

8-11-2009

Ex. 280-US-456

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**Stream:** Whiskey Creek  
**Site:** 649  
**Date:** 4/22/2009  
**Habitat:** Glide **Flow:** High

(1) Level Loop Survey (BM & HP)

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	1.76	101.76		100.00
TR1 HP			4.24	97.52
TR2 HP			4.78	96.98
TR3 HP			4.66	97.10
TR4 HP			4.04	97.72
TR5 HP			4.51	97.25
TR6 HP			4.79	96.97
TP				
TR6 HP	5.55	102.52		96.97
TR5 HP			5.27	97.25
TR4 HP			4.81	97.71
TR3 HP			5.42	97.10
TR2 HP			5.55	96.97
TR1 HP			5.00	97.52
BM			2.52	100.00

Comment:

(2) Water Surface Elevation (WSE) Survey

TR	River Station		HI (ft)	FS (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
	L/R bank (ft)	Ave (ft)						
1-L	0	0	101.81	6.07	0.00	95.74	95.74	8.8
1-M					0.00			
1-R	0			6.08	0.00	95.73		
2-L	81	91	101.81	6.07	0.00	95.74	95.75	8.5
2-M								
2-R	100.7			6.06	0.00	95.75		
3-L	171	206	101.81	6.04	0.00	95.77	95.77	9.3
3-M					0.00			
3-R	241.7			6.05	0.00	95.76		
4-L	236.7	262	101.81	6.01	0.00	95.80	95.80	7.2
4-M					0.00			
4-R	286.7			6.02	0.00	95.79		
5-L	332.7	346	102.23	6.39	0.00	95.84	95.84	7.6
5-M					0.00			
5-R	359.7			6.40	0.00	95.83		
6-L	405.6	430	102.23	6.14	0.00	96.09	96.09	7.5
6-M					0.00			
6-R	454.7			6.15	0.00	96.08		

Ave Q= 8.2

Note: slope calculated from WSE's below

		HI	FS	Rod	WSE
d/s TR1	-90	101.92	6.21	0.00	95.71
u/s TR6	534	102.23	5.91	0.00	96.32

WSE slope = 0.098%

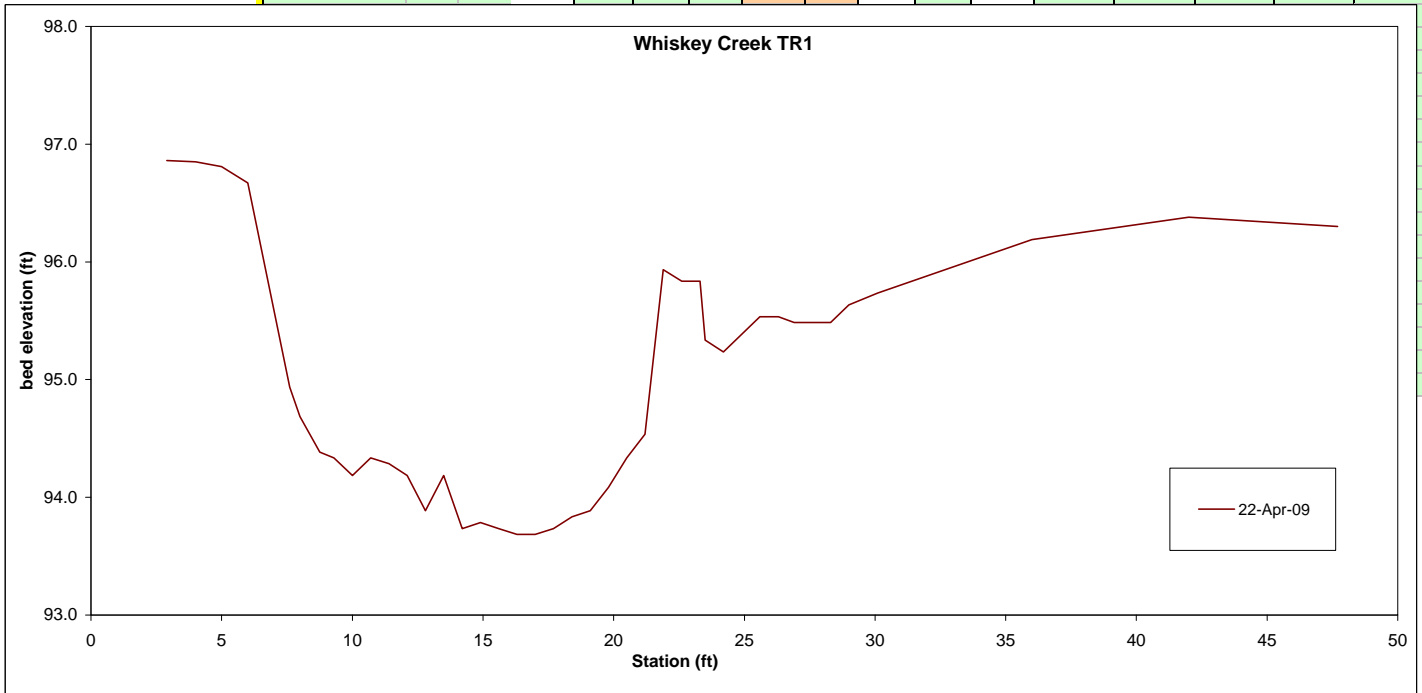
(3) Meter and propeller ID for Velocity Correction

