

10-30-2008

Ex. 277-US-458

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Stream: Williamson River
 Site: 639 (Deep Creek)
 Date: 5/26/1993
 Habitat: Run

Flow: High

(1) Level Loop Survey (BM & HP)

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	3.40	103.40		
HP1			5.33	98.07
HP2			3.68	99.72
HP3			3.65	99.75
TP				
HP3	3.64	103.39		
HP2			3.67	99.72
HP1			5.32	98.07
BM			3.39	100.00

Comment:

Date: 6/23/1993
 Habitat: Run

Flow: Mid

(1) Level Loop Survey

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	4.25	104.25		
HP1			6.19	98.06
HP2			4.54	99.71
HP3			4.51	99.74
TP				
HP3	4.69	104.43		
HP2			4.73	99.70
HP1			6.37	98.06
BM			4.44	99.99

Comment:

Date: 9/18/1993
 Habitat: Run

Flow: Low

(1) Level Loop Survey

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	4.35	104.35		
HP1			6.28	98.07
HP2			4.64	99.71
HP3			4.60	99.75
TP				
HP3	4.35	104.10		
HP2			4.39	99.71
HP1			6.03	98.07
BM			4.11	99.99

Comment:

(2) Water Surface Elevation (WSE) Survey

	Sta		FS	Rod	WSE		Q
	(ft)	(ft)			(ft)	(ft)	
TR1	56.2	103.39	5.72	0.00	97.67	97.68	
	L/R WSE						
	LWSE						
	RWSE						
TR2	140.5	103.39	5.22	0.00	98.17	98.16	23.8
	L/R WSE						
	LWSE						
	RWSE						
TR3	252.9	103.39	4.61	0.00	98.78	98.78	
	L/R WSE						
	LWSE						
	RWSE						

Note: Right bank distances were used to calculate WSE slope
 WSE slope= 0.56%
 Ave Q= 23.8

(2) Water Surface Elevation (WSE) Survey

	Sta		FS	Rod	WSE		Q
	(ft)	(ft)			(ft)	(ft)	
TR1	56.2	104.43	7.39	0.00	97.04	97.04	12.5
	L/R WSE						
	LWSE						
	RWSE						
TR2	140.5	104.43	6.91	0.00	97.52	97.51	#####
	L/R WSE						
	LWSE						
	RWSE						
TR3	252.9	104.43	6.29	0.00	98.14	98.12	11.8
	L/R WSE						
	LWSE						
	RWSE						

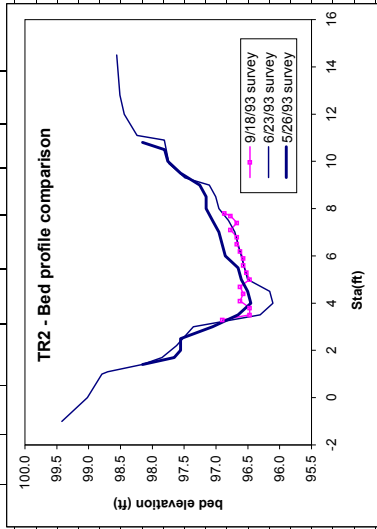
Note: WSE slope = 0.55%
 Ave Q= 12.4

(2) Water Surface Elevation (WSE) Survey

	Sta		FS	Rod	WSE		Q
	(ft)	(ft)			(ft)	(ft)	
TR1	56.2	104.10	7.91	0.00	96.19	96.19	2.0
	L/R WSE						
	LWSE						
	RWSE						
TR2	140.5	104.10	7.20	0.00	96.90	96.87	1.3
	L/R WSE						
	LWSE						
	RWSE						
TR3	252.9	104.10	6.56	0.00	97.54	97.53	1.6
	L/R WSE						
	LWSE						
	RWSE						

