Appendix VIa. Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in May 1998. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	Aliso Creek		Santa Margarita River								
	AC-PPD	AC-CCR	SMR-WGR	SMR-DP	SMR-CP	SMR-SMB	MC-GS	TC-I-15	RC-WGR	MC-WB	SC-SCR
1. Instream Cover	5	3	10	16	1	1	4	5	15	1	13
2. Embeddedness	4	3	13	13	1	1	7	4	12	1	11
3. Velocity/ Depth Regimes	8	8	13	13	5	5	7	10	10	5	10
4. Sediment Deposition	3	4	13	13	1	1	7	4	13	1	11
5. Channel Flow	3	17	10	9	10	8	6	10	14	6	11
6. Channel Alteration	20	9	18	13	18	17	18	18	18	16	15
7. Riffle Frequency	8	10	7	2	18	10	5	12	15	5	12
8. Bank Vegetation	13	9	10	12	13	12	17	15	10	11	9
9. Bank Stability	8	16	18	16	11	10	17	13	10	11	14
10. Riparian Zone	18	8	16	14	20	16	13	18	18	18	16
TOTAL	**90**	**87**	**128**	**121**	**98**	**81**	**101**	**109**	**135**	**75**	**122**
Physical Condition	**Fair**	**Fair**	**Good**	**Good**	**Fair**	**Fair**	**Good**	**Good**	**Good**	**Fair**	**Good**

Appendix VIa (continued). Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in May 1998. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	San Luis Rey River					Carlsbad						
	KC-LR	SLRR-PG	SLRR-395	SLRR-MR	SLRR-FR	LAC-CB	LAC-ECR	BR-ED	BVR-SVW	AHC-SA	AHC-ECR	TC-TCNP
1. Instream Cover	14	11	4	2	3	2	3	0	3	3	2	**DRY**
2. Embeddedness	13	14	3	3	2	2	3	0	3	4	3	
3. Velocity/ Depth Regimes	10	10	6	7	5	7	6	5	5	7	7	
4. Sediment Deposition	14	14	3	3	2	2	3	1	3	4	3	
5. Channel Flow	19	18	6	2	4	3	2	18	6	5	4	
6. Channel Alteration	18	20	19	17	18	15	8	0	7	8	15	
7. Riffle Frequency	15	13	12	12	7	5	10	5	6	8	7	
8. Bank Vegetation	9	18	17	15	16	8	11	0	16	16	12	
9. Bank Stability	10	16	15	14	16	10	14	20	17	17	15	
10. Riparian Zone	16	17	16	16	18	9	9	0	7	8	15	
TOTAL	**138**	**151**	**101**	**91**	**91**	**63**	**69**	**49**	**73**	**80**	**83**	
Physical Condition	**Good**	**Excellent**	**Good**	**Fair**	**Fair**	**Fair**	**Fair**	**Poor**	**Fair**	**Fair**	**Fair**	

Appendix Va (continued). Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in May 1998. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	Carlsbad					Escondido Creek			Los Penasquitos Creek			
	SMC-M	SMC-SP	SMC-LCCC	SMC-RSFR	EC-GVR	EC-HRB	EC-EF	EC-RSFR	RC-HP	LPC-CCR	CCC-805	LPC-BMR
1. Instream Cover	5	9	8	13	6	8	9	2	4	13	**DRY**	13
2. Embeddedness	8	5	13	10	5	8	11	2	2	11		11
3. Velocity/ Depth Regimes	8	10	8	12	10	8	12	5	6	7		7
4. Sediment Deposition	8	6	13	9	4	8	11	2	3	11		10
5. Channel Flow	13	15	4	11	6	13	11	1	12	10		9
6. Channel Alteration	12	10	14	10	19	5	16	18	7	17		17
7. Riffle Frequency	5	8	10	8	6	5	13	5	8	8		8
8. Bank Vegetation	12	14	17	8	16	9	11	16	15	11		16
9. Bank Stability	18	15	16	16	14	15	13	17	13	11		16
10. Riparian Zone	18	11	19	11	19	8	14	18	7	13		18
TOTAL	**107**	**103**	**122**	**108**	**105**	**87**	**121**	**86**	**74**	**112**		**125**
Physical Condition	**Good**	**Good**	**Good**	**Good**	**Good**	**Fair**	**Good**	**Fair**	**Fair**	**Good**		**Good**