Meter ID: 3602  
 Propeller ID: 5B  
 Calibration: 125

Stream: Whiskey Creek  
 Site: Whiskey Creek  
 Transect: 1  
 Habitat: Glide

Survey Date	HI (ft)	Q (cfs)
4/22/2009	101.92	8.8
1/0/1900	0.00	
1/0/1900	0.00	

	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)					Angle (deg)	q (cfs)	Substrate Composition			Percent Dom	Sub Code
					V <sub>0.2/0.6</sub>	V <sub>0.8</sub>	NV <sub>0.2/0.6</sub>	NV <sub>0.8</sub>	Ave			Dom	Sub-d	Cover		
LWP	2.9	5.06	96.86									VEG				
	4.0	5.07	96.85									VEG				
	5.0	5.11	96.81									VEG				
	6.0	5.25	96.67									VEG				
LWE: UCB = 0.2'	7.6		94.94	0.80	0.00	0.00		0.00		0.00	0.00	SI		UCB	100	
	8.0		94.69	1.05	0.17	0.24		0.24		0.14	0.14	SI			100	
	8.8		94.39	1.35	0.38	0.43		0.43		0.38	0.38	SI			100	
	9.3		94.34	1.40	0.38	0.43		0.43		0.38	0.38	SI			100	
	10.0		94.19	1.55	0.37	0.43		0.43		0.46	0.46	SI			100	
	10.7		94.34	1.40	0.30	0.37		0.37		0.36	0.36	SI			100	
	11.4		94.29	1.45	0.31	0.38		0.38		0.38	0.38	SI			100	
	12.1		94.19	1.55	0.36	0.42		0.42		0.45	0.45	SI	AQ VEG	AQ VEG	70	
	12.8		93.89	1.85	0.35	0.41		0.41		0.53	0.53	SI	AQ VEG	AQ VEG	60	
	13.5		94.19	1.55	0.44	0.49		0.49		0.54	0.54	AQ VEG	SI	AQ VEG	70	
	14.2		93.74	2.00	0.41	0.46		0.46		0.65	0.65	AQ VEG	SI	AQ VEG	60	
	14.9		93.79	1.95	0.44	0.49		0.49		0.67	0.67	SI	AQ VEG	AQ VEG	60	
	15.6		93.74	2.00	0.33	0.39		0.39		0.55	0.55	SI	AQ VEG	AQ VEG	70	
	16.3		93.69	2.05	0.25	0.32		0.32		0.46	0.46	SI	AQ VEG	AQ VEG	80	
	17.0		93.69	2.05	0.40	0.45		0.45		0.65	0.65	SI	AQ VEG	AQ VEG	90	
	17.7		93.74	2.00	0.34	0.40		0.40		0.56	0.56	SI			100	
	18.4		93.84	1.90	0.30	0.37		0.37		0.49	0.49	SI			100	
	19.1		93.89	1.85	0.30	0.37		0.37		0.47	0.47	SI			100	
	19.8		94.09	1.65	0.22	0.29		0.29		0.33	0.33	SI			100	
	20.5		94.34	1.40	0.16	0.23		0.23		0.22	0.22	SI	AQ VEG	AQ VEG	80	
edge of veg	21.2		94.54	1.20	0.13	0.19		0.19		0.16	0.16	SI	AQ VEG	AQ VEG	60	
	21.9		95.94	-0.20	0.00	0.00		0.00		0.00	0.00	AQ VEG	SI	AQ VEG	80	
	22.6		95.84	-0.10	0.00	0.00		0.00		0.00	0.00	AQ VEG	SI	AQ VEG	80	
	23.3		95.84	-0.10	0.00	0.00		0.00		0.00	0.00	AQ VEG	SI	AQ VEG	80	
	23.5		95.34	0.40	0.00	0.00		0.00		0.00	0.00	AQ VEG	SI	AQ VEG	80	
	24.2		95.24	0.50	0.00	0.00		0.00		0.00	0.00	AQ VEG	SI	AQ VEG	80	
	24.9		95.39	0.35	0.00	0.00		0.00		0.00	0.00	AQ VEG	SI	AQ VEG	80	
	25.6		95.54	0.20	0.00	0.00		0.00		0.00	0.00	SI	AQ VEG	AQ VEG	60	
	26.3		95.54	0.20	0.00	0.00		0.00		0.00	0.00	SI	AQ VEG	AQ VEG	60	
	26.9		95.49	0.25	0.00	0.00		0.00		0.00	0.00	SI	AQ VEG	AQ VEG	60	
	27.6		95.49	0.25	0.00	0.00		0.00		0.00	0.00	SI	AQ VEG	AQ VEG	60	
	28.3		95.49	0.25	0.00	0.00		0.00		0.00	0.00	SI	AQ VEG	AQ VEG	60	
	29.0		95.64	0.10	0.00	0.00		0.00		0.00	0.00	SI	AQ VEG	AQ VEG	60	
RWE	30.1		95.74	0.00	0.00	0.00		0.00		0.00	0.00	SI	AQ VEG	AQ VEG	60	
	36.0	5.73	96.19									VEG				
	42.0	5.54	96.38									VEG				
RWP	47.7	5.62	96.30									VEG				



Stream: Whiskey Creek  
 Site: Whiskey Creek  
 Transect: 2  
 Habitat: Glide

Survey Date	HI (ft)	Q (cfs)
4/22/2009	101.92	8.5
1/0/1900	0.00	
1/0/1900	0.00	

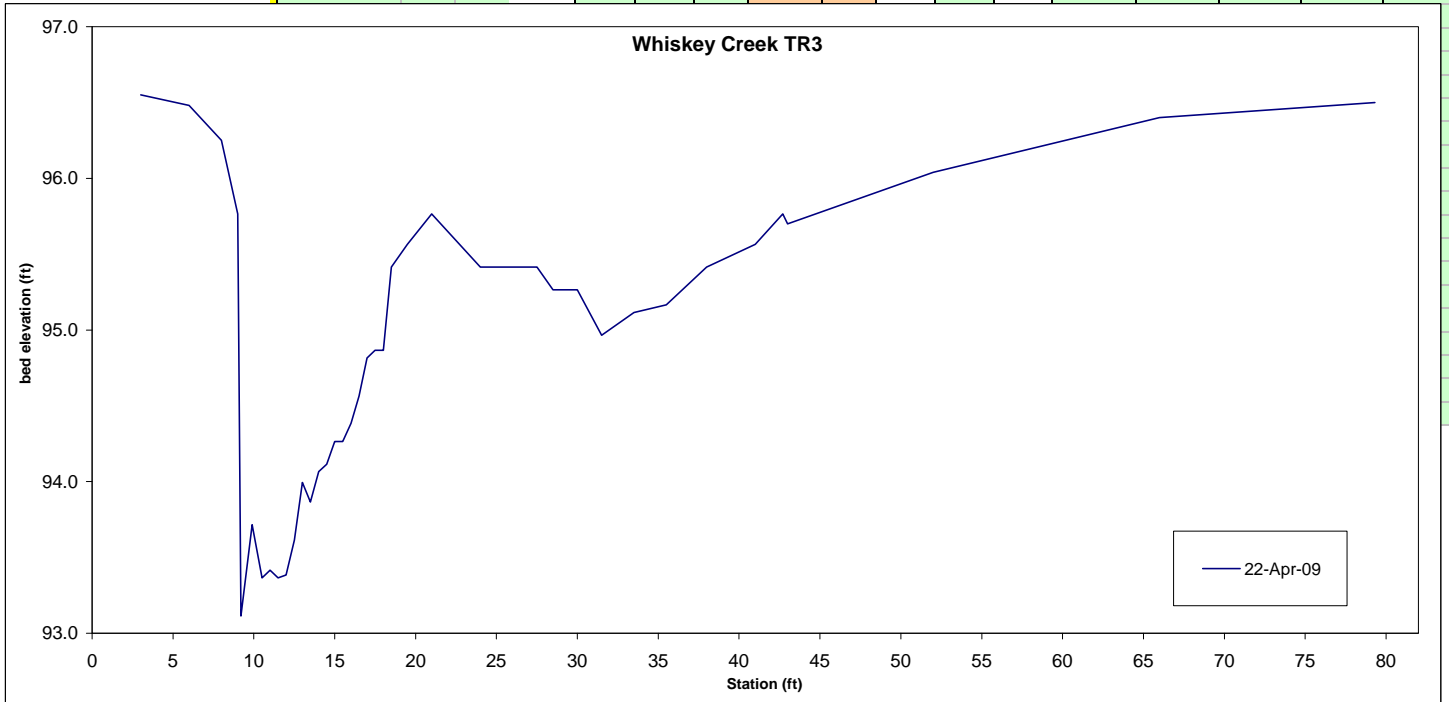
	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	22-Apr-09				Angle (deg)	q (cfs)	Substrate Composition			Percent Dom	Sub Code	
					Vel (ft/s)						Ave	Dom	Sub-d			Cover
					V <sub>0.2/0.6</sub>	V <sub>0.8</sub>	NV <sub>0.2/0.6</sub>	NV <sub>0.8</sub>								
LWP	3.0	5.63	96.29								VEG					
	6.0	5.71	96.21								VEG					
	9.0	5.84	96.08								VEG					
	12.6	6.25	95.67								VEG	SI		80		
LWE	13.0		95.75	0.00	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		80		
	13.7		95.60	0.15	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		80		
	14.4		95.50	0.25	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		80		
	15.1		95.45	0.30	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		80		
	15.8		95.35	0.40	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		80		
	16.5		95.25	0.50	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		80		
	17.2		95.15	0.60	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		80		
	17.9		95.35	0.40	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		80		
	18.6		95.40	0.35	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		80		
	19.2		95.45	0.30	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		80		
	19.9		95.45	0.30	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		80		
	20.3		95.75	0.00	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		80		
	20.7		95.90	-0.15	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		80		
	21.0		95.75	0.00	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		80		
	21.7		94.45	1.30	0.00		0.00	0.00	0.00	0.00	SI			100		
	22.4		94.35	1.40	0.05		0.08	0.08	0.08	0.08	SI			100		
	23.1		94.25	1.50	0.05		0.08	0.08	0.08	0.08	SI			100		
	23.8		94.05	1.70	0.05		0.08	0.08	0.08	0.08	SI			100		
	24.5		93.40	2.35	0.05		0.08	0.08	0.08	0.13	SI			100		
	25.2		93.20	2.55	0.05	0.00	0.08	0.00	0.04	0.07	SI			100		
	25.9		93.00	2.75	0.09	0.02	0.14	0.02	0.08	0.16	SI			100		
	26.6		92.85	2.90	0.07	0.05	0.11	0.05	0.08	0.16	SI			100		
	27.3		92.65	3.10	0.11	0.05	0.17	0.05	0.11	0.24	SI			100		
	28.0		92.45	3.30	0.31	0.36	0.38	0.36	0.37	0.91	SI			100		
	28.8		92.25	3.50	0.51	0.40	0.56	0.40	0.48	1.26	SI			100		
	29.5		92.65	3.10	0.57	0.26	0.62	0.26	0.44	0.95	SI			100		
	30.2		92.60	3.15	0.58	0.36	0.63	0.36	0.50	1.09	SI			100		
	30.9		92.75	3.00	0.17	0.40	0.24	0.40	0.32	0.67	SI			100		
	31.6		93.15	2.60	0.57	0.18	0.62	0.18	0.40	0.73	SI			100		
	32.3		93.25	2.50	0.57	0.29	0.62	0.29	0.46	0.80	SI			100		
	33.0		93.75	2.00	0.42		0.47		0.47	0.66	SI			100		
	33.7		94.15	1.60	0.16		0.23		0.23	0.26	SI			100		
	34.4		94.35	1.40	0.11		0.17		0.17	0.17	SI			100		
	35.1		94.35	1.40	0.00		0.00	0.00	0.00	0.00	SI			100		
	35.8		94.55	1.20	0.00		0.00	0.00	0.00	0.00	SI			100		
	36.5		94.55	1.20	0.00		0.00	0.00	0.00	0.00	SI			100		
	37.2		95.45	0.30	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		70		
	37.9		95.55	0.20	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		70		
	38.5		95.65	0.10	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		70		
RWE	39.0		95.75	0.00	0.00		0.00	0.00	0.00	0.00	AQ VEG	SI		80		
	40.2	6.22	95.70								VEG			80		
	41.0	5.95	95.97								VEG					
	43.0	5.54	96.38								VEG					
	47.0	5.32	96.60								VEG					
	49.0	5.22	96.70								VEG					
RWP	54.5	5.18	96.74								VEG					



