

Appendix E

Benthic Invertebrate Data and QA/QC Results



Table E.1. Raw benthic invertebrate community data for organisms retained on the 500 µm sieve

Major Group	Family (Subfamily/Tribe)	Genus/Species	Fingers Lake Reference Area (Individuals/m ²)					Pond 1 (Individuals/m ²)					Pond 2 (Individuals/m ²)	
			FL1	FL2	FL3	FL4	FL5	SCP3	SCP4	SCP5	SCP1	SCP2		
Diptera	Chironomidae pupae	-								4				
	Chironomidae	(i/d)	9	4	63	23		3	7	44				
	Chironominae	(i/d)		1										
	Chironomini	-	1	14	114	5	138	240	12	24	308	629		
	Tanytarsini	-	1	40	173	3	3	3	1	200	3	13		
	Orthocladinae	-	26	98	1742	9	41	29	18	392	11	20		
	Tanytopodinae	-	4	8	167	41	32	32	5	20	8			
	Ceratopogonidae	(i/d)								12				
	Bezzia									44				
	Culicoides						1							
	Serromyia							1						
Empididae	(i/d)	1												
	Chelifera	1	12				2	4	1		3	4		
Tipulidae	(i/d)							3						
	Dicranota	2				3								
	Tipula								1					
Total			50	194	2428	93	269	319	45	788	354	673		

Notes: i/d = immature/damaged; Converted to individuals/m² by multiplying values by 8.6. Based on area of Ekman grab (0.0232m²)×5 samples at each station

Table E.2. Benthic invertebrate community data summary for organisms retained on the 500 µm sieve

Major Group	Family (Subfamily/Tribe)	Fingers Lake Reference Area (Individuals/m ²)					Reference Total	Pond 1 (Individuals/m ²)			Pond 2 (Individuals/m ²)		Exposure Total
		FL1	FL2	FL3	FL4	FL5		SCP3	SCP4	SCP5	SCP1	SCP2	
Oligochaeta	Aelosomatidae							9	0	0	0	0	9
	Enchytraeidae	9	103	576	0	0	688	0	0	69	0	0	69
	Lumbriculidae	17	0	69	26	120	232	17	0	172	77	43	310
Acari	Hydrachnidia	0	0	0	9	52	60	0	0	34	69	9	112
Pelecypoda	Sphaeriidae	17	0	0	0	172	189						
Ostracoda		0	0	292	0	26	318						
Ephemeroptera	Heptageniidae							0	0	0	9	0	9
Tricoptera	Leptoceridae	0	0	95	0	9	103	0	0	0	26	9	34
	Limnephilidae	0	9	0	0	9	17						
Diptera	Chironomidae	353	1419	19427	697	1840	23736	2640	370	5847	2839	5693	17389
	Ceratopogoninae	0	0	0	0	9	9	0	0	482	0	0	482
	Empididae	17	103	0	0	17	138	34	9	0	26	34	103
	Tipulidae	17	0	0	26	0	43	26	9	0	0	0	34
		430	1634	20459	757	2253	25533	2726	387	6604	3045	5788	18550
Total (Individuals/m ²)		39	149	1860	69	205	5107	273	39	660	305	579	3710
SD		104	423	5829	208	545	8613	832	116	1829	891	1797	2507
SE		31	128	1758	63	164	2597	263	37	578	282	568	793
Median		9	0	0	0	17	1634	4	0	17	17	4	3045
Min		0	0	0	0	0	430	0	0	0	0	0	387
Max		353	1419	19427	697	1840	20459	2640	370	5847	2839	5693	6604
Family Richness (Taxonomic Categories)		6	4	5	3	9	11	5	3	5	6	5	10
% Dominant Family		82	87	95	92	82	93	97	96	89	93	98	94

Table E.3. Raw benthic invertebrate community data for organisms retained on the 250 µm sieve

Major Group	Family (Subfamily/Tribe)	Genus/Species	Fingers Lake Reference Area (Individuals/m ²)					Pond 1 (Individuals/m ²)					Pond 2 (Individuals/m ²)	
			FL1	FL2	FL3	FL4	FL5	SCP3	SCP4	SCP5	SCP1	SCP2		
Diptera	Chironomidae pupae	-												
	Chironomidae	(i/d)	261	216	160	57	80	64	100	156	50	20		
	Chironominae	(i/d)	3		8	568		44	20	4	90			
	Chironomini	-					20	224		8	1800	6		
	Tanytarsini	-		16	8	22	64	16			80	10		
	Orthocladinae	-	41	280	52	110	112	140	24	116	1020	106		
	Tanypodinae	-		8		13	8	4	4	4	40			
	Ceratopogoninae	(i/d)												
	Bezzia									4	20			
	Culicoides													
Empididae	Serromyia													
	(i/d)						4							
	Chelifera			16		4								
	(i/d)													
	Dicranota													
Tipulidae	Tipula													
Total			316	808	324	801	436	536	156	376	3220	200		

Notes: i/d = immature/damaged; Converted to individuals/m² by multiplying values by 8.6. Based on area of Ekman grab (0.0232m²) × 5 samples at each station

