
Stream: Sprague River		29-Jun-00				5-Oct-00				13-Jun-02								
Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	V _{0.8}	Ave	q (cfs)	subst.	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	V _{0.8}	Ave	q (cfs)	subst.	
1.0	5.32	99.35						1.1										
4.0	5.58	99.09						1.1										
8.0	6.06	98.61						1.1										
10.0	6.53	98.14						1.1										
12.0	7.11	97.56						1.1										
16.0	7.41	97.26						1.1										
20.0	7.38	97.29						1.1										
24.0	7.36	97.31						1.1										
28.0	7.33	97.34						1.1										
32.0	7.34	97.33						1.1										
34.0	7.55	97.12						1.1										
36.0	8.02	96.65						1.1										
37.0	8.53	96.14						1.1										
REW	38.4	95.66	0.00	0.00				1.1										
	40.0	94.86	0.80	0.10	0.22			1.1										
	44.0	93.76	1.90	0.03	0.03	0.23		1.2										
	48.0	93.36	2.30	0.10	0.10	0.92		1.2										
	52.0	92.66	3.00	0.50	0.48	5.70		1.3										
	56.0	92.46	3.20	0.62	0.49	0.56	7.10	4.3										
	60.0	92.56	3.10	0.66	0.63	0.65	8.00	4.3										
	64.0	92.46	3.20	0.65	0.58	0.62	7.87	4.3										
	68.0	92.46	3.20	0.64	0.62	0.63	8.06	4.3										
	72.0	92.36	3.30	0.74	0.63	0.69	9.04	4.3										
	76.0	92.26	3.40	0.76	0.67	0.72	9.72	4.3										
	80.0	92.26	3.40	0.72	0.55	0.64	8.64	4.3										
	84.0	92.26	3.40	0.69	0.64	0.67	9.04	4.3										
	88.0	92.26	3.40	0.67	0.58	0.63	8.50	4.3										
	92.0	92.26	3.40	0.61	0.31	0.46	6.26	4.3										
	96.0	92.46	3.20	0.53	0.55	0.54	6.91	4.3										
	100.0	92.56	3.10	0.61	0.01	0.31	3.84	4.3										
	104.0	92.36	3.30	0.48	0.34	0.41	5.41	1.1										
	108.0	92.36	3.30	0.45	0.27	0.36	4.75	1.1										
	112.0	92.56	3.10	0.43	0.18	0.31	3.78	1.3										
	116.0	92.56	3.10	0.26	0.15	0.21	2.54	4.3										
	120.0	92.56	3.10	0.20	0.05	0.13	1.55	1.4										
	124.0	92.86	2.80	0.13	0.03	0.08	0.90	4.3										
	128.0	93.26	2.40	-0.01	-0.01	-0.01	-0.10	1.2										
	in veg	132.0	94.06	1.60	-0.02	-0.02	-0.11	1.2										
	in veg	135.0	94.86	0.80	-0.05	-0.05	-0.08	1.2										
	LEW	136.0	95.66	0.00	0.00	0.00	0.00	1.2										
	137.5	9.68	96.14					1.1										
	138.5	8.98	96.84					1.1										
	139.5	8.18	97.64					1.1										
	140.5	7.55	98.27					1.1										
	141.5	6.73	99.09					1.1										
	142.5	6.35	99.47					1.1										
	152.5	6.05	99.77					1.1										
	162.5	6.29	99.53					1.1										
	172.5	5.75	100.07					1.1										
	181.5	5.70	100.12					1.1										



Stream: Sprague River		29-Jun-00				5-Oct-00				13-Jun-02													
Site: 646	Transsect: 3	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	V _{0.20.6}	V _{0.8}	Ave	q (cfs)	subs.	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	V _{0.20.6}	V _{0.8}	Ave	Angle (deg)	q (cfs)	subs.	
		1.0	6.35	98.32							1.1												
		3.0	6.79	97.88							1.1												
		5.0	7.57	97.10							1.1												
		8.0	7.99	96.68							1.1												
		12.0	8.20	96.47							1.1												
		16.0	8.12	96.55							1.1												
		20.0	8.06	96.61							1.1												
		24.0	8.01	96.66							1.1												
		28.0	7.94	96.73							1.1												
		32.0	7.98	96.69							1.1												
		36.0	8.24	96.43							1.1												
		37.0	8.42	96.25							1.1												
		39.0	8.71	95.96							1.1												
		REW	40.5	95.66	0.00	0.00				0.00	0.00	1.1											
			43.5	95.06	0.60	0.01	0.01	0.01	0.01	0.01	0.02	1.2											
			46.0	93.16	2.50	0.02	0.38	0.20	0.20	1.75	1.2												
			in veg	50.0	91.96	3.70	-0.12	-0.07	-1.04	1.2													
				54.0	91.66	4.00	0.37	0.41	0.39	6.24	1.4												
				58.0	91.76	3.90	0.47	0.51	0.49	7.64	4.2												
				62.0	91.76	3.90	0.55	0.58	0.57	8.81	4.2												
				66.0	91.86	3.80	0.63	0.65	0.64	9.73	4.2												
				70.0	91.76	3.90	0.63	0.68	0.66	10.22	4.2												
				74.0	91.76	3.90	0.61	0.69	0.65	10.14	4.2												
				78.0	91.76	3.90	0.54	0.72	0.63	9.83	4.2												
				82.0	91.76	3.90	0.54	0.69	0.62	9.59	4.2												
				86.0	91.66	4.00	0.62	0.69	0.66	10.48	4.2												
				90.0	91.56	4.10	0.51	0.69	0.60	9.84	4.2												
				94.0	91.51	4.15	0.54	0.61	0.58	9.55	4.2												
				98.0	91.51	4.15	0.55	0.57	0.56	9.30	4.2												
				102.0	91.36	4.30	0.41	0.51	0.46	7.91	4.1												
				106.0	91.36	4.30	0.30	0.44	0.37	6.36	1.1												
				110.0	91.46	4.20	0.27	0.30	0.29	4.79	4.1												
				114.0	91.56	4.10	-0.02	0.23	0.11	1.72	1.1												
				118.0	92.86	2.80	-0.09	0.13	0.02	0.22	1.1												
				122.0	94.31	1.35	0.22	0.22	1.22	2.1													
				LEW	126.2	95.66	0.00	0.00	0.00	0.00	0.00	1.2											
				127.2	9.33	95.34					1.1												
				128.2	9.26	95.41					1.1												
				129.2	9.08	95.59					1.1												
				130.2	8.40	97.42					1.1												
				131.2	5.94	99.88					1.1												
				132.2	5.17	100.65					1.1												
				133.2	5.40	100.42					1.1												
				134.2	5.56	100.26					1.1												
				135.2	5.33	100.49					1.1												
				136.2	5.25	100.57					1.1												

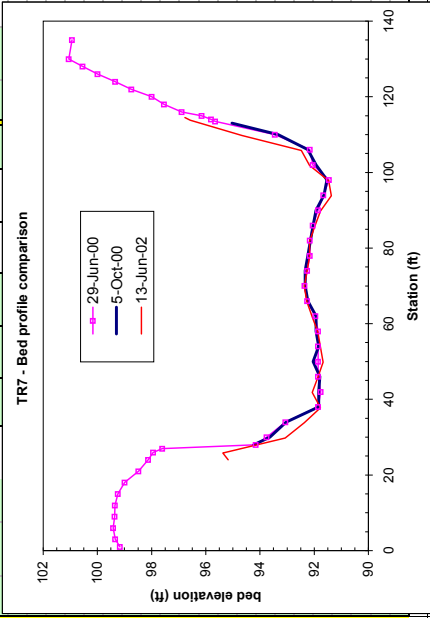


Stream: Sprague River				29-Jun-00				5-Oct-00				13-Jun-02										
Survey Date	HI-R (ft)	HI-L (ft)	Q (cfs)	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	V _{0.2/0.6}	Ave	q (cfs)	sub.	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	V _{0.2/0.6}	Ave	q (cfs)	sub.	
6/29/2000	102.72	106.10	131.4	1.0	8.49	96.52																
10/5/2000			135.8	6.0	8.31	96.70																
6/13/2002			190.6	12.0	8.05	96.96																
				18.0	7.90	97.11																
				22.0	6.03	98.98																
				26.0	5.47	97.25																
				31.0	3.75	98.97																
				37.0	5.02	97.70																
				40.0	5.75	96.97																
				REW	40.8	95.66	0.00	0.00		0.00	0.00	2.1										
				in woo	43.0	95.06	0.60	-0.01	-0.01	-0.02	2.1											
				in woo	47.0	92.26	3.40	-0.02	0.04	0.01	0.14	2.1										
				in woo	51.0	91.46	4.20	0.29	0.30	0.30	4.96	4.2										
					55.0	90.66	5.00	0.46	0.43	0.45	8.90	4.2										
					59.0	90.41	5.25	0.40	0.54	0.47	9.87	4.2										
					63.0	90.66	5.00	0.42	0.62	0.52	10.40	4.2										
					67.0	90.56	5.10	0.43	0.62	0.53	10.71	4.2										
					71.0	90.56	5.10	0.48	0.67	0.58	11.73	2.3										
					75.0	90.66	5.00	0.43	0.75	0.59	11.80	2.3										
					79.0	90.86	4.80	0.50	0.61	0.56	10.66	3.4										
					83.0	91.41	4.25	0.57	0.60	0.59	9.95	3.4										
					87.0	91.86	3.80	0.42	0.77	0.60	9.04	3.4										
					91.0	92.16	3.50	0.56	0.55	0.56	7.77	3.4										
					95.0	92.16	3.50	0.34	0.52	0.43	6.02	3.4										
					99.0	92.16	3.50	0.37	0.49	0.43	6.02	3.4										
					103.0	91.96	3.70	0.31	0.44	0.38	5.55	3.4										
					107.0	91.66	4.00	0.07	0.45	0.26	4.16	2.3										
					111.0	91.56	4.10	0.02	0.23	0.13	2.05	2.1										
					115.0	91.96	3.70	0.02	0.12	0.07	0.65	2.1										
					116.0	93.51	2.15	0.18	0.18	1.10	2.0											
					119.5	95.66	0.00	0.00		0.00	0.00	2.1										
					121.0	102.7	95.83															
					122.0	9.85	96.25															
					124.0	9.08	97.02															
					125.0	8.39	97.71															
					127.0	7.67	98.43															
					129.0	6.89	99.21															
					132.0	6.11	99.99															
					135.0	5.57	100.53															
					140.0	5.29	100.81															
					145.0	5.68	100.42															
					150.0	5.79	100.31															
					155.0	5.68	100.42															
					162.0	5.68	100.42															

