This PDF contains Appendixes 7-11, dealing with tests of Artificial Substrates.

APPENDIXES

1. Tests of Treatment Effects on Density for 1998 Core Samples
2. Density of Benthic Macroinvertebrates from Core Samples
3. Tests of Effects of Treatment and Sampling Date on Density of Benthic Macroinvertebrates
4. Biomass of Benthic Macroinvertebrates from Core Samples
5. Tests of Treatment Effects on Biomass for 1998 Core Samples
6. Tests of Effects of Treatment and Sampling Date on Biomass of Benthic Macroinvertebrates
7. Density of Benthic Macroinvertebrates on Artificial Substrates
8. ANOVA of Density of Invertebrates on Substrates Inside and Outside Main Plot - No Block
9. ANOVA of Density of Invertebrates on Substrates Inside and Outside Main Plot - with Blocks
10. Tests of Treatment Effects on Density of Invertebrates on Artificial Substrates - with Blocks
11. Tests of Treatment Effects on Density of Invertebrates on Artificial Substrates - no Blocks

Appendix Table 7.

BENTHIC MACROINVERTEBRATE DENSITY (# / m2)

Artificial Substrate Samples-June 9-11, 1998

Disks inside main plot - Group 1

Treatment	BTI										Control								Methoprene							
Taxon / Site	4	6	7	11	20	22	23	24	30	Average	5	13	14	18	19	26	51	Average	3	9	10	21	25	29	Average
Unknown/damaged Chironominae	0	0	0	11	0	0	0	0	0	1	0	0	33	0	67	11	0	16	212	11	0	0	0	0	37
Chironomus	56	11	33	56	0	100	33	11	0	33	22	33	11	0	33	22	11	19	234	78	111	0	0	22	74
Dicrotendipes	0	0	0	0	0	0	0	0	0	0	0	11	111	0	0	0	0	18	0	0	0	0	0	0	0
Endochironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glyptotendipes	0	0	0	0	0	0	0	0	0	0	0	0	167	0	0	0	0	24	0	0	0	11	0	0	2
Kiefferulus	11	0	100	11	0	22	0	0	0	16	0	0	0	0	33	0	0	5	0	0	0	0	0	0	0
Lauterborniella	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	2	0	0	0	0	0	0	0
Microtendipes	0	0	0	0	0	0	0	0	0	0	0	0	45	0	0	0	0	6	0	0	0	0	0	0	0
Parachironomus	0	0	0	11	0	11	0	11	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paratendipes	0	22	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polypedilum	0	11	11	0	0	0	0	22	0	5	0	0	0	0	0	11	0	2	22	0	0	0	11	0	6
Pseudochironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tribelos	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CHIRONOMINI	67	45	145	78	0	134	33	45	0	61	22	45	345	0	67	33	11	75	256	78	111	11	11	22	82
Cladotanytarsus	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	3	0	0	0	0	0	0	0
Micropsectra	11	0	0	0	0	0	0	11	0	2	0	0	0	0	0	0	11	2	0	0	0	0	0	0	0
Paratanytarsus	0	0	33	0	11	11	0	56	0	12	11	0	67	0	33	11	0	18	56	0	0	0	0	0	9
Stempellinella	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Tanytarsus	33	22	0	0	0	33	0	22	0	12	22	0	156	0	0	0	0	25	379	0	0	0	0	0	63
TOTAL TANYTARSINI	45	22	33	0	11	45	0	89	0	27	45	0	245	0	33	11	11	49	435	0	0	0	0	0	72
TOTAL CHIRONOMINAE	111	67	178	89	11	178	33	134	0	89	67	45	624	0	167	56	22	140	903	89	111	11	11	22	191