Stream: Whiskey Creek  
 Site: Whiskey Creek  
 Transect: 3  
 Habitat: Glide

Survey Date	HI (ft)	Q (cfs)
4/22/2009	101.92	9.3
1/0/1900	0.00	
1/0/1900	0.00	

	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	22-Apr-09					Angle (deg)	q (cfs)	Substrate Composition			Percent Dom	Sub Code
					Vel (ft/s)							Dom	Sub-d	Cover		
					V <sub>0.2/0.6</sub>	V <sub>0.8</sub>	NV <sub>0.2/0.6</sub>	NV <sub>0.8</sub>	Ave							
LWP	3.0	5.37	96.55									VEG				
	6.0	5.44	96.48									VEG				
	8.0	5.67	96.25									VEG				
LWE	9.0		95.77	0.00	0.00		0.00		0.00		0.00	AQ VEG	SI	AQ VEG	70	
	9.2		93.12	2.65	0.50	0.50	0.55	0.55	0.55		0.66	SI		OHV	100	
	9.9		93.72	2.05	0.48		0.53		0.53		0.71	SI		OHV	100	
	10.5		93.37	2.40	0.69		0.74		0.74		0.98	SI			100	
	11.0		93.42	2.35	0.79		0.84		0.84		0.99	SI			100	
	11.5		93.37	2.40	0.84		0.89		0.89		1.07	SI	AQ VEG	AQ VEG	90	
	12.0		93.39	2.38	0.59		0.64		0.64		0.76	SI	AQ VEG	AQ VEG	80	
	12.5		93.62	2.15	0.52		0.57		0.57		0.61	SI	AQ VEG	AQ VEG	70	
	13.0		94.00	1.77	0.59		0.64		0.64		0.57	SI	AQ VEG	AQ VEG	70	
	13.5		93.87	1.90	0.54		0.59		0.59		0.56	SI	AQ VEG	AQ VEG	70	
	14.0		94.07	1.70	0.32		0.38		0.38		0.33	SI	AQ VEG	AQ VEG	70	
	14.5		94.12	1.65	0.22		0.29		0.29		0.24	SI	AQ VEG	AQ VEG	70	
	15.0		94.27	1.50	0.34		0.40		0.40		0.30	SI	AQ VEG	AQ VEG	80	
	15.5		94.27	1.50	0.34		0.40		0.40		0.30	SI	AQ VEG	AQ VEG	70	
	16.0		94.39	1.38	0.34		0.40		0.40		0.28	SI	AQ VEG	AQ VEG	80	
	16.5		94.57	1.20	0.33		0.39		0.39		0.24	SI	AQ VEG	AQ VEG	90	
	17.0		94.82	0.95	0.30		0.37		0.37		0.17	SI	AQ VEG	AQ VEG	90	
	17.5		94.87	0.90	0.18		0.25		0.25		0.11	SI	AQ VEG	AQ VEG	90	
	18.0		94.87	0.90	0.05		0.08		0.08		0.04	SI	AQ VEG	AQ VEG	90	
	18.5		95.42	0.35	0.00		0.00		0.00		0.00	AQ VEG	SI	AQ VEG	70	
	19.5		95.57	0.20	0.00		0.00		0.00		0.00	AQ VEG	SI	AQ VEG	70	
	21.0		95.77	0.00	0.00		0.00		0.00		0.00	SI	AQ VEG	AQ VEG	80	
	24.0		95.42	0.35	0.00		0.00		0.00		0.00	AQ VEG	SI	AQ VEG	90	
	26.0		95.42	0.35	0.00		0.00		0.00		0.00	SI	AQ VEG	AQ VEG	70	
	27.5		95.42	0.35	0.05		0.08		0.08		0.03	SI	AQ VEG	AQ VEG	70	
	28.5		95.27	0.50	0.05		0.08		0.08		0.05	AQ VEG	SI	AQ VEG	70	
	30.0		95.27	0.50	0.00		0.00		0.00		0.00	AQ VEG	SI	AQ VEG	70	
	31.5		94.97	0.80	0.05		0.08		0.08		0.11	SI	AQ VEG	AQ VEG	80	
	33.5		95.12	0.65	0.05		0.08		0.08		0.10	SI	AQ VEG	AQ VEG	80	
	35.5		95.17	0.60	0.05		0.08		0.08		0.11	SI	AQ VEG	AQ VEG	70	
	38.0		95.42	0.35	0.00		0.00		0.00		0.00	AQ VEG	SI	AQ VEG	60	
	41.0		95.57	0.20	0.00		0.00		0.00		0.00	AQ VEG	SI	AQ VEG	60	
RWE	42.7		95.77	0.00	0.00		0.00		0.00		0.00	SI			100	
	43.0	6.22	95.70									VEG	SI		70	
	52.0	5.88	96.04									VEG				
	66.0	5.52	96.40									VEG				
RWP	79.3	5.42	96.50									VEG				



