

Table 8. Physical Habitat Quality Data for Benthic Macroinvertebrate Sites on South Fork American River Tributaries, El Dorado Irrigation District, FERC Project 184, Fall 2001.

	Alder Creek: AR-B2 Off Hazel Valley Road - Dirt				Alder Creek: AR-B1 Alder Creek below diversion at cabins				Carpenter Creek: CR-B2 Above EID Diversion Ditch				Carpenter Creek: CR-B1 Between SFAR and Diversion Ditch				No-Name Creek: NN-B2 Upstream of Diversion @ fence				No-Name Creek: NN-B1 At Cabin 30 - 30 mile Tract						
	Riffle sampled				Riffle sampled				Riffle sampled				Riffle sampled				Riffle sampled				Riffle sampled						
	1	2	3	Mean	2	3	4	Mean	2	3	4	Mean	2	3	4	Mean	1	2	3	Mean	3	4	5	Mean			
Sampling information																											
Date Sampled				11/1/2001				10/31/2000				10/25/2001				10/25/2001				10/31/2000				10/31/2000			
Time Sampled				10:30				15:00				11:00				13:30				12:30				9:35			
UTM				4290964				4293834				4293595				4293677				4293573				4293770			
GPS				10-S-0730188				10-S-0727778				10-S-0732346				10-S-0732236				10-S-0731246				10-S-0731206			
												4,055															
Site characteristics		5	5	10	6.7		45	40	50	45.0				90	90	95	91.7		90	80	90	86.7		85	95	90	90.0
Canopy cover (%)		3	6	6	5.0		1.5	2	1	1.5		95	95	95		95.0		5	3	7		5.0		10	10	12	10.7
Gradient (%)		22	23	22	22.3		22	17	8	15.7		4	3	4		3.7		18	12	9-12						spot	
Transect Location (ft)										1095		spot					1216				spot						1200
Elevation (m)					212					324						1236											240
Reach Length (ft)												131					231										
Physical characteristics		25	26	24	25.0		27	19	10	18.7				21	14	13	16.0		12	17	16	15.0		22	20	38.5	26.8
Riffle Length (ft)		18	15	18.5	17.2		10	20	30	20.0		23	7	9		13.0		10	9	6		3.2		2	3	2.75	2.6
Avg. Riffle Width (ft)		0.33	0.48	0.50	0.44		0.95	0.67	0.85	0.82		6	4	5		5.0		0.28	0.28	0.25		0.16		0.13	0.15	0.16	0.15
Avg. Riffle Depth (ft)		0.43	0.15	0.38	0.32		0.85	0.96	1.23	1.01		0.32	0.22	0.27		0.27		0.42	0.64	1.19		0.33		0.17	0.57	0.98	0.57
Riffle Velocity (ft/s)		32	32	32	32.0		23	23	23	23.0		0.79	0.69	0.58		0.69		20	20	20		18.0		19	19	19	19.0
Substrate Complexity		25	20	20	21.7		30	25	25	26.7		25	25	25		25.0		35	20	25		25.0		70	5	20	31.7
Embeddedness (%)	med.	low	low	low		med.	low	low	low		10	15	10	high	med.	low	med.	med.	med.	med.	med.		low	low	low	low	
Substrate Consolidation					23.40					28.60		low	low	low	low		63.00										52.30
Specific Conductance (<i>u</i> s)					12.30					10.86						63.00					10.56						11.60
Dissolved Oxygen (mg/l)					6.10					9.00						11.52					8.20						8.10
Water Temp (C°)					146					118						7.60					106						95
Physical Habitat Quality Score												115					105										
Substrate Composition		2	5	5	4.0		5	10	15	10.0				20	20	15	18.3		15	10	15	13.3		40	50	45	45.0
Fines (<0.1")		3	5	5	4.3		15	15	20	16.7		5	15	10		10.0		10	10	10		8.3		15	35	30	26.7
Gravel (0.1-2")		5	10	20	11.7		30	30	35	31.7		5	25	15		15.0		25	20	15		15.0		10	5	5	6.7
Cobble (2-10")		20	70	70	53.3		50	45	30	41.7		20	10	15		15.0		45	50	60		51.7		35	10	20	21.7
Boulder (>10")		70	10	0	26.7		0	0	0	0.0		70	50	60		60.0		0	0	0		0.0		0	0	0	0.0
Bedrock (solid)							0	0	0	0.0		0	0	0		0.0								70	10	0	26.7

Table 8 (Cont.)

