

11-5-2008

Ex. 280-US-475

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Stream: SF Sprague River

Site: 655

Date: 9/26/1990

Habitat: Run

Flow: Low

Date: 4/5/1991

Habitat: Run

Flow: Mid

Date: 5/18/1993

Habitat: Run

Flow: High

(1) Level Loop Survey (BM & HP)

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	0.35	100.35		100.00
HP1			0.34	100.01
HP2			0.34	100.01
HP3			0.22	100.13
TP				
HP3	0.71	100.83		
HP2			0.82	100.01
HP1			0.82	100.01
BM			0.83	100.00

Comment:

(1) Level Loop Survey

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	4.77	104.77		100.00
HP1			4.76	100.01
HP2			4.76	100.01
HP3			4.62	100.15
TP				
HP3	4.82	104.97		
HP2			4.95	100.02
HP1			4.95	100.02
BM			4.96	100.01

Comment:

(1) Level Loop Survey

BM/HP (ft)	BS (ft)	HI (ft)	FS (ft)	Elev (ft)
BM	3.62	103.62		100.00
HP1			3.62	100.00
HP2			3.62	100.00
HP3			3.45	100.17
TP				
HP3	4.10	104.27		
HP2			4.25	100.02
HP1			4.25	100.02
BM			4.25	100.02

Comment:

(2) Water Surface Elevation (WSE) Survey

TR	River Station		FS (ft)	HI (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
	L/R bank (ft)	Ave (ft)						
1-L	0	0	100.85	9.62	0.00	91.23	91.25	8.1
1-R	0	0	100.85	9.59	0.00	91.26	91.26	8.1
2-L	29.9	15	100.85	9.57	0.00	91.28	91.29	8.5
2-R	0	0	100.84	9.55	0.00	91.30	91.30	8.5
3-L	88.9	95.3	100.84	9.48	0.00	91.36	91.36	8.3
3-R	101.7		100.84	9.48	0.00	91.36	91.36	8.3

Note:

WSE slope = 0.121%

Ave Q= 8.3

(2) Water Surface Elevation (WSE) Survey

TR	River Station		FS (ft)	HI (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
	L/R bank (ft)	Ave (ft)						
1-L	0	0	104.97	13.23	0.00	91.74	91.77	47.3
1-R	0	0	104.97	13.17	0.00	91.80	91.80	47.3
2-L	29.9	15	104.97	13.20	0.00	91.77	91.78	46.4
2-R	0	0	104.97	13.19	0.00	91.78	91.78	46.4
3-L	88.9	95.3	104.97	13.04	0.00	91.93	91.92	43.5
3-R	101.7		104.97	13.06	0.00	91.91	91.91	43.5

Note:

WSE slope = 0.157%

Ave Q= 45.7

(2) Water Surface Elevation (WSE) Survey

TR	River Station		FS (ft)	HI (ft)	Rod (ft)	WSE (ft)	Ave WSE (ft)	Q (cfs)
	L/R bank (ft)	Ave (ft)						
1-L	0	0	104.27	10.68	0.00	93.59	93.63	
1-R	0	0	104.27	10.60	0.00	93.67	93.67	
2-L	29.9	15	104.27	10.49	0.00	93.78	93.76	300.3
2-R	0	0	104.27	10.53	0.00	93.74	93.74	
3-L	88.9	95.3	104.27	10.42	0.00	93.85	93.80	
3-R	101.7		104.27	10.52	0.00	93.75	93.75	

Note:

WSE slope = 0.178%

Ave Q= 300.3

(3) Meter and propeller ID for Velocity Correction

Meter ID: NA  
Propeller ID: NA

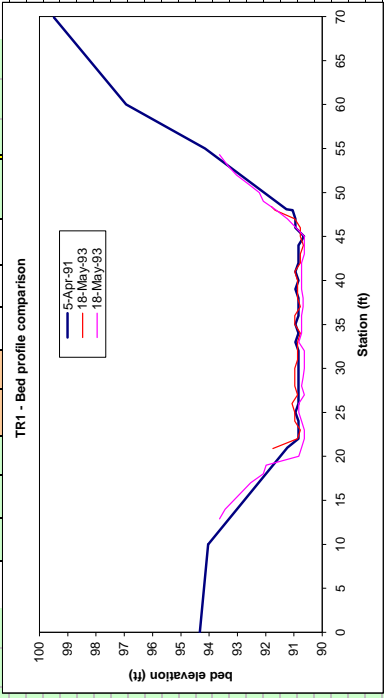
(3) Meter and propeller ID for Velocity Correction

