

**Appendix H1:** Relative frequency (%) of Ephemeroptera, Plecoptera and Trichoptera occurrences in pre- (N = 28) and post-mining (N =34) samples from sites experiencing mining-induced flow loss. While the bulk of the samples were identified to the genus level, consultants were at times only able to identify to the family level.

Order	Family	Genus	Pre-mining	Post-mining
Ephemeroptera	Ameletidae	<i>Ameletus</i>	71.43	55.88
Ephemeroptera	Baetidae	<i>Acentrella</i>	3.58	5.89
Ephemeroptera	Baetidae	<i>Baetis</i>	35.71	26.47
Ephemeroptera	Baetidae	<i>Centroptilum</i>	32.14	2.94
Ephemeroptera	Baetidae	<i>Dipheter</i>	7.14	17.65
Ephemeroptera	Caenidae	<i>Caenis</i>	14.28	0.00
Ephemeroptera	Ephemerellidae	<i>Ephemerella</i>	53.57	26.47
Ephemeroptera	Ephemerellidae	<i>Eurylophella</i>	57.14	20.59
Ephemeroptera	Ephemerellidae	<i>Serratella</i>	3.57	0.00
Ephemeroptera	Ephemerellidae	Ephemerellidae	10.71	2.94
Ephemeroptera	Ephemeridae	<i>Ephemer</i>	17.86	5.89
Ephemeroptera	Heptageniidae	<i>Epeorus</i>	50.00	23.53
Ephemeroptera	Heptageniidae	<i>Stenacron</i>	14.28	2.94
Ephemeroptera	Heptageniidae	<i>Stenonema/ Maccaffertium</i>	14.28	2.94
Ephemeroptera	Heptageniidae	<i>Nixe</i>	14.28	26.47
Ephemeroptera	Heptageniidae	Heptageniidae	7.14	0.00
Ephemeroptera	Leptophlebiidae	<i>Leptophlebia</i>	14.28	0.00
Ephemeroptera	Leptophlebiidae	<i>Paraleptophlebia</i>	39.29	23.53
Ephemeroptera	Leptophlebiidae	Leptophlebiidae	25.00	23.53
Ephemeroptera	Siphonuridae	<i>Siphonurus</i>	10.71	11.76
Plecoptera	Capniidae	<i>Allocapnia</i>	46.4	41.2
Plecoptera	Capniidae	<i>Paracapnia</i>	14.3	8.8
Plecoptera	Capniidae	Capniidae	7.1	0.0
Plecoptera	Chloroperlidae	<i>Alloperla</i>	14.3	11.8
Plecoptera	Chloroperlidae	<i>Haploperla</i>	3.6	20.6
Plecoptera	Chloroperlidae	<i>Sweltsa</i>	50.0	61.8
Plecoptera	Chloroperlidae	Chloroperlidae	14.3	8.8
Plecoptera	Leuctridae	<i>Leuctra</i>	60.7	64.7
Plecoptera	Leuctridae	Leuctridae	10.7	11.8
Plecoptera	Nemouridae	<i>Amphinemura</i>	60.7	73.5
Plecoptera	Nemouridae	<i>Prostoia</i>	3.6	17.6
Plecoptera	Nemouridae	<i>Soyedina</i>	10.7	8.8
Plecoptera	Nemouridae	Nemouridae	7.1	8.8
Plecoptera	Peltoperlidae	<i>Peltoperla</i>	21.4	11.8
Plecoptera	Peltoperlidae	Peltoperlidae	3.6	0.0

<b>Order</b>	<b>Family</b>	<b>Genus</b>	<b>Pre-mining</b>	<b>Post-mining</b>
Plecoptera	Perlidae	<i>Acroneuria</i>	14.3	5.9
Plecoptera	Perlidae	<i>Perlesta</i>	7.1	8.8
Plecoptera	Perlidae	Perlidae	7.1	14.7
Plecoptera	Perlodidae	<i>Clioperla</i>	21.4	14.7
Plecoptera	Perlodidae	<i>Cultus</i>	32.1	23.5
Plecoptera	Perlodidae	<i>Diploperla</i>	7.1	14.7
Plecoptera	Perlodidae	<i>Isoperla</i>	53.6	97.1
Plecoptera	Perlodidae	<i>Malirekus</i>	10.7	2.9
Plecoptera	Perlodidae	<i>Yugus</i>	0.0	5.9
Trichoptera	Glossomatidae	<i>Agapetus</i>	17.9	2.9
Trichoptera	Hydropsychidae	<i>Cheumatopsyche</i>	0.0	5.9
Trichoptera	Hydropsychidae	<i>Diplectrona</i>	39.3	55.9
Trichoptera	Hydropsychidae	Hydropsychidae	3.6	0.0
Trichoptera	Hydroptilidae	<i>Hydroptilia</i>	3.6	0.0
Trichoptera	Lepidostomatidae	<i>Lepidostoma</i>	21.4	26.5
Trichoptera	Lepidostomatidae	Lepidostomatidae	0.0	2.9
Trichoptera	Limnephilidae	<i>Anabolia</i>	0.0	2.9
Trichoptera	Limnephilidae	<i>Hydatophylax</i>	7.1	0.0
Trichoptera	Limnephilidae	<i>Ironoquia</i>	3.6	50.0
Trichoptera	Limnephilidae	<i>Pycnopsyche</i>	60.7	47.1
Trichoptera	Limnephilidae	Limnephilidae	17.9	5.9
Trichoptera	Molannidae	<i>Molanna</i>	3.6	5.9
Trichoptera	Phryganeidae	<i>Ptilostomis</i>	3.6	0.0
Trichoptera	Philopotamidae	<i>Wormaldia</i>	7.1	2.9
Trichoptera	Polycentropodidae	<i>Polycentropus</i>	10.7	8.8
Trichoptera	Polycentropodidae	Polycentropodidae	0.0	2.9
Trichoptera	Rhyacophilidae	<i>Rhyacophila</i>	42.9	67.6
Trichoptera	Uenoidae	<i>Neophylax</i>	42.9	55.9