Stream: Whiskey Creek  
 Site: Whiskey Creek  
 Transect: 4  
 Habitat: Glide

Survey Date	HI (ft)	Q (cfs)
4/22/2009	101.93	7.2
1/0/1900	0.00	
1/0/1900	0.00	

	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)				Angle (deg)	q (cfs)	Substrate Composition			Percent Dom	Sub Code
					V <sub>0.2,0.6</sub>	V <sub>0.8</sub>	NV <sub>0.2,0.6</sub>	NV <sub>0.8</sub>			Dom	Sub-d	Cover		
					Ave										
LWP	3.0	4.99	96.94												
	5.5	5.11	96.82									VEG			
	6.7	5.16	96.77									VEG			
LWE; UCB = 0.3'	7.3		95.80	0.00	0.00	0.00		0.00	0.00	SI	AQ VEG	Q VEG, UC	70		
	7.4		94.30	1.50	0.55	0.60		0.60	0.31	SI	SA		70		
	8.0		94.40	1.40	0.85	0.90		0.90	0.70	SI	SA		70		
	8.5		94.30	1.50	0.90	0.95		0.95	0.71	SI	SA		90		
	9.0		94.30	1.50	0.89	0.94		0.94	0.71	SI	SA		90		
	9.5		94.30	1.50	0.63	0.68		0.68	0.51	SI	SA		80		
	10.0		94.30	1.50	0.89	0.94		0.94	0.71	SI	SA		80		
	10.5		94.40	1.40	1.04	1.09		1.09	0.76	SI	SA		80		
	11.0		94.50	1.30	0.90	0.95		0.95	0.62	SI	SA		80		
	11.5		94.50	1.30	0.82	0.87		0.87	0.57	SI	SA		90		
	12.0		94.35	1.45	0.54	0.59		0.59	0.43	SI	SA		90		
	12.5		94.75	1.05	0.37	0.43		0.43	0.22	SI	AQ VEG	AQ VEG	80		
	13.0		95.13	0.67	0.63	0.68		0.68	0.23	AQ VEG	SI	AQ VEG	70		
	13.5		95.25	0.55	0.65	0.70		0.70	0.19	AQ VEG	SI	AQ VEG	70		
	14.0		95.30	0.50	0.27	0.34		0.34	0.08	SI	AQ VEG	AQ VEG	60		
	14.5		95.40	0.40	0.13	0.19		0.19	0.04	SI	AQ VEG	AQ VEG	80		
	15.0		95.30	0.50	0.10	0.16		0.16	0.06	SI	AQ VEG	AQ VEG	80		
	16.0		95.30	0.50	0.10	0.16		0.16	0.08	SI	AQ VEG	AQ VEG	80		
	17.0		95.50	0.30	0.10	0.16		0.16	0.05	SI	AQ VEG	AQ VEG	80		
	18.0		95.50	0.30	0.10	0.16		0.16	0.05	SI	AQ VEG	AQ VEG	80		
	19.0		95.50	0.30	0.10	0.16		0.16	0.05	SI	AQ VEG	AQ VEG	80		
	20.0		95.55	0.25	0.05	0.08		0.08	0.02	SI	AQ VEG	AQ VEG	80		
	21.0		95.55	0.25	0.05	0.08		0.08	0.03	SI	AQ VEG	AQ VEG	80		
	23.0		95.40	0.40	0.05	0.08		0.08	0.06	AQ VEG	SI	AQ VEG	60		
	25.0		95.60	0.20	0.00	0.00		0.00	0.00	AQ VEG	SI	AQ VEG	60		
	27.0		95.65	0.15	0.00	0.00		0.00	0.00	AQ VEG	SI	AQ VEG	60		
	29.0		95.70	0.10	0.00	0.00		0.00	0.00	AQ VEG	SI	AQ VEG	60		
RWE	30.4		95.80	0.00	0.00	0.00		0.00	0.00	AQ VEG	SI	AQ VEG	60		
	37.7	5.94	95.99									VEG			
	48.0	5.54	96.39									VEG			
	56.0	5.72	96.21									VEG			
RWP	63.8	5.42	96.51									VEG			