Appendix VIa (continued). Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in May 1998. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	San Diego River			Sweetwater River			San Juan Creek		
	SDR-MD	SDR-MT	SDR-1	SR-79	SR-94	SR-WS	SJC-74	OC-FR	ATC-AP
1. Instream Cover	5	15	4	4	3	3	**DRY**	**DRY**	**DRY**
2. Embeddedness	4	12	5	5	3	2			
3. Velocity/ Depth Regimes	8	10	5	10	5	7			
4. Sediment Deposition	6	12	6	6	2	2			
5. Channel Flow	7	9	10	10	4	6			
6. Channel Alteration	20	20	11	11	15	20			
7. Riffle Frequency	5	12	5	6	5	7			
8. Bank Vegetation	16	17	12	12	12	12			
9. Bank Stability	16	17	15	15	8	10			
10. Riparian Zone	20	18	14	14	14	20			
TOTAL	**107**	**142**	**87**	**93**	**71**	**89**			
Physical Condition	**Good**	**Good**	**Fair**	**Fair**	**Fair**	**Fair**			

Appendix VIb. Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in September 1998. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	Aliso Creek		Santa Margarita River								
	AC-PPD	AC-CCR	SMR-WGR	SMR-DP	SMR-CP	SMR-SMB	MC-GS	TC-I-15	RC-WGR	MC-WB	SC-SCR
1. Instream Cover	4	3	10	14	1	**No Flow**	5	8	15	**DRY**	13
2. Embeddedness	3	2	15	10	1		2	8	9		7
3. Velocity/ Depth Regimes	8	8	13	13	5		7	10	10		10
4. Sediment Deposition	4	2	15	10	1		7	6	9		7
5. Channel Flow	2	2	5	5	12		2	5	7		8
6. Channel Alteration	20	3	20	16	20		18	18	20		18
7. Riffle Frequency	8	10	7	2	16		5	12	15		12
8. Bank Vegetation	7	10	11	17	18		17	17	13		16
9. Bank Stability	5	16	20	16	17		18	14	17		17
10. Riparian Zone	20	4	20	15	20		19	17	19		16
TOTAL	**81**	**60**	**136**	**118**	**111**		**100**	**115**	**134**		**124**
Physical Condition	**Fair**	**Fair**	**Good**	**Good**	**Good**		**Fair**	**Good**	**Good**		**Good**

Appendix VIb (continued). Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in September 1998. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	San Luis Rey River					Carlsbad						
	KC-LR	SLRR-PG	SLRR-395	SLRR-MR	SLRR-FR	LAC-CB	LAC-ECR	BVR-ED	BVR-SVW	AHC-SA	AHC-ECR	TC-TCNP
1. Instream Cover	11	12	2	2	2	3	3	1	1	3	2	**DRY**
2. Embeddedness	6	11	2	2	2	2	3	0	0	3	2	
3. Velocity/ Depth Regimes	10	10	6	7	5	7	6	5	5	7	7	
4. Sediment Deposition	6	12	2	2	2	2	3	15	2	4	3	
5. Channel Flow	18	17	1	4	1	5	10	18	20	2	2	
6. Channel Alteration	18	20	18	20	20	18	8	0	18	9	18	
7. Riffle Frequency	15	13	12	12	7	5	10	5	6	8	7	
8. Bank Vegetation	8	18	14	17	14	6	13	0	0	12	16	
9. Bank Stability	9	16	14	14	20	11	16	20	20	10	6	
10. Riparian Zone	10	19	17	19	20	7	9	0	0	16	16	
TOTAL	**111**	**148**	**88**	**99**	**93**	**66**	**81**	**64**	**72**	**74**	**79**	
Physical Condition	**Good**	**Good**	**Fair**	**Fair**	**Fair**	**Fair**	**Fair**	**Fair**	**Fair**	**Fair**	**Fair**	