Acricotopus	156	201	178	45	0	67	0	189	0	93	0	0	0	0	11	0	0	2	67	178	11	56	0	0	52
Corynoneura	33	11	33	0	0	0	33	45	0	17	0	0	11	11	89	22	11	21	0	11	11	0	0	33	9
Cricotopus	201	0	0	11	0	0	0	11	0	25	0	0	11	0	0	0	0	2	0	0	0	0	0	0	0
Cricotopus/Orthocladius/Para	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnophyes	0	0	45	0	0	11	0	234	0	32	0	0	0	0	0	33	0	5	0	0	0	0	0	0	0
Paraphaenocladius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Psectrocladius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Orthocladiinae (too small)	22	0	11	0	0	0	0	22	0	6	0	0	0	0	0	11	0	2	0	0	0	0	0	0	0
TOTAL ORTHOCLADIINAE	412	212	267	56	0	78	33	502	0	173	0	0	22	11	100	67	11	30	67	189	22	56	0	33	61
Ablabesmyia	0	11	134	0	0	0	11	0	0	17	0	11	0	0	0	0	0	2	33	0	11	0	0	0	7
Guttipelopia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	0	0	0	0	0	7
Labrundinia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Larsia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	2
Monopelopia	0	22	256	33	0	0	0	11	0	36	0	0	0	0	11	0	11	3	0	0	0	0	0	11	2
Procladius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanypodinae (too small/damaged)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	0	0	4
TOTAL TANYPODINAE	0	33	390	33	0	0	11	11	0	53	0	11	0	0	11	0	11	5	100	0	11	11	0	11	22
TOTAL CHIRONOMIDAE	524	312	836	178	11	256	78	646	0	316	67	56	646	11	279	123	45	175	307	279	145	78	11	67	275
Allaudomyia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atrichopogon	0	0	0	0	0	0	0	123	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bezzia/Palpomyia	0	0	33	0	0	22	45	11	0	12	0	11	0	11	0	0	0	3	22	11	11	0	0	11	9
Culicoides	11	11	0	0	0	0	0	0	0	2	0	11	0	0	0	0	0	2	0	0	0	0	0	0	0
Forcipomyia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CERATOPOGONIDAE	11	11	33	0	0	22	45	134	0	28	0	22	0	11	0	0	0	5	22	11	11	0	0	11	9
Coquillettidia	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	2	11	0	0	0	0	0	2
EPHYDRIDAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	2
Odontomyia	0	11	11	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odontomyia/Hedriodiscus	0	0	11	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stratiomys	0	0	22	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL STATIOMYIDAE	0	11	45	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limonia	0	0	11	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11	2
Prionocera	0	11	0	0	0	0	0	11	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pseudolimnophila	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tipulidae (too small)	0	11	0	0	0	11	0	11	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL TIPULIDAE	0	22	11	0	0	11	0	22	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
TOTAL OTHER DIPTERA	11	45	89	0	0	33	45	156	0	42	0	33	0	11	0	0	0	6	33	11	11	0	0	33	13
TOTAL DIPTERA	535	357	925	178	11	290	123	802	0	366	67	89	646	22	279	123	45	182	341	290	156	78	11	100	288