Stream: Whiskey Creek  
 Site: Whiskey Creek  
 Transect: 5  
 Habitat: Glide

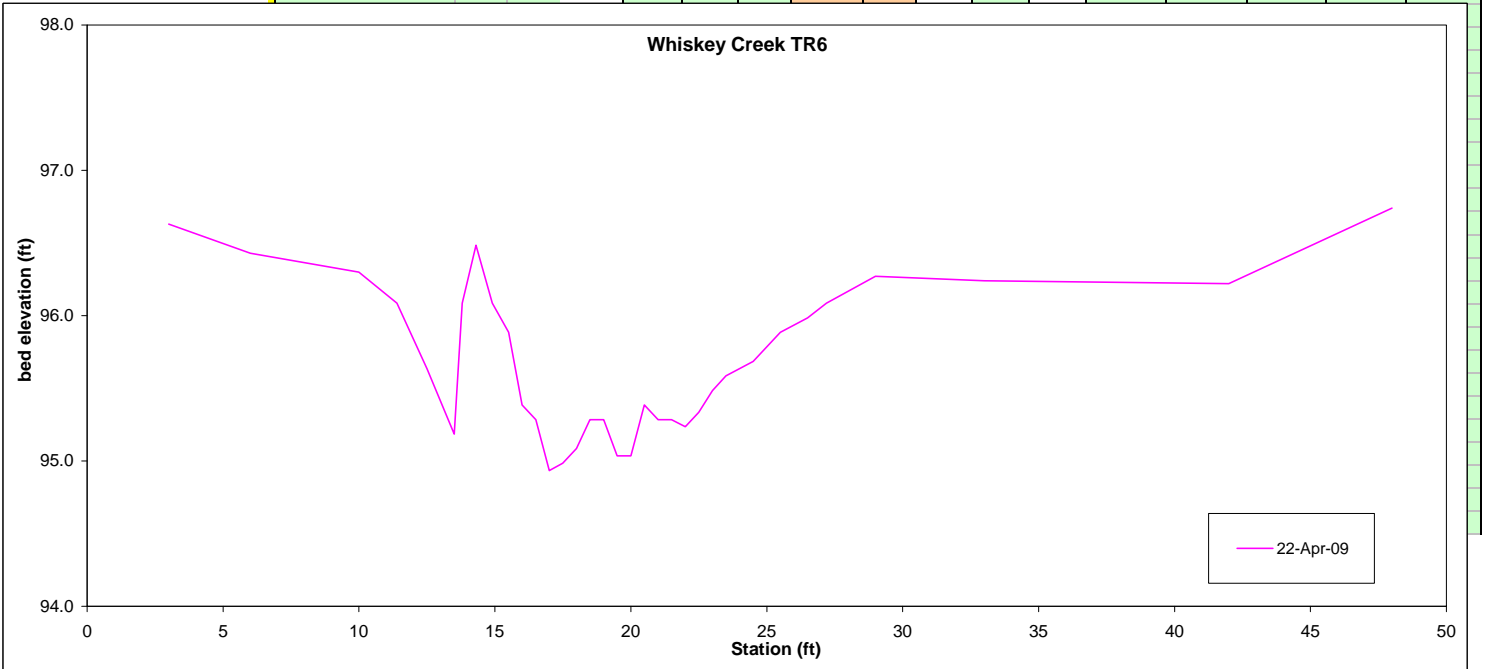
22-Apr-09															
Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	Vel (ft/s)					Angle (deg)	q (cfs)	Substrate Composition			Percent Dom	Sub Code
				V <sub>0.2/0.6</sub>	V <sub>0.8</sub>	NV <sub>0.2/0.6</sub>	NV <sub>0.8</sub>	Ave			Dom	Sub-d	Cover		
LWP	3.0	5.40	96.41									VEG			
	6.0	5.59	96.22									VEG			
	8.5	5.78	96.03									VEG			
	8.8	6.02	95.79									VEG	SI		90
LWE	11.2		95.84	0.00	0.00	0.00		0.00		0.00		AQ VEG	SI	AQ VEG	70
	12.0		95.69	0.15	0.00	0.00		0.00		0.00		AQ VEG	SI	AQ VEG	70
	13.0		95.39	0.45	0.05	0.08		0.08		0.04		SI	AQ VEG	AQ VEG	60
	14.0		95.39	0.45	0.05	0.08		0.08		0.04		SI	AQ VEG	AQ VEG	60
	15.0		95.44	0.40	0.00	0.00		0.00		0.00		AQ VEG	SI	AQ VEG	80
	16.0		95.04	0.80	0.05	0.08		0.08		0.06		AQ VEG	SI	AQ VEG	80
	17.0		95.54	0.30	0.05	0.08		0.08		0.02		AQ VEG	SI	AQ VEG	70
	17.5		94.46	1.38	0.45	0.50		0.50		0.35		SI	SG		60
	18.0		94.54	1.30	0.49	0.54		0.54		0.35		SG	SA		60
	18.5		94.39	1.45	1.05	1.10		1.10		0.79		SG	SA		60
	19.0		94.49	1.35	1.03	1.08		1.08		1.08		SG	SA		70
	19.5		94.59	1.25	1.20	1.24		1.24		0.77		SG	SA		70
	20.0		94.59	1.25	0.87	0.92		0.92		0.58		SG	SA		70
	20.5		94.64	1.20	0.62	0.67		0.67		0.40		SG	SA		80
	21.0		94.69	1.15	0.55	0.60		0.60		0.34		SG	SA		80
	21.5		94.59	1.25	0.84	0.89		0.89		0.56		SG	SA		80
	22.0		94.64	1.20	1.09	1.13		1.13		0.68		SG	SA		60
	22.5		94.84	1.00	1.23	1.27		1.27		0.63		SG	SA		60
	23.0		94.79	1.05	1.30	1.34		1.34		0.70		AQ VEG	SA	AQ VEG	70
	23.5		94.74	1.10	0.88	0.93		0.93		0.36		AQ VEG	SA	AQ VEG	80
	23.7		94.69	1.15	0.79	0.84		0.84		0.24		AQ VEG	SA	AQ VEG	80
RWE	24.0		95.64	0.20	0.00	0.00		0.00		0.00		AQ VEG	SI	AQ VEG	90
	24.2	6.02	95.79									VEG	SI		80
	28.0	6.00	95.81									VEG	SI		80
	33.0	5.99	95.82									VEG			
	34.7	5.76	96.05									VEG			
	39.0	5.41	96.40									VEG			
	43.0	5.22	96.59									VEG			
RWP	47.2	5.30	96.51									VEG			



Stream: Whiskey Creek  
 Site: Whiskey Creek  
 Transect: 6  
 Habitat: Glide

Survey Date	HI (ft)	Q (cfs)
4/22/2009	101.81	7.5
1/0/1900	0.00	
1/0/1900	0.00	

	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	22-Apr-09					Angle (deg)	q (cfs)	Substrate Composition			Percent Dom	Sub Code
					Vel (ft/s)							Dom	Sub-d	Cover		
					V <sub>0.2/0.6</sub>	V <sub>0.8</sub>	NV <sub>0.2/0.6</sub>	NV <sub>0.8</sub>	Ave							
LWP	3.0	5.18	96.63									VEG				
	6.0	5.38	96.43									VEG				
	10.0	5.51	96.30									VEG				
LWE	11.4		96.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	AQ VEG	SI	AQ VEG	70	
	12.5		95.64	0.45	0.10	0.16	0.16	0.16	0.07	0.07	0.07	SI	AQ VEG	AQ VEG	80	
	13.5		95.19	0.90	0.15	0.22	0.22	0.22	0.13	0.13	0.13	SI	AQ VEG	AQ VEG	80	
Edge of grass clump	13.8		96.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	14.3		96.49	-0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	AQ VEG		AQ VEG	100	
Edge of grass clump	14.9		96.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	15.5		95.89	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	AQ VEG	SI	AQ VEG	80	
	16.0		95.39	0.70	0.10	0.16	0.16	0.16	0.06	0.06	0.06	AQ VEG	SI	AQ VEG	80	
	16.5		95.29	0.80	0.29	0.36	0.36	0.36	0.14	0.14	0.14	AQ VEG	SI	AQ VEG	70	
	17.0		94.94	1.15	0.27	0.34	0.34	0.34	0.19	0.19	0.19	SI	SMG		70	
	17.5		94.99	1.10	1.56	1.60	1.60	1.60	0.88	0.88	0.88	SMG	SA		80	
	18.0		95.09	1.00	1.67	1.70	1.70	1.70	0.85	0.85	0.85	SMG	SA		80	
	18.5		95.29	0.80	1.37	1.41	1.41	1.41	0.56	0.56	0.56	AQ VEG	SMG	AQ VEG	60	
	19.0		95.29	0.80	1.33	1.37	1.37	1.37	0.55	0.55	0.55	AQ VEG	SMG	AQ VEG	60	
	19.5		95.04	1.05	1.00	1.05	1.05	1.05	0.55	0.55	0.55	SMG	SA		70	
	20.0		95.04	1.05	0.82	0.87	0.87	0.87	0.46	0.46	0.46	SMG	SA		70	
	20.5		95.39	0.70	1.29	1.33	1.33	1.33	0.46	0.46	0.46	AQ VEG	SMG	AQ VEG	70	
	21.0		95.29	0.80	1.33	1.37	1.37	1.37	0.55	0.55	0.55	SMG	AQ VEG	AQ VEG	60	
	21.5		95.29	0.80	1.58	1.62	1.62	1.62	0.65	0.65	0.65	SMG	AQ VEG	AQ VEG	60	
	22.0		95.24	0.85	1.61	1.64	1.64	1.64	0.70	0.70	0.70	SMG	AQ VEG	AQ VEG	60	
	22.5		95.34	0.75	1.32	1.36	1.36	1.36	0.51	0.51	0.51	SMG	AQ VEG	AQ VEG	60	
	23.0		95.49	0.60	0.33	0.39	0.39	0.39	0.12	0.12	0.12	AQ VEG	SI	AQ VEG	60	
	23.5		95.59	0.50	0.10	0.16	0.16	0.16	0.06	0.06	0.06	AQ VEG	SI	AQ VEG	90	
	24.5		95.69	0.40	0.05	0.08	0.08	0.08	0.03	0.03	0.03	AQ VEG	SI	AQ VEG	90	
	25.5		95.89	0.20	0.05	0.08	0.08	0.08	0.02	0.02	0.02	SI	AQ VEG	AQ VEG	60	
	26.5		95.99	0.10	0.05	0.08	0.08	0.08	0.01	0.01	0.01	SI	AQ VEG	AQ VEG	60	
RWE	27.2		96.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SI	AQ VEG	AQ VEG	70	
	29.0	5.54	96.27									VEG	SI			
	33.0	5.57	96.24									VEG	SI			
	42.0	5.59	96.22									VEG	SI			
RWP	48.0	5.07	96.74									VEG				