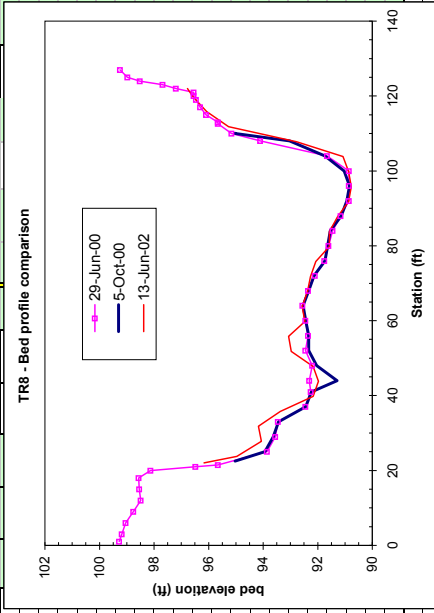


Stream: Sprague River				29-Jun-00						5-Oct-00						13-Jun-02																
Survey Date	HHR (ft)	HL-L (ft)	Q (cfs)	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	Ave	q (cfs)	sub	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	Ave	q (cfs)	sub	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	Ave	q (cfs)	sub					
				adj (ft)						$V_{0.20.6}$	$V_{0.8}$																					
6/29/2000	103.99	106.10	129.1	3.0	5.72	98.27	2.20	0.00	0.00	0.00	0.00	31.9	95.04	95.04	0.00	0.00	0.00	0.00	0.00	2.1												
10/5/2000	6		139.1	6.0	5.22	98.77	2.80	-0.09	0.07	-0.01	-0.11	34.0	93.64	93.64	1.40	0.04	0.04	0.04	0.17	2.1	veg											
6/13/2002			197.8	9.0	4.82	99.17	4.20	3.25	0.04	0.05	0.59	42.0	92.84	92.84	2.20	0.00	0.00	0.00	0.00	2.1	veg											
				12.0	4.68	99.31	4.60	4.00	0.30	0.42	0.36	46.0	91.84	91.84	3.20	0.34	0.12	0.23	0.54	2.3	veg											
				15.0	4.63	99.36	4.50	4.50	0.40	0.49	0.45	50.0	91.24	91.24	3.80	0.63	0.45	0.54	8.21	2.3												
				21.0	4.35	99.64	4.16	4.50	0.40	0.49	0.45	50.0	91.24	91.24	3.80	0.63	0.45	0.54	8.21	2.3												
				24.0	4.47	99.52	4.16	4.50	0.40	0.49	0.45	50.0	91.24	91.24	3.80	0.63	0.45	0.54	8.21	2.3												
				27.0	5.26	98.73	4.16	4.50	0.40	0.49	0.45	50.0	91.24	91.24	3.80	0.63	0.45	0.54	8.21	2.3												
				28.0	5.95	98.04	4.16	4.50	0.40	0.49	0.45	50.0	91.24	91.24	3.80	0.63	0.45	0.54	8.21	2.3												
				29.0	6.22	97.77	4.16	4.50	0.40	0.49	0.45	50.0	91.24	91.24	3.80	0.63	0.45	0.54	8.21	2.3												
				30.0	7.30	96.69	4.16	4.50	0.40	0.49	0.45	50.0	91.24	91.24	3.80	0.63	0.45	0.54	8.21	2.3												
				31.0	8.34	95.65	4.16	4.50	0.40	0.49	0.45	50.0	91.24	91.24	3.80	0.63	0.45	0.54	8.21	2.3												
				REW			31.9					31.9	95.04	95.04	0.00	0.00	0.00	0.00	0.00	2.1												
				34.0			34.0					34.0	93.64	93.64	1.40	0.04	0.04	0.04	0.17	2.1												
				38.0			38.0					38.0	92.84	92.84	2.20	0.00	0.00	0.00	0.00	2.1												
				42.0			42.0					42.0	92.44	92.44	2.60	0.19	0.02	0.11	1.09	2.1												
				46.0			46.0					46.0	91.84	91.84	3.20	0.34	0.12	0.23	0.54	2.3												
				50.0			50.0					50.0	91.24	91.24	3.80	0.63	0.45	0.54	8.21	2.3												
				54.0			54.0					54.0	91.14	91.14	3.90	0.73	0.56	0.65	10.06	2.3												
				58.0			58.0					58.0	91.34	91.34	3.70	0.79	0.70	0.75	11.03	2.3												
				62.0			62.0					62.0	91.34	91.34	3.70	0.78	0.65	0.72	10.58	2.3												
				66.0			66.0					66.0	91.34	91.34	3.70	0.93	0.74	0.84	12.36	2.3												
				70.0			70.0					70.0	91.54	91.54	3.50	0.98	0.68	0.83	11.62	2.3												
				74.0			74.0					74.0	91.89	91.89	3.15	0.88	0.66	0.77	9.70	4.2												
				78.0			78.0					78.0	92.14	92.14	2.90	0.90	0.59	0.75	8.64	4.2												
				82.0			82.0					82.0	91.34	91.34	3.70	1.03	0.64	0.84	12.36	4.2												
				86.0			86.0					86.0	92.44	92.44	2.60	0.86	0.76	0.81	8.42	4.2												
				90.0			90.0					90.0	92.34	92.34	2.70	0.88	0.61	0.75	8.05	4.2												
				94.0			94.0					94.0	92.54	92.54	2.50	0.80	0.57	0.69	6.85	4.2												
				98.0			98.0					98.0	92.64	92.64	2.40	0.66	0.66	0.66	5.34	4.2												
				102.0			102.0					102.0	92.64	92.64	2.40	0.66	0.66	0.66	5.34	4.2												
				106.0			106.0					106.0	92.24	92.24	2.80	0.51	0.02	0.27	2.97	2.4												
				110.0			110.0					110.0	91.94	91.94	3.10	0.26	-0.03	0.12	1.43	2.1												
				114.0			114.0					114.0	94.04	94.04	1.00	0.27	0.00	0.27	0.81	2.0												
				118.0			118.0					118.0	95.04	95.04	0.00	0.00	0.00	0.00	0.00	2.1												
				122.0	9.80	96.30	0.00	0.00	0.00	0.00	0.00	122.0	95.04	95.04	0.00	0.00	0.00	0.00	0.00	2.1												
				126.0	9.18	96.30	0.00	0.00	0.00	0.00	0.00	126.0	95.04	95.04	0.00	0.00	0.00	0.00	0.00	2.1												
				130.0	8.68	97.42	0.00	0.00	0.00	0.00	0.00	130.0	96.30	96.30	0.00	0.00	0.00	0.00	0.00	2.1												
				134.0	7.96	98.14	0.00	0.00	0.00	0.00	0.00	134.0	96.30	96.30	0.00	0.00	0.00	0.00	0.00	2.1												
				138.0	7.05	99.05	0.00	0.00	0.00	0.00	0.00	138.0	96.30	96.30	0.00	0.00	0.00	0.00	0.00	2.1												
				142.0	6.08	100.02	0.00	0.00	0.00	0.00	0.00	142.0	96.30	96.30	0.00	0.00	0.00	0.00	0.00	2.1												
				146.0	4.90	101.20	0.00	0.00	0.00	0.00	0.00	146.0	96.30	96.30	0.00	0.00	0.00	0.00	0.00	2.1												
				150.0	5.13	100.97	0.00	0.00	0.00	0.00	0.00	150.0	96.30	96.30	0.00	0.00	0.00	0.00	0.00	2.1												
				154.0	5.51	100.59	0.00	0.00	0.00	0.00	0.00	154.0	96.30	96.30	0.00	0.00	0.00	0.00	0.00	2.1												
				158.0	5.44	100.66	0.00	0.00	0.00	0.00	0.00	158.0	96.30	96.30	0.00	0.00	0.00	0.00	0.00	2.1												
				162.0	5.29	100.81	0.00	0.00	0.00	0.00	0.00	162.0	96.30	96.30	0.00	0.00	0.00	0.00	0.00	2.1												
				166.0	5.05	101.05	0.00	0.00	0.00	0.00	0.00	166.0	96.30	96.30	0.00	0.00	0.00	0.00	0.00	2.1												
				170.0																2.1												
				174.0																2.1												
				178.0																												