Meter ID: NA  
Propeller ID: NA

(3) Meter and propeller ID for Velocity Correction

Meter ID: NA  
Propeller ID: NA

26-Sep-90										5-Apr-91										18-May-93																							
Sta	ES	Ground	Depth	Vel (ft/s)	V <sub>0.5</sub>	NV <sub>0.5</sub>	NV <sub>0.5</sub>	Angle	q	Substrate	Sta	ES	Ground	Depth	Vel (ft/s)	V <sub>0.5</sub>	NV <sub>0.5</sub>	NV <sub>0.5</sub>	Angle	q	Substrate	Sta	Adj	FS	Ground	Depth	Vel (ft/s)	V <sub>0.5</sub>	NV <sub>0.5</sub>	NV <sub>0.5</sub>	Angle	q	Substrate										
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(deg)	(cfs)		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(deg)	(cfs)		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(deg)	(cfs)										
LWP	0.0	6.52	94.33							1.1	LWP	0.0	10.62	94.35								LWE	14.9	12.9																			
LEW	10.0	6.82	94.03	0.00	0.00	0.00	0.00	0.00	0.00	1.1	LEW	20.9	13.23	91.74	0.10	0.00	0.00	0.00	0.00	0.00	0.00	LEW	16.0	14.0	93.63	0.00																	
	22.0	22.0	90.85	0.40	0.32	0.32	0.32	0.32	0.32	2.6		22.0	22.0	90.87	0.90	0.81	0.81	0.81	0.81	0.81	0.00		17.0	15.0	93.13	0.50																	
	23.0	24.0	90.85	0.40	1.22	1.22	1.22	1.22	0.49	2.6		23.0	23.0	90.77	1.00	0.94	0.94	0.94	0.94	0.94	0.00		18.0	16.0	92.83	0.80																	
	24.0	24.0	90.85	0.40	0.54	0.54	0.54	0.54	0.22	2.6		24.0	24.0	90.97	0.80	1.54	1.54	1.54	1.54	1.54	0.00		19.0	17.0	92.53	1.10																	
	25.0	25.0	90.95	0.30	0.42	0.42	0.42	0.42	0.13	2.6		25.0	25.0	90.97	0.80	0.84	0.84	0.84	0.84	0.84	0.00		20.0	18.0	92.08	1.55																	
	26.0	26.0	90.85	0.40	0.52	0.52	0.52	0.52	0.21	2.6		26.0	26.0	91.07	0.70	2.16	2.16	2.16	2.16	2.16	0.00		21.0	19.0	91.98	1.65																	
	27.0	27.0	90.85	0.40	0.71	0.71	0.71	0.71	0.28	2.6		27.0	27.0	90.87	0.90	2.25	2.25	2.25	2.25	2.25	0.00		22.0	20.0	90.83	2.80																	
	28.0	28.0	90.85	0.40	1.24	1.24	1.24	1.24	0.50	2.6		28.0	28.0	90.97	0.80	1.78	1.78	1.78	1.78	1.78	0.00		23.0	21.0	90.73	2.90																	
	29.0	29.0	90.85	0.40	0.93	0.93	0.93	0.93	0.37	2.6		29.0	29.0	90.97	0.80	1.97	1.97	1.97	1.97	1.97	0.00		24.0	22.0	90.63	3.00																	
	30.0	30.0	90.85	0.40	1.02	1.02	1.02	1.02	0.41	2.6		30.0	30.0	90.97	0.80	2.33	2.33	2.33	2.33	2.33	0.00		25.0	23.0	90.63	3.00																	
	31.0	31.0	90.85	0.40	0.76	0.76	0.76	0.76	0.30	2.6		31.0	31.0	90.87	0.90	2.15	2.15	2.15	2.15	2.15	0.00		26.0	24.0	90.73	2.90																	
	32.0	32.0	90.85	0.40	0.71	0.71	0.71	0.71	0.28	2.6		32.0	32.0	90.87	0.90	1.80	1.80	1.80	1.80	1.80	0.00		27.0	25.0	90.83	2.80																	
	33.0	33.0	90.95	0.30	1.26	1.26	1.26	1.26	0.38	2.6		33.0	33.0	90.87	0.90	1.80	1.80	1.80	1.80	1.80	0.00		28.0	26.0	90.83	2.80																	