Appendix VIb (continued). Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in September 1998. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	Carlsbad					Escondido Creek			Los Penasquitos Creek			
	SMC-M	SMC-SP	SMC-LCCC	SMC-RSFR	EC-6 GVR5	EC-HRB	EC-EF	EC-RSFR	RC-HP	LPC-CCR	CCC-805	LPC-BMR
1. Instream Cover	5	13	12	7	6	6	9	**No Riffle**	2	13	13	4
2. Embeddedness	12	12	10	7	5	3	11		1	12	13	3
3. Velocity/ Depth Regimes	8	10	12	8	10	8	12		5	7	7	7
4. Sediment Deposition	12	12	9	7	5	3	11		14	12	13	3
5. Channel Flow	10	10	5	2	6	5	10		8	4	11	5
6. Channel Alteration	12	4	12	15	19	5	10		6	15	17	15
7. Riffle Frequency	5	8	8	10	6	5	13		5	8	7	8
8. Bank Vegetation	9	15	9	17	14	18	8		6	7	11	19
9. Bank Stability	18	14	17	16	14	18	13		18	18	15	19
10. Riparian Zone	18	7	10	19	19	4	15		5	9	15	12
TOTAL	**109**	**105**	**104**	**108**	**104**	**75**	**112**		**70**	**105**	**122**	**95**
Physical Condition	**Good**	**Good**	**Good**	**Good**	**Good**	**Fair**	**Good**		**Fair**	**Good**	**Good**	**Fair**

Appendix VIb (continued). Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in September 1998. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	San Diego River			Sweetwater River			San Juan Creek		
	SDR-MD	SDR-MT	SDR-1	SR-79	SR-94	SR-WS	SJC-74	SJC-OC	SJC-ATC
1. Instream Cover	9	12	7	10	3	3	15	DRY	8
2. Embeddedness	8	12	8	11	3	2	12		9
3. Velocity/ Depth Regimes	8	10	5	10	5	7	10		7
4. Sediment Deposition	10	15	8	10	2	2	12		9
5. Channel Flow	14	15	4	5	1	3	3		15
6. Channel Alteration	15	15	15	20	16	20	14		20
7. Riffle Frequency	5	12	5	6	5	7	7		5
8. Bank Vegetation	16	18	12	16	12	12	10		9
9. Bank Stability	13	16	16	16	13	12	13		13
10. Riparian Zone	16	18	15	19	16	20	15		18
TOTAL	**114**	**143**	**95**	**123**	**76**	**88**	**111**		**113**
Physical Condition	**Good**	**Good**	**Fair**	**Good**	**Fair**	**Fair**	**Good**		**Good**

Appendix VIc. Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in November 1998. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	Aliso Creek		Santa Margarita River								
	AC-PPD	AC-CCR	SMR-WGR	SMR-DP	SMR-CP	SMR-SMB	MC-GS	TC-I-15	RC-WGR	MC-WB	SC-SCR
1. Instream Cover	6	3	11	16	1	**No Flow**	2	5	15	**Poor Flow**	14
2. Embeddedness	3	2	13	11	1		2	5	10		8
3. Velocity/ Depth Regimes	8	8	5	13	13		6	10	10		10
4. Sediment Deposition	3	2	13	11	1		3	5	10		8
5. Channel Flow	6	13	7	7	8		2	5	15		6
6. Channel Alteration	20	13	20	17	20		20	20	20		15
7. Riffle Frequency	8	10	18	2	7		5	12	15		12
8. Bank Vegetation	11	7	12	18	19		8	16	15		12
9. Bank Stability	5	11	19	16	7		13	14	16		15
10. Riparian Zone	20	6	20	18	20		20	19	18		15
TOTAL	**90**	**75**	**129**	**129**	**97**		**81**	**111**	**144**		**115**
Physical Condition	**Fair**	**Fair**	**Good**	**Good**	**Fair**		**Fair**	**Good**	**Good**		**Good**

Appendix VIc (continued). Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in November 1998. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	San Luis Rey River					Carlsbad						
	KC-LR	SLRR-PG	SLRR-395	SLRR-MR	SLRR-FR	LAC-CB	LAC-ECR	BVR-ED	BVR-SVW	AHC-SA	AHC-ECR	TC-TCNP
1. Instream Cover	8	12	2	2	2	2	3	0	1	**No Flow**	2	10
2. Embeddedness	6	15	2	2	2	2	3	0	0		2	9
3. Velocity/ Depth Regimes	10	10	6	7	5	7	6	5	5		7	10
4. Sediment Deposition	5	16	2	2	2	2	2	0	0		2	9
5. Channel Flow	13	16	1	8	16	9	3	14	20		3	6
6. Channel Alteration	14	20	20	20	20	12	10	0	0		15	20
7. Riffle Frequency	15	13	12	12	7	5	10	5	6		7	6
8. Bank Vegetation	9	18	16	18	18	12	8	0	1		8	12
9. Bank Stability	12	18	15	18	16	11	13	20	20		4	13
10. Riparian Zone	15	20	20	19	20	11	4	0	6		7	19
TOTAL	**107**	**158**	**96**	**108**	**108**	**73**	**62**	**44**	**59**		**57**	**114**
Physical Condition	**Good**	**Excellent**	**Fair**	**Good**	**Good**	**Fair**	**Fair**	**Poor**	**Fair**		**Fair**	**Good**