Appendix Table 7.

BENTHIC MACROINVERTEBRATE DENSITY (# / m2)

Artificial Substrate Samples-June 9-11, 1998

Disks inside main plot - Group 1

Treatment	BTI										Control								Methoprene						
Taxon / Site	4	6	7	11	20	22	23	24	30	Average	5	13	14	18	19	26	51	Average	3	9	10	21	25	29	Average
EPHEMEROPTERA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ODONATA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11	0	0	4
Cordulüidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	2
Lestidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMIPTERA																									
Corixidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	2
Neoplea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CURCULIONIDAE	0	0	11	0	0	11	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYTISCIDAE																									
Liodessus-adult	0	22	0	0	0	0	11	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dytiscid larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporinae larvae	0	0	11	0	0	11	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	11	2
Haliplus-larvae	0	11	0	0	0	0	0	11	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	11	2
HYDROPHILIDAE																									
Cymbiodyta-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enochrus-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrobius-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrophilid larva	0	0	11	0	0	0	0	11	0	2	0	0	0	0	0	0	0	0	0	0	11	0	0	11	4
LAMPYRIDAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyphon-larvae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SCIRTIDAE	33	56	123	33	22	0	56	33	0	40	0	0	0	0	0	0	11	2	0	167	11	0	0	56	39
TOTAL COLEOPTERA	33	89	156	33	22	22	67	56	0	53	0	0	0	0	0	0	11	2	0	167	22	0	0	89	46
Insect Pupae	0	0	11	0	0	11	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL INSECTS	568	446	1092	212	33	323	189	858	0	414	67	89	646	22	279	123	56	183	363	468	178	89	11	189	342
CRUSTACEA																									
Caecidotea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	56	11
Hyalella azteca	0	0	0	0	22	0	0	0	0	2	0	0	167	0	0	0	0	24	0	0	0	0	0	22	4
BIVALVIA	56	67	234	22	0	11	0	45	0	48	0	11	0	0	0	0	11	3	33	123	11	22	0	56	41
GASTROPODA																									
Armiger	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fossaria	0	56	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gyraulus	0	33	45	22	0	0	45	22	0	19	0	0	11	0	11	0	0	3	0	0	0	11	0	0	2
Helisoma	0	0	0	0	0	0	0	11	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lymnaeidae	0	0	0	0	0	0	45	11	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physidae (Physa)	0	100	0	0	0	0	201	0	0	33	0	0	0	0	0	0	0	0	0	0	11	78	0	11	17
Planorbidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stagnicola	11	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL GASTROPODA	11	189	45	22	0	0	290	45	0	67	0	0	11	0	11	0	0	3	0	0	11	89	0	11	19
ANNELIDA																									
Oligochaeta	212	145	189	111	11	11	78	67	0	92	0	0	33	0	33	11	0	11	45	0	11	45	0	33	22
Hirudinoidea	0	0	11	11	11	22	0	156	11	25	0	0	3667	0	123	0	11	543	0	0	0	0	0	11	2
TOTAL MACROINVERTEBRATES	847	847	1571	379	78	368	557	1170	11	648	67	100	4525	22	446	134	78	767	441	591	212	256	11	379	440