	34.0	34.0	90.85	0.40	0.09	0.09	0.09	0.09	0.04	2.6		34.0	34.0	90.77	1.00	2.37	2.37	2.37	2.37	2.37	0.00		29.0	27.0	90.63	3.00																	
	35.0	35.0	90.95	0.30	1.17	1.17	1.17	1.17	0.35	2.6		35.0	35.0	90.97	0.80	2.21	2.21	2.21	2.21	2.21	0.00		30.0	28.0	90.73	2.90																	
	36.0	36.0	90.85	0.40	0.83	0.83	0.83	0.83	0.33	2.6		36.0	36.0	90.97	0.80	2.40	2.40	2.40	2.40	2.40	0.00		31.0	29.0	90.68	2.95																	
	37.0	37.0	90.85	0.40	0.01	0.01	0.01	0.01	0.00	2.6		37.0	37.0	90.77	1.00	2.23	2.23	2.23	2.23	2.23	0.00		32.0	30.0	90.63	3.00																	
	38.0	38.0	90.85	0.40	1.82	1.82	1.82	1.82	0.73	4.6		38.0	38.0	90.87	0.90	1.99	1.99	1.99	1.99	1.99	0.00		33.0	31.0	90.63	3.00																	
	39.0	39.0	90.95	0.30	1.20	1.20	1.20	1.20	0.36	4.6		39.0	39.0	90.87	0.90	1.95	1.95	1.95	1.95	1.95	0.00		34.0	32.0	90.63	3.00																	
	40.0	40.0	90.85	0.40	0.89	0.89	0.89	0.89	0.36	4.6		40.0	40.0	90.87	0.90	2.61	2.61	2.61	2.61	2.61	0.00		35.0	33.0	90.83	2.80																	
	41.0	41.0	90.95	0.30	0.66	0.66	0.66	0.66	0.20	4.6		41.0	41.0	90.97	0.80	2.36	2.36	2.36	2.36	2.36	0.00		36.0	34.0	90.73	2.90																	
	42.0	42.0	90.85	0.40	1.20	1.20	1.20	1.20	0.48	4.6		42.0	42.0	90.77	1.00	2.08	2.08	2.08	2.08	2.08	0.00		37.0	35.0	90.73	2.90																	
	43.0	43.0	90.85	0.40	0.88	0.88	0.88	0.88	0.35	2.4		43.0	43.0	90.77	1.00	2.77	2.77	2.77	2.77	2.77	0.00		38.0	36.0	90.73	2.90																	
	44.0	44.0	90.85	0.40	0.92	0.92	0.92	0.92	0.37	2.4		44.0	44.0	90.67	1.10	2.61	2.61	2.61	2.61	2.61	0.00		39.0	37.0	90.68	2.95																	
	45.0	45.0	90.65	0.60	1.10	1.10	1.10	1.10	0.66	2.4		45.0	45.0	90.77	1.00	2.67	2.67	2.67	2.67	2.67	0.00		40.0	38.0	90.68	2.95																	
	46.0	46.0	90.95	0.30	0.76	0.76	0.76	0.76	0.23	2.4		46.0	46.0	90.77	1.00	2.17	2.17	2.17	2.17	2.17	0.00		41.0	39.0	90.73	2.90																	
	47.0	47.0	90.95	0.30	0.00	0.00	0.00	0.00	0.00	2.4		47.0	47.0	90.97	0.80	1.81	1.81	1.81	1.81	1.81	0.00		42.0	40.0	90.73	2.90																	
	48.0	48.0	91.05	0.30	0.00	0.00	0.00	0.00	0.00	2.4		48.0	48.0	91.67	0.10	0.80	0.80	0.80	0.80	0.80	0.00		43.0	41.0	90.73	2.90																	
	48.1	48.1	9.59	91.26	0.00	0.00	0.00	0.00	0.00	2.2		48.1	48.1	13.17	91.80	0.00	0.00	0.00	0.00	0.00	0.00		44.0	42.0	90.73	2.90																	
	55.0	55.0	6.71	94.14						1.2		55.0	55.0	9.48	99.49								REW	56.3	54.3	93.63	0.00																
	60.0	60.0	3.91	96.94						1.2		60.0	60.0	5.48	99.49																												
	69.9	69.9	1.36	99.49						1.2		69.9	69.9	5.48	99.49																												







```

Run          MID          TRANSECT 1