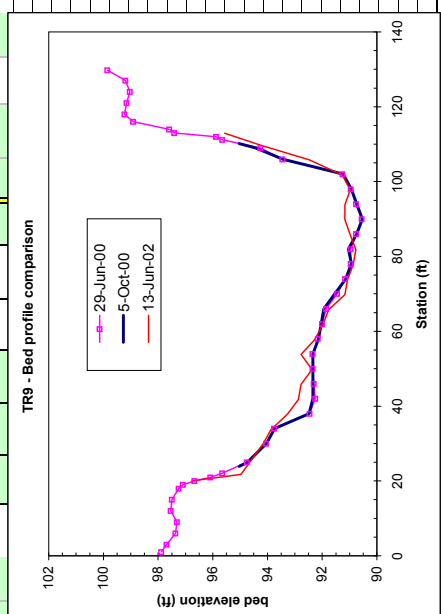
Stream: Sprague River		29-Jun-00		5-Oct-00		13-Jun-02		q	
Site: 646	Transsect: 7	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	V _{0.20.6}	Ave	sub.
Habitat: Rffile	HI-R	HI-L	Q	q	q	q	q	q	q
Survey Date	HI-R (ft)	HI-L (ft)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
6/29/2000	103.99	106.10	137.5	1.1	1.1	1.1	1.1	1.1	1.1
10/5/2000	6.0	4.57	99.42	1.1	1.1	1.1	1.1	1.1	1.1
6/13/2002	9.0	4.63	99.36	1.1	1.1	1.1	1.1	1.1	1.1
	12.0	4.64	99.35	1.1	1.1	1.1	1.1	1.1	1.1
	15.0	4.75	99.24	1.1	1.1	1.1	1.1	1.1	1.1
	18.0	5.00	98.99	1.1	1.1	1.1	1.1	1.1	1.1
	21.0	5.51	98.48	1.1	1.1	1.1	1.1	1.1	1.1
	24.0	5.86	98.13	1.1	1.1	1.1	1.1	1.1	1.1
	26.0	6.05	97.94	1.1	1.1	1.1	1.1	1.1	1.1
	27.0	6.38	97.61	1.1	1.1	1.1	1.1	1.1	1.1
	REW: 28.0		94.16	1.50	0.07	0.07	0.11	0.11	2.1
	30.0		93.76	1.90	0.06	0.06	0.34	0.34	2.1
	34.0		93.06	2.60	-0.02	0.16	0.07	0.73	2.1
	38.0		91.86	3.80	0.02	0.19	0.11	1.60	2.1
	42.0		91.76	3.90	0.29	0.40	0.35	5.38	2.1
	46.0		91.86	3.80	0.20	0.50	0.35	5.32	2.3
	50.0		91.86	3.80	0.32	0.61	0.57	8.59	2.3
	54.0		91.86	3.80	0.42	0.62	0.52	7.90	2.3
	58.0		91.86	3.80	0.45	0.61	0.53	8.06	2.3
	62.0		91.96	3.70	0.56	0.67	0.62	9.10	2.3
	66.0		92.26	3.40	0.58	0.68	0.63	8.57	2.3
	70.0		92.36	3.30	0.54	0.71	0.63	8.25	2.4
	74.0		92.26	3.40	0.61	0.72	0.67	9.04	2.4
	78.0		92.16	3.50	0.61	0.68	0.65	9.03	2.4
	82.0		92.16	3.50	0.51	0.63	0.57	7.98	2.4
	86.0		92.06	3.60	0.58	0.76	0.67	9.65	2.4
	90.0		91.86	3.80	0.57	0.72	0.65	9.80	2.4
	94.0		91.66	4.00	0.57	0.65	0.61	9.76	2.4
	98.0		91.46	4.20	0.47	0.58	0.53	8.82	2.4
	102.0		92.06	3.60	0.44	0.43	0.44	6.26	2.4
	106.0		92.16	3.50	0.18	0.12	0.15	2.10	2.4
	110.0		93.46	2.70	0.14	0.14	0.14	1.16	2.1
	LEW: 113.5		95.66	0.00	0.00	0.00	0.00	0.00	2.1
	114.0		10.29	95.81					1.1
	115.0		9.95	96.15					1.1
	116.0		9.21	96.89					1.1
	118.0		8.56	97.54					1.1
	120.0		8.10	98.00					1.1
	122.0		7.36	98.74					1.1
	124.0		6.76	99.34					1.1
	126.0		6.11	99.99					1.1
	128.0		5.55	100.55					1.1
	130.0		5.04	101.06					1.1
	135.0		5.16	100.94					1.1
	140.0		5.55	100.55					1.1
	145.5		5.25	100.85					1.1



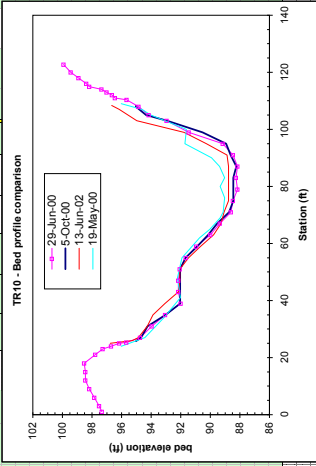
Stream: Spague River			29-Jun-00			5-Oct-00			13-Jun-02									
Sta	FS	Ground	Depth	Vel (ft/s)	Ave	q	sub.	Sta	FS	Ground	Depth	Vel (ft/s)	Ave	q	sub.			
(ft)	(ft)	(ft)	(ft)	V _{0.206}	V _{0.8}	(cfs)		(ft)	(ft)	(ft)	(ft)	V _{0.206}	V _{0.8}	(cfs)				
1.0	4.71	99.28					1.1											
3.0	4.81	99.18					1.1											
6.0	4.95	99.04					1.1											
9.0	5.23	98.76					1.1											
12.0	5.50	98.49					1.1											
15.0	5.45	98.54					1.1											
18.0	5.43	98.56					1.1											
20.0	5.86	98.13					1.1											
21.0	7.51	96.48					1.1											
REW	21.5	95.66	0.00	0.00		0.00	0.00	22.5	95.04	95.04	0.00	0.00		0.00	0.00	2.1		
	25.0	93.86	1.80	0.01	0.01	0.07	2.1	veg	25.0	93.94	1.10	-0.01	-0.01	-0.04	2.1	1.8	24	
	29.0	93.56	2.10	0.00	0.00	0.00	0.00	veg	29.0	93.64	1.40	0.00	0.00	0.00	2.1	5.8	28	
woodh	33.0	93.46	2.20	0.01	0.01	0.09	2.1	veg	33.0	93.44	1.60	-0.03	-0.03	-0.19	2.1	9.8	32	
	37.0	92.46	3.20	0.10	0.29	0.20	2.50	veg	37.0	92.44	2.60	0.42	-0.04	0.19	1.98	2.1	13.8	36
	41.0	92.26	3.40	0.00	0.41	0.21	2.44	veg	41.0	92.24	2.80	0.43	0.00	0.22	2.11	2.1	17.8	40
	44.0	92.21	3.35	0.43	0.55	0.49	5.75	2.3	44.0	91.29	3.75	0.63	0.49	0.56	7.35	2.3	21.8	44
	48.0	92.46	3.20	0.26	0.61	0.44	5.57	2.1	48.0	92.04	3.00	0.72	0.27	0.50	5.94	2.3	25.8	48
	52.0	92.46	3.20	0.41	0.63	0.52	6.86	2.3	52.0	92.34	2.70	0.79	0.62	0.71	7.61	2.3	33.8	52
	56.0	92.36	3.30	0.45	0.59	0.52	6.66	2.3	56.0	92.34	2.70	0.79	0.62	0.71	7.61	2.3	33.8	56
	60.0	92.46	3.20	0.49	0.64	0.57	7.01	2.3	60.0	92.54	2.60	0.84	0.61	0.73	7.54	2.3	37.8	60
	64.0	92.36	3.30	0.53	0.62	0.58	7.59	2.4	64.0	92.54	2.60	0.84	0.61	0.73	7.54	2.3	37.8	64
	68.0	92.11	3.55	0.46	0.60	0.53	7.53	2.4	68.0	92.14	2.90	0.85	0.73	0.79	9.16	2.4	45.8	68
	72.0	91.76	3.90	0.58	0.62	0.60	9.36	2.4	72.0	91.74	3.30	0.85	0.68	0.77	10.10	2.4	53.8	72
	80.0	91.61	4.05	0.63	0.65	0.64	10.37	2.4	80.0	91.64	3.40	0.90	0.82	0.86	11.70	2.4	57.8	80
	84.0	91.46	4.20	0.61	0.65	0.63	10.58	2.4	84.0	91.54	3.50	0.91	0.78	0.85	11.83	2.4	61.8	84
	88.0	91.16	4.50	0.57	0.73	0.65	11.70	4.2	88.0	91.14	3.90	0.88	0.75	0.82	12.71	4.2	65.8	88
	92.0	90.86	4.80	0.51	0.67	0.59	11.33	4.2	92.0	90.94	4.10	0.75	0.70	0.73	11.89	4.2	69.8	92
	96.0	90.86	4.80	0.45	0.43	0.44	8.45	2.3	96.0	90.84	4.20	0.57	0.52	0.55	9.16	2.3	73.8	96
	100.0	90.86	4.80	0.40	0.27	0.34	6.43	2.3	100.0	91.04	4.00	0.49	0.27	0.38	6.08	2.3	77.8	100
	104.0	91.66	4.00	0.01	0.26	0.14	2.16	2.1	104.0	91.74	3.30	0.44	-0.02	0.21	2.77	2.1	81.8	104
	108.0	94.11	1.55	0.11		0.51		veg	108.0	93.04	2.00	0.08	0.08	0.48	2.1	85.8	108	
	110.0	95.16	0.50	-0.15		-0.15	-0.17	1.2	veg	110.0	95.04	0.00	0.00	0.00	0.00	1.2	89.8	112
	112.6	95.66	0.00	0.00		0.00	0.00	1.2	LEW	110.1					1.2	93.8	116	
	113.0	10.44	95.66															
	115.0	10.01	96.09															
	117.0	9.79	96.31															
	119.0	9.64	96.46															
	120.0	9.55	96.55															
	121.0	9.55	96.55															
	122.0	8.90	97.20															
	123.0	8.41	97.69															
	124.0	7.58	98.52															
	125.0	7.12	98.98															
	127.0	6.85	99.25															
	129.0	6.46	99.64															
	131.0	5.91	100.19															
	133.0	5.35	100.75															
	135.0	5.15	100.95															
	137.4	5.00	101.10															



