

APPENDIX I

Macroinvertebrates

East Credit Subwatershed Study
Phase I – Characterization Report

Prepared for:

Region of Peel
Town of Caledon

Prepared by:

Credit Valley Conservation
William B. Morton

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TABLE OF CONTENTS

1.0	<i>SITE SPECIFIC AQUATIC INVERTEBRATE IDENTIFICATIONS.....</i>	<i>1</i>
2.0	<i>AQUATIC INVERTEBRATE IDENTIFICATIONS FOR LONG-TERM MONITORING SITES.....</i>	<i>8</i>

SAMPLE DATE	A-1 07.07.18	B-1 02.07.15	B-2 02.07.18	CD-1 02.07.16	E-1 02.07.18	F-1 02.07.23	F-2 02.07.24	G-1 02.07.16	H-1 02.07.15	I-1 02.07.23	I-2 02.07.18	K-1 02.07.18	K-2 02.07.23	L-1 02.07.23	L-2 02.07.24
% Subsampled					90										
TAXA LIST															
<i>Gammarus pseudolimnaeus</i>			1					194		11	45	15			11
HYALELLIDAE:													19		17
<i>Hyalella azteca</i>															
DECAPODA:															
CAMBARIDAE:															
<i>Cambarus (juvenile)</i>		1							3			1			
INSECTA:															
COLEOPTERA:															
DRYOPTERA:															
<i>Helichus lithophilus</i>								1							
DYTISCIDAE:													2		
<i>Agabus</i>			1												
ELMIDAE:															
<i>Dubiraphia</i>										19	2	2		4	3
<i>Macrochus glabratus</i>															2
<i>Opistoservus fastidius</i>	8	6							2	25		39			1
<i>Promoresia tardella</i>												1			
<i>Stenelmis erenata</i>	17							1		14		20			8
HALIPLIDAE:															
<i>Haliphys</i>												2	1		
HYDROPHILIDAE:															
<i>Hydrobius melaeus</i>								1		1			2		
<i>Paracymus</i>									1						
PSEPHENIDAE:															
<i>Ectopria nervosa</i>	1													2	1
DIPTERA:															
CERATOPOGONIDAE:			2												
CHIRONOMIDAE:											2				
CHIRONOMINAE:															
<i>Chironomus</i>	1				18	3				3			1	28	11
<i>Cladopelma</i>						1									6

SAMPLE DATE	A-1 07.07.18	B-1 02.07.15	B-2 02.07.18	CD-1 02.07.16	E-1 02.07.18	F-1 02.07.23	F-2 02.07.24	G-1 02.07.16	H-1 02.07.15	I-1 02.07.23	I-2 02.07.18	K-1 02.07.18	K-2 02.07.23	L-1 02.07.23	L-2 02.07.24
% Subsampled					90										
TAXA LIST															
<i>Cladotanytarsus</i>										1					
<i>Cryptochironomus</i>	3	2				1	1	9		3	2		1	1	7
<i>Dicerotendipes</i>															1
<i>Glyptotendipes</i>						1									
<i>Microsestra</i>		26	38	10		1		1	9		1	24	35		
<i>Microtendipes</i>	17							2		5	6	3		2	
<i>Paralauterbourmiella</i>															
<i>Paratanytarsus</i>															
<i>Paratendipes</i>					9							1	2		1
<i>Phaenopsectra</i>				10						6		11			3
<i>Polypedilum</i>	9	4		2	11			14	2	2					37
<i>Rheotanytarsus</i>		25				1		1				2			1
<i>Sitochironomus</i>						1		1		12	68			2	1
<i>Tanytarsus</i>					5					1				1	
<i>Zavreliella</i>															1
DIAMESINAE:															
<i>Diamesa</i>		12	1					1	6	2		27			1
<i>Pagastia</i>			1									15			
ORTHOCLADIINAE:															
<i>Brillia</i>		1	1	3							1				
<i>Corynoneura</i>													1		
<i>Cricotopus</i>	7	3	1												
<i>Parametriocnemus</i>				3					3						
<i>Paraphaenocladus</i>				3					4						
<i>Thienemanniella</i>									2						
<i>Tvetenia</i>				2					4						2
PRODIAMESINAE:															
<i>Odontomesa fubva</i>								2							
<i>Prodiamesa</i>	1							1	2		14				
TANYPODINAE:															
<i>Ablabesmyia</i>			67	7		3			8	2					13
<i>Climotanypus</i>														1	
<i>Conchapelopia</i>	6	5	9	7				2	1	2	1	35	3	1	3

