

APPENDIX D

**Carmel River benthic macroinvertebrate individuals organized by
taxonomic group and year of sampling**

Taxa	Fall 2000					Spring 2001					Fall 2001				Spring 2002				Fall 2002						
	CRCA	CRSH	SHRC	CRSP	CRRR	CRCA	CRSH	CRSP	CRDD US	CRDD DS	CRRR	CRCA	CRSH	CRSP	CRRR	CRCA	CRSH	CRSP	CRRR	CRCA	CRSH	CRRW	CRSP	CRRR	
Tabanidae																									
Tanypodinae	1		3		1	1	3	2	7	1	2					1			1						
Tanytarsini	99	10	130	1		48	18	10	23	7	22	29	3		1	13	2	5	92	20	15	1	3	77	
Tinodes			1		6				2	1	3			2	9				2						
Tipula									1	1		1				1	1			1					
Tipulidae																									
Torrenticola																									
Trienodes frontalis									1																
Trichoclinocera						1	2	1																	
Tricorythodes	1			28	155		4	2	68	25	53			6	18				4					1	
Tropisternus																								1	
Turbellaria	6		3		32	1	1	14	18	23			1	4			1	13	2	1			2		
Wiedemannia																									
Wormaldia						2	27	2	2				4		2	11	44				1				
Zaitzevia																									

Taxa	Spring 2003					Fall 2003					Fall 2004					Fall 2005					Fall 2006					
	CRCA	CRSH	CRRW	CRSP	CRRR	CRCA	CRSH	CRRW	CRSP	CRRR	CRLP	CRCA	CRSH	SHRC	CRSP	CRRR	CRLP	CRCA	CRSH	CRSP	CRRR	CRLP	CRCA	CRSH	CRSP	CRRR
Agabus																6										
Agapetus																										
Ambrysus																										
Ameletus											14															
Amiocentrus aspilus																										
Ampumixis dispar											5						3					9				
Antocha	10	18	19	8	5	7	7	8	5			4	8	12	5		2	18	19	13	6	10	4	8	3	7
Argia	16	4		1	1	13	4		15	9	5	11	28		7			14	41		4		24	32		
Astacidea																										
Atractides																3										1
Atrichopogon							1					1			3		1									1
Baetis	124	174	176	231	129	58	136	141	140	4	13	78	84	10	124	15	56	157	67	195	40	106	133	84	233	46
Bezzia/ Palpomyia					1						6						3					1				
Calineuria californica																	3					1				
Caloparyphus/Euparyphus						1	1				4	1	4			2	4					4				
Capniidae											24						13					1				1
Centropetium																										
Chaoborus																										
Cheumatopsyche						3	1	3						1				10	1							4
Chironomini	3	1	1				1				10	2	1	61		4			2			2	1	4		
Cleptelmis addenda		1						2	1				1			1	3		1			4		3		
Clinocera																										
Coenagrionidae																										
Cordulegaster dorsalis																										
Cryptochia																										1
Cryptolabis											1						6					2				
Cultus											2						5					3				
Cyclorrhaphous/Brachycera											1															
Dasyhelea					2	1										7										
Dicranota	2		1								3						2					2				
Dipheter hageni	1	1															5					3	1			
Dixa		1									3															
Dolichopodidae											1					1										
Drunella																										
Empididae		1		2																						
Epeorus											12						79					39				
Ephemerella			1	1	14						2						21					4				
Ephydriidae																										
Erpobdellidae												1														
Eubrianax edwardsii											11						13					14				
Fallceon quilleri										1																
Farula																										
Ferrissia			1			1					3		4													
Glossosoma																										
Glossosomatidae					2																					
Gumaga										1																
Gyraulus	2	1			2							1	1			2										3
Gyrinus																										
Hedriodiscus/Odontomyia		1																								
Helichus																										
Hemerodromia						13	1	2	3		26	9	6	7	4		14	12	6	2		8	13	3	2	1
Heptageniidae																										

