

Table 4. Physical Habitat Quality Data for Benthic Macroinvertebrate Sites on South Fork American River Section, El Dorado Irrigation District, FERC Project 184, Fall 2001.

	South Fork American River: SO-B1 Below Diversion Dam				South Fork American River: SO-B2 Kyburz - Upstream of Diversion Dam				South Fork American River: SO-B3 Upstream Wildwood Way Bridge				South Fork American River: SO-B4 SFAR at 42 mile tract				South Fork American River: SO-B5 SFAR at Camp Sacramento				Strawberry Creek: SB-B1 Upstream of Lot 20			
	Riffle sampled			Mean	Riffle sampled			Mean	Riffle sampled			Mean	Riffle sampled			Mean	Riffle sampled			Mean	Riffle sampled			Mean
	1	3	5		1	2	3		1	2	3		1	2	3		1	2	5		1	2	5	
Sampling information																								
Date Sampled	10/24/2001				10/24/2001				10/24/2001				10/19/2001				10/19/2001				10/19/2001			
Time Sampled	14:30				12:00				9:00				11:30				9:00				14:00			
UTM	4292906				4294036				4294492															
GPS	10-S-0732867				10-S-0733225				10-S-0733711															
Elevation (ft)	3,973				3,986				4,032															
Site characteristics																								
Canopy cover (%)	5	5	5	5.0	5	5	5.0	5.0	20.0	15.0	10.0	15.0	30.0	20.0	15.0	21.7	5.0	20.0	2.0	9.0	10.0	5.0	15.0	10.0
Gradient (%)	1	3	2	2.0	0.50	2.00	0.5	1.0	0.5	1.5	1.0	1.0	2.0	1.5	1.5	1.7	2.0	2.5	1.0	1.8	0.5	2.5	2.0	1.7
Transect Location (ft)	43	18	13	24.7	16	19	20.0	18.3	13.0	37.0	21.0	23.7	31.0	8.8	10.4	16.7	15.0	20.0	32.0	22.3	16.5	9.6	7.4	11.2
Elevation (m)	1211				1215				1229															
Reach Length (ft)	400				166.0				1000.0				271.0				1600.0				225.0			
Physical characteristics																								
Riffle Length (ft)	46	20	15	27.0	19	23	25	22.3	16.0	43.0	25.0	28.0	36.0	11.0	13.0	20.0	19.0	25.0	38.0	27.3	18.5	12.0	9.0	13.2
Avg. Riffle Width (ft)	13	18	52	27.7	45	35	23.0	34.3	48.0	33.0	27.0	36.0	13.5	20.0	20.0	17.8	12.0	12.0	35.0	19.7	9.0	10.0	10.0	9.7
Avg. Riffle Depth (ft)	1.13	1.23	0.75	1.04	0.72	1.00	1.12	0.95	0.42	0.48	0.78	0.56	0.47	0.77	0.60	0.61	0.70	0.78	0.32	0.60	0.50	0.57	0.67	0.58
Riffle Velocity (ft/s)	1.33	1.51	1.45	1.43	0.74	1.14	0.94	0.94	1.19	0.91	0.93	1.01	1.31	2.96	1.36	1.88	0.45	1.32	1.03	0.93	0.73	1.19	1.03	0.98
Substrate Complexity	18	18	18	18.0	26	26	26.0	26.0	18.0	18.0	18.0	18.0	17.0	17.0	17.0	17.0	28.0	28.0	28.0	28.0	18.0	18.0	18.0	18.0
Embeddedness (%)	50	50	60	53.3	20	50	20	30.0	35	35	40	36.7	45.0	50.0	50.0	48.3	5.0	30.0	5.0	13.3	30.0	35.0	50.0	38.3
Substrate Consolidation	high	high	high	high	low	high	med.	med.	med.	med.	high	med.	high	high	high	high	low	med.	low	high	high	med.	high	high
Specific Conductance ( <i>u</i> s)	25.00				23.40				38.20				18.70				24.00				33.50			
Dissolved Oxygen (mg/l)	10.95				11.25				12.36				10.27				9.82							
Water Temp (C°)	9.40				8.10				6.20				7.20				5.20				6.90			
Physical Habitat Quality Score	103				137				77.0				116.0				108.0				112.0			
Substrate Composition																								
Fines (<0.1")	5	5	5	5.0	20	20	10.0	16.7	30.0	30.0	25.0	28.3	5.0	5.0	5.0	5.0	2.0	10.0	15.0	9.0	5.0	15.0	30.0	16.7
Gravel (0.1-2")	10	5	10	8.3	10	5	15	10.0	20.0	25.0	15.0	20.0	40.0	30.0	20.0	30.0	3.0	10.0	20.0	11.0	15.0	5.0	10.0	10.0
Cobble (2-10")	35	5	20	20.0	20	30	45.0	31.7	35.0	30.0	40.0	35.0	35.0	35.0	30.0	33.3	5.0	10.0	55.0	23.3	15.0	5.0	5.0	8.3
Boulder (>10")	10	70	60	46.7	50	40	30	40.0	15.0	15.0	15.0	15.0	15.0	25.0	35.0	25.0	70.0	60.0	10.0	46.7	25.0	65.0	20.0	36.7
Bedrock (solid)	40	15	5	20.0	0	5	0.0	1.7	0.0	0.0	5.0	1.7	5.0	5.0	10.0	6.7	20.0	10.0	0.0	10.0	40.0	10.0	15.0	21.7