IOC          1101100000001000101000
QARD  5.0
QARD  8.3
QARD 10.0
QARD 15.0
QARD 20.0
QARD 25.0
QARD 30.0
QARD 35.0
QARD 40.0
QARD 45.2
QARD 50.0
QARD 60.0
QARD 70.0
QARD 80.0
QARD 90.0
QARD 100.0
QARD 110.0
QARD 120.0
QARD 130.0
QARD 140.0
QARD 150.0
QARD 160.0
QARD 170.0
QARD 180.0
QARD 200.0
QARD 220.0
QARD 240.0
QARD 260.0
QARD 280.0
QARD 300.3
XSEC  0.0      0.0 1.0    90.95 0.00168
      0.0 0.094.33 10.094.03 20.991.73 22.090.86 23.090.76 24.090.96
      0.0 25.090.96 26.091.06 27.090.86 28.090.96 29.090.96 30.090.96
      0.0 31.090.86 32.090.86 33.090.86 34.090.76 35.090.96 36.090.96
      0.0 37.090.76 38.090.86 39.090.86 40.090.86 41.090.96 42.090.76
      0.0 43.090.76 44.090.66 45.090.76 46.090.76 47.090.96 48.091.66
      0.0 48.491.79 55.094.14 60.096.94 69.999.49
NS     0.0      1.1      1.1 0.07  2.2      2.6      2.6      2.6
NS     0.0      2.6      2.6      2.6      2.6      2.6      2.6
NS     0.0      2.6      2.6      2.6      2.6      2.6      2.6
NS     0.0      2.6      4.6      4.6      4.6      4.6      4.6
NS     0.0      2.4      2.4      2.4      2.4      2.4 .018  2.4
NS     0.0 .02    2.2      2.1      1.2      1.2
CAL1   0.0      91.76      45.2
VEL1   0.0      0.001 0.81 0.94 1.54 0.84 2.16 2.25 1.78 1.97 2.33
VEL1   0.0 2.15 1.80 1.80 2.37 2.21 2.40 2.23 1.99 1.95 2.61 2.36 2.08
VEL1   0.0 2.77 2.61 2.67 2.17 1.81 0.80 0.00
CAL2   0.0      91.25      8.3
VEL2   0.0
VEL2   0.0
VEL2   0.0
CAL3   0.0      93.63      300.3
VEL3   0.0
VEL3   0.0
VEL3   0.0
ENDJ

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Run          MID          TRANSECT 2
IOC          1101100100001000101000
QARD 5.0
QARD 8.3
QARD 10.0
QARD 15.0
QARD 20.0
QARD 25.0
QARD 30.0
QARD 35.0
QARD 40.0
QARD 45.2
QARD 50.0
QARD 60.0
QARD 70.0
QARD 80.0
QARD 90.0
QARD 100.0
QARD 110.0
QARD 120.0
QARD 130.0
QARD 140.0
QARD 150.0
QARD 160.0
QARD 170.0
QARD 180.0
QARD 200.0
QARD 220.0
QARD 240.0
QARD 260.0
QARD 280.0
QARD 300.3
XSEC 0.0          0.0 1.0          90.99 0.00168
      0.0 0.094.15 10.093.36 16.191.76 17.491.07 19.091.07 20.590.77
      0.0 22.090.77 23.590.77 25.090.67 26.590.87 28.090.77 29.590.87
      0.0 31.090.77 32.590.57 34.090.87 35.590.77 37.090.77 38.590.77
      0.0 40.090.77 41.590.67 43.090.67 44.590.97 46.091.37 46.791.77
      0.0 49.093.90 57.095.72 70.098.28 78.199.37
NS 0.0          1.1 .07 1.1 .05 2.2          2.5 .027 6.2          6.2
NS 0.0          6.2          6.2          6.2          6.2          6.2          6.2
NS 0.0          6.2          2.6 .065 2.6          2.4          2.4          2.4
NS 0.0          2.4          2.4          2.4          2.2 .12 2.2 .15 2.2