Table E.4. QA/QC re-sort results

Major Group	Family (Subfamily/Tribe)	Genus/Species	Resorted Sample FL4
Oligochaeta	Aeolosomatidae	-	
	Enchytraeidae	-	
	Lumbriculidae	-	
	Naididae	-	
Acari	Eremaeidae	-	
	Hydrachnidia	-	
Pelecypoda	Sphaeriidae	(i/d)	
		<i>Pisidium</i>	
Ostracoda	-	-	
Cladocera		(i/d)	
	Chydoridae	(i/d)	
	Daphnidae	(i/d)	
Copepoda		(i/d)	
	Calanoida	(i/d)	
	Cyclopoida	(i/d)	
Ephemeroptera	Heptageniidae	(i/d)	
Tricoptera	Leptoceridae	<i>Mystacides</i>	
		<i>Oecetis</i>	
	Limnephilidae	(i/d)	
		<i>Ecclisomyia</i>	
Diptera	Chironomidae pupae	-	
	Chironomidae	(i/d)	
	Chironominae	(i/d)	
	Chironomini	-	
	Tanytarsini	-	
	Orthoclaadiinae	-	
	Tanypodinae	-	
	Ceratopogoninae	(i/d)	
		<i>Bezzia</i>	
		<i>Culicoides</i>	
		<i>Serromyia</i>	
	Empididae	(i/d)	
		<i>Chelifera</i>	
	Tipulidae	(i/d)	
		<i>Dicranota</i>	
		<i>Tipula</i>	
Total Number in Resorted Sample			0
Total Number in Original Sample			93
Sorting Efficiency (%)			100

Appendix F
Fish Survey Data



Table F.1. Raw Fish Capture Data

Watercourse	Site ID	Specimen No.	Sample Method	Species	Length (mm)	Weight (g)	Liver Weight (g)	Carcass Weight (g)	Life Stage	Sex Mat	Gender	Date	Comment
Seep Creek	SC1	1	BP	NNST	61	1.43			A	U	U	19-Aug-05	No external parasites, preserved
Seep Creek	SC1	2	BP	ARGR	48	0.8			J	IM	U	19-Aug-05	healthy, preserved
Seep Creek	SC1	3	BP	ARGR	46	0.6					U	19-Aug-05	No external parasites, preserved
Seep Creek	SC1	4	BP	ARGR	49	0.96			J	IM	U	19-Aug-05	healthy, preserved
Seep Creek	SC1	5	BP	ARGR	50	1			J	IM	U	19-Aug-05	burned, preserved
Seep Creek	SC1	6	BP	ARGR	45	0.9			J	IM	U	19-Aug-05	burned, preserved
Seep Creek	SC1	7	BP	ARGR	32	0.3			YOY	IM	U	19-Aug-05	burned, preserved
Seep Creek	SC1	8	BP	ARGR	105	10	0.52		J	IM	M	19-Aug-05	healthy, too small for collection
Seep Creek	SC1	9	BP	ARGR	104	10			J	IM		19-Aug-05	healthy, preserved
Seep Creek	SC1	10	BP	ARGR	44	<2			J	IM	U	19-Aug-05	healthy, released
Seep Creek	SC1	11	BP	ARGR	45	<2			J	IM	U	19-Aug-05	healthy, released
Seep Creek	SC1	12	BP	ARGR	48	<2			J	IM	U	19-Aug-05	healthy, released
Seep Creek	SC1	13	BP	ARGR	42	<2			J	IM	U	19-Aug-05	healthy, released
Seep Creek	SC1	14	BP	ARGR	45	<2			J	IM	U	19-Aug-05	healthy, released
Seep Creek	SC1	15	BP	ARGR	48	<2			J	IM	U	19-Aug-05	healthy, released
Seep Creek	SC1	16	BP	ARGR	49	<2			J	IM	U	19-Aug-05	healthy, released
Seep Creek	SC2	1	BP	ARGR	101	10			J	IM		20-Aug-05	
Seep Creek	SC2	2	BP	ARGR	96	8			J	IM		20-Aug-05	
Seep Creek	SC2	3	BP	ARGR	47	<2			J	IM		20-Aug-05	
Seep Creek	SC2	4	BP	ARGR	44	<2			J	IM		20-Aug-05	
Seep Creek	SC2	5	BP	ARGR	44	<2			J	IM		20-Aug-05	
Seep Creek	SC2	6	BP	ARGR	55	<2			J	IM		20-Aug-05	
Seep Creek	SC2	7	BP	ARGR	46	<2			J	IM		20-Aug-05	
Seep Creek	SC2	8	BP	ARGR	43	<2			J	IM		20-Aug-05	
Seep Creek	SC2	9	BP	ARGR	49	<2			J	IM		20-Aug-05	
Seep Creek	SC2	10	BP	ARGR	49	<2			J	IM		20-Aug-05	

Table F.1. Raw Fish Capture Data (cont.)