SAMPLE DATE	A-1 07.07.18	B-1 02.07.15	B-2 02.07.18	CD-1 02.07.16	E-1 02.07.18	F-1 02.07.23	F-2 02.07.24	G-1 02.07.16	H-1 02.07.15	I-1 02.07.23	I-2 02.07.18	K-1 02.07.18	K-2 02.07.23	L-1 02.07.23	L-2 02.07.24
% Subsampled					90										
TAXA LIST															
<i>Natarsia</i>									1						
<i>Macropelopia</i>		2	11	15					17		9				
<i>Procladius</i>					5	1	2	2		14		1	2	2	1
<i>Tanytus</i>							20								2
EMPIDIDAE:															
<i>Chelifera</i>			12									1			
<i>Hemerodromia</i>		1		1								5			
SIMULIIDAE:															
<i>Simulium</i>			1	1					2			1			1
TABANIDAE:															
<i>Chrysops</i>		3	12	4				1	5	3	1	2			
TIPULIDAE:															
<i>Antocha</i>	4		2												1
<i>Dicranota</i>	1	24	3	4				1	19	7					2
<i>Hexatoma</i>												1			
<i>Linnophila</i>		2	3	1											
<i>Oromostia (Scleroprocta)</i>			4						2						
<i>Pseudolimmnophila</i>		1							6						
<i>Tipula</i>		10		2				1	2	1		2			
EPHEMEROPTERA:															
BAETIDAE:															
<i>Acentrella</i>															
<i>Acerpenna macdunnoughi</i>	1									2		9			
<i>Baetis brunneicolor</i>			16	6				2	10	8	7				
<i>Baetis flavistriga</i>	10	4	19	10						2		16			1
EPHEMERELLIDAE:															
<i>Eurylophella</i>		8	4	3											
EPHEMERIDAE:															
<i>Litobrachia recurvata</i>		2							1						
HEPTAGENIIDAE:															
<i>Heptagenia</i>		4	1	4											
<i>Stenacron interpunctatum</i>														1	2

SAMPLE DATE	A-1 07.07.18	B-1 02.07.15	B-2 02.07.18	CD-1 02.07.16	E-1 02.07.18	F-1 02.07.23	F-2 02.07.24	G-1 02.07.16	H-1 02.07.15	I-1 02.07.23	I-2 02.07.18	K-1 02.07.18	K-2 02.07.23	L-1 02.07.23	L-2 02.07.24
TAXA LIST					90										
<i>Stenonema vicarium</i>									1	1					
LEPTOPHLEBIIDAE:															
<i>Paraleptophlebia</i>		4	2	3					3						
HEMIPTERA:															
CORIXIDAE:															
nymphs						2				9					
<i>Palmacorixa</i>					3										1
GERRIDAE:															
<i>Gerris</i>		1		1					1						
VELIIDAE:															
<i>Rhagovelia obesa</i>												1			
MEGALOPTERA:															
CORYDALIDAE:															
<i>Nigronia serricornis</i>		2	4	2						5		4			1
SIALIDAE:															
<i>Stalis</i>		3	14		1				9	3	1	2		1	
ODONATA:															
AESHNIDAE:															
<i>Aeshna umbrosa</i>									1				1		
<i>Boyeria</i>		1								1					
CALOPTERYGIDAE:															
<i>Calopteryx aequabile</i>								1						1	
CORDULEGASTRIDAE:															
<i>Cordulegaster maculatus</i>			2						2					3	
CORDULIIDAE:															
<i>Somatochlora minor</i>						1									
GOMPHIDAE:															
<i>Gomphus</i>					1										
PLECOPTERA:															