Table 4 (Cont.)

	Pyramid Creek: PY-B1 Upstream of Hwy 50 gage station				Echo Creek: EC-B2 Echo Creek below Echo Lake				Echo Creek: EC-B1 Echo Creek @ KOA Campground			
	Riffle sampled			Mean	Riffle sampled			Mean	Riffle sampled			Mean
	1	3	5		1	2	3		1	3	4	
Sampling information												
Date Sampled				10/22/2001				#####				10/17/2001
Time Sampled				15:00				14:00				17:00
UTM												
GPS												
Elevation (ft)				6,316								
Site characteristics												
Canopy cover (%)	35.0	40.0	50.0	41.7	5.0	5.0	10.0	6.7	5.0	20.0	15.0	13.3
Gradient (%)	1.3	1.5	1.0	1.3	2.0	2.5	0.5	1.7	1.0	7.0	0.5	2.8
Transect Location (ft)	41.0	23.0	18.0	27.3				spot				spot
Elevation (m)												
Reach Length (ft)				229.0				149.0				243.0
Physical characteristics												
Riffle Length (ft)	49.0	25.0	22.0	32.0	20.0	10.0	32.0	20.7	10.0	23.0	14.0	15.7
Avg. Riffle Width (ft)	18.0	20.0	22.0	20.0	6.0	12.0	8.0	8.7	3.0	8.0	7.0	6.0
Avg. Riffle Depth (ft)	0.48	0.43	0.33	0.41	0.20	0.30	0.50	0.33	0.25	0.30	0.30	0.28
Riffle Velocity (ft/s)	0.24	0.24	0.93	0.47	0.05	0.02	-0.03	0.01	0.42	0.27	0.77	0.49
Substrate Complexity	17.0	17.0	17.0	17.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Embeddedness (%)	30.0	50.0	50.0	43.3	5.0	5.0	10.0	6.7	15.0	20.0	20.0	18.3
Substrate Consolidation	med.	high	high	high	med.	med.	low	med.	med.	med.	med.	med.
Specific Conductance ( $\mu$ S)				5.90				39.40				90.10
Dissolved Oxygen (mg/l)				10.34				5.65				9.70
Water Temp (C°)				8.60				12.00				8.30
Physical Habitat Quality Score				118.0				103.0				137.0
Substrate Composition												
Fines (<0.1")	1.0	25.0	20.0	15.3	5.0	5.0	10.0	6.7	0.0	0.0	10.0	3.3
Gravel (0.1-2")	5.0	10.0	5.0	6.7	2.0	7.0	5.0	4.7	15.0	10.0	10.0	11.7
Cobble (2-10")	60.0	35.0	30.0	41.7	5.0	28.0	5.0	12.7	40.0	30.0	30.0	33.3
Boulder (>10")	24.0	40.0	35.0	33.0	63.0	60.0	80.0	67.7	45.0	60.0	50.0	51.7
Bedrock (solid)	10.0	0.0	10.0	6.7	25.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0