

Supplementary Information 2: Surber results from a) the Cotter River, and b) Cunningham Creek. Mesocosm results are also listed with designation of whether the taxa were found in the Cunningham and Cotter waterways or just the Cotter River. Several exceptions on this designation were made for taxa identified from the Cunningham Creek. These had <0.1% composition and presence may be associated with net contamination.

a) Cotter River Surber sampling results with average percent composition presented.

Cotter River (3x Surber samples)				
Class or higher	Order	Family	Lowest taxonomic unit	Average % Composition
Acarina			Acarina	2.03
Oligochaeta			Oligochaeta	6.76
Platyhelminthes	Tricladida	Dugesidae	Platyhelminthes	0.52
Insecta	Diptera	Simuliidae	Simuliidae	17.29
Insecta	Diptera	Chironomidae	Chironominae	9.97
Insecta	Diptera	Chironomidae	Cricotopus	1.20
Insecta	Diptera	Chironomidae	Thienemanniella	1.37
Insecta	Diptera	Chironomidae	Tanypodinae	0.45
Insecta	Diptera	Chironomidae	Aphroteniinae	0.15
Insecta	Diptera	Chironomidae	Podonomopsis	0.41
Insecta	Coleoptera	Hydrophilidae	Hydrophilidae	0.82
Insecta	Coleoptera	Psephenidae	Sclerocyphon	0.41
Insecta	Hygrophila	Planorbidae	Planorbidae	1.70
Insecta	Ephemeroptera	Baetidae	Offadens	3.34
Insecta	Ephemeroptera	Baetidae	Baetidae	0.26
Insecta	Coleoptera	Scirtidae	Scirtidae	0.15
Insecta	Coleoptera	Elmidae Larvae	Austrolimnius	1.12
Insecta	Coleoptera	Elmidae Larvae	Elmidae Larvae	0.15
Insecta	Coleoptera	Elmidae Adult	Elmidae Adult	0.15
Insecta	Trichoptera	Hydroptilidae	Hydroptila losida	0.15
Insecta	Ephemeroptera	Caenidae	Tasmanocoenis tillyardi	2.35
Insecta	Ephemeroptera	Caenidae	Caenidae	0.26
Insecta	Ephemeroptera	Leptophlebiidae	Austrophlebioides pusillus	3.07
Insecta	Ephemeroptera	Leptophlebiidae	Leptophlebiidae	22.51
Insecta	Ephemeroptera	Leptophlebiidae	Kirrara procera	0.26
Insecta	Ephemeroptera	Coloburiscidae	Colobruscoides	0.15
Insecta	Plecoptera	Gripopterygidae	Gripopterygidae	13.74
Insecta	Trichoptera	Glossosomatidae	Agapetus AV1	2.18
Insecta	Diptera	Empididae	Empididae	0.14
Insecta	Trichoptera	Conoesucidae	Not conoesucus or Costora	1.90
Insecta	Trichoptera	Conoesucidae	Conoesucus	0.14
Insecta	Trichoptera	Conoesucidae	Lingora AV1	0.14
Insecta	Trichoptera	Leptoceridae	Notalina	0.29
Insecta	Trichoptera	Leptoceridae	Notalina fulva	0.15
Insecta	Trichoptera	Leptoceridae	Oecetis	0.30
Insecta	Trichoptera	Leptoceridae	Leptoceridae	0.30
Insecta	Trichoptera	Philopotamidae	Chimarra monticola	1.49
Insecta	Trichoptera	Philopotamidae	Philopotamidae	0.15
			Hemigomphus comitatus,gouldii,	
Insecta	Odonata	Gomphidae	Heteroclytus or theischingeri	0.15
Insecta	Odonata	Gomphidae	Gomphidae	0.30
Insecta	Trichoptera	Hydroptilidae	Hellyethira basilobata	0.15
Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche AV1	1.06
Insecta	Trichoptera	Hydropsychidae	Hydropsychidae	0.26

b) Cunningham Creek Surber sample results with average percent composition presented.