NS 0.0          1.1          1.1          2.2          2.2
WSL 0.0          91.19          91.28          91.31          91.40          91.49          91.56
WSL 0.0          91.64          91.70          91.76          91.82          91.88          91.98
WSL 0.0          92.09          92.18          92.27          92.35          92.43          92.52
WSL 0.0          92.60          92.67          92.74          92.81          92.88          92.95
WSL 0.0          93.07          93.20          93.32          93.43          93.55          93.66
CAL1 0.0          91.77          45.2
VEL1 0.0          0.001 1.60 2.20 1.59 1.75 1.90 1.15 1.90 2.00 1.98
VEL1 0.0 1.46 1.76 0.44 1.86 1.72 2.04 1.82 1.12 1.60 0.940.0010.001
VEL1 0.0
CAL2 0.0          91.29          8.3
VEL2 0.0
VEL2 0.0
VEL2 0.0
CAL3 0.0          93.76          300.3
VEL3 0.0
VEL3 0.0
VEL3 0.0
ENDJ

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Run          MID          TRANSECT 3
IOC          1101100100001000101000
QARD 5.0
QARD 8.3
QARD 10.0
QARD 15.0
QARD 20.0
QARD 25.0
QARD 30.0
QARD 35.0
QARD 40.0
QARD 45.2
QARD 50.0
QARD 60.0
QARD 70.0
QARD 80.0
QARD 90.0
QARD 100.0
QARD 110.0
QARD 120.0
QARD 130.0
QARD 140.0
QARD 150.0
QARD 160.0
QARD 170.0
QARD 180.0
QARD 200.0
QARD 220.0
QARD 240.0
QARD 260.0
QARD 280.0
QARD 300.3
XSEC 0.0          0.0 1.0    90.99  0.00168
      0.0 0.092.71  8.092.08  8.291.93 10.091.62 11.991.32 13.591.12
      0.0 15.090.92 16.590.92 18.090.92 19.591.02 21.091.02 22.590.72
      0.0 24.090.72 25.590.52 27.090.82 28.590.62 30.090.52 31.590.52
      0.0 33.090.72 34.590.72 36.090.82 37.591.02 38.091.42 39.091.82
      0.0 39.391.91 42.394.75 42.594.72
NS    0.0 .1    1.2 .06   1.2    2.2    2.2    9.2    2.6
NS    0.0    2.6 .065  2.6    6.2    6.2    6.2    6.2
NS    0.0    6.2    6.2    6.2    6.2    6.2    6.2    6.2
NS    0.0    6.2    6.2    2.2 .08   2.2 .10   2.2 .12   2.2
NS    0.0 .16   2.2    1.1    1.1
WSL   0.0    91.26   91.36   91.39   91.49   91.58   91.66
WSL   0.0    91.73   91.79   91.86   91.92   91.98   92.08
WSL   0.0    92.19   92.28   92.37   92.46   92.54   92.62
WSL   0.0    92.70   92.77   92.85   92.92   92.99   93.06
WSL   0.0    93.18   93.31   93.43   93.55   93.67   93.78
CAL1  0.0    91.92    45.2
VEL1  0.0          0.00 0.50 0.75 0.83 1.47 0.83 1.43 1.66 1.53 1.52
VEL1  0.0 1.38 1.95 1.73 1.42 1.60 1.76 1.88 1.79 1.46 0.47 0.270.001
VEL1  0.0 0.00
CAL2  0.0    91.36    8.3
VEL2  0.0
VEL2  0.0
VEL2  0.0
CAL3  0.0    93.80    300.3
VEL3  0.0
VEL3  0.0
VEL3  0.0
ENDJ

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