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RIFFLE          LOW          TRANSECT 1
IOC      0110000000000000000000
QARD    5.0
QARD   10.0
QARD   11.4
QARD   15.0
QARD   20.0
QARD   25.0
QARD   30.0
QARD   35.0
QARD   36.9
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   85.0
QARD   90.0
QARD   95.0
QARD  100.0
QARD  105.0
QARD  110.0
QARD  120.0
QARD  124.3
QARD  130.0
QARD  140.0
QARD  150.0
QARD  160.0
XSEC    0.0      0.00 1.0      92.72  0.00753
        0.0  1.096.21  7.095.42 13.094.97 19.094.54 21.293.89 21.593.52
        0.0 22.093.52 24.093.07 26.092.77 28.092.72 30.092.80 31.092.87
        0.0 33.093.19 34.093.12 36.093.32 38.093.32 40.093.12 42.093.02
        0.0 44.093.09 46.093.12 48.093.02 50.093.07 52.093.15 53.793.30
        0.0 56.093.12 58.093.00 60.092.96 62.093.20 62.793.52 63.094.14
        0.0 68.094.93 71.095.34 72.596.50 73.296.61
NS      0.0      1.2      1.2      1.2      1.2      1.2      2.8
NS      0.0      2.8      4.5      4.6      6.4      6.5      5.7
NS      0.0      7.5      5.6      5.6      5.6      5.6      5.6
NS      0.0      5.6      5.6      5.6      6.3      6.3      3.6
NS      0.0      3.6      3.6      4.6      2.4      2.1      2.1
NS      0.0      1.2      1.2      1.2      1.2
CALQ    0.0      93.52     11.4     -0.90
ENDJ
    
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RIFFLE          MID          TRANSECT 1
IOC      011000000000000000000000
QARD    5.0
QARD   10.0
QARD   11.4
QARD   15.0
QARD   20.0
QARD   25.0
QARD   30.0
QARD   35.0
QARD   36.9
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   85.0
QARD   90.0
QARD   95.0
QARD  100.0
QARD  105.0
QARD  110.0
QARD  120.0
QARD  124.3
QARD  130.0
QARD  140.0
QARD  150.0
QARD  160.0
XSEC    0.0      0.00 1.0      92.72  0.00753
        0.0  1.096.21  7.095.42 13.094.97 19.094.54 20.194.24 21.193.92
        0.0 22.093.39 24.093.14 26.092.92 28.092.74 30.092.72 31.092.72
        0.0 33.093.22 34.093.12 36.093.37 38.093.27 40.093.12 42.093.12
        0.0 44.093.04 46.093.27 48.093.00 50.093.25 52.092.97 53.793.12
        0.0 56.093.14 58.093.22 60.093.07 62.693.47 62.793.92 63.094.14
        0.0 68.094.93 71.095.34 72.596.50 73.296.61
NS      0.0      1.2      1.2      1.2      1.2      1.2      1.2
NS      0.0      2.8      4.5      4.6      6.4      6.5      5.7
NS      0.0      7.5      5.6      5.6      5.6      5.6      5.6
NS      0.0      5.6      5.6      5.6      6.3      6.3      3.6
NS      0.0      3.6      3.6      4.6      2.4      2.1      2.1
NS      0.0      1.2      1.2      1.2      1.2
CALQ    0.0      93.92     36.9     -2.10
ENDJ
    
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RIFFLE	LOW		TRANSECT 1										
IOC	1101100100001000101000												
QARD	5.0												
QARD	10.0												
QARD	11.4												
QARD	15.0												
QARD	20.0												
QARD	25.0												
QARD	30.0												
QARD	35.0												
QARD	36.9												
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	85.0												
QARD	90.0												
QARD	95.0												
QARD	100.0												
QARD	105.0												
QARD	110.0												
QARD	120.0												
QARD	124.3												
QARD	130.0												
QARD	140.0												
QARD	150.0												
QARD	160.0												
XSEC	0.0	0.00	1.0	92.79	0.00753								
	0.0	1.096.21	7.095.42	13.094.97	19.094.54	21.293.89	21.593.52						
	0.0	22.093.52	24.093.07	26.092.77	28.092.72	30.092.80	31.092.87						
	0.0	33.093.19	34.093.12	36.093.32	38.093.32	40.093.12	42.093.02						
	0.0	44.093.09	46.093.12	48.093.02	50.093.07	52.093.15	53.793.30						
	0.0	56.093.12	58.093.00	60.092.96	62.093.20	62.793.52	63.094.14						
	0.0	68.094.93	71.095.34	72.596.50	73.296.61								
NS	0.0	1.2	1.2	1.2	1.2	1.2	2.8						
NS	0.0	2.8	4.5	4.6	6.4	6.5	5.7						
NS	0.0	7.5	5.6	5.6	5.6	5.6	5.6						
NS	0.0	5.6	5.6	5.6	6.3	6.3	3.6						
NS	0.0	3.6	3.6	4.6	2.4	2.1	2.1						
NS	0.0	1.2	1.2	1.2	1.2								
WSL	0.0	93.36	93.49	93.52	93.61	93.71	93.80						
WSL	0.0	93.86	93.91	93.92	93.94	93.97	93.99						
WSL	0.0	94.02	94.04	94.06	94.08	94.10	94.12						
WSL	0.0	94.13	94.15	94.17	94.19	94.20	94.22						
WSL	0.0	94.25	94.26	94.28	94.31	94.33	94.36						
CAL1	0.0	93.52	11.4										
VEL1	0.0			0.00	0.00	0.21	0.18	0.27	1.25	1.20			
VEL1	0.0	1.35	1.34	0.68	1.03	0.99	1.03	-0.07	1.55	1.07	0.85	0.47	0.52
VEL1	0.0	0.80	0.68	0.73	0.36	0.00							
CAL2	0.0	93.92	36.9										
VEL2	0.0												
VEL2	0.0												
VEL2	0.0												
CAL3	0.0	94.24	124.3										
VEL3	0.0												
VEL3	0.0												
VEL3	0.0												
ENDJ													