Appendix Table 7 continued.

BENTHIC MACROINVERTEBRATE DENSITY (# / m2)

Artificial Substrate Samples- June 9-11, 1998

Group 2 disks outside plot

Treatment	BTI										Control									Methoprene						
Taxon / Site	4	6	7	11	20	22	23	24	30	Average	5	13	14	17	18	19	26	51	Average	3	9	10	21	25	28	Average
Unknown/damaged Chironominae	0	0	0	0	89	0	0	33	0	14	0	0	0	11	0	0	0	0	1	0	22	22	0	0	0	7
Chironomus	0	11	0	45	22	11	22	212	0	36	0	11	11	89	11	11	11	0	18	11	680	56	0	11	89	141
Dicrotendipes	0	0	0	0	0	0	11	0	0	1	0	11	67	0	0	33	0	0	14	0	0	0	0	0	0	0
Endochironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glyptotendipes	0	0	0	0	0	0	0	0	0	0	0	0	33	0	0	0	0	0	4	0	0	0	0	0	0	0
Kiefferulus	0	0	11	0	0	0	0	11	0	2	0	0	0	22	0	0	0	0	3	0	0	0	0	0	0	0
Lauterborniella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Microtendipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parachironomus	0	0	0	33	0	0	11	45	0	10	0	0	0	0	0	11	0	0	1	11	0	0	0	0	0	2
Parastendipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polypedilum	0	0	0	0	0	0	0	0	0	0	11	0	0	123	0	0	0	0	17	0	0	0	0	0	0	0
Pseudochironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tribelos	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CHIRONOMINI	0	11	11	78	22	11	45	267	0	50	11	22	111	234	11	56	11	0	57	22	680	56	0	11	89	143
Cladotanytarsus	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	1	0	0	0	0	0	0	0
Micropsectra	0	0	0	0	0	0	0	0	0	0	11	0	0	156	0	0	0	0	21	11	0	67	0	0	0	13
Paratanytarsus	0	0	11	0	0	0	0	22	0	4	22	11	67	33	0	11	0	0	18	0	0	0	0	0	22	4
Stempellinella	0	0	11	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanytarsus	0	11	0	0	11	0	0	267	0	32	0	0	11	0	0	0	0	0	1	33	0	11	0	0	0	7
TOTAL TANYTARSINI	0	11	22	0	11	0	0	290	0	37	33	11	89	189	0	11	0	0	42	45	0	78	0	0	22	24
TOTAL CHIRONOMINAE	0	22	33	78	123	11	45	591	0	100	45	33	201	435	11	67	11	0	100	67	702	156	0	11	111	175
Acricotopus	0	0	0	22	11	0	0	466	0	56	0	0	0	11	0	0	366	0	47	11	546	435	11	0	0	167
Corynoneura	0	0	0	0	0	11	56	33	0	11	22	0	0	78	0	89	0	0	24	0	56	145	0	0	67	45
Cricotopus	0	0	0	0	0	0	0	33	0	4	0	0	11	0	0	0	0	0	1	0	0	0	0	0	0	0
Cricotopus/Orthocladius/Para	0	0	0	0	0	0	0	11	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnophyes	0	0	0	11	0	0	0	0	11	2	0	0	0	479	0	0	0	0	60	0	11	33	11	0	0	9
Paraphaenocladius	0	0	0	0	0	0	0	0	0	0	0	0	0	89	0	0	0	0	11	0	0	0	0	0	0	0
Psectrocladius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Orthocladiinae (too small)	0	0	0	0	0	0	0	33	0	4	0	0	0	0	0	0	0	0	0	0	45	11	0	0	0	8
TOTAL ORTHOCLADIINAE	0	0	0	33	11	11	56	580	11	78	22	0	11	658	0	89	366	0	143	11	658	624	22	0	67	230
Ablabesmyia	0	0	56	22	0	33	0	11	0	14	0	33	0	0	0	0	0	0	4	22	0	0	0	0	22	7
Guttipelopia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Labrundinia	0	0	0	0	0	0	0	11	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Larsia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monopelopia	0	22	22	0	0	11	0	11	11	9	22	22	0	0	0	0	0	11	7	0	0	22	0	0	11	6
Procladius	0	0	0	0	0	11	0	0	0	1	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	2
Tanypodinae (too small/damaged)	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	1	22	11	11	0	0	0	7
TOTAL TANYPODINAE	0	22	78	22	0	56	0	33	11	25	22	67	0	0	0	0	0	11	13	56	11	33	0	0	33	22
TOTAL CHIRONOMIDAE	0	45	111	134	134	78	100	1204	22	203	89	100	212	1092	11	156	379	11	256	134	1371	814	22	11	212	427
Alluaudomyia	0	0	0	0	0	11	0	11	0	2	0	0	0	11	0	0	0	0	1	11	0	0	0	0	0	2
Atrichopogon	0	0	0	0	0	0	0	0	0	0	0	0	0	45	0	0	0	0	6	0	0	0	0	0	0	0
Bezzia/Palpomyia	33	0	33	0	0	22	11	11	0	12	0	0	0	0	0	0	33	0	4	0	0	11	0	0	0	2
Culicoides	0	0	0	0	0	33	0	11	0	5	0	0	0	0	0	0	11	0	1	0	0	0	0	0	0	0
Forcipomyia	0	0	0	0	0	0	0	11	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CERATOPOGONIDAE	33	0	33	0	0	67	11	45	0	21	0	0	0	56	0	0	45	0	13	11	0	11	0	0	0	4
Coquillettidia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EPHYDRIDAE	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	0
Odontomyia	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	0
Odontomyia/Hedriodiscus	0	0	11	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stratiomys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	2
TOTAL STATIOMYIDAE	0	0	11	0	0	0	0	0	0	1	0	0	0	11	0	0	0	0	1	0	11	0	0	0	0	2
Limonia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prionocera	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	0
Pseudolimnophila	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tipulidae (too small)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL TIPULIDAE	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	0
TOTAL OTHER DIPTERA	33	0	45	0	0	67	11	45	0	22	0	0	0	89	0	0	45	0	17	11	11	11	0	0	0	6
TOTAL DIPTERA	33	45	156	134	134	145	111	1248	22	225	89	100	212	1181	11	156	424	11	273	145	1382	825	22	11	212	433