Stream: Sprague River				29-Jun-00				5-Oct-00				13-Jun-02											
Site	Date	HL-L (ft)	Q (cfs)	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	V _{0.206} Ave	V _{0.8} Ave	q (cfs)	sub.	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	V _{0.206} Ave	V _{0.8} Ave	q (cfs)	sub.		
6/29/2000	103.99	106.11	132.6	1.0	6.11	97.88																	
10/5/2000			139.1	3.0	6.62	97.37																	
6/13/2002			185.6	9.0	6.68	97.31																	
				12.0	6.45	97.54																	
				15.0	6.50	97.49																	
				18.0	6.74	97.25																	
				19.0	6.90	97.09																	
				20.0	7.32	96.67																	
				21.0	7.90	96.09																	
				REW	22.1	95.66	0.00	0.00	0.00	0.00	0.00	1.2		23.9	95.04	95.04	0.00	0.00	0.00	0.00	0.00	1.1	
					25.0	94.76	0.90	-0.01	-0.01	-0.04	0.00	1.2		25.0	94.74	94.74	0.30	-0.03	-0.03	0.00	0.00	0.00	1.2
					30.0	94.06	1.60	-0.03	-0.03	-0.22	0.00	1.2	veg	30.0	94.04	94.04	1.00	-0.03	-0.03	0.00	0.00	0.00	1.2
					34.0	93.76	1.90	0.06	0.06	0.46	0.00	0.46	2.1	34.0	93.74	93.74	1.30	0.02	0.02	0.10	0.10	2.1	
					38.0	92.46	3.20	0.02	0.21	1.47	0.21	1.47	2.1	38.0	92.49	92.49	2.55	0.22	-0.08	0.07	0.71	2.1	
					42.0	92.26	3.40	0.29	0.44	3.37	4.96	2.3	2.3	42.0	92.34	92.34	2.70	0.43	0.36	0.40	4.27	2.3	
					46.0	92.31	3.35	0.32	0.45	0.39	5.16	2.3	2.3	46.0	92.34	92.34	2.70	0.57	0.51	0.54	5.83	2.3	
					50.0	92.36	3.30	0.41	0.52	0.47	6.14	2.3	2.3	50.0	92.34	92.34	2.70	0.68	0.50	0.59	6.37	2.3	
					54.0	92.36	3.30	0.46	0.51	0.49	6.40	2.3	2.3	54.0	92.34	92.34	2.70	0.70	0.63	0.67	7.18	2.3	
					58.0	92.16	3.50	0.47	0.59	0.53	7.42	2.3	2.3	58.0	92.14	92.14	2.90	0.71	0.60	0.66	7.60	2.3	
					62.0	92.01	3.65	0.48	0.58	0.52	7.52	2.3	2.3	62.0	92.04	92.04	3.00	0.73	0.65	0.69	8.28	2.3	
					66.0	91.86	3.80	0.53	0.57	0.55	8.36	2.3	2.3	66.0	91.94	91.94	3.10	0.72	0.74	0.73	9.05	2.3	
					70.0	91.46	4.20	0.52	0.56	0.54	9.07	2.3	2.3	70.0	91.54	91.54	3.50	0.76	0.73	0.75	10.43	2.3	
					74.0	91.16	4.50	0.59	0.61	0.60	10.80	2.3	2.3	74.0	91.14	91.14	3.90	0.76	0.76	0.76	11.86	2.3	
					78.0	90.96	4.70	0.62	0.63	11.75	4.2	4.2	4.2	78.0	90.94	90.94	4.10	0.75	0.69	0.72	11.81	4.2	
					82.0	90.96	4.70	0.62	0.58	0.60	11.28	4.2	4.2	82.0	91.04	91.04	4.00	0.87	0.76	0.82	13.04	4.2	
					86.0	90.76	4.90	0.64	0.59	0.62	12.05	4.2	4.2	86.0	90.74	90.74	4.30	0.81	0.77	0.79	13.59	4.2	
					90.0	90.56	5.10	0.63	0.56	0.60	12.14	4.2	4.2	90.0	90.54	90.54	4.50	0.64	0.50	0.57	10.26	4.2	
					94.0	90.76	4.90	0.49	0.46	0.48	9.31	2.4	2.4	94.0	90.74	90.74	4.30	0.65	0.48	0.57	9.72	2.4	
					98.0	90.96	4.70	0.23	0.34	0.29	5.36	2.3	2.3	98.0	90.94	90.94	4.10	0.36	0.36	0.41	6.72	2.3	
					102.0	91.26	4.40	0.15	0.25	0.20	3.52	2.1	2.1	102.0	91.24	91.24	3.80	0.29	0.00	0.15	2.20	2.1	
					106.0	93.46	2.20	-0.04	-0.04	-0.31	0.00	0.00	0.00	106.0	93.44	93.44	1.60	0.04	0.00	0.04	0.22	2.1	
					109.0	94.26	1.40	-0.01	-0.01	-0.04	0.00	0.00	0.00	109.0	94.44	94.44	0.60	0.01	0.00	0.01	0.01	2.1	
					LEW	111.2	95.66	0.00	0.00	0.00	0.00	0.00	2.1	LEW	110.2	95.04	0.00	0.00	0.00	0.00	0.00	0.00	2.1
					112.0	10.23	95.88																
					113.0	8.70	97.41																
					114.0	8.52	97.59																
					116.0	7.20	98.91																
					118.0	6.88	99.23																
					121.0	6.96	99.15																
					124.0	7.08	99.03																
					127.0	6.91	99.20																
					129.8	6.25	99.86																