Watercourse Name	Site ID	Specimen No.	Sample Method	Species	Length (mm)	Weight (g)	Liver Weight (g)	Carcass Weight (g)	Life Stage	Sex Mat	Gender	Date	Comment
Seep Creek	SC2	11	BP	ARGR	50	<2			J	IM		20-Aug-05	
Seep Creek	SC2	12	BP	ARGR	45	<2			J	IM		20-Aug-05	
Seep Creek	SC2	13	BP	ARGR	47	<2			J	IM		20-Aug-05	
Seep Creek	SC2	14	BP	ARGR	48	<2			J	IM		20-Aug-05	
Seep Creek	SC2	15	BP	ARGR	49	<2			J	IM		20-Aug-05	
Seep Creek	SCD1	1	GN	ARGR	97				J	IM	U	21-Aug-05	
Seep Creek	SCD1	2	GN	ARGR	98				J	IM	U	21-Aug-05	
Seep Creek	SCD1	3	GN	ARGR	95				J	IM	U	21-Aug-05	
Seep Creek	SCD1	4	GN	ARGR	98				J	IM	U	21-Aug-05	
Seep Creek	SCD1	5	GN	ARGR	99	9.3			J	IM	F	21-Aug-05	
Seep Creek	SCD1	6	GN	ARGR	86	7.9			J	IM	U	21-Aug-05	
Seep Creek	SCD1	7	GN	ARGR	102	10.8			J	IM	F	21-Aug-05	
Seep Creek	SCD1	8	GN	ARGR	93	7.4			J	IM	M	21-Aug-05	gonads must be inspected for maturity
Seep Creek	SC1	18	MB	NNST	68	1.97			U	U	F	22-Aug-05	
Seep Creek	SC1	19	MB	NNST	64	1.63	0.03	1.23	U	U	F	22-Aug-05	
Seep Creek	SC1	20	MB	NNST	61	1.64	0.04	0.91	U	U	M	22-Aug-05	
Seep Creek	SC1	21	MB	NNST	59	1.4	0.04	0.83	U	U	U	22-Aug-05	
Seep Creek	SC1	22	MB	NNST	58	1.22	0.05	0.69	U	U	M	22-Aug-05	Lesion on opercle
Seep Creek	SC1	23	MB	NNST	53	0.86	0.2	0.45	J	IM	F	22-Aug-05	
Seep Creek	SC1	24	MB	NNST	50	0.93	0.02	0.45	J	IM	M	22-Aug-05	
Seep Creek	SC1	25	MB	NNST	49	0.91	0.02	0.39	J	IM	F	22-Aug-05	
Seep Creek	SC1	26	MB	NNST	51	0.77	0.02	0.38	U	U	U	22-Aug-05	preserved in formalin
Seep Creek	SC1	27	MB	NNST	47	0.72			U	U	U	22-Aug-05	
Seep Creek	SC1	28	MB	NNST	52	1.10	0.04	0.46	U	U	M	22-Aug-05	preserved in formalin
Seep Creek	SC1	29	MB	NNST	51	1.03			U	U	M	22-Aug-05	preserved in formalin, body degrading; no internal exam

Table F.1. Raw Fish Capture Data (cont.)

Watercourse Name	Site ID	Specimen No.	Sample Method	Species	Length (mm)	Weight (g)	Liver Weight (g)	Carcass Weight (g)	Life Stage	Sex Mat	Gender	Date	Comment
Seep Creek	SC1	30	MB	NNST	51	0.83			U	U	M	22-Aug-05	
Seep Creek	SC1	31	MB	NNST	74	2.72			A	U	M	22-Aug-05	
Seep Creek	SC1	32	MB	NNST	66	1.64			U	U	M	22-Aug-05	
Seep Creek	SC1	33	MB	NNST	51	0.98			U	U	M	22-Aug-05	
Seep Creek	SC1	34	MB	NNST	59	1.12			U	U	M	22-Aug-05	
Seep Creek	SC1	35	MB	NNST	54	0.73			U	U	M	22-Aug-05	
Seep Creek	SC1	36	MB	NNST	51	0.80			U	U	M	22-Aug-05	
Seep Creek	SC1	37	MB	NNST	65	1.56			U	U	M	22-Aug-05	
Seep Creek	SC3	0	FN	ARGR	64	2.21					U	22-Aug-05	
Seep Creek	SC3	1	FN	ARGR	49	1.25						25-Aug-05	Healthy
Seep Creek	SC3	2	FN	ARGR	49	1.36						25-Aug-05	Healthy
Seep Creek	SC3	3	FN	ARGR	97	7.79	0.09	5.42		IM	F	25-Aug-05	
Seep Creek	SC3	4	FN	ARGR	97	8.54	0.11	5.59		IM	M	25-Aug-05	
Seep Creek	SC3	5	FN	NNST	65	1.43	0.03	0.75		MA	F	25-Aug-05	
Seep Creek	SC3	6	FN	NNST	53	1.02	0.03	0.44		IM	F	25-Aug-05	
Seep Creek	SC3	7	FN	NNST	55	1.06				IM	F	25-Aug-05	
Seep Creek	SC3	8	FN	NNST	53	0.95	0.02	0.55		IM	F	25-Aug-05	
Seep Creek	SC3	9	FN	NNST	57	1.19	0.04	0.48		IM	F	25-Aug-05	
Seep Creek	SC3	10	FN	NNST	58	1.13	0.04	0.67		IM	F	25-Aug-05	
Seep Creek	SC3	11	FN	NNST	43	0.65	0.04	0.63		IM	F	25-Aug-05	
Seep Creek	SC3	12	FN	NNST	51	0.78	0.04	0.34			U	25-Aug-05	fungal infection/skin aberrations
Seep Creek	C1	1	GN	ARCH	612	2260			U	U	U	25-Aug-05	given to local assistant
Seep Creek	C1	2	GN	LKTR	593	2175						25-Aug-05	given to local assistant
Seep Creek	C1	3	GN	LKTR	764	4610						25-Aug-05	given to local assistant
Seep Creek	SCD1	9	GN	ARGR	115	11.56		0.46	J	IM	M	27-Aug-05	
Seep Creek	SCD1	10	GN	ARGR	121	17.77	0.19	12.35	J	IM	M	28-Aug-05	

Table F.1. Raw Fish Capture Data (cont.)