Appendix VIc (continued). Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in November 1998. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	CARLSBAD					ESCONDIDO CREEK			LOS PENASQUITOS CREEK			
	SMC-M	SMC-SP	SMC-LCCC	SMC-RSFR	EC-GVR	EC-HRB	EC-EF	EC-RSFR	RC-HP	LPC-CCR	CCC-805	LPC-BMR
1. Instream Cover	5	11	15	13	7	11	10	Slow Moving Water	3	13	14	7
2. Embeddedness	14	8	12	12	6	9	8		2	12	14	5
3. Velocity/ Depth Regimes	8	10	12	8	10	8	12		5	7	7	7
4. Sediment Deposition	15	8	12	12	6	8	9		2	12	14	5
5. Channel Flow	16	10	10	2	10	10	12		12	8	7	6
6. Channel Alteration	15	8	12	18	19	10	17		7	16	16	18
7. Riffle Frequency	5	8	8	10	6	5	13		5	8	7	8
8. Bank Vegetation	13	11	12	17	14	12	11		7	7	5	18
9. Bank Stability	16	10	15	16	12	16	15		13	15	8	17
10. Riparian Zone	18	6	7	19	17	5	15		6	10	14	15
TOTAL	**125**	**90**	**115**	**127**	**107**	**94**	**122**		**62**	**108**	**106**	**106**
Physical Condition	**Good**	**Fair**	**Good**	**Good**	**Good**	**Fair**	**Good**		**Fair**	**Good**	**Good**	**Good**

Appendix VIc (continued). Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in November 1998. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	San Diego River			Sweetwater River			San Juan Creek		
	SDR-MD	SDR-MT	SDR-1	SR-79	SR-94	SR-WS	SJC-74	OC-FR	ATC-AP
1. Instream Cover	5	13	8	7	2	3	10	Marginal Flow	11
2. Embeddedness	5	11	10	5	2	2	11		9
3. Velocity/ Depth Regimes	8	10	5	10	5	7	10		7
4. Sediment Deposition	4	11	10	5	2	2	11		9
5. Channel Flow	5	10	11	9	1	9	4		1
6. Channel Alteration	20	20	16	19	17	20	15		20
7. Riffle Frequency	5	12	5	6	5	7	7		5
8. Bank Vegetation	16	14	12	15	15	13	13		14
9. Bank Stability	13	16	16	15	11	13	14		7
10. Riparian Zone	20	19	13	19	12	19	11		14
TOTAL	**101**	**136**	**106**	**110**	**72**	**95**	**106**		**97**
Physical Condition	**Good**	**Good**	**Good**	**Good**	**Fair**	**Fair**	**Good**		**Fair**

Appendix VId. Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in May 1999. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	Aliso Creek		Santa Margarita River								
	AC-PPD	AC-CCR	SMR-WGR	SMR-DP	SMR-CP	SMR-SMB	MC-GS	TC-I-15	RC-WGR	MC-WB	SC-SCR
1. Instream Cover	11	8	17	14	8	5	15	15	17	**DRY**	14
2. Embeddedness	5	5	14	8	0	0	4	8	14		8
3. Velocity/ Depth Regimes	9	8	17	14	8	9	13	12	6		14
4. Sediment Deposition	6	3	14	11	4	4	9	11	16		10
5. Channel Flow	12	15	8	12	2	5	6	12	7		12
6. Channel Alteration	20	8	20	12	17	17	20	18	15		14
7. Riffle Frequency	11	7	16	15	10	7	14	13	11		16
8. Bank Vegetation	13	13	19	15	16	14	14	17	16		14
9. Bank Stability	7	20	20	17	11	10	17	16	17		14
10. Riparian Zone	17	5	19	11	14	15	15	14	16		12
TOTAL	**111**	**92**	**164**	**129**	**90**	**86**	**127**	**136**	**135**		**128**
Physical Condition	**Good**	**Fair**	**Excellent**	**Good**	**Fair**	**Fair**	**Good**	**Good**	**Good**		**Good**