Cunningham surber samples (4x Surber samples)				
Class or higher	Order	Family	Lowest taxonomic unit	Average % composition
Acarina			Acarina	5.98
Cladocera			Cladocera	0.67
Copepoda			Copepoda	1.84
Nematoda			Nematoda	0.19
Oligochaeta			Oligochaeta	8.99
Ostracoda			Ostracoda	12.95
Platyhelminthes	Tricladida	Dugesiidae	Dugesiidae	1.34
Insecta	Dipteria	Simuliidae	Simuliidae	10.65
			Cheumatopsyche AV2, AV4,	
Insecta	Trichoptera	Hydropsychidae	AV5, AV9, AV12	4.77
Insecta	Dipteria	Chironomidae	Chironominae	3.33
Insecta	Dipteria	Chironomidae	Cricotopus	3.29
Insecta	Dipteria	Chironomidae	Thienemanniella	0.62
Insecta	Dipteria	Chironomidae	Tanypodinae	0.42
Insecta	Dipteria	Chironomidae	Paraheptagyia	0.13
Insecta	Coleoptera	Scirtidae	Scirtidae	0.27
Insecta	Coleoptera	Hydrophilidae	Hydrophilidae	0.13
Insecta	Coleoptera	Dytiscidae	Dytiscidae	0.89
Insecta	Coleoptera	Psephenidae	Sclerocyphon	0.05
Insecta	Odonata	Corduliidae	Corduliidae	0.55
Insecta	Zygoptera		Zygoptera	0.05
Insecta	Hygrophila	Planorbidae	Planorbidae	0.14
Insecta	Dipteria	Ceratopogonidae	Forcipomyiinae	0.14
Insecta	Ephemeroptera	Baetidae	Offadens	4.84
Insecta	Hygrophila	Physidae	Physa acuta	0.56
Insecta	Hygrophila	Lymnaeidae	Lymnaeidae	0.42
Insecta	Coleoptera	Scirtidae	Scirtidae	0.71
Insecta	Coleoptera	Elmidae	Austrolimnius	0.28
Insecta	Dipteria	Tipulidae	Tipulidae	0.14
Insecta	Trichoptera	Hydroptilidae	Hydroptila scamandra	0.14
Insecta	Trichoptera	Hydroptilidae	Hydroptila losida	3.29
Insecta	Trichoptera	Hydroptilidae	Hellyethira cubitans	0.10
Insecta	Ephemeroptera	Caenidae	Tasmanocoenis tillyardi	31.88
Insecta	Ephemeroptera	Leptophlebiidae	Austrophlebiodies pusillus	0.07
Insecta	Plecoptera	Gripopterygidae	Gripopterygidae	0.14
Insecta	Trichoptera	Leptoceridae	Triplectides australis	0.05

c) Mesocosm results average percent composition across all treatments is presented, and the treatment classification. Taxa that were identified as present in the Cunningham were excluded, with the exception of being present in the Cunningham at less than 0.1% (data here not relevant to that calculation).