Watercourse Name	Site ID	Specimen No.	Sample Method	Species	Length (mm)	Weight (g)	Liver Weight (g)	Carcass Weight (g)	Life Stage	Sex Mat	Gender	Date	Comment
Seep Creek	SC3	11	FN	NNST	43	0.65	0.04	0.63		IM	F	25-Aug-05	
Seep Creek	SC3	12	FN	NNST	51	0.78	0.04	0.34			U	25-Aug-05	
Seep Creek	C1	1	GN	ARCH	612	2260			U	U	U	25-Aug-05	given to local assistant
Seep Creek	C1	2	GN	LKTR	593	2175						25-Aug-05	given to local assistant
Seep Creek	C1	3	GN	LKTR	764	4610						25-Aug-05	given to local assistant
Seep Creek	SCD1	9	GN	ARGR	115	11.56		0.46	J	IM	M	27-Aug-05	
Seep Creek	SCD1	10	GN	ARGR	121	17.77	0.19	12.35	J	IM	M	28-Aug-05	
Seep Creek	SCD1	11	GN	ARGR	103	10.13	0.13	7.05	J	IM	M	28-Aug-05	
Seep Creek	SCD1	12	GN	ARGR	104	11.24	0.14	7.44	J	IM	M	28-Aug-05	
Seep Creek	SCD1	13	GN	ARGR	122	17.26			J	IM	F	28-Aug-05	
Seep Creek	SCD1	14	GN	ARGR	94	8.29	0.17		J	IM	F	28-Aug-05	
Seep Creek	SCD1	15	GN	ARGR	96	8.38	0.09	5.48	J	IM	F	28-Aug-05	
Seep Creek	SCD1	16	GN	ARGR	110	11.06	0.08	7.49	J	IM	F	28-Aug-05	
Seep Creek	SCD1	17	GN	ARGR	119	17.39	0.17	12.21	J	IM	F	28-Aug-05	
Seep Creek	SCD1	18	GN	ARGR	114	14.56	0.14	10.13	J	IM	M	28-Aug-05	
Seep Creek	SCD1	19	GN	ARGR	118	11.66	0.09	8.27	J	IM	M	28-Aug-05	
Seep Creek	SCD1	20	GN	ARGR	96	7.96	0.06	5.41	J	IM	M	28-Aug-05	
Seep Creek	SCD1	21	GN	ARGR	92	7.06	0.05	4.89	J	IM	M	28-Aug-05	
Seep Creek	SCD1	92	GN	ARGR	116	15.74	0.2	11.15	J	IM	M	02-Sep-05	
Seep Creek	SCD1	93	GN	ARGR	118	19.62	0.17	13.73	J	IM	M	02-Sep-05	
Seep Creek	SCD1	94	GN	ARGR	102	12.05	0.13	8.42	J	IM	M	02-Sep-05	
Seep Creek	SCD1	95	GN	ARGR	99	10.27	0.12	6.84	J	IM	U	02-Sep-05	
Seep Creek	SCD1	96	GN	ARGR	107	14.14	0.18	9.94	J	IM	M	02-Sep-05	
Seep Creek	SCD1	97	GN	ARGR	100	11.09	0.08	7.39	J	IM	U	02-Sep-05	
Seep Creek	SCD1	98	GN	ARGR	96	10.17	0.09	6.33	J	IM	F	02-Sep-05	
Seep Creek	SCD1	99	GN	ARGR	111	9.61	0.06	6.59	J	IM	U	02-Sep-05	

Table F.1. Raw Fish Capture Data (cont.)

Watercourse Name	Site ID	Specimen No.	Sample Method	Species	Length (mm)	Weight (g)	Liver Weight (g)	Carcass Weight (g)	Life Stage	Sex Mat	Gender	Date	Comment
Seep Creek	SC4	1	BP	ARGR	94	10.25	0.15	6.42	J	IM		02-Sep-05	
Seep Creek	SC4	2	BP	ARGR	61				YOY			02-Sep-05	released
Seep Creek	SC4	3	BP	ARGR	54				YOY			02-Sep-05	released
Seep Creek	SC4	4	BP	ARGR	57				YOY			02-Sep-05	released
Seep Creek	SC4	5	BP	ARGR	62				YOY			02-Sep-05	released
Seep Creek	SC4	6	BP	ARGR	55				YOY			02-Sep-05	released
Seep Creek	SC4		OB	ARGR					YOY			02-Sep-05	
Seep Creek	SC4		OB	ARGR					YOY			02-Sep-05	
Seep Creek	SC4		OB	ARGR					YOY			02-Sep-05	
Seep Creek	SC4		OB	NNST					J			02-Sep-05	
Seep Creek	SC4		OB	NNST					J			02-Sep-05	
Seep Creek	SCD1	100	GN	ARGR	100	9.82	0.08	6.05	J	IM	M	03-Sep-05	
Seep Creek	SCD1	101	GN	ARGR	112	14.54	0.17	10.30	J	IM	F	03-Sep-05	
Seep Creek	SCD1	102	GN	ARGR	116	16.00	0.17	10.72	J	IM	F	03-Sep-05	
Seep Creek	SCD1	103	GN	ARGR	152	18.91	0.2	13.35	J	IM	F	03-Sep-05	
Seep Creek	SCD1	104	GN	ARGR	117	16.67	0.19	12.25	J	IM	M	03-Sep-05	
Seep Creek	SCD1	105	GN	ARGR	90	7.90	0.09	5.19	J	IM	F	03-Sep-05	
Seep Creek	SCD1	106	GN	ARGR	116	16.72	0.14	11.05	J	IM	U	03-Sep-05	
Seep Creek	SCD1	107	GN	ARGR	94	8.80	0.11	6.21	J	IM	F	03-Sep-05	
Seep Creek	SCD1	108	GN	ARGR	101	10.70	0.09	7.37	J	IM	F	03-Sep-05	
Seep Creek	SCD1	109	GN	ARGR	100	10.58	0.11	7.19	J	IM	M	04-Sep-05	
Seep Creek	SCD1	110	GN	ARGR	106	10.68	0.12	9.42	J	IM	M	04-Sep-05	
Seep Creek	SCD1	111	GN	ARGR	102	10.43	0.08	7.18	J	IM	U	04-Sep-05	
Seep Creek	SCD1	112	GN	ARGR	89	7.86	0.09	5.02	J	IM	M	04-Sep-05	
Seep Creek	SCD1	113	GN	ARGR	98	10.92	0.12	7.19	J	IM	F	04-Sep-05	
Seep Creek	SCD1	114	GN	ARGR	105	14.26	0.14	9.98	J	IM	M	04-Sep-05	