Note: WSE slope = 0.68%
 Ave Q= 1.6

Stream: Williamson River		26-May-93										23-Jun-93										18-Sep-93													
Site:	Q (cfs)	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	V _{0.206} (ft/s)	V _{0.8} (ft/s)	Ave (ft/s)	q (cfs)	substrate	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	V _{0.206} (ft/s)	V _{0.8} (ft/s)	Ave (ft/s)	q (cfs)	substrate	Sta (ft)	FS (ft)	Ground (ft)	Depth (ft)	V _{0.206} (ft/s)	V _{0.8} (ft/s)	Ave (ft/s)	q (cfs)	substrate							
Habitat: Run																																			
Survey HI		LWP	0.0							L1																									
Date	(ft)	LWE	1.4	98.16	0.00	0.00	0.00	0.00	0.00	L1																									
5/26/1993	103.39		1.7	97.66	0.50	0.60	0.60	0.09	1.1	L1																									
6/23/1993	104.43		2	97.56	0.60	0.94	0.94	0.23	1.1	L1																									
9/18/1993	104.10	1.3	2.5	97.56	0.60	2.94	2.94	0.88	1.1	L1																									
			3	97.06	1.10	2.77	2.77	1.52	1.1	L1																									
			3.5	96.66	1.50	2.72	2.72	2.04	5.5	L1																									
			4	96.46	1.70	2.54	2.54	2.16	1.1	L1																									
			4.5	96.51	1.65	2.56	2.56	2.11	1.1	L1																									
			5	96.61	1.55	2.66	2.66	2.06	5.5	L1																									
			5.5	96.66	1.50	2.53	2.53	1.90	5.5	L1																									
			6	96.86	1.30	2.74	2.74	1.78	5.5	L1																									
			6.5	96.91	1.25	2.87	2.87	1.79	5.5	L1																									
			7	96.96	1.20	2.92	2.92	1.75	1.1	L1																									
			7.5	97.06	1.10	2.84	2.84	1.56	5.5	L1																									
			8	97.16	1.00	2.18	2.18	1.09	5.3	L1																									
			8.5	97.16	1.00	2.18	2.18	1.09	5.3	L1																									
			9	97.26	0.90	2.09	2.09	0.94	5.3	L1																									
			9.5	97.56	0.60	1.82	1.82	0.55	1.3	L1																									
			10	97.76	0.40	0.79	0.79	0.16	1.3	L1																									
			10.5	97.81	0.35	0.58	0.58	0.08	1.3	L1																									
			RWE	10.8		0.00	0.00	0.00	0.00	L1																									




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RUN                MID
IOC                1101100000001000101000
QARD  1.0
QARD  1.6
QARD  3.0
QARD  4.0
QARD  5.0
QARD  6.0
QARD  7.0
QARD  8.0
QARD  9.0
QARD 10.0
QARD 11.0
QARD 12.4
QARD 13.0
QARD 14.0
QARD 15.0
QARD 16.0
QARD 17.0
QARD 18.0
QARD 19.0
QARD 20.0
QARD 21.0
QARD 22.0
QARD 23.0
QARD 23.8
QARD 25.0
QARD 26.0
QARD 27.0
QARD 28.0
QARD 29.0
QARD 30.0
XSEC1000.0        0.00 1.0      95.90  0.0055
    1000.0  0.0 97.8  1.0 97.8  2.0 97.7  3.0 97.6  3.5 97.3  3.9 97.0
    1000.0  4.2 96.9  5.0 96.5  5.5 96.5  6.0 96.4  6.5 96.3  7.0 96.3
    1000.0  7.5 96.3  8.0 96.2  8.5 96.0  9.0 95.7  9.5 95.7 10.0 95.4
    1000.0 10.5 95.4 11.0 95.5 11.7 95.5 11.9 96.6 12.2 97.0 12.6 97.2
    1000.0 13.6 97.5 14.6 97.6 15.6 97.7 16.6 97.7 17.7 97.8 19.0 97.9
NS  1000.0        1.1      1.1      1.1      1.1 0.14  1.1 0.12  1.3
NS  1000.0  0.1  1.3  .08  1.3      1.3      1.3      1.3      1.3
NS  1000.0        1.3      1.3      1.3      1.3      3.5      3.5
NS  1000.0        3.5      3.5 1.0  3.5  1.0  3.5      3.5      1.1
NS  1000.0        1.1      1.1      1.1      1.1      1.1      1.1
CAL11000.0      97.04      12.4
VEL11000.0                0.00 0.20 0.70 1.05 1.10 1.30 1.40
VEL11000.0  1.65 1.55 1.75 2.00 2.25 2.50 2.70 1.60 0.10-0.15 0.00
VEL11000.0
CAL21000.0      97.68      23.8
VEL21000.0
VEL21000.0
VEL21000.0
CAL31000.0      96.19      1.6
VEL31000.0
VEL31000.0
VEL31000.0
ENDJ
    