Stream: Strauge River		29-Jun-00		5-Oct-00		13-Jun-02		19-Mar-00		Angle	
Stn (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	Vel (ft/s)	Vel (ft/s)	Depth (ft)	Vel (ft/s)	Depth (ft)	Vel (ft/s)	Angle (deg)
Stn (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)	Vel (ft/s)	Vel (ft/s)	Depth (ft)	Vel (ft/s)	Depth (ft)	Vel (ft/s)	Angle (deg)
1.0	6.65	97.34									
3.0	6.47	97.52									
6.0	6.15	97.84									
9.0	5.80	98.19									
12.0	5.55	98.44									
15.0	5.36	98.55									
18.0	5.36	98.55									
21.0	6.22	97.27									
24.0	7.29	96.70									
25.0	7.82	96.17									
25.3	8.32	95.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1
25.3	8.32	95.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1
27.0	94.76	99.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1
27.0	94.76	99.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1
31.0	93.96	97.40	-0.04	0.20	0.00	0.00	0.00	0.00	0.00	0.00	2.1
31.0	93.96	97.40	-0.04	0.20	0.00	0.00	0.00	0.00	0.00	0.00	2.1
35.0	92.01	95.21	0.03	0.27	0.15	2.19	2.1	0.01	0.01	0.01	2.1
35.0	92.01	95.21	0.03	0.27	0.15	2.19	2.1	0.01	0.01	0.01	2.1
39.0	92.16	93.50	0.22	0.28	0.25	3.50	2.1	0.01	0.01	0.01	2.1
39.0	92.16	93.50	0.22	0.28	0.25	3.50	2.1	0.01	0.01	0.01	2.1
43.0	92.16	93.50	0.22	0.28	0.25	3.50	2.1	0.01	0.01	0.01	2.1
43.0	92.16	93.50	0.22	0.28	0.25	3.50	2.1	0.01	0.01	0.01	2.1
47.0	92.16	93.50	0.22	0.28	0.25	3.50	2.1	0.01	0.01	0.01	2.1
47.0	92.16	93.50	0.22	0.28	0.25	3.50	2.1	0.01	0.01	0.01	2.1
51.0	92.06	93.60	0.42	0.43	0.43	6.12	2.2	0.01	0.01	0.01	2.1
51.0	92.06	93.60	0.42	0.43	0.43	6.12	2.2	0.01	0.01	0.01	2.1
55.0	91.66	93.00	0.45	0.46	0.46	7.28	2.2	0.01	0.01	0.01	2.1
55.0	91.66	93.00	0.45	0.46	0.46	7.28	2.2	0.01	0.01	0.01	2.1
59.0	90.96	92.70	0.46	0.46	0.46	8.37	2.4	0.01	0.01	0.01	2.1
59.0	90.96	92.70	0.46	0.46	0.46	8.37	2.4	0.01	0.01	0.01	2.1
63.0	90.21	92.65	0.46	0.46	0.46	10.04	2.4	0.01	0.01	0.01	2.1
63.0	90.21	92.65	0.46	0.46	0.46	10.04	2.4	0.01	0.01	0.01	2.1
67.0	89.46	92.60	0.45	0.45	0.45	11.57	2.4	0.01	0.01	0.01	2.1
67.0	89.46	92.60	0.45	0.45	0.45	11.57	2.4	0.01	0.01	0.01	2.1
71.0	88.61	92.65	0.55	0.51	0.53	14.95	4.2	0.01	0.01	0.01	2.1
71.0	88.61	92.65	0.55	0.51	0.53	14.95	4.2	0.01	0.01	0.01	2.1
75.0	88.46	92.60	0.63	0.50	0.57	16.27	4.2	0.01	0.01	0.01	2.1
75.0	88.46	92.60	0.63	0.50	0.57	16.27	4.2	0.01	0.01	0.01	2.1
79.0	88.16	92.50	0.53	0.58	0.56	16.65	5.2	0.01	0.01	0.01	2.1
79.0	88.16	92.50	0.53	0.58	0.56	16.65	5.2	0.01	0.01	0.01	2.1
83.0	88.26	92.40	0.59	0.48	0.54	15.84	5.2	0.01	0.01	0.01	2.1
83.0	88.26	92.40	0.59	0.48	0.54	15.84	5.2	0.01	0.01	0.01	2.1
87.0	88.16	92.50	0.33	0.44	0.39	11.55	5.2	0.01	0.01	0.01	2.1
87.0	88.16	92.50	0.33	0.44	0.39	11.55	5.2	0.01	0.01	0.01	2.1
91.0	88.46	92.70	0.10	0.21	0.16	4.46	5.2	0.01	0.01	0.01	2.1
91.0	88.46	92.70	0.10	0.21	0.16	4.46	5.2	0.01	0.01	0.01	2.1
95.0	89.16	92.50	-0.03	-0.01	-0.02	-0.52	5.2	0.01	0.01	0.01	2.1
95.0	89.16	92.50	-0.03	-0.01	-0.02	-0.52	5.2	0.01	0.01	0.01	2.1
99.0	89.16	92.50	-0.03	-0.01	-0.02	-0.52	5.2	0.01	0.01	0.01	2.1
99.0	89.16	92.50	-0.03	-0.01	-0.02	-0.52	5.2	0.01	0.01	0.01	2.1
103.0	92.96	92.70	-0.03	-0.07	-0.07	-0.41	2.1	0.01	0.01	0.01	2.1
103.0	92.96	92.70	-0.03	-0.07	-0.07	-0.41	2.1	0.01	0.01	0.01	2.1
105.0	94.16	92.50	-0.07	-0.03	-0.07	-0.26	2.1	0.01	0.01	0.01	2.1
105.0	94.16	92.50	-0.07	-0.03	-0.07	-0.26	2.1	0.01	0.01	0.01	2.1
108.0	94.86	92.50	-0.03	-0.06	-0.06	-0.06	2.1	0.01	0.01	0.01	2.1
108.0	94.86	92.50	-0.03	-0.06	-0.06	-0.06	2.1	0.01	0.01	0.01	2.1
110.4	95.66	92.50	0.00	0.00	0.00	0.00	2.1	0.01	0.01	0.01	2.1
110.4	95.66	92.50	0.00	0.00	0.00	0.00	2.1	0.01	0.01	0.01	2.1
111.0	7.54	96.45									
111.0	7.54	96.45									
112.0	7.34	96.65									
112.0	7.34	96.65									
113.0	6.97	97.02									
113.0	6.97	97.02									
115.0	5.81	98.18									
115.0	5.81	98.18									
116.0	5.60	98.39									
116.0	5.60	98.39									
118.0	5.08	98.91									
118.0	5.08	98.91									
120.0	4.55	99.44									
120.0	4.55	99.44									
122.7	4.08	99.91									
122.7	4.08	99.91									



RIFFLE 646
 IOC 1101100100001000101000
 QARD 40.0
 QARD 50.0
 QARD 60.0
 QARD 80.0
 QARD 100.0
 QARD 125.0
 QARD 130.5
 QARD 150.0
 QARD 184.3
 QARD 200.0
 QARD 225.0
 QARD 250.0
 QARD 275.0
 QARD 300.0
 QARD 350.0
 QARD 396.2
 QARD 425.0
 QARD 450.0
 QARD 475.0
 QARD 500.0
 QARD 550.0
 QARD 600.0
 QARD 650.0
 QARD 700.0
 QARD 750.0
 QARD 800.0
 QARD 850.0
 QARD 900.0
 QARD 950.0
 QARD1000.0
 XSEC 1000 0.00 1.0 92.84 .000074
 1000 1.099.02 5.099.28 10.099.49 14.099.50 16.098.70 18.098.48
 1000 20.098.10 22.097.68 23.097.00 25.096.55 27.096.15 29.095.84
 1000 31.095.66 33.095.04 35.094.44 40.093.94 45.093.34 50.093.04
 1000 55.093.09 60.093.04 65.093.04 70.092.94 75.092.94 80.092.84
 1000 85.092.84 90.092.84 95.092.94100.093.14105.093.34110.093.69
 1000115.094.04120.094.14125.094.19130.094.14135.093.94140.093.59
 1000145.094.54145.895.04147.595.66148.495.94149.496.82150.498.99
 1000158.499.63168.499.19178.499.12187.499.65
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.3 3.1 1.2 1.2 4.1 4.3
 NS 1000 4.3 4.3 4.3 4.3 4.3 .02 4.3
 NS 1000 4.1 4.1 .035 4.1 4.1 4.1 4.3
 NS 1000 4.3 4.3 4.3 .018 3.1 .06 1.3 .1 1.2
 NS 1000 1.2 1.1 1.2 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1
 WSL 1000 94.44 94.54 94.62 94.77 94.90 95.04
 WSL 1000 95.07 95.17 95.32 95.38 95.48 95.57
 WSL 1000 95.65 95.74 95.90 96.03 96.11 96.17
 WSL 1000 96.23 96.29 96.40 96.51 96.61 96.70
 WSL 1000 96.80 96.88 96.97 97.05 97.12 97.19
 CAL1 1000 95.04 125.0
 VEL1 1000
 VEL1 1000 0.00 0.00 0.00 0.55 0.66 0.64 0.57 0.64 0.57 0.78 0.83
 VEL1 1000 0.82 0.91 0.50 0.56 0.62 0.91 0.60 0.38 0.42 0.91 0.02 0.10
 VEL1 1000 0.12 0.00 0.00
 CAL2 1000 96.00 396.2
 VEL2 1000
 VEL2 1000
 VEL2 1000
 VEL2 1000
 CAL3 1000 96.00 396.2
 VEL3 1000
 VEL3 1000
 VEL3 1000
 VEL3 1000
 ENDJ

RIFFLE 646
 IOC 1101100100001000101000
 QARD 40.0
 QARD 50.0
 QARD 60.0
 QARD 80.0
 QARD 100.0
 QARD 125.0
 QARD 130.5
 QARD 150.0
 QARD 184.3
 QARD 200.0
 QARD 225.0
 QARD 250.0
 QARD 275.0
 QARD 300.0
 QARD 350.0
 QARD 396.2
 QARD 425.0
 QARD 450.0
 QARD 475.0
 QARD 500.0
 QARD 550.0
 QARD 600.0
 QARD 650.0
 QARD 700.0
 QARD 750.0
 QARD 800.0
 QARD 850.0
 QARD 900.0
 QARD 950.0
 QARD1000.0
 XSEC 1000 0.00 1.0 92.84 .000074
 1000 1.099.35 4.099.09 8.098.61 10.098.14 12.097.56 16.097.26
 1000 20.097.29 24.097.31 28.097.34 32.097.33 34.097.12 36.096.65
 1000 37.096.14 38.495.66 40.095.04 42.094.49 44.093.84 48.093.34
 1000 52.092.74 56.092.49 60.092.64 64.092.54 68.092.54 72.092.44
 1000 76.092.34 80.092.34 84.092.34 88.092.29 92.092.34 96.092.54
 1000100.092.69104.092.14108.092.04112.092.54116.092.69120.092.84
 1000124.093.04128.093.24132.093.74135.095.01136.095.04137.596.14
 1000138.596.84139.597.64140.598.27141.599.09142.599.47152.599.77
 1000162.599.53172.5100.1181.5100.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.2 1.2
 NS 1000 .1 1.3 4.3 4.3 4.3 4.3 .032 4.3
 NS 1000 4.3 .045 4.3 .06 4.3 4.3 4.3 4.3
 NS 1000 4.3 .1 1.1 .07 1.1 1.3 4.3 1.4
 NS 1000 .1 4.3 1.2 .2 1.2 1.2 1.2 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1
 WSL 1000 94.45 94.54 94.62 94.77 94.91 95.05
 WSL 1000 95.08 95.18 95.33 95.39 95.49 95.58
 WSL 1000 95.66 95.75 95.91 96.04 96.12 96.18
 WSL 1000 96.24 96.30 96.41 96.52 96.62 96.71
 WSL 1000 96.81 96.89 96.98 97.06 97.13 97.20
 CAL1 1000 95.04 125.0
 VEL1 1000
 VEL1 1000 0.00 0.00 0.00 0.00 0.16 0.53 0.66 0.56 0.61 0.96
 VEL1 1000 0.73 0.37 0.29 0.43 0.45 0.43 0.41 0.15 0.25 0.28 0.52 0.27
 VEL1 1000 0.09 0.25 0.01 0.00 0.00
 VEL1 1000
 CAL2 1000 96.00 396.2
 VEL2 1000
 VEL2 1000
 VEL2 1000
 VEL2 1000
 VEL2 1000
 CAL3 1000 96.00 396.2
 VEL3 1000
 VEL3 1000
 VEL3 1000
 VEL3 1000
 VEL3 1000
 ENDJ

