

APPENDIX 3

Aquatic Resources (C. Portt and Associates):

- 3.1 Photos
- 3.2 Benthic Invertebrate Sampling Results

Appendix 3.1 Photographs



Photo 1: Habitat Reach L1 and Electrofishing Reach F-L1. August 2014.



Photo 2: Habitat Reach L2 downstream from beaver dam. May 2014.

Appendix 3.1 Photographs



Photo 3: Habitat Reach L3, upstream from beaver dam. November 2013.



Photo 4: Habitat Reach L4. and Electrofishing Reach F-L2. June 2014.

Appendix 3.1 Photographs



Photo 5: Abandoned crossing in Reach L4. November, 2013.



Photo 6: Habitat Reach L6. and Electrofishing Reach F-L3. May 2014.

Appendix 3.1 Photographs



Photo 7: Habitat Reach L7 immediately upstream from Scharr St. May 2014.



Photo 8: Habitat Reach L7. November 2013.

Appendix 3.1 Photographs



Photo 9: Habitat Reach W1. May 2014



Photo 10: Habitat Reach W1. May 2014.

Appendix 3.1 Photographs



Photo 11: Habitat Reach W2. January 2015.



Photo 12: Habitat Reach W2. June 2014.

Appendix 3.1 Photographs



Photo 13: Habitat reach W3. January 2015.



Photo 14: Seepage area in Habitat Reach W3. January 2015.

Appendix 3.1 Photographs



Photo 15: 16 Habitat reach WT1 upstream from driveway culvert. January 2015.



Photo 16: 16 Habitat reach WT1 downstream from driveway culvert. January 2015.

Appendix 3.1 Photographs



Photo 17: Habitat Reach WT2. May 2014.



Photo 18: Habitat Reach WT2. January 2015.

APPENDIX 3.2 BENTHIC INVERTEBRATE SAMPLING RESULTS

Site	TB-L1			TB-L2			TB-L3			TB-L4			TB-L5			TB-W1		
Replicate	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Habitat type	r	p	r	r	p	r	r	p	r	r	p	r	p	p	p	r	p	r
% subsampled	15.4	42.1	27	1	5.9	3.3	11.5	8.6	9.1	8.8	20	5.3	44	56.7	18.1	12.3	5.7	6.1
TAXA LIST																		
ANNELIDA:HIRUDINEA																		
GLOSSIPHIONIIDAE:																		
<i>Glossiphonia complanata</i>																2		
<i>Helobdella stagnalis</i>																1		3
ANNELIDA:OLIGOCHAETA																		
ENCHYTRAEIDAE:																1		1
LUMBRICIDAE:																		
<i>Sparganophilus eiseni</i>										2						1		2
NAIDIDAE:																		
<i>Nais</i>							1											
TUBIFICIDAE:																		
Immature With Hairs	3	3	4	9	3	6			4	1								
Immature Without Hairs	1						1	2		4	3	2	2	10	7	1		1
CRUSTACEA:AMPHIPODA:																		
CRANGONYCTIDAE:																		
<i>Crangonyx</i>							1			3	10	4						
HYALELLIDAE:																		
<i>Hyalella azteca</i>	1				2							1		1		2		
CRUSTACEA:DECAPODA:																		
CAMBARIDAE:																		
<i>Orconectes (juveniles)</i>											3	2						
<i>Orconectes obscurus</i>			1															
INSECTA:																		
COLEOPTERA:																		
DYTISCIDAE:																		
<i>Agabus</i>																		1
ELMIDAE:																		
<i>Dubiraphia</i>	10	7			1		3	8		2	6	2	10	17	11	7	5	12