Mesocosm results					
Class or higher	Order	Family	Lowest taxonomic unit	Average % composition	Treatment classification
Hirunidea	Coleoptera	Elmidae	Arhynchobdellida	0.02	Cotter
Insecta	Coleoptera	Elmidae	Daternomina	0.01	Cotter
Insecta	Coleoptera	Elmidae	Kingolus	0.07	Cotter
			Kingolus cupreus,aeratus,		
Insecta	Coleoptera	Elmidae	and tyrrhenus	0.02	Cotter
Insecta	Coleoptera	Elmidae	Kingolus flavosignatus	0.01	Cotter
Insecta	Coleoptera	Elmidae	Kingolus metallicus	0.00	Cotter
Insecta	Coleoptera	Elmidae	Kingolus tinctus	0.01	Cotter
Insecta	Coleoptera	Elmidae	Notriolus/Simsonia spp.	0.01	Cotter
Insecta	Coleoptera	Elmidae	Simsonia cf.angusta	0.04	Cotter
Insecta	Coleoptera	Elmidae	Simsonia L12E	0.01	Cotter
Insecta	Coleoptera	Elmidae	Simsonia L2E	0.07	Cotter
Insecta	Coleoptera	Nanophyidae	Simsonia wilsoni	0.00	Cotter
Insecta	Diptera	Athericidae	Austronanodes	0.00	Cotter
Insecta	Diptera	Ceratopogonidae	Athericidae	0.01	Cotter
Insecta	Diptera	Chironomidae	Dasyhelea	0.01	Cotter
Insecta	Diptera	Chironomidae	Aphroteniinae	0.02	Cotter
Insecta	Diptera	Chironomidae	Corynoneura	0.78	Cotter
Insecta	Diptera	Chironomidae	Echinocladius	0.49	Cotter
Insecta	Diptera	Chironomidae	Nanocladius	0.00	Cotter
Insecta	Diptera	Chironomidae	Nanocladius/Psectrocladius	0.01	Cotter
Insecta	Diptera	Chironomidae	Paralimnophyes/limnophyes	0.01	Cotter
Insecta	Diptera	Empididae	Rheocricotopus	0.00	Cotter
Insecta	Diptera	Muscidae	Empididae	0.33	Cotter
Insecta	Diptera	Psychodidae	Muscidae	0.00	Cotter
Insecta	Diptera	Sciomyzidae	Psychodidae	0.01	Cotter
Insecta	Ephemeroptera	Ameletopsidae	Dichetophora	0.01	Cotter
Insecta	Ephemeroptera	Baetidae	Mirawarra	0.01	Cotter
Insecta	Ephemeroptera	Caenidae	Cloeon	0.03	Cotter
Insecta	Ephemeroptera	Caenidae	Irpacaenis	0.16	Cotter
Insecta	Ephemeroptera	Caenidae	Irpacaenis A/B	0.02	Cotter
Insecta	Ephemeroptera	Leptophlebiidae	Irpacaenis SpA	0.03	Cotter
Insecta	Ephemeroptera	Leptophlebiidae	Atalophlebia AV2	0.02	Cotter
Insecta	Ephemeroptera	Leptophlebiidae	Atalophlebia AV8	0.00	Cotter
Insecta	Ephemeroptera	Leptophlebiidae	Atalophlebia AV9	0.00	Cotter
Insecta	Ephemeroptera	Leptophlebiidae	Atalophlebia cf. AV4	0.01	Cotter
Insecta	Ephemeroptera	Leptophlebiidae	Atalophlebia spp.	0.02	Cotter
Insecta	Ephemeroptera	Leptophlebiidae	Austrophlebioides	0.12	Cotter
Insecta	Ephemeroptera	Leptophlebiidae	Kirrara procera	0.01	Cotter
Insecta	Ephemeroptera	Leptophlebiidae	Leptophlebiidae	0.49	Cotter
Insecta	Ephemeroptera		Nousia	0.13	Cotter
Insecta	Hydrozoa	Hydridae	Coloburuscooides spp.	0.19	Cotter
Insecta	Hygrophila	Lymnaeidae	Hydridae	0.26	Cotter

