

Table 3. Physical Habitat Quality Data for Benthic Macroinvertebrate Sites on South Fork American River Section, El Dorado Irrigation District, FERC Project 184, Fall 1999.

	South Fork American River				South Fork American River				South Fork American River				South Fork American River				South Fork American Rive		
	SO-B1	SO-B1-2	SO-B1		SO-B2	SO-B2	SO-B2-3		SO-B3	SO-B3	SO-B3-3		SO-B4	SO-B4-2	SO-B4		SO-B5-1	SO-B5	SO-B5
	Riffle sampled				Riffle sampled				Riffle sampled				Riffle sampled				Riffle sampled		
	1	2	3	Mean	1	2	3	Mean	1	2	3	Mean	1	2	3	Mean	1	2	3
Sampling information																			
Date Sampled				10/20/1999				10/20/1999				10/18/1999				10/27/1999			
Time Sampled				1730				1150				1530				1300			
Latitude	38° 45' 53"	38° 45' 50"	38° 45' 55"		38° 45' 56"	38° 46' 02"	38° 46' 03"		38° 46' 11"	38° 46' 13"	38° 46' 12"		38° 47' 33"	38° 47' 36"	38° 47' 40"		38° 48' 08"	38° 48' 13"	38° 48' 13"
Longitude	120° 19' 11"	120° 19' 10"	120° 19' 10"		120° 18' 52"	120° 19' 04"	120° 18' 55"		120° 18' 36"	120° 18' 32"	120° 18' 31"		120° 08' 51"	120° 08' 51"	120° 08' 50"		120° 07' 10"	120° 06' 58"	120° 06' 56"
Site characteristics																			
Canopy cover (%)	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.6	10.0	10.0	10.0	10.0	0.0	5.0	5.0	3.3	10.0	5.0	50.0
Gradient (%)	1.0	2.0	2.0	1.7	1.3	1.0	1.5	1.3	2.0	2.0	2.0	2.0	2.0	2.5	2.5	2.3	2.0	1.0	1.0
Transect Location																			
Elevation (Ft)				3900				3900				4000				5700			
Reach Length (ft)				716.0				635.0				1300.0				363.0			
Physical characteristics																			
Riffle Length (ft)	234.0	60.0	92.0	128.7	180.0	133.0	122.0	145.0	120.0	46.0	40.0	68.7	79.0	65.0	61.0	68.3	21.0	80.0	70.0
Avg. Riffle Width (ft)	7.7	25.0	19.3	17.3	4.7	5.0	7.0	5.6	46.0	6.0	8.0	20.0	20.0	27.0	29.0	25.3	17.0	23.0	16.0
Avg. Riffle Depth (ft)	0.7	1.3	0.8	0.9	1.1	0.7	0.9	0.9	0.8	1.0	1.0	0.9	0.3	0.9	0.7	0.6	1.5	1.0	0.7
Riffle Velocity (ft/s)	1.97	1.70	1.67	1.8	1.63	1.13	1.37	1.4	2.83	1.70	1.56	2.0	1.53	1.33	1.73	1.5	1.20	1.60	2.00
Substrate Complexity	16	17	17	16.6	16	16	17	16.2	16	16	16	16.0	17	18	17	17.3	18	16	16
Embeddedness (%)	10	10	10	10.0	10	10	10	10.0	10	10	10	10.0	10	10	10	10.0	10	10	10
Substrate Consolidation	Med	Med	Med	Med	Med	Med	Med	Med	Med	Med	Med	Med		Med	Med	Med	Med	Med	Med
Water Quality																			
Specific Conductance (<i>u s</i>)				0.02				0.02				0.02				0.01			
Dissolved Oxygen (mg/l)				11.2				9.3				9.4				10.1			
Water Temp (C°)				11.5				7.2				9.2				6.8			
pH				7.3				7.9				7.1				7.4			
Physical Habitat Quality Score				171.0				171.0				169.0				163.0			
Substrate Composition																			
Fines (<0.1")	5.0	5.0	3.3	4.4	6.7	6.7	5.0	6.1	5.0	5.0	15.0	8.3	5.0	5.0	5.0	5.0	3.0	5.0	2.0
Gravel (0.1-2")	6.7	0.0	0.0	2.2	10.0	13.3	5.0	9.4	10.0	5.0	5.0	6.7	5.0	3.3	5.0	4.4	2.0	60.0	60.0
Cobble (2-10")	78.3	65.0	66.7	70.0	46.7	63.3	58.3	56.1	80.0	65.0	40.0	61.7	86.7	50.0	60.0	65.6	90.0	35.0	35.0
Boulder (>10")	5.0	30.0	26.7	20.6	36.7	16.7	31.7	28.3	5.0	25.0	30.0	20.0	3.3	41.7	16.7	20.6	5.0	0.0	3.0
Bedrock (solid)	5.0	0.0	3.3	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.3	4.4	0.0	0.0	0.0