Table F.1. Raw Fish Capture Data (cont.)

Watercourse Name	Site ID	Specimen No.	Sample Method	Species	Length (mm)	Weight (g)	Liver Weight (g)	Carcass Weight (g)	Life Stage	Sex Mat	Gender	Date	Comment
Seep Creek	SCD1	115	GN	ARGR	93	8.38	0.12	5.48	J	IM	F	04-Sep-05	
Seep Creek	SCD1	22	MB	NNST	58	1.00						04-Sep-05	
Seep Creek	SCD1	23	MB	NNST	55	1.03						04-Sep-05	
Seep Creek	SCD1	24	MB	NNST	55	1.01						04-Sep-05	
Seep Creek	SCD1	25	MB	NNST	56	0.93						04-Sep-05	
Seep Creek	SCD1	26	MB	NNST	52	1.00						04-Sep-05	
Seep Creek	SCD1	27	MB	NNST	50	1.05						04-Sep-05	
Seep Creek	SCD1	28	MB	NNST	49	0.81						04-Sep-05	
Seep Creek	SCD1	29	MB	NNST	52	0.83						04-Sep-05	
Seep Creek	SCD1	30	MB	NNST	54	0.88						04-Sep-05	
Seep Creek	SCD1	31	MB	NNST	56	1.07						04-Sep-05	
Seep Creek	SCD1	32	MB	NNST	56	1.10						04-Sep-05	
Seep Creek	SCD1	33	MB	NNST	57	1.12						04-Sep-05	
Seep Creek	SCD1	34	MB	NNST	56	1.02						04-Sep-05	
Seep Creek	SCD1	35	MB	NNST	51	0.93						04-Sep-05	
Seep Creek	SCD1	36	MB	NNST	66	1.54						04-Sep-05	
Seep Creek	SCD1	37	MB	NNST	60	2.09						04-Sep-05	
Seep Creek	SCD1	38	MB	NNST	53	1.05						04-Sep-05	
Seep Creek	SCD1	39	MB	NNST	55	1.03						04-Sep-05	
Seep Creek	SCD1	40	MB	NNST	54	1.07						04-Sep-05	
Seep Creek	SCD1	41	MB	NNST	57	0.96						04-Sep-05	
Seep Creek	SCD1	42	MB	NNST	54	1.05						04-Sep-05	
Seep Creek	SCD1	43	MB	NNST	54	1.32						04-Sep-05	
Seep Creek	SCD1	44	MB	NNST	51	0.74						04-Sep-05	
Seep Creek	SCD1	45	MB	NNST	61	1.17						04-Sep-05	
Seep Creek	SCD1	46	MB	NNST	55	1.03						04-Sep-05	

Table F.1. Raw Fish Capture Data (cont.)

Watercourse Name	Site ID	Specimen No.	Sample Method	Species	Length (mm)	Weight (g)	Liver Weight (g)	Carcass Weight (g)	Life Stage	Sex Mat	Gender	Date	Comment
Seep Creek	SCD1	47	MB	NNST	59	1.18						04-Sep-05	
Seep Creek	SCD1	48	MB	NNST	51	0.83						04-Sep-05	
Seep Creek	SCD1	49	MB	NNST	59	1.02						04-Sep-05	
Seep Creek	SCD1	50	MB	NNST	53	0.87						04-Sep-05	
Seep Creek	SCD1	51	MB	NNST	51	0.86						04-Sep-05	
Seep Creek	SCD1	52	MB	NNST	55	1.02						04-Sep-05	
Seep Creek	SCD1	53	MB	NNST	55	1.00						04-Sep-05	
Seep Creek	SCD1	54	MB	NNST	55	1.08						04-Sep-05	
Seep Creek	SCD1	55	MB	NNST	52	0.96						04-Sep-05	
Seep Creek	SCD1	56	MB	NNST	55	0.89						04-Sep-05	
Seep Creek	SCD1	57	MB	NNST	56	1.08						04-Sep-05	
Seep Creek	SCD1	58	MB	NNST	55	0.89						04-Sep-05	
Seep Creek	SCD1	59	MB	NNST	72	2.26						04-Sep-05	
Seep Creek	SCD1	60	MB	NNST	51	0.84						04-Sep-05	
Seep Creek	SCD1	61	MB	NNST	55	1.12						04-Sep-05	
Seep Creek	SCD1	62	MB	NNST	61	1.15						04-Sep-05	
Seep Creek	SCD1	63	MB	NNST	54	0.87						04-Sep-05	
Seep Creek	SCD1	64	MB	NNST	54	0.93						04-Sep-05	
Seep Creek	SCD1	65	MB	NNST	52	0.87						04-Sep-05	
Seep Creek	SCD1	66	MB	NNST	51	0.80						04-Sep-05	
Seep Creek	SCD1	67	MB	NNST	60	1.22						04-Sep-05	
Seep Creek	SCD1	68	MB	NNST	58	1.02						04-Sep-05	
Seep Creek	SCD1	69	MB	NNST	54	0.89						04-Sep-05	
Seep Creek	SCD1	70	MB	NNST	52	0.93						04-Sep-05	
Seep Creek	SCD1	71	MB	NNST	50	0.84						04-Sep-05	
Seep Creek	SCD1	72	MB	NNST	48	0.79						04-Sep-05	

Table F.1. Raw Fish Capture Data (cont.)