SAMPLE DATE	A-1 07.07.18	B-1 02.07.15	B-2 02.07.18	CD-1 02.07.16	E-1 02.07.18	F-1 02.07.23	F-2 02.07.24	G-1 02.07.16	H-1 02.07.15	I-1 02.07.23	I-2 02.07.18	K-1 02.07.18	K-2 02.07.23	L-1 02.07.23	L-2 02.07.24
% Subsampled					90										
TAXA LIST															
CHLOROPERLIDAE:															
<i>Alloperla</i>			3												
<i>Hastaperla brevis</i>			13												
LEUCTRIDAE:															
<i>Leuctra</i>	2		8												
NEMOURIDAE:															
<i>Amphinemoura delosa</i>			6	5				1	6						
PERLODIDAE:															
<i>Isoperla</i>	1														
TRICHOPTERA:															
GLOSSOSOMATIDAE:															
<i>Glossosoma</i>	4											8			
HYDROPSYCHIDAE:															
<i>Cheumatopsyche</i>	33	3		1						4	3	2			33
<i>Diplectrona modesta</i>									21						
<i>Hydropsyche</i>	9									10		13			3
LEPIDOSTOMATIDAE:															
<i>Lepidostoma</i>		7	5						33						
LEPTOCERIDAE:															
<i>Mystacides sepulchralis</i>	1													1	
<i>Oecetis</i>														1	
LIMNEPHILIDAE:									7						
<i>Limnephilus</i>			2					1							
<i>Pycnopsyche</i>												1			
PHILOPOTAMIDAE:															
<i>Dolophilodes</i>	1	2	3	5					21			4			
PHYRGANAEIDAE:															
<i>Oligostomis</i>		1	1	1					10	2					
PSYCHOMYIIDAE:															
<i>Lype diversa</i>				1						1					
RHYACOPHILIDAE:															
<i>Rhyacophila</i>			1												

SAMPLE	A-1	B-1	B-2	CD-1	E-1	F-1	F-2	G-1	H-1	I-1	I-2	K-1	K-2	L-1	L-2
DATE	07.07.18	02.07.15	02.07.18	02.07.16	02.07.18	02.07.23	02.07.24	02.07.16	02.07.15	02.07.23	02.07.18	02.07.18	02.07.23	02.07.23	02.07.24
% Subsampled					90										
TAXA LIST															
UEONIDAE:															
<i>Neophylax</i>									1						
MOLLUSCA:BIVALVIA:															
SPHAERIIDAE:															
<i>Musculium securis</i>						5							1		
<i>Pisidium sp.</i>		4	21	21	3	15		8	14	7	20	4	4	23	6
<i>Sphaerium simile</i>					2					5	1	2		5	1
MOLLUSCA:GASTROPODA:															
HYDROBIIDAE:															
<i>Ammicola limosa</i>						1									
PHYSIDAE:															
<i>Physa integra</i>								3	2						
<i>Physella gyrina</i>						1				1					
PLANORBIDAE:															
<i>Helisoma anceps</i>						31				1					
<i>Promenetus exactuus</i>						3									
PLEUROERCIDAE:															
<i>Pleurocerca acuta</i>														4	7
VALVATIDAE:															
<i>Valvata tricarinata</i>						71									
VIVIPARIDAE:															
<i>Campeloma desicum</i>					1		3							10	5
NEMATODA:															
PLATYHELMINTHES:		1	2	2		1		1				2	6	1	3
PLANARIIDAE:															
<i>Dugesia tigrina</i>						1									
Total Taxa	28	34	36	32	14	32	14	25	41	39	20	43	23	23	39
Total Specimens	170	181	294	143	68	242	123	253	257	284	190	338	245	250	266
Terrestrials		7	1	9						14					

Stations	501130002	501130004	501130004	501130003	501200005
# Cells Picked	50	27	30	25	10
Taxa	Number of Individuals Picked				
Chironomidae	55	34	19	117	86
Ablabesmyia sp.	2		1	1	1
Larisa sp.	4				
Prodiamesa sp.	13				
Paraphaenocladus sp.	6				
Psilometriocnemus sp.	15	2	4	36	1
Tevetenia bavarica group	1		2	2	
Micropsectra sp.	7			11	
Polypedilum (P) tuberculum	1			6	1
Polypedilum (T) Scalaenum	6				40
Polypedilum (U) flavum				1	
Dianesa sp.		1	3	1	
Microtendipes sp.		1		6	2
Polypedilum sp.		1			
Rheotanytarsus sp.		1	1	2	
Saetheria tylus		15	2		
Stempellinella sp.		1	1	12	
Tanytarsus sp.		1	1	22	1
Cricotopus			2	1	2
Polypedilum sp.			2		
Conchapelopia sp.				3	
Pagastia sp.				5	
Eukietteriella sp.				1	
Cladotanytarsus sp.				6	16
Chrytochironomus sp.				1	3
Nilovanypus fimbriatus					1
Procladius sp.					1
Tanypus sp.					1
Paralauterborniella sp.					3
Chironomus sp.					7
Cladopelma sp.					2
Paracladopelma sp.					2
Paratenpides sp.					1
Paratanytarsus					1
Tubificidae	7	5	2		16
Immatures	7	5	2		10
Aulodrilus limnbius					1
Aulodrilus pigueti					3
Ilyodrilus templetoni					2
Naididae				1	4
Nais bretscheri				1	
Nais communis					1
Dero digitata					1
Piguetiella michiganensis					2
Enchytraeiidae		1		1	
Mesenchytraeus sp.		1		1	