Insecta	Lepidoptera	Crambidae	Lymnaeidae	0.14	Cotter
Insecta	Megaloptera	Corydalidae	Crambidae	0.00	Cotter
Insecta	Odonata	Gomphidae	Archichauliodes	0.20	Cotter
Insecta	Odonata	Telephlebiidae	Gomphidae	0.19	Cotter
Insecta	Odonata	Telephlebiidae	Austroaeschna inermis	0.01	Cotter
			Austroaeschna		
Insecta	Odonata	Telephlebiidae	unicornis/pinheyi	0.01	Cotter
Insecta	Odonata	Telephlebiidae	Notoaeschna sagittata	0.01	Cotter
Insecta	Plecoptera	Gripopterygidae	Telephlebiidae	0.00	Cotter
Insecta	Plecoptera	Gripopterygidae	Dinotoperla	0.02	Cotter
Insecta	Plecoptera	Gripopterygidae	Dinotoperla cf.fontana	1.51	Cotter
Insecta	Plecoptera	Gripopterygidae	Illiesoperla	0.04	Cotter
Insecta	Plecoptera	Gripopterygidae	Illiesoperla cf.brevicauda	0.01	Cotter
Insecta	Plecoptera	Gripopterygidae	Leptoperla	0.11	Cotter
Insecta	Plecoptera	Gripopterygidae	Leptoperla longicauda/bifida	0.00	Cotter
Insecta	Plecoptera	Gripopterygidae	Newmanoperla thoreyi	0.31	Cotter
Insecta	Plecoptera		Trinotoperla nivata/minor	0.00	Cotter
Insecta	Trichoptera	Calamoceratidae	Plecoptera	0.03	Cotter
Insecta	Trichoptera	Conoesucidae	Anisocentropus	0.15	Cotter
Insecta	Trichoptera	Conoesucidae	Coenoria	0.01	Cotter
Insecta	Trichoptera	Conoesucidae	Conoesucidae spp.	2.89	Cotter
Insecta	Trichoptera	Conoesucidae	Conoesucus AV4	0.01	Cotter
Insecta	Trichoptera	Conoesucidae	Conoesucus sp.	0.06	Cotter
Insecta	Trichoptera	Glossosomatidae	Lingora AV1	1.09	Cotter
Insecta	Trichoptera	Helicopsychidae	Agapetus AV1	2.39	Cotter
Insecta	Trichoptera	Hydrobiosidae	Helicopsyche heacota	0.02	Cotter
Insecta	Trichoptera	Hydropsychidae	Taschorema complex	0.01	Cotter
Insecta	Trichoptera	Hydropsychidae	Asmicridea AV1	0.04	Cotter
Insecta	Trichoptera	Hydroptilidae	Cheumatopsyche AV1	0.59	Cotter
			Hellyethira		
Insecta	Trichoptera	Hydroptilidae	cf.exsertaorcubitans	0.01	Cotter
Insecta	Trichoptera	Leptoceridae	Hydroptila cf.obscura/losida	0.09	Cotter
Insecta	Trichoptera	Leptoceridae	Leptoceridae spp.	0.14	Cotter
Insecta	Trichoptera	Leptoceridae	Notalina	0.03	Cotter
Insecta	Trichoptera	Leptoceridae	Notalina cf.spira	0.01	Cotter
Insecta	Trichoptera	Leptoceridae	Notalina fulva	0.76	Cotter
Insecta	Trichoptera	Polycentropodidae	Oecetis	2.44	Cotter
Insecta	Trichoptera	Polycentropodidae	Genusl AV1	0.21	Cotter
Insecta	Trichoptera	Polycentropodidae	Neureclipsis napaea	0.98	Cotter
Insecta	Trichoptera	Polycentropodidae	Paranyctiophylax AV4	0.79	Cotter
Insecta	Trichoptera	Polycentropodidae	Plectrocnemia	0.01	Cotter
Insecta	Trichoptera	Tasimiidae	Polycentropodidae	0.22	Cotter
Insecta	Coleoptera	Psephenidae	Tasimia AV1	0.11	Cotter
					Cotter and
Insecta	Coleoptera	Psephenidae	Sclerocyphon cf. zwicki	0.01	Cunningham
					Cotter and
Insecta	Coleoptera	Psephenidae	Sclerocyphon striatus	0.02	Cunningham
					Cotter and
Insecta	Ephemeroptera	Leptophlebiidae	Sclerocyphon	0.18	Cunningham
					Cotter and
Insecta	Zygoptera		Austrophlebidies pusillus	1.26	Cunningham
					Cotter and
Insecta	Coleoptera	Elmidae	Zygoptera	0.02	Cunningham
					Cotter and
Insecta	Coleoptera	Hydrophilidae	Austrolimnius	0.03	Cunningham
					Cotter and
Insecta	Diptera	Tipulidae	Hydrophilidae	0.10	Cunningham