Watercourse Name	Site ID	Specimen No.	Sample Method	Species	Length (mm)	Weight (g)	Liver Weight (g)	Carcass Weight (g)	Life Stage	Sex Mat	Gender	Date	Comment
Seep Creek	SCD1	73	MB	NNST	60	1.22						04-Sep-05	
Seep Creek	SCD1	74	MB	NNST	58	1.03						04-Sep-05	
Seep Creek	SCD1	75	MB	NNST	54	1.06						04-Sep-05	
Seep Creek	SCD1	76	MB	NNST	60	1.30						04-Sep-05	
Seep Creek	SCD1	77	MB	NNST	62	1.54						04-Sep-05	
Seep Creek	SCD1	78	MB	NNST	53	0.86						04-Sep-05	
Seep Creek	SCD1	79	MB	NNST	64	0.96						04-Sep-05	
Seep Creek	SCD1	80	MB	NNST	48	0.73						04-Sep-05	
Seep Creek	SCD1	81	MB	NNST	56	1.00						04-Sep-05	
Seep Creek	SCD1	82	MB	NNST	58	1.09						04-Sep-05	
Seep Creek	SCD1	83	MB	NNST	53	1.05						04-Sep-05	
Seep Creek	SCD1	84	MB	NNST	51	0.87						04-Sep-05	
Seep Creek	SCD1	85	MB	NNST	53	0.93						04-Sep-05	
Seep Creek	SCD1	86	MB	NNST	58	1.19						04-Sep-05	
Seep Creek	SCD1	87	MB	NNST	60	1.10						04-Sep-05	
Seep Creek	SCD1	88	MB	NNST	55	1.13						04-Sep-05	
Seep Creek	SCD1	89	MB	NNST	54	0.87						04-Sep-05	
Seep Creek	SCD1	90	MB	NNST	58	1.14						04-Sep-05	
Seep Creek	SCD1	91	MB	NNST	60	0.77						04-Sep-05	
Fingers Creek	F1	1	GN	RNWH	395	665						26-Aug-05	Ageing structures removed
Fingers Creek	F1	2	GN	RNWH	398	645						26-Aug-05	Ageing structures removed
Fingers Creek	F1	3	GN	RNWH	397	675						26-Aug-05	Ageing structures removed
Fingers Creek	F1	4	GN	RNWH	393	640						26-Aug-05	Ageing structures removed
Fingers Creek	F1	5	GN	RNWH	357	480						26-Aug-05	Ageing structures removed
Fingers Creek	F1	6	GN	RNWH	392	695						26-Aug-05	Ageing structures removed
Fingers Creek	F1	7	GN	RNWH	418	810						26-Aug-05	Ageing structures removed

Table F.1. Raw Fish Capture Data (cont.)

Watercourse Name	Site ID	Specimen No.	Sample Method	Species	Length (mm)	Weight (g)	Liver Weight (g)	Carcass Weight (g)	Life Stage	Sex Mat	Gender	Date	Comment
Fingers Creek	F1	8	GN	RNWH	413	745						26-Aug-05	Ageing structures removed
Fingers Creek	F1	9	GN	RNWH	414	755						26-Aug-05	Ageing structures removed
Fingers Creek	F1	10	GN	RNWH								26-Aug-05	Individual released
Fingers Creek	F1	11	GN	LKTR								26-Aug-05	specimen released
Fingers Creek	FC3	5	BP	BURB								27-Aug-05	Mortality
Fingers Creek	FC3	6	BP	BURB								27-Aug-05	
Fingers Creek	FC3	7	BP	BURB								27-Aug-05	
Fingers Creek	FC3	8	BP	ARGR	63							31-Aug-05	Released
Fingers Creek	FC3	9	BP	ARGR	62							31-Aug-05	Released
Fingers Creek	FC3	10	BP	ARGR	61							31-Aug-05	Released
Fingers Creek	FC3	11	BP	ARGR	64							31-Aug-05	Released
Fingers Creek	FC3	12	BP	ARGR	61							31-Aug-05	Released
Fingers Creek	FC3	13	BP	ARGR	57							31-Aug-05	Released
Fingers Creek	FC3	14	BP	ARGR	56							31-Aug-05	Released
Fingers Creek	FC3	33	BP	ARGR	171	68.46	0.520	58.68	J	IM	M	31-Aug-05	
Fingers Creek	FC3	32	BP	ARGR	111	16.10	0.127	13.12	J	IM		31-Aug-05	
Fingers Creek	FC3	31	BP	ARGR	93	9.33	0.093	6.76	J	IM		31-Aug-05	
Fingers Creek	FC3	30	BP	ARGR	113	18.67	0.206	14.91	J	IM		31-Aug-05	
Fingers Creek	FC3	29	BP	ARGR	117	18.03	0.174	15.22	J	IM		31-Aug-05	
Fingers Creek	FC3	28	BP	ARGR	115	17.75	0.179	13.15	J	IM		31-Aug-05	
Fingers Creek	FC3	27	BP	ARGR	123	20.98	0.214	16.21	J	IM		31-Aug-05	
Fingers Creek	FC3	26	BP	ARGR	101	12.76	0.111	9.67	J	IM		31-Aug-05	
Fingers Creek	FC3	25	BP	ARGR	110	15.52	0.131	12.58	J	IM		31-Aug-05	
Fingers Creek	FC3	24	BP	ARGR	121	20.52	0.205	16.04	J	IM		31-Aug-05	
Fingers Creek	FC3	23	BP	ARGR	111	17.34	0.181	13.4	J	IM		31-Aug-05	
Fingers Creek	FC3	22	BP	ARGR	98	12.14			J	IM	F	31-Aug-05	

Table F.1. Raw Fish Capture Data (cont.)