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	Mean
Sampling information	
Date Sampled	10/18/1999
Time Sampled	0:00
Latitude	
Longitude	
Site characteristics	
Canopy cover (%)	21.7
Gradient (%)	1.3
Transect Location	
Elevation (Ft)	6500
Reach Length (ft)	1600.0
Physical characteristics	
Riffle Length (ft)	57.0
Avg. Riffle Width (ft)	18.7
Avg. Riffle Depth (ft)	1.1
Riffle Velocity (ft/s)	1.6
Substrate Complexity	16.7
Embeddedness (%)	10.0
Substrate Consolidation	
Water Quality	
Specific Conductance (<i>u s</i>)	0.01
Dissolved Oxygen (mg/l)	9.6
Water Temp (C°)	6.1
pH	7.4
Physical Habitat Quality Score	162.0
Substrate Composition	
Fines (<0.1")	3.3
Gravel (0.1-2")	40.7
Cobble (2-10")	53.3
Boulder (>10")	2.7
Bedrock (solid)	0.0

Table 3 (Cont.)

	Strawberry Creek				Pyramid Creek				Echo Creek				Echo Creek			
	SB-B1	SB-B1	SB-B1-3		PY-B1	PY-B1-2	PY-B1		EC-B1	EC-B1-2	EC-B1		EC-B3	EC-B3	EC-B3-3	
	Riffle sampled				Riffle sampled				Riffle sampled				Riffle sampled			
	1	2	3	Mean	1	2	3	Mean	1	2.0	3	Mean	1	2	3	Mean
Sampling information																
Date Sampled				10/27/1999				10/27/1999				10/25/1999				11/1/1999
Time Sampled				1600				1015				1130				1340
Latitude	38° 47' 13"	38° 47' 12"	38° 47' 12"		38° 48' 54"	38° 48' 54"	38° 49' 04"		38° 50' 42"	38° 50' 43"	38° 50' 42"		38° 46' 07"	38° 50' 44"	38° 50' 43"	
Longitude	120° 09' 02"	120° 09' 04"	120° 09' 00"		120° 06' 57"	120° 06' 58"	120° 06' 56"		120° 01' 40"	120° 01' 40"	120° 01' 40"		120° 25' 51"	120° 04' 55"	120° 04' 56"	
Site characteristics																
Canopy cover (%)	0.0	0.0	5.0	1.7	5.0	36.7	5.0	15.6	20.0	23.3	26.7	23.3	100.0	21.7	60.0	60.6
Gradient (%)	6.0	6.0	6.0	6.0	2.0	2.5	2.5	2.3	2.5	2.3	2.0	2.3	5.0	5.0	5.0	5.0
Transect Location																
Elevation (Ft)				5600				6300				6400				7400
Reach Length (ft)				380.0				405.0				446.0				280.0
Physical characteristics																
Riffle Length (ft)	32.0	87.0	90.0	69.7	130.0	61.0	72.0	87.7	75.0	85.0	136.0	98.7	50.0	50.0	80.0	60.0
Avg. Riffle Width (ft)	10.0	2.7	2.7	5.1	18.0	14.0	18.0	16.7	4.7	6.7	2.5	4.6	2.3	3.3	2.2	2.6
Avg. Riffle Depth (ft)	0.6	0.5	0.7	0.6	0.7	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2
Riffle Velocity (ft/s)	0.93	1.30	1.33	1.2	0.67	0.73	0.83	0.7	0.73	0.77	1.03	0.8	0.37	0.40	0.40	0.4
Substrate Complexity	17	17	16	16.7	18	17	17	17.3	16	16	16	16.0	18	18	18	18.0
Embeddedness (%)	10	10	13	11.1	10	20	10	13.3	10	10	10	10.0	10	10	10	10.0
Substrate Consolidation	Med	Med	Med	Med	Med	Med	Med	Med	Med-High		Med	Med	Med	Med	Med	Med
Water Quality																
Specific Conductance (<i>u s</i>)				0.03				0.00				0.07				0.00
Dissolved Oxygen (mg/l)				10.5				9.5				9.6				8.2
Water Temp (C°)				6.5				7.3				4.9				6.2
pH				7.6				6.7				7.1				7.2
Physical Habitat Quality Score				167				160.0				157.0				171.0
Substrate Composition																
Fines (<0.1")	5.0	5.0	8.3	6.1	5.0	13.3	6.7	8.3	3.3	3.3	5.0	3.9	0.0	0.0	0.0	0.0
Gravel (0.1-2")	5.0	6.7	3.3	5.0	3.3	3.3	0.0	2.2	5.0	8.3	8.3	7.2	13.3	10.0	13.3	12.2
Cobble (2-10")	56.7	61.7	48.3	55.6	81.7	76.7	86.7	81.7	45.0	78.3	60.0	61.1	70.0	63.3	66.7	66.7
Boulder (>10")	6.7	6.7	6.7	6.7	16.7	6.7	6.7	10.0	46.7	10.0	23.3	26.7	0.0	3.3	0.0	1.1
Bedrock (solid)	26.7	20.0	33.3	26.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	23.3	20.0	20.0