Site	TB-L1			TB-L2			TB-L3			TB-L4			TB-L5			TB-W1		
Replicate	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
<i>Dubiraphia quadrinotata</i>															1			
<i>Optioservus</i>	2		3				1			1		1						
<i>Stenelmis crenata</i>	4		7				3		4			5	1					
HYDROPHILIDAE:																		
<i>Paracymus</i>				1	1		1									1		
DIPTERA:																		
CERATOPOGONIDAE:			3	8	7	4							2					1
CHIRONOMIDAE:CHIRONOMINAE																		
<i>Chironomus</i>		3											1	1	3			
<i>Cryptochironomus</i>	3	3		3	2	1		2		1	2		2	4	2			2
<i>Cryptotendipes</i>		2													2			
<i>Dicrotendipes</i>		2					1						3		2			
<i>Microtendipes</i>	5	2	1	7	1	2	14	8	19	17	10	13	10	9	10	2		1
<i>Paratanytarsus</i>	6		6	1			20	1		12	3	1	1			1	1	2
<i>Paratendipes</i>	7	20	5				3	29	23	2	43	7	22	11	12	6		4
<i>Phaenopsectra</i>		1								1				1		1		
<i>Polypedilum</i>	1	2	1		1		5		4	2		2					1	
<i>Stempellina</i>	1	4				1	4	2	3	21	3	3	3		7	2		
<i>Stempellinella</i>													1	4	6			
<i>Stenochironomus</i>											1							
<i>Stictochironomus</i>	23	39	10	6	1	1	25	31	13	7		12	15	18	19	3	66	10
<i>Tanytarsus</i>	5	4	3	7	7	6		14	11	7	8	3	13	8	16		3	6
<i>Zavreliella</i>														1				
CHIRONOMINDAE:ORTHOCLADIINAE:																		
<i>Brillia</i>	1						2	2								3		
<i>Cricotopus/Orthocladus</i>	3		3	4	1	3		2	1	6	4	6	2		3	1	1	
<i>Nanocladius</i>	1																	
<i>Parametricnemus</i>			1							1		1				1		1
<i>Thienemanniella</i>														1				
<i>Tvetenia</i>				2		3	1			1								
CHIRONOMIDAE:TANYPODINAE:																		
<i>Conchapelopia</i>	8	6	1		4	1	3		1	7	4	3		2	1	16	4	23

Site	TB-L1			TB-L2			TB-L3			TB-L4			TB-L5			TB-W1		
Replicate	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
<i>Nilotanypus</i>					1											1		
<i>Procladius</i>	3	3						1	1				9	11	1	1		1
PTYCHOPTERIDAE:																		
<i>Ptychoptera</i>					1	2												
SCIOMYZIDAE:																		
<i>Sepedon</i>								1										
SIMULIIDAE:																		
<i>Simulium</i>				4	3					1						1		7
STRATIOMYIDAE:																		
<i>Stratiomys</i>																		1
TABANIDAE:																		
<i>Chrysops</i>														1				2
TIPULIDAE:																		
<i>Antocha</i>					1													
<i>Dicranota</i>	1		12	2					1							17		8
<i>Tipula</i>	1					1												
EPHEMEROPTERA:																		
BAETIDAE:																		
<i>Acerpenna pygmaeus</i>							1											
<i>Baetis flavistriga</i>			1	2	2				1			3						1
HEPTAGENIIDAE:																		
<i>Stenacron interpunctatum</i>	1						1											
LEPTOPHLEBIIDAE:											1							
MEGALOPTERA:																		
CORYDALIDAE:																		
<i>Nigronia serricornis</i>									1									
SIALIDAE:																		
<i>Sialis</i>							1					1						
TRICHOPTERA:																		
HYDROPSYCHIDAE:																		
<i>Cheumatopsyche</i>	4		39	43	9	31	6		4	3		25				2		11
LEPIDOSTOMATIDAE:																		
<i>Lepidostoma</i>	1			1	1	2										4		5

Site	TB-L1			TB-L2			TB-L3			TB-L4			TB-L5			TB-W1		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Replicate																		
LEPTOCERIDAE:																		
<i>Mystacides sepulchralis</i>							1											
LIMNEPHILIDAE:																		
<i>Pycnopsyche</i>								1			1							
PHILOPOTAMIDAE:																		
<i>Chimarra</i>			3															
MOLLUSCA: BIVALVIA																		
SPHAERIIDAE:																		
<i>Pisidium</i>	6	4		3	30	32		1	5	1			2	1		26	19	
<i>Sphaerium striatinum</i>	4						1		5				1					
MOLLUSCA: GASTROPODA:																		
LYMNAEIDAE																		
<i>Fossaria modicella</i>					16	3												
PHYSIDAE:																		
<i>Physella gyrina</i>				1	7	3												
VIVIPARIDAE:																		
<i>Cipangopaludina chinensis</i>											1							
NEMATODA:			1						1									1
PLATYHELMINTHES:																		
PLANARIIDAE:	1							1				2						
Total number	107	105	105	104	102	102	100	105	103	103	102	100	100	101	103	104	103	104
Taxa richness	27	16	19	17	22	17	23	15	19	22	15	22	18	17	16	25	10	22