Watercourse Name	Site ID	Specimen No.	Sample Method	Species	Length (mm)	Weight (g)	Liver Weight (g)	Carcass Weight (g)	Life Stage	Sex Mat	Gender	Date	Comment
Fingers Creek	F2	1	MB	SLSC	60							01-Sep-05	released, trap at end of dock
Fingers Creek	F2	2	MB	NNST								01-Sep-05	Mortality, returned to lake
Fingers Creek	FC3	1	HN	ARGR					YOY			03-Sep-05	Mortality
Fingers Creek	FC3	2	HN	ARGR					YOY			03-Sep-05	Mortality
Fingers Creek	FC3	3	HN	ARGR					YOY			03-Sep-05	Mortality
Fingers Creek	FC3	4	HN	BURB	220							03-Sep-05	Released
Fingers Creek	FC3	15	BP	ARGR					YOY			03-Sep-05	Released
Fingers Creek	FC3	16	BP	ARGR					YOY			03-Sep-05	Released
Fingers Creek	FC3	17	BP	ARGR					YOY			03-Sep-05	Released
Fingers Creek	FC3	18	BP	ARGR					YOY			03-Sep-05	Released
Fingers Creek	FC3	19	BP	LKTR	119				J			03-Sep-05	Released
Fingers Creek	FC3	20	BP	SLSC	81				A			03-Sep-05	Released
Fingers Creek	FC3	21	BP	ARGR	57				YOY			03-Sep-05	Released
Fingers Creek	FC3	58	BP	ARGR	158	47.44	0.408	38.820	J	IM		03-Sep-05	
Fingers Creek	FC3	57	BP	ARGR	120	22.46	0.238	18.670	J	IM		03-Sep-05	
Fingers Creek	FC3	56	BP	ARGR	116	18.74	0.155	15.100	J	IM		03-Sep-05	
Fingers Creek	FC3	55	BP	ARGR	111	18.00	0.170	14.610	J	IM		03-Sep-05	
Fingers Creek	FC3	54	BP	ARGR	92	8.20	0.110	6.690	J	IM		03-Sep-05	
Fingers Creek	FC3	53	BP	ARGR	114	18.00	0.188	14.750	J	IM		03-Sep-05	
Fingers Creek	FC3	52	BP	ARGR	109	15.59			J	IM		03-Sep-05	
Fingers Creek	FC3	51	BP	ARGR	113	15.39	0.116	12.720	J	IM		03-Sep-05	
Fingers Creek	FC3	50	BP	ARGR	117	18.42	0.180	15.800	J	IM		03-Sep-05	
Fingers Creek	FC3	49	BP	ARGR	114	18.98	0.190	16.100	J	IM		03-Sep-05	
Fingers Creek	FC3	48	BP	ARGR	166	56.00	0.420	47.310	J	IM		03-Sep-05	
Fingers Creek	FC3	47	BP	ARGR	165	57.71	0.413	49.140	J	IM		03-Sep-05	
Fingers Creek	FC3	46	BP	ARGR	121	22.88	0.210	18.870	J	IM		03-Sep-05	

Table F.1. Raw Fish Capture Data (cont.)

Watercourse Name	Site ID	Specimen No.	Sample Method	Species	Length (mm)	Weight (g)	Liver Weight (g)	Carcass Weight (g)	Life Stage	Sex Mat	Gender	Date	Comment
Fingers Creek	FC3	45	BP	ARGR	115	18.33	0.215	14.29	J	IM		03-Sep-05	
Fingers Creek	FC3	44	BP	ARGR	110	12.66	0.152	8.51	J	IM		03-Sep-05	
Fingers Creek	FC3	43	BP	ARGR	97	10.7	0.152	8.12	J	IM		03-Sep-05	
Fingers Creek	FC3	42	BP	ARGR	99	12.61	0.178	9.44	J	IM		03-Sep-05	
Fingers Creek	FC3	41	BP	ARGR	169	64.77	0.504	54.24	J	IM		03-Sep-05	
Fingers Creek	FC3	40	BP	ARGR	161	54.08	0.509	45.03	J	IM		03-Sep-05	
Fingers Creek	FC3	39	BP	ARGR	110	15.07	0.139	11.65	J	IM		03-Sep-05	
Fingers Creek	FC3	38	BP	ARGR	116	18.28	0.153	14.57	J	IM		03-Sep-05	
Fingers Creek	FC3	37	BP	ARGR	117	16.25	0.143	12.27	J	IM		03-Sep-05	
Fingers Creek	FC3	36	BP	ARGR	106	16.43	0.129	12.56	J	IM		03-Sep-05	
Fingers Creek	FC3	35	BP	ARGR	106	14.43	0.12	11.33	J	IM		03-Sep-05	
Fingers Creek	FC3	34	BP	ARGR	111	17.48	0.182	13.23	J	IM		03-Sep-05	