Stations		501130002	501130004	501130004	501130003	501200005
# Cells Picked		50	27	30	25	10
Taxa		Number of Individuals Picked				
Ancylidae						2
Laevapex Fuscus						2
Anisitsiellidae						1
Bandokia sp.						1
Baetidae		92	36	40	44	8
Baetis sp.		29				
Baetis flavistriga		9	25	25	42	8
Baetis intercalaris		54	2	12		
Unknown			9	3	2	
Ceratopogonidae		1			1	4
Probezzia sp.		1			1	4
Chloroperlidae		3				
Sweltsa sp.		3				
Coenagrionidae					1	1
Unknown Imm					1	1
Cordulegasteridae		2	2	1	4	
Cordulegaster maculatus		2	2	1		
Cordulegaster sp.					4	
Corydalidae			1	4	5	2
Nigrania sp.			1	4	5	2
Curculionidae		17			2	
Listronotus sp.		17			2	
Elmidae		3	66	111	36	29
Optioservus sp.		1	42	75	13	5
Optioservus ovalis			2	1	3	
Stenelmis crenata		2	11	22	4	
Stenelmis sp.			11	13	16	22
Dubiraphia sp.						2
Empididae		4	1	18	2	
Chelifera sp.		4	1			
Hemerodromia sp.				18	2	
Ephemerellidae			18			
Unknown Imm			18			
Gammaridae				30		5
Gammarus sp.				30		5

Stations		501130002	501130004	501130004	501130003	501200005
# Cells Picked		50	27	30	25	10
Taxa		Number of Individuals Picked				
Gerridae		1				
Trepobates sp.		1				
Glossiphoniidae				1		
Alboglossiphonia leteroclita				1		
Glossosomatidae			2	6	26	
Glossosoma sp.			2	6	26	
Gomphidae			2			
Unknown Imm			2			
Helicopsychidae						1
Helicopsyche borealis						1
Heptageniidae			10		5	4
Stenonema sp.			10		5	4
Hydrophilidae		1				
Hydrobius sp.		1				
Hydropsychidae			75	37	8	20
Unknown Imm			27	19	5	12
Cheumatopsyche sp.			43	12		4
Hydropsyche sp.			5	6	3	
Hydropsyche bronta						1
Hydropsyche slossonae						3
Hydroptilidae		3		1		
Hydroptila sp.		3		1		
Hygrobatidae		4				
Hygrobatas sp.		4				
Isonychiidae			3		6	
Isonychia sp.			3		6	
Lebertiidae		2				
Lebertia sp.		2				
Lepidostomatidae		18				
Lepidostomata (N) cinereum		1				
Lepidostomata (N) unicolor		17				
Leptoceridae						1
Oecetis sp.						1
Leptophlebiidae					1	
Leptophlebia sp.					1	

Stations	501130002	501130004	501130004	501130003	501200005
# Cells Picked	50	27	30	25	10
Taxa	Number of Individuals Picked				
Leuctridae	12				
Leuctra ferruginea	12				
Limnephilidae	6		1		
Pycnopsyche sp.	6		1		
Nemouridae	3				
Zopada cinctipes	3				
Perlidae		3	2	1	
Paragnetina media		3	2		
Agnetina sp.				1	
Philopotamidae	2	5		6	
Dolophilodes sp.	2				
Dolophilades distinctus		5			
Chimarra sp.				6	
Piscolidae			1		
Myzobdella lugubris			1		
Pleuroceridae					5
Goniobasis livescens					5
Polycentropodidae			2		
Neureclipsis sp.			2		
Rhyacophilidae	1				
Rhyacophila sp.	1				
Simuliidae	7				
Simulium sp.	7				
Sphaeriidae	4	5	10	5	12
Pisidium casertanum	4	5		1	4
Pisidium henslowanum					5
Sphaerium striarinum					3
Musculium securis			10	4	
Tabanidae					1
Tabanus sp.					1
Tipulidae	8	5	3	10	1
Dicronata sp.	2	2		3	1
Hexatoma sp.	5				
Tipula sp.	1	1		1	
Pseudo Limnophila sp.		2			
Pedicia sp.			3		

Stations	501130002	501130004	501130004	501130003	501200005
# Cells Picked	50	27	30	25	10
Taxa	Number of Individuals Picked				
Antocha sp.				6	
Tricorythidae					1
Tricorythodes minutes					1
Trombidiformes			2		
Deuteronymphys indet.			2		