Appendix VId (continued). Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in May 1999. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	San Luis Rey River					Carlsbad						
	KC-LR	SLRR-PG	SLRR-395	SLRR-MR	SLRR-FR	LAC-CB	LAC-ECR	BVR-ED	BVR-SVW	AHC-SA	AHC-ECR	TC-TCNP
1. Instream Cover	15	18	9	9	11	10	11	8	8	**DRY**	12	14
2. Embeddedness	7	10	5	0	0	5	9	0	0		2	13
3. Velocity/ Depth Regimes	10	14	6	8	12	4	8	2	2		9	13
4. Sediment Deposition	9	13	4	2	6	5	9	10	6		6	15
5. Channel Flow	14	20	19	11	19	9	7	20	20		10	5
6. Channel Alteration	9	20	15	18	20	15	11	0	8		11	20
7. Riffle Frequency	9	17	7	10	9	2	9	4	6		6	9
8. Bank Vegetation	14	19	15	16	18	9	9	2	2		12	17
9. Bank Stability	15	18	10	10	14	13	17	20	20		11	17
10. Riparian Zone	11	18	14	16	20	7	7	2	8		7	17
TOTAL	**113**	**167**	**104**	**100**	**129**	**79**	**97**	**68**	**80**		**86**	**140**
Physical Condition	**Good**	**Excellent**	**Good**	**Fair**	**Good**	**Fair**	**Fair**	**Fair**	**Fair**		**Fair**	**Good**

Appendix VId (continued). Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in May 1999. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	Carlsbad					Escondido Creek			Los Penasquitos Creek			
	SMC-M	SMC-SP	SMC-LCCC	SMC-RSFR	EC-GVR	EC-HRB	EC-EF	EC-RSFR	RC-HP	LPC-CCR	CCC-805	LPC-BMR
1. Instream Cover	12	14	16	13	14	12	14	**DRY**	11	17	16	13
2. Embeddedness	14	13	16	7	11	8	16		0	16	16	8
3. Velocity/ Depth Regimes	7	7	10	8	8	7	17		4	10	14	10
4. Sediment Deposition	18	13	14	8	11	10	15		11	17	15	11
5. Channel Flow	14	17	15	12	13	12	17		8	15	16	13
6. Channel Alteration	12	10	14	18	14	10	14		9	12	14	11
7. Riffle Frequency	6	9	11	11	7	6	15		8	16	12	11
8. Bank Vegetation	12	14	14	18	14	14	14		8	13	13	17
9. Bank Stability	19	17	16	16	13	16	16		14	18	14	17
10. Riparian Zone	12	6	10	17	11	12	12		6	9	13	14
TOTAL	**126**	**120**	**136**	**128**	**116**	**107**	**150**		**79**	**143**	**143**	**125**
Physical Condition	**Good**	**Good**	**Good**	**Good**	**Good**	**Good**	**Good**		**Fair**	**Good**	**Good**	**Good**

Appendix VId (continued). Physical habitat quality scores for sampling reaches within eight watersheds in San Diego County in May 1999. Scores for each habitat parameter range from 0 (poor) to 20 (excellent).

Habitat Parameter	San Diego River			Sweetwater River			San Juan Creek		
	SDR-MD	SDR-MT	SDR-1	SR-79	SR-94	SR-WS	SJC-74	OC-FR	ATC-AP
1. Instream Cover	14	17	12	16	8	6	16	**DRY**	17
2. Embeddedness	4	16	11	15	0	0	16		12
3. Velocity/ Depth Regimes	11	17	12	17	3	6	10		14
4. Sediment Deposition	9	15	11	13	4	4	15		14
5. Channel Flow	17	15	15	15	11	12	11		16
6. Channel Alteration	20	18	16	18	9	20	17		18
7. Riffle Frequency	12	14	9	18	5	10	8		17
8. Bank Vegetation	16	17	13	17	11	16	15		12
9. Bank Stability	16	16	15	19	11	13	16		14
10. Riparian Zone	19	16	15	16	16	16	9		16
TOTAL	**138**	**161**	**129**	**164**	**78**	**103**	**133**		**150**
Physical Condition	**Good**	**Excellent**	**Good**	**Excellent**	**Fair**	**Good**	**Good**		**Good**

APPENDIX IIIa-IIId

Physical Habitat Scores