RIFFLE

MID

TRANSECT 1

IOC 1101100100001000101000

QARD 5.0  
 QARD 10.0  
 QARD 11.4  
 QARD 15.0  
 QARD 20.0  
 QARD 25.0  
 QARD 30.0  
 QARD 35.0  
 QARD 36.9  
 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 85.0  
 QARD 90.0  
 QARD 95.0  
 QARD 100.0  
 QARD 105.0  
 QARD 110.0  
 QARD 120.0  
 QARD 124.3  
 QARD 130.0  
 QARD 140.0  
 QARD 150.0  
 QARD 160.0

XSEC 0.0 0.00 1.0 92.79 0.00753  
 0.0 1.096.21 7.095.42 13.094.97 19.094.54 20.194.24 21.193.92  
 0.0 22.093.39 24.093.14 26.092.92 28.092.74 30.092.72 31.092.72  
 0.0 33.093.22 34.093.12 36.093.37 38.093.27 40.093.12 42.093.12  
 0.0 44.093.04 46.093.27 48.093.00 50.093.25 52.092.97 53.793.12  
 0.0 56.093.14 58.093.22 60.093.07 62.693.47 62.793.92 63.094.14  
 0.0 68.094.93 71.095.34 72.596.50 73.296.61

NS 0.0 1.2 1.2 1.2 1.2 1.2 1.2  
 NS 0.0 2.8 4.5 4.6 6.4 6.5 5.7  
 NS 0.0 7.5 5.6 5.6 5.6 5.6 5.6  
 NS 0.0 5.6 5.6 5.6 6.3 6.3 3.6  
 NS 0.0 3.6 3.6 4.6 2.4 2.1 2.1  
 NS 0.0 1.2 1.2 1.2 1.2

WSL 0.0 93.36 93.49 93.52 93.61 93.71 93.80  
 WSL 0.0 93.86 93.91 93.92 93.94 93.97 93.99  
 WSL 0.0 94.02 94.04 94.06 94.08 94.10 94.12  
 WSL 0.0 94.13 94.15 94.17 94.19 94.20 94.22  
 WSL 0.0 94.25 94.26 94.28 94.31 94.33 94.36

CAL1 0.0 93.92 36.9  
 VEL1 0.0 0.00 0.00 0.28 0.56 0.41 1.29 1.63 1.61  
 VEL1 0.0 1.89 1.71 1.07 1.62 1.91 2.10 0.36 2.58 1.52 0.96 0.32 0.57  
 VEL1 0.0 0.94 1.01 0.84 0.00 0.00

CAL2 0.0 94.24 124.3  
 VEL2 0.0  
 VEL2 0.0  
 VEL2 0.0  
 CAL3 0.0 93.52 11.4

VEL3 0.0  
 VEL3 0.0  
 VEL3 0.0  
 ENDJ

RIFFLE

HGH

TRANSECT 1

IOC 1101100100001000101000

QARD 5.0  
 QARD 10.0  
 QARD 11.4  
 QARD 15.0  
 QARD 20.0  
 QARD 25.0  
 QARD 30.0  
 QARD 35.0  
 QARD 36.9  
 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 85.0  
 QARD 90.0  
 QARD 95.0  
 QARD 100.0  
 QARD 105.0  
 QARD 110.0  
 QARD 120.0  
 QARD 124.3  
 QARD 130.0  
 QARD 140.0  
 QARD 150.0  
 QARD 160.0

XSEC 0.0 0.00 1.0 92.79 0.00753  
 0.0 1.096.21 7.095.42 13.094.97 19.094.54 20.194.24 22.093.29  
 0.0 24.093.24 26.092.84 28.092.84 30.092.79 31.092.84 33.093.04  
 0.0 34.093.04 36.093.34 38.093.34 40.093.14 42.093.04 44.093.04  
 0.0 46.093.24 48.092.94 50.093.34 52.093.04 53.793.14 56.093.09  
 0.0 58.092.94 60.092.94 62.093.14 62.693.29 63.294.24 68.094.93  
 0.0 71.095.34 72.596.50 73.296.61

NS 0.0 1.2 1.2 1.2 1.2 1.2 2.8  
 NS 0.0 4.5 4.6 6.4 6.5 5.7 7.5  
 NS 0.0 5.6 5.6 5.6 5.6 5.6 5.6  
 NS 0.0 5.6 5.6 6.3 6.3 3.6 3.6  
 NS 0.0 3.6 4.6 2.4 2.1 2.1 1.2  
 NS 0.0 1.2 1.2 1.2

WSL 0.0 93.36 93.49 93.52 93.61 93.71 93.80  
 WSL 0.0 93.86 93.91 93.92 93.94 93.97 93.99  
 WSL 0.0 94.02 94.04 94.06 94.08 94.10 94.12  
 WSL 0.0 94.13 94.15 94.17 94.19 94.20 94.22  
 WSL 0.0 94.25 94.26 94.28 94.31 94.33 94.36

CAL1 0.0 94.24 124.3  
 VEL1 0.0 0.00 0.94 1.64 1.17 2.49 3.08 3.15 3.43  
 VEL1 0.0 3.07 2.87 2.62 2.66 3.21 0.73 4.25 3.44 3.84 0.34 3.70 3.59  
 VEL1 0.0 3.07 2.38 1.43 0.64 0.00

CAL2 0.0 93.92 36.9

VEL2 0.0  
 VEL2 0.0  
 VEL2 0.0

CAL3 0.0 93.52 11.4

VEL3 0.0  
 VEL3 0.0  
 VEL3 0.0

ENDJ

RIFFLE

LOW

TRANSECT 2

IOC 1101100000001000101000

QARD 5.0  
 QARD 10.0  
 QARD 11.4  
 QARD 15.0  
 QARD 20.0  
 QARD 25.0  
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 QARD 36.9  
 QARD 40.0  
 QARD 45.0  
 QARD 50.0  
 QARD 55.0  
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 QARD 65.0  
 QARD 70.0  
 QARD 75.0  
 QARD 80.0  
 QARD 85.0  
 QARD 90.0  
 QARD 95.0  
 QARD 100.0  
 QARD 105.0  
 QARD 110.0  
 QARD 120.0  
 QARD 124.3  
 QARD 130.0  
 QARD 140.0  
 QARD 150.0  
 QARD 160.0

XSEC 0.0 0.00 1.0 92.80 0.00753  
 0.0 -7.097.33 1.096.75 3.096.17 5.095.75 5.394.15 8.293.70  
 0.0 9.093.55 10.593.20 12.092.95 13.592.80 15.092.43 16.592.80  
 0.0 18.092.90 19.592.50 21.092.45 22.592.60 24.093.30 25.593.30  
 0.0 27.093.70 28.593.50 30.093.35 31.593.35 33.093.20 34.593.30  
 0.0 36.093.60 37.593.50 38.893.70 39.094.40 41.094.93 44.095.50  
 NS 0.0 1.2 1.2 1.2 1.2 1.2 2.4  
 NS 0.0 2.3 2.6 6.2 6.2 7.3 7.4  
 NS 0.0 6.7 6.5 6.5 6.5 7.6 7.6  
 NS 0.0 7.6 7.5 7.5 5.6 5.4 5.2  
 NS 0.0 2.5 2.4 2.1 1.2 1.2 1.2  
 CAL1 0.0 93.70 11.4  
 VEL1 0.0 0.00 0.00 0.43 0.30 0.57 0.23 1.39  
 VEL1 0.0 0.80 0.66 0.45 0.52 0.42 1.22 0.00 0.95 1.00 1.21 0.93 0.22  
 VEL1 0.0 0.00 0.00 0.00  
 CAL2 0.0 94.62 124.3  
 VEL2 0.0  
 VEL2 0.0  
 VEL2 0.0  
 CAL3 0.0 94.10 36.9  
 VEL3 0.0  
 VEL3 0.0  
 VEL3 0.0  
 ENDJ