RIFFLE 646

IOC 1101100100001000101000

QARD	40.0
QARD	50.0
QARD	60.0
QARD	80.0
QARD	100.0
QARD	125.0
QARD	130.5
QARD	150.0
QARD	184.3
QARD	200.0
QARD	225.0
QARD	250.0
QARD	275.0
QARD	300.0
QARD	350.0
QARD	396.2
QARD	425.0
QARD	450.0
QARD	475.0
QARD	500.0
QARD	550.0
QARD	600.0
QARD	650.0
QARD	700.0
QARD	750.0
QARD	800.0
QARD	850.0
QARD	900.0
QARD	950.0
QARD	1000.0
XSEC	1000 0.00 1.0 92.84 .000074
	1000 1.098.32 3.097.88 5.097.10 8.096.68 12.096.47 16.096.55
	1000 20.096.61 24.096.66 28.096.73 32.096.69 36.096.43 37.096.25
	1000 39.095.96 40.595.66 43.095.04 44.594.34 46.093.59 50.092.44
	1000 54.091.54 58.091.79 62.091.79 66.091.79 70.091.84 74.091.84
	1000 78.091.74 82.091.74 86.091.74 90.091.54 94.091.54 98.091.44
	1000102.091.44106.091.49110.091.44114.091.34118.092.79122.094.29
	1000124.195.04126.295.66127.295.34128.295.41129.295.59130.297.42
	1000131.299.88135.2100.7145.2100.4155.2100.3165.2100.5174.2100.6
NS	1000 1.1 1.1 1.1 1.1 1.1 1.1
NS	1000 1.1 1.1 1.1 1.1 1.1 1.1
NS	1000 1.1 1.1 1.1 1.1 1.2 .15 1.2 .13 1.2
NS	1000 .09 1.4 4.2 4.2 4.2 4.2 4.2
NS	1000 4.2 4.2 4.2 4.2 4.2 4.2
NS	1000 4.1 1.1 4.1 .24 1.1 .25 1.1 2.1
NS	1000 1.2 1.2 1.1 1.1 1.1 1.1
NS	1000 1.1 1.1 1.1 1.1 1.1 1.1
WSL	1000 94.45 94.55 94.63 94.78 94.91 95.05
WSL	1000 95.08 95.18 95.33 95.39 95.49 95.58
WSL	1000 95.66 95.76 95.92 96.05 96.13 96.19
WSL	1000 96.25 96.31 96.42 96.53 96.63 96.72
WSL	1000 96.82 96.90 96.99 97.07 97.14 97.21
CAL1	1000 95.05 125.0
VEL1	1000
VEL1	1000 0.00 0.00 0.00 0.00 0.19 0.51 0.57 0.57 0.55 0.59
VEL1	1000 0.63 0.59 0.51 0.53 0.60 0.60 0.52 0.25 0.23 0.11 0.05 0.08
VEL1	1000 0.00 0.00
CAL2	1000 96.00 396.2
VEL2	1000
VEL2	1000
VEL2	1000
VEL2	1000
CAL3	1000 96.00 396.2
VEL3	1000
VEL3	1000
VEL3	1000
VEL3	1000
ENDJ	

RIFFLE 646

IOC 1101100100001000101000

QARD 40.0
 QARD 50.0
 QARD 60.0
 QARD 80.0
 QARD 100.0
 QARD 125.0
 QARD 130.5
 QARD 150.0
 QARD 184.3
 QARD 200.0
 QARD 225.0
 QARD 250.0
 QARD 275.0
 QARD 300.0
 QARD 350.0
 QARD 396.2
 QARD 425.0
 QARD 450.0
 QARD 475.0
 QARD 500.0
 QARD 550.0
 QARD 600.0
 QARD 650.0
 QARD 700.0
 QARD 750.0
 QARD 800.0
 QARD 850.0
 QARD 900.0
 QARD 950.0
 QARD1000.0
 XSEC 1000 0.00 1.0 92.84 .000074
 1000-15.099.22-10.098.79 -5.097.82 1.096.61 5.096.44 10.096.16
 1000 15.096.25 20.096.40 25.096.89 30.098.04 32.097.29 37.096.78
 1000 39.096.61 41.096.21 43.096.12 44.095.66 45.195.04 47.094.04
 1000 50.092.34 54.092.04 58.091.54 62.091.44 66.091.44 70.091.34
 1000 74.091.24 78.091.14 82.091.04 86.091.14 90.091.44 94.091.54
 1000 98.091.54102.091.44106.091.34110.091.44114.091.54118.093.89
 1000121.495.04121.795.66123.696.10124.696.77126.697.70128.699.25
 1000129.6100.8139.6100.8149.6100.5159.6100.9168.6100.8
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 2.1 .15 2.1 .15 2.1
 NS 1000 .15 2.1 4.2 3.2 3.2 4.3 4.3
 NS 1000 3.2 3.2 3.2 3.2 3.2 3.2
 NS 1000 3.2 2.1 2.1 .12 2.3 .12 2.3 2.1
 NS 1000 2.1 2.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.1
 WSL 1000 94.45 94.55 94.63 94.78 94.91 95.05
 WSL 1000 95.08 95.18 95.33 95.39 95.49 95.59
 WSL 1000 95.67 95.76 95.92 96.05 96.13 96.19
 WSL 1000 96.25 96.31 96.42 96.53 96.63 96.72
 WSL 1000 96.82 96.90 97.00 97.08 97.15 97.22
 CAL1 1000 95.05 125.0
 VEL1 1000
 VEL1 1000 0.00-0.04 0.09 0.41 0.59 0.66 0.83 0.82
 VEL1 1000 0.82 0.79 0.77 0.80 0.73 0.65 0.63 0.38 0.37 0.07 0.06 0.19
 VEL1 1000 0.00 0.00
 CAL2 1000 96.01 396.2
 VEL2 1000
 VEL2 1000
 VEL2 1000
 CAL3 1000 96.01 396.2
 VEL3 1000
 VEL3 1000
 VEL3 1000
 VEL3 1000
 ENDJ

RIFFLE 646
 IOC 1101100100001000101000
 QARD 40.0
 QARD 50.0
 QARD 60.0
 QARD 80.0
 QARD 100.0
 QARD 125.0
 QARD 130.5
 QARD 150.0
 QARD 184.3
 QARD 200.0
 QARD 225.0
 QARD 250.0
 QARD 275.0
 QARD 300.0
 QARD 350.0
 QARD 396.2
 QARD 425.0
 QARD 450.0
 QARD 475.0
 QARD 500.0
 QARD 550.0
 QARD 600.0
 QARD 650.0
 QARD 700.0
 QARD 750.0
 QARD 800.0
 QARD 850.0
 QARD 900.0
 QARD 950.0
 QARD1000.0
 XSEC 1000 0.00 1.0 92.84 .000074
 1000 1.096.52 6.096.70 12.096.96 18.097.11 22.098.98 26.097.25
 1000 31.098.97 37.097.70 40.096.97 40.895.66 42.795.04 43.094.84
 1000 47.092.44 51.091.64 55.090.84 59.090.44 63.090.64 67.090.64
 1000 71.090.64 75.090.64 79.090.84 83.091.44 87.091.84 91.092.14
 1000 95.092.24 99.092.14103.092.04107.091.64111.091.64115.092.04
 1000116.093.64119.595.04120.795.66121.095.83122.096.25124.097.02
 1000125.097.71127.098.43129.099.21132.099.99135.0100.5140.0100.8
 1000145.0100.4150.0100.3155.0100.4162.0100.4
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 2.1 .5 2.1
 NS 1000 .20 2.1 .15 4.2 4.2 4.2 4.2
 NS 1000 2.3 2.3 3.4 3.4 3.4 3.4
 NS 1000 3.4 3.4 3.4 .12 2.3 .15 2.1 .18 2.1
 NS 1000 .3 2.2 2.1 2.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1
 WSL 1000 94.45 94.55 94.63 94.78 94.91 95.05
 WSL 1000 95.08 95.18 95.33 95.40 95.50 95.59
 WSL 1000 95.67 95.76 95.92 96.05 96.13 96.20
 WSL 1000 96.26 96.32 96.43 96.54 96.64 96.73
 WSL 1000 96.83 96.91 97.00 97.08 97.15 97.22
 CAL1 1000 95.05 125.0
 VEL1 1000 0.00 0.00
 VEL1 1000 0.08 0.06 0.46 0.58 0.70 0.78 0.78 0.80 0.80 0.71 0.65 0.67
 VEL1 1000 0.68 0.49 0.33 0.16 0.11 0.13 0.27 0.00 0.00
 VEL1 1000
 CAL2 1000 96.03 396.2
 VEL2 1000
 VEL2 1000
 VEL2 1000
 CAL3 1000 96.03 396.2
 VEL3 1000
 VEL3 1000
 VEL3 1000
 VEL3 1000
 ENDJ