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RUN	MID													TRANSECT 2			
IOC	1101100100001000101000																
QARD	1.0																
QARD	1.6																
QARD	3.0																
QARD	4.0																
QARD	5.0																
QARD	6.0																
QARD	7.0																
QARD	8.0																
QARD	9.0																
QARD	10.0																
QARD	11.0																
QARD	12.4																
QARD	13.0																
QARD	14.0																
QARD	15.0																
QARD	16.0																
QARD	17.0																
QARD	18.0																
QARD	19.0																
QARD	20.0																
QARD	21.0																
QARD	22.0																
QARD	23.0																
QARD	23.8																
QARD	25.0																
QARD	26.0																
QARD	27.0																
QARD	28.0																
QARD	29.0																
QARD	30.0																
XSEC1000.0	0.00	1.0		96.11	0.0055												
1000.0	-1.0	99.4	0.0	99.0	1.0	98.8	1.1	98.7	1.4	98.2	1.7	97.9					
1000.0	2.2	97.6	3.0	97.4	3.5	96.3	4.0	96.1	4.5	96.2	5.0	96.5					
1000.0	5.5	96.6	6.0	96.6	6.5	96.7	7.0	96.7	7.5	96.8	8.0	97.0					
1000.0	8.5	97.0	9.0	97.1	9.3	97.5	9.9	97.7	10.9	97.8	11.1	98.2					
1000.0	12.0	98.4	12.8	98.5	14.5	98.6											
NS 1000.0	1.1		1.1		1.1		1.1		1.1		1.1		1.1				
NS 1000.0	1.1		1.1		5.5		1.1		1.1		1.1		5.5				
NS 1000.0	5.5		5.5		5.5		1.1		5.5		5.3						
NS 1000.0	5.3	.052	1.3	.048	1.3	.07	1.3	.09	1.3		1.3						
NS 1000.0	1.3		1.3		1.3												
WSL 1000.0	96.86		96.89		97.02		97.06		97.11		97.18						
WSL 1000.0	97.24		97.29		97.35		97.40		97.45		97.51						
WSL 1000.0	97.55		97.61		97.67		97.73		97.78		97.84						
WSL 1000.0	97.89		97.95		98.00		98.05		98.10		98.14						
WSL 1000.0	98.19		98.23		98.27		98.30		98.34		98.37						
CAL11000.0	97.51		12.4														
VEL11000.0							0.00	0.90	2.60	2.45	2.30	2.40					
VEL11000.0	2.60	2.50	2.50	2.60	2.50	2.40	2.50	0.80	0.00								
VEL11000.0																	
CAL21000.0	98.16		23.8														
VEL21000.0																	
VEL21000.0																	
VEL21000.0																	
CAL31000.0	96.87		1.6														
VEL31000.0																	
VEL31000.0																	
VEL31000.0																	
ENDJ																	

RUN	MID													TRANSECT 3
IOC	1101100100001000101000													
QARD	1.0													
QARD	1.6													
QARD	3.0													
QARD	4.0													
QARD	5.0													
QARD	6.0													
QARD	7.0													
QARD	8.0													
QARD	9.0													
QARD	10.0													
QARD	11.0													
QARD	12.4													
QARD	13.0													
QARD	14.0													
QARD	15.0													
QARD	16.0													
QARD	17.0													
QARD	18.0													
QARD	19.0													
QARD	20.0													
QARD	21.0													
QARD	22.0													
QARD	23.0													
QARD	23.8													
QARD	25.0													
QARD	26.0													
QARD	27.0													
QARD	28.0													
QARD	29.0													
QARD	30.0													
XSEC1000.0	0.00	1.0		96.62	0.0055									
1000.0	-1.0	99.5	0.0	99.4	1.0	99.3	2.0	99.1	2.9	98.8	3.2	96.7		
1000.0	3.7	96.6	4.2	96.6	4.7	97.5	5.4	97.0	5.9	97.1	6.4	97.1		
1000.0	6.9	97.1	7.4	97.1	7.9	97.2	8.4	97.3	8.9	97.6	9.4	98.0		
1000.0	9.9	97.9	10.1	98.4	11.0	98.8	12.0	99.3	13.0	99.6	14.3	99.9		
NS 1000.0		1.1		1.1		1.1		1.1	.022	1.1		3.5		
NS 1000.0		3.5		3.5		9.9		9.9		5.3		5.3		
NS 1000.0		5.3		5.3		3.5		3.3	.16	3.3	0.2	3.3		
NS 1000.0		3.3		1.3		1.3		1.3		1.3		1.3		
WSL 1000.0		97.47		97.51		97.64		97.69		97.75		97.82		
WSL 1000.0		97.88		97.94		97.99		98.04		98.09		98.15		
WSL 1000.0		98.19		98.25		98.31		98.36		98.42		98.47		
WSL 1000.0		98.52		98.58		98.63		98.68		98.73		98.77		
WSL 1000.0		98.81		98.85		98.88		98.91		98.95		98.98		
CAL11000.0		98.12		12.4										
VEL11000.0				0.00	1.60	1.80	1.40	1.90	3.20	2.90	2.90			
VEL11000.0	2.10	2.10	0.90	0.70	0.10	0.01	0.00							
CAL21000.0		98.78		23.8										
VEL21000.0														
VEL21000.0														
CAL31000.0		97.53		1.6										
VEL31000.0														
VEL31000.0														
ENDJ														