RIFFLE

MID

TRANSECT 2

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IOC      1101100000001000101000
QARD   5.0
QARD  10.0
QARD  11.4
QARD  15.0
QARD  20.0
QARD  25.0
QARD  30.0
QARD  35.0
QARD  36.9
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  85.0
QARD  90.0
QARD  95.0
QARD 100.0
QARD 105.0
QARD 110.0
QARD 120.0
QARD 124.3
QARD 130.0
QARD 140.0
QARD 150.0
QARD 160.0
XSEC   0.0      0.00  1.0      92.80   0.00753
      0.0 -7.097.33  1.096.75  3.096.17  5.095.75  5.394.15  6.094.10
      0.0  7.593.90  9.093.50 10.593.20 12.093.00 13.592.78 15.092.40
      0.0 16.592.85 18.092.82 19.592.40 21.092.42 22.592.60 24.093.32
      0.0 25.593.28 27.093.70 28.593.50 30.093.40 31.593.40 33.093.20
      0.0 34.593.30 36.093.60 37.593.50 38.893.85 38.994.10 41.094.93
      0.0 44.095.50
NS      0.0      1.2      1.2      1.2      1.2      1.2      1.2
NS      0.0      2.4      2.3  .20  2.6  .25  6.2  .25  6.2      7.3
NS      0.0      7.4      6.7  .11  6.5  .11  6.5      6.5  .09  7.6
NS      0.0      7.6      7.6      7.5      7.5      5.6      5.4
NS      0.0  .20  5.2  .25  2.5      2.4      2.1      1.2      1.2
NS      0.0      1.2
CAL1    0.0      94.10      36.9
VEL1    0.0      0.00  0.00  0.00  0.33  0.34  0.35  0.76
VEL1    0.0  1.47  2.30  1.36  1.35  2.47  0.93  2.06  2.19  1.84  1.80  1.85  2.07
VEL1    0.0  0.45  0.10  0.73  0.00  0.00
CAL2    0.0      94.62      124.3
VEL2    0.0
VEL2    0.0
VEL2    0.0
CAL3    0.0      93.70      11.4
VEL3    0.0
VEL3    0.0
VEL3    0.0
ENDJ
    
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RIFFLE

LOW

TRANSECT 3

IOC 1101100000001000101000

QARD 5.0  
 QARD 10.0  
 QARD 11.4  
 QARD 15.0  
 QARD 20.0  
 QARD 25.0  
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 QARD 35.0  
 QARD 36.9  
 QARD 40.0  
 QARD 45.0  
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 QARD 65.0  
 QARD 70.0  
 QARD 75.0  
 QARD 80.0  
 QARD 85.0  
 QARD 90.0  
 QARD 95.0  
 QARD 100.0  
 QARD 105.0  
 QARD 110.0  
 QARD 120.0  
 QARD 124.3  
 QARD 130.0  
 QARD 140.0  
 QARD 150.0  
 QARD 160.0

XSEC 0.0 0.00 1.0 94.45 0.00753  
 0.0 -6.098.76 1.098.31 6.097.56 6.796.60 10.095.88 15.095.06  
 0.0 20.295.01 20.894.79 21.594.39 22.094.14 24.093.99 26.094.49  
 0.0 28.094.74 30.094.59 32.094.54 34.094.49 36.094.34 38.094.49  
 0.0 40.094.54 42.094.74 44.094.54 46.094.59 48.094.39 50.094.69  
 0.0 52.094.49 54.094.49 56.094.44 58.094.79 59.094.79 59.895.24  
 0.0 60.395.58 62.095.99 66.496.45 70.497.52

NS 0.0 1.2 1.2 1.2 1.2 1.2 1.2  
 NS 0.0 1.2 1.2 2.4 2.4 4.2 4.2  
 NS 0.0 4.5 5.4 5.6 5.6 5.6 5.6  
 NS 0.0 5.6 5.6 6.5 6.5 5.6 5.6  
 NS 0.0 5.6 5.6 6.4 6.2 1.2 1.2  
 NS 0.0 1.2 1.2 1.2 1.2

CAL1 0.0 94.79 11.4

VEL1 0.0 0.00 0.00 0.00 0.00 0.95

VEL1 0.0 0.25 0.48 1.64 1.53 2.55 1.78 1.79 1.36 1.87 0.94 1.52 1.36

VEL1 0.0 0.58 1.06 1.09 0.00 0.00

CAL2 0.0 95.55 124.3

VEL2 0.0

VEL2 0.0

VEL2 0.0

CAL3 0.0 95.05 36.9

VEL3 0.0

VEL3 0.0

VEL3 0.0

ENDJ



RIFFLE

MID

TRANSECT 3

IOC 1101100000001000101000

QARD 5.0  
 QARD 10.0  
 QARD 11.4  
 QARD 15.0  
 QARD 20.0  
 QARD 25.0  
 QARD 30.0  
 QARD 35.0  
 QARD 36.9  
 QARD 40.0  
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 QARD 80.0  
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 QARD 100.0  
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 QARD 110.0  
 QARD 120.0  
 QARD 124.3  
 QARD 130.0  
 QARD 140.0  
 QARD 150.0  
 QARD 160.0

XSEC 0.0 0.00 1.0 94.45 0.00753  
 0.0 -6.098.76 1.098.31 6.097.56 6.796.60 10.095.88 15.095.06  
 0.0 20.295.05 21.594.10 22.093.95 24.093.80 26.094.30 28.094.60  
 0.0 30.094.45 32.094.43 34.094.45 36.094.25 38.094.37 40.094.53  
 0.0 42.094.70 44.094.70 46.094.65 48.094.25 50.094.50 52.094.35  
 0.0 54.094.45 56.094.45 58.094.65 59.695.05 59.895.24 60.395.58  
 0.0 62.095.99 66.496.45 70.497.52

NS 0.0 1.2 1.2 1.2 1.2 1.2 1.2  
 NS 0.0 .1 1.2 .15 2.4 .15 2.4 .20 4.2 4.2 4.5  
 NS 0.0 5.4 5.6 5.6 5.6 .048 5.6 5.6  
 NS 0.0 5.6 6.5 6.5 5.6 5.6 5.6  
 NS 0.0 5.6 6.4 .07 6.2 .05 1.2 1.2 1.2  
 NS 0.0 1.2 1.2 1.2

CAL1 0.0 95.05 36.9

VEL1 0.0 0.00 0.46 0.57 0.26 0.93 1.08

VEL1 0.0 1.91 1.93 1.96 2.70 1.73 1.86 2.04 1.93 1.23 1.47 1.66 1.55

VEL1 0.0 1.50 1.26 1.08 0.00

CAL2 0.0 95.55 124.3

VEL2 0.0

VEL2 0.0

VEL2 0.0

CAL3 0.0 94.79 11.4

VEL3 0.0

VEL3 0.0

VEL3 0.0

ENDJ