RIFFLE 646
 IOC 1101100100001000101000
 QARD 40.0
 QARD 50.0
 QARD 60.0
 QARD 80.0
 QARD 100.0
 QARD 125.0
 QARD 130.5
 QARD 150.0
 QARD 184.3
 QARD 200.0
 QARD 225.0
 QARD 250.0
 QARD 275.0
 QARD 300.0
 QARD 350.0
 QARD 396.2
 QARD 425.0
 QARD 450.0
 QARD 475.0
 QARD 500.0
 QARD 550.0
 QARD 600.0
 QARD 650.0
 QARD 700.0
 QARD 750.0
 QARD 800.0
 QARD 850.0
 QARD 900.0
 QARD 950.0
 QARD1000.0
 XSEC 1000 0.00 1.0 92.84 .000074
 1000 1.098.01 3.098.27 6.098.77 9.099.17 12.099.31 15.099.36
 1000 18.099.54 21.099.64 24.099.52 27.098.73 28.098.04 29.097.77
 1000 30.096.69 31.095.65 31.595.66 31.995.04 34.093.64 38.092.84
 1000 42.092.44 46.091.84 50.091.24 54.091.14 58.091.34 62.091.34
 1000 66.091.34 70.091.54 74.091.89 78.092.14 82.091.34 86.092.44
 1000 90.092.34 94.092.54 98.092.64102.092.64106.092.24110.091.94
 1000114.094.04116.095.04116.395.04118.395.66120.096.30121.096.92
 1000122.097.42124.098.14126.099.05128.0100.0130.0101.2135.0101.0
 1000140.0100.6145.0100.7150.0100.8153.5101.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 2.1 2.1 2.1 .15 2.1
 NS 1000 .15 2.1 .1 2.3 2.3 2.3 2.3 2.3
 NS 1000 2.3 4.2 4.2 4.2 4.2 4.2 4.2
 NS 1000 4.2 4.2 4.2 4.2 .075 2.4 .1 2.1
 NS 1000 2.0 2.1 2.1 2.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1
 WSL 1000 94.45 94.55 94.63 94.78 94.91 95.05
 WSL 1000 95.08 95.18 95.34 95.40 95.50 95.59
 WSL 1000 95.67 95.76 95.92 96.06 96.14 96.20
 WSL 1000 96.26 96.32 96.43 96.54 96.64 96.74
 WSL 1000 96.84 96.92 97.01 97.09 97.16 97.23
 CAL1 1000 95.05 125.0
 VEL1 1000
 VEL1 1000 0.00 0.04 0.00 0.11 0.23 0.54 0.65 0.75 0.72
 VEL1 1000 0.84 0.83 0.77 0.75 0.84 0.81 0.75 0.69 0.66 0.57 0.27 0.12
 VEL1 1000 0.27 0.00 0.00 0.00
 VEL1 1000
 CAL2 1000 96.02 396.2
 VEL2 1000
 VEL2 1000
 VEL2 1000
 VEL2 1000
 VEL2 1000
 CAL3 1000 96.02 396.2
 VEL3 1000
 VEL3 1000
 VEL3 1000
 VEL3 1000
 VEL3 1000
 ENDJ

RIFFLE 646

IOC 1101100100001000101000

QARD 40.0
 QARD 50.0
 QARD 60.0
 QARD 80.0
 QARD 100.0
 QARD 125.0
 QARD 130.5
 QARD 150.0
 QARD 184.3
 QARD 200.0
 QARD 225.0
 QARD 250.0
 QARD 275.0
 QARD 300.0
 QARD 350.0
 QARD 396.2
 QARD 425.0
 QARD 450.0
 QARD 475.0
 QARD 500.0
 QARD 550.0
 QARD 600.0
 QARD 650.0
 QARD 700.0
 QARD 750.0
 QARD 800.0
 QARD 850.0
 QARD 900.0
 QARD 950.0
 QARD1000.0
 XSEC 1000 0.00 1.0 92.84 .000074
 1000 1.099.17 3.099.34 6.099.42 9.099.36 12.099.35 15.099.24
 1000 18.098.99 21.098.48 24.098.13 26.097.94 27.097.61 28.094.24
 1000 30.093.64 34.093.04 38.091.84 42.091.84 46.091.79 50.092.04
 1000 54.091.84 58.091.94 62.091.94 66.092.24 70.092.34 74.092.34
 1000 78.092.24 82.092.14 86.092.04 90.091.94 94.091.64 98.091.54
 1000102.091.94106.092.24110.093.34113.095.04113.595.66114.095.81
 1000115.096.15116.096.89118.097.54120.098.00122.098.74124.099.34
 1000126.099.99128.0100.6130.0101.1135.0100.9140.0100.6145.5100.9
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1 .3 2.1
 NS 1000 .3 2.1 .15 2.1 .12 2.1 .07 2.1 .05 2.3 2.3
 NS 1000 2.3 2.3 2.3 2.3 2.4 2.4
 NS 1000 2.4 2.4 2.4 2.4 2.4 2.4
 NS 1000 2.4 .1 2.4 2.1 2.1 2.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 WSL 1000 94.45 94.55 94.63 94.78 94.91 95.05
 WSL 1000 95.08 95.18 95.34 95.40 95.50 95.59
 WSL 1000 95.67 95.76 95.93 96.06 96.14 96.20
 WSL 1000 96.26 96.32 96.44 96.55 96.65 96.74
 WSL 1000 96.84 96.92 97.02 97.10 97.17 97.24
 CAL1 1000 95.05 125.0
 VEL1 1000 0.16
 VEL1 1000 0.12 0.00 0.09 0.29 0.32 0.68 0.76 0.75 0.79 0.78 0.75 0.83
 VEL1 1000 0.83 0.90 0.89 0.79 0.74 0.58 0.50 0.16 0.17 0.00 0.00
 VEL1 1000
 CAL2 1000 96.01 396.2
 VEL2 1000
 VEL2 1000
 VEL2 1000
 VEL2 1000
 CAL3 1000 96.01 396.2
 VEL3 1000
 VEL3 1000
 VEL3 1000
 VEL3 1000
 ENDJ