Taxa	Spring 2003					Fall 2003					Fall 2004					Fall 2005					Fall 2006					
	CRCA	CRSH	CRRW	CRSP	CRRR	CRCA	CRSH	CRRW	CRSP	CRRR	CRLP	CRCA	CRSH	SHRC	CRSP	CRRR	CRLP	CRCA	CRSH	CRSP	CRRR	CRLP	CRCA	CRSH	CRSP	CRRR
Hetaerina americana								1	1	2	1								2	6					8	
Hexatoma											2															
Hyaella	26	4			3	10	4	1	1		7	2		2			2	2	11	1	3		48	1	3	
Hydraena																	1									
Hydropsyche	14	3	14	7	16	11	5	32	56	34		5	4	151	15		3	38	7	57	120	1	15	18	68	127
Hydroptila		1																								
Hygrobatas				1	4																					
Hygrobatidae																										
Ironodes			1																						1	
Isoperla											3						3						1			
Lebertia	1	1	1	1	3	2	2	1	1	1	5	1		1	2	2	2	3	1		7		2	2	4	4
Lepidostoma	1				5						2			4							1		5			
Leucotrichia pictipes						61	80	32	90			27	24	8	44	1	1	79	15	27			51	38	32	1
Limnophila											1															
Limonia		1				1			1															2		
Lymnaeidae				1									2													
Malenka			1	1		1					5	1	14				9		3	2		8		4	14	2
Maruina lanceolata						1									3			1								
Menetus																										
Meringodixa chalonensis																										
Micrasema	5	8	16	23	161	5		6	16	121	4	36	1		118	134	22	2			56	4	19		15	99
Mystacides																										
Narpus																										
Nectopsyche																										
Neoplasta		1	2	1	1						1	1			1		1	1	4	10	19		4	3	8	57
Ochrotrichia	2	2	13	7	4	4	3	10	16	6		1		1	6	5		12	4				4	3	8	57
Oecetis																										
Oligochaeta		2		1	1					25	3	7	12	21	18	15	2			9			5	5		1
Optioservus				1	1					6					2	21										12
Ordobrevia nubifera																										
Orthoclaadiinae	81	70	58	28	12	35	25	10	16	27	116	40	71	39	30	142	53	35	22	13	11	95	27	63	5	4
Ostracoda	2				29	1		170	49	16	23	2	2		39	4			2	11	57			6	3	6
Oxyethira																										1
Paraleptophlebia		1									11						3					3				
Physa	1				18					44				7	14	6					9					1
Pisidium																							2			
Planorbidae							3	1																		
Polycentropus													15													
Postelichus																										
Prostoma						13	4	7	5	14			1	2	2	8	1	18	2	4	2	1	5	4		4
Protzia										2					2		1				2	2				
Psephenus falli										1																
Psychodidae			1																							
Psychomyia																										
Rhithrogena											9											10				
Rhyacophila		1	1	3			2				8				1						15	8		1	4	
Sciomyzidae																1										
Serratella																										
Sialis																										
Simulium	167	179	163	161	22	218	199	49	64		93	254	176		70	8	56	41	256	133	4	60	107	176	95	16
Sperchon	6	5	10	8	30	12	11	10	15	27	3	5	2	3	9	2	8	21	9	4	64	14	13	12	10	18
Sperchonopsis	1					2	1	2	2										3	1		5	1	3		4
Sweltsa											21							7				6				