Note: Length is fork length for ARGR, RNWH, LKTR, ARCH, BURB; Length is total length for NNST and SLSC

Codes:

Species:	ARGR	Arctic grayling	Sample Method:	BP	Backpack electrofishing	Life stage, maturity, gender:	A	Adult
	ARCH	Arctic char		FN	Fyke net		F	Female
	BURB	Burbot		GN	Gill net		IM	Immature
	LKTR	Lake trout		HN	Hoop net		J	Juvenile
	NNST	Ninespine stickleback		MB	Minnow trap, baited		M	Male
	RNWH	Round whitefish		OB	Observed		U	Unknown
	SLSC	Slimy sculpin					YOY	Young-of-year

Table F.2. Net and trap effort

Site	Method	Set	Set date	Set time	Pull date	Pull time	Effort (h)
D1AP	Gill Net	1	21-Aug-05	9:37	21-Aug-05	13:35	4.0
	Gill Net	2	27-Aug-05	8:20	27-Aug-05	15:35	7.3
	Gill Net	3	28-Aug-05	12:00	28-Aug-05	18:50	6.8
	Gill Net	5	28-Aug-05	12:10	28-Aug-05	19:00	6.8
	Gill Net	6	29-Aug-05	14:15	29-Aug-05	19:30	5.3
	Gill Net	7	01-Sep-05	19:40	02-Sep-05	14:30	18.8
	Gill Net	8	02-Sep-05	14:40	03-Sep-05	18:15	27.6
	Gill Net	9	03-Sep-05	18:30	04-Sep-05	14:30	20.0
D1AP	Baited Minnow Trap	1	02-Sep-05	19:00	04-Sep-05	14:10	43.2
	Baited Minnow Trap	2	02-Sep-05	19:02	04-Sep-05	14:12	43.2
	Baited Minnow Trap	3	02-Sep-05	19:04	04-Sep-05	14:14	43.2
	Baited Minnow Trap	4	02-Sep-05	19:06	04-Sep-05	14:16	43.2
	Baited Minnow Trap	5	02-Sep-05	19:08	04-Sep-05	14:18	43.2
FC1	Gill Net	1	26-Aug-05	10:30	26-Aug-05	14:30	4.0
FC2	Baited Minnow Trap	1	26-Aug-05	11:25	01-Sep-05	19:20	151.9
	Baited Minnow Trap	2	26-Aug-05	11:27	01-Sep-05	19:23	151.9
	Baited Minnow Trap	3	26-Aug-05	11:30	01-Sep-05	19:24	151.9
	Baited Minnow Trap	4	26-Aug-05	11:32	01-Sep-05	19:28	151.9
	Baited Minnow Trap	5	26-Aug-05	11:34	01-Sep-05	19:32	152.0
C1	Gill Net	1	25-Aug-05	10:30	25-Aug-05	14:00	3.5
FC3	Hoop Net	1	26-Aug-05	15:35	31-Aug-05	12:15	116.7
	Hoop Net	2	31-Aug-05	12:15	03-Sep-05	13:00	72.8
FC3	Baited Minnow Trap	1	04-Sep-05	18:00	05-Sep-05	8:30	14.5
	Baited Minnow Trap	2	04-Sep-05	18:00	05-Sep-05	8:34	14.6
	Baited Minnow Trap	3	04-Sep-05	18:00	05-Sep-05	8:36	14.6
	Baited Minnow Trap	4	04-Sep-05	18:00	05-Sep-05	8:40	14.7
SC1	Baited Minnow Trap	1	19-Aug-05	12:55	22-Aug-05	15:20	74.4
	Baited Minnow Trap	2	19-Aug-05	12:58	22-Aug-05	15:30	74.5
	Baited Minnow Trap	3	19-Aug-05	13:02	22-Aug-05	15:40	74.6
	Baited Minnow Trap	4	19-Aug-05	13:06	22-Aug-05	15:44	74.6
	Baited Minnow Trap	5	19-Aug-05	13:12	22-Aug-05	15:47	74.6
SC3	Fyke Net	1	21-Aug-05	15:50	25-Aug-05	10:45	90.9
SCP2	Gill Net	1	22-Aug-05	14:45	22-Aug-05	17:10	2.4

Table F.3. Backpack electrofishing effort

Site	Run	Date	Time	Effort (s)
FC3	1	27-Aug-05	11:30	222
	2	31-Aug-05	12:50	1747
	3	03-Sep-05	9:30	386
	4	03-Sep-05	12:30	2689
SC4	1	02-Sep-05	15:45	779
SC1	1	19-Aug-05	10:15	904
SC2	1	20-Aug-05	12:50	1252

Table F.4. Total number of fish liver tissues combined in fish tissue composite samples

Site	Sample Number	No. of Liver Tissues	Total Weight of Composite Sample (g)
Exposure	LUP05UDIAPARGR001C	19	2.37
	LUP05UDIAPARGR002C	17	2.08
Reference	LUP05UF3ARGR001C	13	2.47
	LUP05UF3ARGR002C	11	2.45
	LUP05UF3ARGR003C	11	2.60

Table F.5. Arctic grayling ageing QA/QC results

Sample ID	Fork Length	Ageing Results	
		1st Read	2nd Read
FC3 - 27	123	1	1
FC3 - 33	171	2	2
FC3 - 36	106	1	1
FC3 - 46	121	1	1
FC3 - 48	166	2	2
FC3 - 54	92	1	1
FC3 - 58	158	2	2