	Mill Creek: ML-B2 Gage Station above Diversion				Mill Creek: ML-B1 Below EID Diversion				Bull Creek: BU-B2 Upstream ofDiversion at Ditch Camp 2				Bull Creek: BU-B1 Below EID Diversion				Ogilby Creek: OG-B2 Just above Diversion				Ogilby Creek: OG-B1 Below EID Diversion				
	Riffle sampled				Riffle sampled				Riffle sampled				Riffle sampled				Riffle sampled				Riffle sampled				
	1	2	3	Mean	1	3	4	Mean	1	2	3	Mean	1	3	5	Mean	1	3	5	Mean	1	2	4	Mean	
Sampling information																									
Date Sampled	11/1/2001				11/13/2001				11/2/2001				11/14/2001				11/2/2001				11/13/2001				
Time Sampled	14:00				14:30				10:00				8:30				12:30				12:00				
UTM	4292987				4292841				4293510				4294324				4293261				4293806				
GPS	10-S-0726447 4,872				10-S-0726308				10-S-0723586				10-S-0723055				10-S-0719962				10-S-0718881 3,196				
Site characteristics																									
Canopy cover (%)	70	75	85	76.7	15 3	20 3	15 7	16.7 4.3	85 8	90 10	90 6	88.3 8.0	95 1	65 3	95 3	85.0 2.3	90 2	90 3	95 4	91.7 3.0	30 3	30 3	40 6	33.3 4.0	
Gradient (%)	2	2	2	2.0	spot	16	13				spot			spot				spot					spot		
Transect Location (ft)	33	40	25	32.7				1055				190				1038			1248					974	
Elevation (m)								150								200			280					190	
Reach Length (ft)				104																					
Physical characteristics																									
Riffle Length (ft)	45	45	30	40.0	13 9	22 8	16 7	17.0 8.0	33 3	80 2.5	140 1.5	84.3 2.3	7 3.2	10 1.5	12 2	9.7 2.2	25 3	10 3	10 1	15.0 2.3		12 5.8	20 6	16 6	16.0 5.9
Avg. Riffle Width (ft)	33	40	25	32.7	0.17	0.26	0.15	0.19	2.50	0.15	0.15	0.93	0.13	0.13	0.18	0.15	0.23	0.15	0.20	0.19					
Avg. Riffle Depth (ft)	0.20	0.37	0.17	0.25	0.17	0.32	0.73	0.41	0.19	0.01	0.006	0.07	0.53	0.67	0.11	0.44	0.43	0.35	0.65	0.48					
Riffle Velocity (ft/s)	0.13	0	0.04	0.06	26	26	26	26.0	15	15	15	15.0	14	14	14	14.0	20	20	20	20.0					
Substrate Complexity	21	21	21	21.0	30	40	15	28.3	35	25	45	35.0	65	55	60	60.0	30	20	0	16.7					
Embeddedness (%)	15	15	10	13.3	med.	high	low	med.	med.	low	high	med.	high	high	high	high	med.	med.	high	med.					
Substrate Consolidation	low	low	low	low				43.70				55.70				44.50				54.30					
Specific Conductance (<i>u</i> s)				37.50				11.04				11.30				11.73				13.05					
Dissolved Oxygen (mg/l)				9.90				8.60				7.60				7.60				7.20					
Water Temp (C°)				7.20				113				99				73				96					
Physical Habitat Quality Score				67																				105	
Substrate Composition																									
Fines (<0.1")	10	10	10	10.0	5 5	5 5	10 15	6.7 8.3	10 20	5 2	5 2	6.7 8.0	45 10	30 15	35 25	36.7 16.7	5 5	10 60	2 0	5.7 21.7		20 20	10 20	10 5	13.3 15.0
Gravel (0.1-2")	10	10	10	10.0	30	20	15	21.7	35	3	3	13.7	35	25	15	25.0	20	25	1	15.3					
Cobble (2-10")	30	30	30	30.0	60	70	60	63.3	35	20	20	25.0	10	30	25	21.7	40	5	0	15.0		25 30	20 50	15 70	20.0 50.0
Boulder (>10")	50	50	50	50.0	0	0	0	0.0	0	70	70	46.7	0	0	0	0.0	30	0	97	42.3					
Bedrock (solid)	0	0	0	0.0	0	70	70	46.7	30	0	97	42.3	0	0	0	0.0	30	10	5	15.0		5	0	0	1.7

Table 8 (Cont.)

	Esmeralda Creek: ES-B2 Above EID Diversion				Esmeralda Creek: ES-B1 Below EID Diversion			
	Riffle sampled				Riffle sampled			
	2	3	4	Mean	1	2	4	Mean
Sampling information								
Date Sampled				11/12/2001				11/13/2001
Time Sampled				14:00				9:30
UTM				no reading				no reading
GPS				no reading				no reading
Site characteristics	60	100	95	85.0	70	80	95	81.7
Canopy cover (%)	1	1	1	1.0	2	3	5	3.3
Gradient (%)			spot				spot	
Transect Location (ft)								
Elevation (m)				175				130
Reach Length (ft)								
Physical characteristics	21	13	14	16.0	16	15	16	15.7
Riffle Length (ft)	4	3.5	2.5	3.3	2.5	2.5	4	3.0
Avg. Riffle Width (ft)	0.20	0.20	0.23	0.21	0.26	0.20	0.21	0.22
Avg. Riffle Depth (ft)	0.66	0.97	0.89	0.84	1.02	0.39	0.73	0.71
Riffle Velocity (ft/s)	21	21	21	21.0	20	20	20	20.0
Substrate Complexity	20	20	20	20.0	10	35	40	28.3
Embeddedness (%)	low	low	low	low				
Substrate Consolidation				44.00				no reading
Specific Conductance (μ S)				11.93				no reading
Dissolved Oxygen (mg/l)				8.20				no reading
Water Temp (C°)				115				98
Physical Habitat Quality Score								
Substrate Composition	20	10	10	13.3	5	10	20	11.7
Fines (<0.1")	20	30	30	26.7	10	30	25	21.7
Gravel (0.1-2")	55	60	60	58.3	20	20	15	18.3
Cobble (2-10")	5	0	0	1.7	35	30	35	33.3
Boulder (>10")	0	0	0	0.0	30	10	5	15.0
Bedrock (solid)	0	0	0	0.0	0	0	0	0.0