**Appendix H2:** Relative frequency (%) of Ephemeroptera, Plecoptera, and Trichoptera occurrences in pre- (N = 14) and post-restoration (N =21) samples for sites with gate cut mitigation. While the bulk of the samples were identified to the genus level, consultants were at times only able to identify to the family level.

Order	Family	Genus	Pre-mining	Post-restoration
Ephemeroptera	Ameletidae	<i>Ameletus</i>	35.0	19.0
Ephemeroptera	Baetidae	<i>Acentrella</i>	21.4	19.0
Ephemeroptera	Baetidae	<i>Baetis</i>	14.0	28.6
Ephemeroptera	Baetidae	<i>Centroptilum</i>	0.0	19.0
Ephemeroptera	Baetidae	<i>Dipheter</i>	21.0	23.8
Ephemeroptera	Caenidae	<i>Caenis</i>	100.0	95.2
Ephemeroptera	Ephemerellidae	<i>Ephemerella</i>	57.1	28.6
Ephemeroptera	Ephemerellidae	<i>Eurylophella</i>	78.6	81.0
Ephemeroptera	Ephemerellidae	<i>Serratella</i>	7.1	4.8
Ephemeroptera	Ephemerellidae	Ephemerellidae	7.1	4.8
Ephemeroptera	Ephemeridae	<i>Ephemer</i>	57.1	28.6
Ephemeroptera	Heptageniidae	<i>Epeorus</i>	36.0	19.0
Ephemeroptera	Heptageniidae	<i>Stenacron</i>	28.6	33.3
Ephemeroptera	Heptageniidae	<i>Stenonema/ Maccaffertium</i>	71.0	57.1
Ephemeroptera	Heptageniidae	<i>Nixe</i>	7.1	23.8
Ephemeroptera	Heptageniidae	Heptageniidae	7.1	0.0
Ephemeroptera	Leptophlebiidae	<i>Leptophlebia</i>	14.3	4.8
Ephemeroptera	Leptophlebiidae	<i>Paraleptophlebia</i>	14.3	14.3
Ephemeroptera	Leptophlebiidae	Leptophlebiidae	21.4	4.8
Plecoptera	Capniidae	<i>Allocapnia</i>	57.1	23.8
Plecoptera	Capniidae	<i>Paracapnia</i>	0.0	4.8
Plecoptera	Chloroperlidae	<i>Alloperla</i>	14.3	4.8
Plecoptera	Chloroperlidae	<i>Haploperla</i>	14.3	4.8
Plecoptera	Chloroperlidae	<i>Sweltsa</i>	28.6	9.5
Plecoptera	Leuctridae	<i>Leuctra</i>	21.4	28.6
Plecoptera	Nemouridae	<i>Amphinemura</i>	57.1	52.4
Plecoptera	Nemouridae	<i>Prostoia</i>	14.3	14.3
Plecoptera	Nemouridae	Nemouridae	7.1	0.0
Plecoptera	Perlidae	<i>Acroneuria</i>	21.4	23.8
Plecoptera	Perlidae	<i>Perlesta</i>	21.4	38.1
Plecoptera	Perlidae	Perlidae	7.1	0.0
Plecoptera	Perlodidae	<i>Clioperla</i>	7.1	4.8
Plecoptera	Perlodidae	<i>Cultus</i>	7.1	4.8
Plecoptera	Perlodidae	<i>Diploperla</i>	0.0	4.8
Plecoptera	Perlodidae	<i>Isoperla</i>	28.8	52.4

<b>Order</b>	<b>Family</b>	<b>Genus</b>	<b>Pre-mining</b>	<b>Post-restoration</b>
Trichoptera	Hydropsychidae	<i>Ceratopsyche</i>	0.0	28.6
Trichoptera	Hydropsychidae	<i>Cheumatopsyche</i>	57.1	66.7
Trichoptera	Hydropsychidae	<i>Diplectrona</i>	0.0	4.8
Trichoptera	Hydropsychidae	<i>Hydropsyche</i>	7.1	33.3
Trichoptera	Hydropsychidae	<i>Hydroptilia</i>	7.1	4.8
Trichoptera	Hydropsychidae	<i>Ochrotrichia</i>	7.1	14.3
Trichoptera	Limnephilidae	<i>Pycnopsyche</i>	28.6	14.3
Trichoptera	Philopotamidae	<i>Chimarra</i>	14.3	19.0
Trichoptera	Philopotamidae	<i>Wormaldia</i>	0.0	4.8
Trichoptera	Rhyacophilidae	<i>Rhyacophila</i>	35.7	52.4
Trichoptera	Uenoidae	<i>Neophylax</i>	7.1	0.0