Taxa	Spring 2003					Fall 2003					Fall 2004					Fall 2005					Fall 2006							
	CRCA	CRSH	CRRW	CRSP	CRRR	CRCA	CRSH	CRRW	CRSP	CRRR	CRLP	CRCA	CRSH	SHRC	CRSP	CRRR	CRLP	CRCA	CRSH	CRSP	CRRR	CRLP	CRCA	CRSH	CRSP	CRRR		
Tabanidae											2																	
Tanypodinae	4	1	1	1	1						21			1		1	2											
Tanytarsini	33	5			2	29	18	4	4	8	22	14	73	172		119	19	26	16	2	1	61	4	17				
Tinodes					2											10											3	
Tipula												1			1	1												
Tipulidae																												
Torrenticola																	1											
Triaenodes frontalis																												
Trichoclinocera																												
Tricorythodes		1			18											15											59	
Tropisternus																2												
Turbellaria				1	13	1	1	3	2	125			1		1													
Wiedemannia		1		2							3	2			1													
Wormaldia	2	12	21	14	1						1																	
Zaitzevia											8																	

Taxa	Fall 2007					Fall 2008						Fall 2009				
	CRLP	CRCA	CRSH	CRSP	CRSW	CRLP	CRCA	CRSH	SHRC	CRSP	CRSW	CRLP	CRCA	CRSH	CRSP	CRRR
Hetaerina americana			1		3											
Hexatoma																
Hyaella		3	3	7	3		11	10		3			4	2	17	
Hydraena						1										
Hydropsyche		3	9	11	52	4	8	1	88	17	68	27	6	1	10	75
Hydroptila																
Hygrobatas																
Hygrobatidae																
Ironodes												3				
Isoperla						3						11				
Lebertia	1	1		4	3	3	2	1		1	12	1			1	
Lepidostoma						1			6	2	1	1				
Leucotrichia pictipes		5	12	4			23	1	2	1				1	3	
Limnophila																
Limonia			2	1												
Lymnaeidae					2											
Malenka	3		3	3	1	1		1	22	9	5	8	1			7
Maruina lanceolata		1				1	2		1				1			
Menetus							1						1			
Meringodixa chalonensis	1															
Micrasema	5	4		7	46	1	1			14	130	140	4		3	255
Mystacides																
Narpus																
Nectopsyche																
Neoplasta		3	1	1	1	2			1	1		2				
Ochrotrichia	5		1	2	8	1	1			1	2		1			2
Oecetis																
Oligochaeta					3	1	2	1		1	1	2		1		
Optioservus					37						5					13
Ordobrevia nubifera						1						1				
Orthocladinae	40	71	51	25	11	73	26	31	25	15	15	37	40	19	20	4
Ostracoda	1		73	2	101			76	3	1	23			88	14	4
Oxyethira																
Paraleptophlebia				1		4						9				
Physa					6				6		1					1
Pisidium												1				
Planorbidae																
Polycentropus									11							
Postelichus																
Prostoma	2	2		2		2	3			2	1			1		
Protzia	1					3						1				
Psephenus falli																
Psychodidae																
Psychomyia																
Rhithrogena						30						55				
Rhyacophila	1			3		6	2			2		10	1		1	
Sciomyzidae				3												
Serratella																
Sialis												1				
Simulium	294	248	166	266	127	127	276	311	46	280	98	16	362	290	316	45
Sperchon	7	20	1	5	4	11	24		4	5	47	3	5	1	2	2
Sperchonopsis		2				2	6	1		1	5		2	2	1	
Sweltsa	2					18				1		7				

Taxa	Fall 2007					Fall 2008						Fall 2009				
	CRLP	CRCA	CRSH	CRSP	CRSW	CRLP	CRCA	CRSH	SHRC	CRSP	CRSW	CRLP	CRCA	CRSH	CRSP	CRRR
Tabanidae	1											1				
Tanypodinae					1	1	1	2								
Tanytarsini	4	8	23	5	6	16	3	9	164	1	1	1	10	2		
Tinodes					2											2
Tipula	2	1											1			
Tipulidae																
Torrenticola												1				
Triaenodes frontalis																
Trichoclinocera																
Tricorythodes					2						3			3		1
Tropisternus																
Turbellaria			1		28				6		18					
Wiedemannia		2				6										
Wormaldia									1	1						
Zaitzevia	13					1						3				