RIFFLE 646
 IOC 1101100100001000101000
 QARD 40.0
 QARD 50.0
 QARD 60.0
 QARD 80.0
 QARD 100.0
 QARD 125.0
 QARD 130.5
 QARD 150.0
 QARD 184.3
 QARD 200.0
 QARD 225.0
 QARD 250.0
 QARD 275.0
 QARD 300.0
 QARD 350.0
 QARD 396.2
 QARD 425.0
 QARD 450.0
 QARD 475.0
 QARD 500.0
 QARD 550.0
 QARD 600.0
 QARD 650.0
 QARD 700.0
 QARD 750.0
 QARD 800.0
 QARD 850.0
 QARD 900.0
 QARD 950.0
 QARD1000.0
 XSEC 1000 0.00 1.0 92.84 .000074
 1000 1.099.28 3.099.18 6.099.04 9.098.76 12.098.49 15.098.54
 1000 18.098.56 20.098.13 21.096.48 21.595.66 22.595.04 25.093.94
 1000 29.093.64 33.093.44 37.092.44 41.092.24 44.091.29 48.092.04
 1000 52.092.34 56.092.34 60.092.44 64.092.54 68.092.34 72.092.14
 1000 76.091.74 80.091.64 84.091.54 88.091.14 92.090.94 96.090.84
 1000100.091.04104.091.74108.093.04110.095.04110.195.04112.695.66
 1000113.095.66115.096.09117.096.31119.096.46120.096.55121.096.55
 1000122.097.20123.097.69124.098.52125.098.98127.099.25129.099.64
 1000131.0100.2133.0100.8135.0101.0137.4101.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 2.1 2.1 2.1
 NS 1000 2.1 2.1 2.1 2.1 2.3 2.3
 NS 1000 .050 2.1 2.3 2.3 2.3 2.4 2.4
 NS 1000 2.4 2.4 2.4 4.2 4.2 2.3
 NS 1000 2.3 .1 2.1 .12 2.1 1.2 1.2
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 WSL 1000 94.45 94.55 94.63 94.78 94.91 95.05
 WSL 1000 95.08 95.19 95.34 95.40 95.50 95.59
 WSL 1000 95.68 95.77 95.93 96.06 96.15 96.21
 WSL 1000 96.27 96.33 96.44 96.56 96.66 96.75
 WSL 1000 96.85 96.94 97.03 97.11 97.18 97.26
 CAL1 1000 95.06 125.0
 VEL1 1000 0.00-0.01
 VEL1 1000 0.00-0.03 0.19 0.22 0.56 0.50 0.37 0.71 0.73 0.72 0.77 0.79
 VEL1 1000 0.77 0.86 0.85 0.82 0.73 0.55 0.38 0.21 0.08 0.00 0.00-0.15
 VEL1 1000 0.00
 VEL1 1000
 CAL2 1000 96.03 396.2
 VEL2 1000
 VEL2 1000
 VEL2 1000
 VEL2 1000
 VEL2 1000
 CAL3 1000 96.03 396.2
 VEL3 1000
 VEL3 1000
 VEL3 1000
 VEL3 1000
 VEL3 1000
 ENDJ

```

RIFFLE          646
IOC            1101100100001000101000
QARD  40.0
QARD  50.0
QARD  60.0
QARD  80.0
QARD 100.0
QARD 125.0
QARD 130.5
QARD 150.0
QARD 184.3
QARD 200.0
QARD 225.0
QARD 250.0
QARD 275.0
QARD 300.0
QARD 350.0
QARD 396.2
QARD 425.0
QARD 450.0
QARD 475.0
QARD 500.0
QARD 550.0
QARD 600.0
QARD 650.0
QARD 700.0
QARD 750.0
QARD 800.0
QARD 850.0
QARD 900.0
QARD 950.0
QARD1000.0
XSEC 1000      0.00 1.0      92.84  .000074
1000  1.097.88  3.097.69  6.097.37  9.097.31 12.097.54 15.097.49
1000 18.097.25 19.097.09 20.096.67 21.096.09 22.195.66 23.995.04
1000 25.094.74 30.094.04 34.093.74 38.092.49 42.092.34 46.092.34
1000 50.092.34 54.092.34 58.092.14 62.092.04 66.091.94 70.091.54
1000 74.091.14 78.090.94 82.091.04 86.090.74 90.090.54 94.090.74
1000 98.090.94102.091.24106.093.44109.094.44110.295.04111.295.66
1000112.095.88113.097.41114.097.59116.098.91118.099.23121.099.15
1000124.099.03127.099.20129.899.86
NS 1000      1.1      1.1      1.1      1.1      1.1      1.1
NS 1000      1.1      1.1      1.1      1.1      1.2      1.2
NS 1000  .2     1.2  .15     2.1  .12  2.1  .1     2.1      2.3      2.3
NS 1000      2.3      2.3      2.3      2.3      2.3      2.3
NS 1000      2.3      4.2      4.2      4.2      4.2      2.4
NS 1000      2.3  .12     2.1  .12  2.1  .15     2.1      2.1      2.1
NS 1000      1.1      1.1      1.1      1.1      1.1      1.1
NS 1000      1.1      1.1      1.1
WSL 1000     94.45     94.55     94.63     94.78     94.91     95.05
WSL 1000     95.09     95.19     95.34     95.40     95.50     95.60
WSL 1000     95.68     95.77     95.93     96.07     96.15     96.21
WSL 1000     96.27     96.33     96.45     96.56     96.66     96.76
WSL 1000     96.86     96.94     97.03     97.12     97.19     97.26
CAL1 1000     95.06     125.0
VEL1 1000
VEL1 1000-0.03-0.03 0.02 0.07 0.40 0.54 0.59 0.67 0.66 0.69 0.73 0.75
VEL1 1000 0.76 0.72 0.82 0.79 0.57 0.57 0.41 0.15 0.04 0.01 0.00 0.00
VEL1 1000
CAL2 1000     96.04     396.2
VEL2 1000
VEL2 1000
VEL2 1000
VEL2 1000
CAL3 1000     96.04     396.2
VEL3 1000
VEL3 1000
VEL3 1000
VEL3 1000
ENDJ

```

RIFFLE 646
 IOC 1101100100001000101000
 QARD 40.0
 QARD 50.0
 QARD 60.0
 QARD 80.0
 QARD 100.0
 QARD 125.0
 QARD 130.5
 QARD 150.0
 QARD 184.3
 QARD 200.0
 QARD 225.0
 QARD 250.0
 QARD 275.0
 QARD 300.0
 QARD 350.0
 QARD 396.2
 QARD 425.0
 QARD 450.0
 QARD 475.0
 QARD 500.0
 QARD 550.0
 QARD 600.0
 QARD 650.0
 QARD 700.0
 QARD 750.0
 QARD 800.0
 QARD 850.0
 QARD 900.0
 QARD 950.0
 QARD1000.0
 XSEC 1000 0.00 1.0 92.84 .000074
 1000 1.097.34 3.097.52 6.097.84 9.098.19 12.098.44 15.098.45
 1000 18.098.53 21.097.77 23.097.27 24.096.70 25.096.17 25.395.67
 1000 25.895.04 27.094.69 31.094.24 35.093.04 39.092.04 43.092.04
 1000 47.092.04 51.092.04 55.091.69 59.090.89 63.090.14 67.089.54
 1000 71.088.74 75.088.44 79.088.44 83.088.44 87.088.24 91.088.64
 1000 95.088.94 99.090.54103.092.94105.094.34108.095.04108.295.04
 1000110.495.66111.096.45112.096.65113.097.02114.097.36115.098.18
 1000116.098.39118.098.91120.099.44122.799.91
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 2.1
 NS 1000 2.1 2.2 2.1 2.1 2.1 2.1
 NS 1000 2.2 2.2 2.2 2.4 2.4 4.2
 NS 1000 4.2 4.2 5.2 5.2 5.2 .15 5.2
 NS 1000 .25 2.2 .25 2.1 .25 2.1 2.1 2.1 2.1
 NS 1000 2.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 1.1
 WSL 1000 94.46 94.55 94.63 94.78 94.91 95.06
 WSL 1000 95.09 95.19 95.34 95.41 95.51 95.60
 WSL 1000 95.69 95.78 95.94 96.08 96.16 96.22
 WSL 1000 96.29 96.35 96.46 96.58 96.68 96.78
 WSL 1000 96.88 96.96 97.06 97.14 97.21 97.29
 CAL1 1000 95.07 125.0
 VEL1 1000
 VEL1 1000 0.00 0.00 0.01 0.02-0.05 0.24 0.44 0.53 0.59 0.54 0.63 0.70
 VEL1 1000 0.66 0.61 0.64 0.54 0.32 0.15-0.04-0.04-0.04 0.08 0.00 0.00
 VEL1 1000 0.00
 CAL2 1000 96.03 396.2
 VEL2 1000
 VEL2 1000
 VEL2 1000
 VEL2 1000
 CAL3 1000 96.03 396.2
 VEL3 1000
 VEL3 1000
 VEL3 1000
 VEL3 1000
 ENDJ

RIFFLE 646

IOC 1101100100001000101000

QARD 40.0
 QARD 50.0
 QARD 60.0
 QARD 80.0
 QARD 100.0
 QARD 125.0
 QARD 130.5
 QARD 150.0
 QARD 184.3
 QARD 200.0
 QARD 225.0
 QARD 250.0
 QARD 275.0
 QARD 300.0
 QARD 350.0
 QARD 396.2
 QARD 425.0
 QARD 450.0
 QARD 475.0
 QARD 500.0
 QARD 550.0
 QARD 600.0
 QARD 650.0
 QARD 700.0
 QARD 750.0
 QARD 800.0
 QARD 850.0
 QARD 900.0
 QARD 950.0
 QARD1000.0

XSEC 1000 0.00 1.0 92.84 .000074
 1000 1.097.34 3.097.52 6.097.84 9.098.19 12.098.44 15.098.45
 1000 18.098.53 21.097.77 23.097.27 24.096.03 27.094.43 34.093.13
 1000 41.092.03 48.092.23 55.091.93 62.090.73 65.090.03 69.089.33
 1000 71.089.13 76.089.03 80.089.33 83.089.03 87.089.38 90.089.93
 1000 95.091.73100.091.63105.094.03107.094.63109.096.03110.495.66
 1000111.096.45112.096.65113.097.02114.097.36115.098.18116.098.39
 1000118.098.91120.099.44122.799.91

NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1 2.1 .2 2.2 2.1
 NS 1000 2.1 2.2 2.2 2.4 4.2 4.2
 NS 1000 4.2 4.2 5.2 5.2 5.2 5.2
 NS 1000 2.2 2.1 2.1 2.1 2.1 2.1
 NS 1000 1.1 1.1 1.1 1.1 1.1 1.1
 NS 1000 1.1 1.1 1.1

WSL 1000 94.46 94.55 94.63 94.78 94.91 95.06
 WSL 1000 95.09 95.19 95.34 95.41 95.51 95.60
 WSL 1000 95.69 95.78 95.94 96.08 96.16 96.22
 WSL 1000 96.29 96.35 96.46 96.58 96.68 96.78
 WSL 1000 96.88 96.96 97.06 97.14 97.21 97.29

CAL1 1000 96.03 396.2
 VEL1 1000 0.00 0.32 0.61
 VEL1 1000 0.85 1.05 1.16 1.26 1.27 1.31 1.29 1.43 1.51 1.37 1.15 0.99
 VEL1 1000 0.58 0.17-0.16-0.22 0.00 0.00

VEL1 1000
 CAL2 1000 95.07 125.0
 VEL2 1000
 VEL2 1000
 VEL2 1000

CAL3 1000 95.07 125.0
 VEL3 1000
 VEL3 1000
 VEL3 1000
 VEL3 1000
 ENDJ