Insecta	Hygrophila	Planorbidae	Tipulidae	0.24	Cotter and Cunningham
Insecta	Plecoptera	Gripopterygidae	Planorbidae	1.53	Cotter and Cunningham
Insecta	Trichoptera	Hydroptilidae	Gripopterygidae	0.40	Cotter and Cunningham
Insecta	Trichoptera	Hydroptilidae	Hellyethira cf.cubitans	0.03	Cotter and Cunningham
Insecta	Nematoda		Hydroptila cf.scamandra	0.09	Cotter and Cunningham
Insecta	Cladocera		Nematoda	0.10	Cotter and Cunningham
Insecta	Coleoptera	Dytiscidae	Cladocera	3.17	Cotter and Cunningham
Insecta	Coleoptera	Elmidae	Dytiscidae	0.02	Cotter and Cunningham
Insecta	Coleoptera	Scirtidae	Elmidae	0.09	Cotter and Cunningham
Insecta	Diptera	Chironomidae	Scirtidae	0.09	Cotter and Cunningham
Insecta	Diptera	Chironomidae	Australia/Cricotopus	0.01	Cotter and Cunningham
Insecta	Diptera	Chironomidae	Chironomidae	0.34	Cotter and Cunningham
Insecta	Diptera	Ceratopogonidae	Orthocladiinae	1.33	Cotter and Cunningham
Insecta	Diptera	Chironomidae	Ceratopogoninae	0.10	Cotter and Cunningham
Insecta	Diptera	Chironomidae	Chironominae	25.30	Cotter and Cunningham
Insecta	Diptera	Chironomidae	Cricotopus spp.	0.21	Cotter and Cunningham
Insecta	Diptera	Chironomidae	Cricotopus/Paratrichocladus	0.63	Cotter and Cunningham
Insecta	Diptera	Chironomidae	Parametricnemus	0.01	Cotter and Cunningham
Insecta	Diptera	Chironomidae	Tanypodinae	2.02	Cotter and Cunningham
Insecta	Diptera	Simuliidae	Thienemanniella	0.01	Cotter and Cunningham
Insecta	Ephemeroptera	Baetidae	Simuliidae	0.13	Cotter and Cunningham
Insecta	Ephemeroptera	Baetidae	Baetidae spp.	0.06	Cotter and Cunningham
Insecta	Ephemeroptera	Caenidae	Offadens	0.11	Cotter and Cunningham
Insecta	Ephemeroptera	Caenidae	Tasmanocoenis spp.	3.13	Cotter and Cunningham
Insecta	Ephemeroptera	Caenidae	Caenidae spp.	2.42	Cotter and Cunningham
Insecta	Ephemeroptera		Tasmanocoenis tillyardi	2.37	Cotter and Cunningham
Insecta	Hygrophila	Physidae	Ephemeroptera	0.01	Cotter and Cunningham
Insecta	Hygrophila		Physa acuta	0.48	Cotter and Cunningham
Insecta	Odonata	Austrocorduliidae/	Hygrophila	0.82	Cotter and

Insecta	Odonata	Corduliidae Austrocorduliidae/ Corduliidae		0.01	Cunningham Cotter and Cunningham Cotter and
Insecta	Trichoptera	Economidae	Odonata	0.01	Cunningham Cotter and
Insecta	Trichoptera	Hydropsychidae	Ecnomus	0.08	Cunningham Cotter and
Insecta	Trichoptera	Hydropsychidae	Cheumatopsyche AV2-4-5-9- 12	1.16	Cunningham Cotter and
Insecta	Trichoptera	Hydroptilidae	Hydropsychidae	0.12	Cunningham Cotter and
Insecta	Trichoptera	Hydroptilidae	Hellyethira	0.00	Cunningham Cotter and
Insecta	Trichoptera	Hydroptilidae	Hydroptila	0.10	Cunningham Cotter and
Insecta	Trichoptera	Hydroptilidae	Hydroptilidae	0.03	Cunningham Cotter and
Insecta	Trichoptera	Hydroptilidae	Hellyethira cf.basilobata	0.37	Cunningham Cotter and
Insecta	Trichoptera		Hydroptila cf.losida	0.05	Cunningham Cotter and
Insecta	Tricladida	Dugesiidae	Trichoptera	0.02	Cunningham Cotter and
Rhabditophora			Dugesiidae	0.42	Cunningham Cotter and
Acarina			Acarina	2.06	Cunningham Cotter and
Nemertea			Nemertea	0.01	Cunningham Cotter and
Oligochaeta			Oligochaeta	17.04	Cunningham Cotter and
Ostracoda			Ostracoda	10.45	Cunningham Cotter and
Copepoda			Copepoda	2.06	Cunningham