Appendix Table 7 continued.

BENTHIC MACROINVERTEBRATE DENSITY (# / m2)

Artificial Substrate Samples- June 9-11, 1998

Group 2 disks outside plot

Treatment	BTI										Control									Methoprene						
Taxon / Site	4	6	7	11	20	22	23	24	30	Average	5	13	14	17	18	19	26	51	Average	3	9	10	21	25	29	Average
EPHEMEROPTERA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	0
ODONATA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	2
Cordulilidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lestidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	2
HEMIPTERA																										
Corixidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neoplea	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	3	0	0	0	0	0	0	0
CURCULIONIDAE	0	0	0	0	0	0	0	0	0	0	0	11	0	11	0	0	0	0	3	0	0	0	0	0	67	11
DYTISCIDAE																										
Liodessus-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dytiscid larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	11	2
Hydroporinae larvae	0	0	11	0	0	0	0	0	0	1	0	0	0	11	0	11	0	0	3	0	56	0	0	0	0	9
Haliplus-larvae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HYDROPHILIDAE																										
Cymbiodyta-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	2
Enochrus-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrobius-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	2
Hydrophilid larva	0	0	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	3	0	11	0	0	0	0	2
LAMPYRIDAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyphon-larvae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	1	0	0	0	0	0	22	4
SCIRTIDAE	0	11	78	0	89	33	33	0	11	28	56	167	0	67	0	0	0	0	36	22	201	33	0	11	0	45
TOTAL COLEOPTERA	0	11	89	0	89	33	33	0	11	30	67	178	0	100	0	22	0	11	47	22	290	33	0	11	100	76
Insect Pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	11	0	3	0	0	0	0	0	0	0
TOTAL INSECTS	33	56	245	134	223	178	145	1248	33	255	156	279	212	1315	11	189	435	22	327	167	1694	858	22	22	312	513
CRUSTACEA																										
Caecidotea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	67	15
Hyalella azteca	0	0	0	0	323	0	0	0	11	37	0	0	67	11	11	0	0	0	11	0	11	0	0	0	123	22
BIVALVIA	33	11	33	0	0	0	11	56	0	16	11	0	0	0	0	0	22	0	4	22	267	156	0	0	0	74
GASTROPODA																										
Armiger	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	6
Fossaria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	2
Gyraulus	0	0	11	45	0	0	0	33	0	10	0	0	0	0	0	0	100	0	13	11	0	0	0	0	45	9
Helisoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lymnaeidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	4
Physidae (Physa)	0	22	11	0	0	0	56	0	0	10	0	0	0	0	0	0	11	0	1	0	11	0	0	11	11	6
Planorbidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	2
Stagnicola	11	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL GASTROPODA	11	22	22	45	11	0	56	33	0	22	0	0	0	0	0	0	111	0	14	11	11	22	11	11	100	28
ANNELIDA																										
Oligochaeta	11	0	33	0	0	0	45	245	0	37	11	0	45	0	11	22	11	0	13	45	111	11	56	0	0	37
Hirudinoidea	0	0	0	0	0	11	0	0	0	1	0	0	312	0	11	78	11	0	52	22	0	11	11	0	22	11
TOTAL MACROINVERTEBRATES	89	89	334	178	557	189	256	1583	45	369	178	279	635	1326	45	290	591	22	421	267	2095	1059	123	33	624	700

Appendix Table 7 continued.

BENTHIC MACROINVERTEBRATE DENSITY (# / m2)

Artificial Substrate Samples- June 9-11, 1998

Group 3 disks outside plot

Treatment	BTI									Control								Methoprene					
Taxon / Site	4	6	7	11	20	22	23	30	Average	5	13	14	18	19	26	51	Average	3	10	21	25	29	Average
Unknown/damaged Chironominae	0	0	11	0	234	0	11	0	32	0	11	0	67	0	22	0	14	0	0	0	0	0	0
Chironomus	45	11	0	22	100	33	0	0	26	33	11	11	33	11	189	0	41	0	22	22	0	0	9
Dicrotendipes	0	0	0	0	245	0	11	0	32	0	0	0	566	0	22	0	84	0	0	0	0	0	0
Endochironomus	0	0	0	0	0	0	0	0	0	0	0	0	33	0	11	0	6	0	0	0	0	0	0
Glyptotendipes	0	0	0	0	0	0	0	0	0	0	0	0	1246	0	0	0	178	0	0	0	0	0	0
Kiefferulus	0	0	0	0	0	0	11	0	1	0	0	0	0	0	111	0	16	0	0	0	0	0	0
Lauterborniella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Microtendipes	0	0	0	0	11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parachironomus	0	0	0	0	11	0	0	0	1	0	0	0	56	0	0	0	8	0	0	0	0	0	0
Paratendipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polypedilum	11	0	0	0	0	0	0	0	1	0	0	11	0	0	11	0	3	11	0	11	0	0	4
Pseudochironomus	0	0	0	0	0	11	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tribelos	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CHIRONOMINI	56	11	0	33	368	45	22	0	67	33	11	22	1939	11	345	0	336	11	22	33	0	0	13
Cladotanytarsus	0	0	0	0	45	0	0	0	6	0	0	0	22	0	0	0	3	0	0	0	0	0	0
Micropsectra	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	14	0	22	0	0	0	4
Paratanytarsus	0	0	0	22	212	100	0	0	42	0	0	0	56	22	0	0	11	11	0	0	22	11	9
Stempellinella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanytarsus	0	0	11	33	111	0	11	0	21	0	11	0	67	0	56	0	19	33	0	0	0	0	7
TOTAL TANYTARSINI	0	0	11	56	368	100	11	0	68	0	111	0	145	22	56	0	48	45	22	0	22	11	20
TOTAL CHIRONOMINAE	56	11	22	89	970	145	45	0	167	33	134	22	2151	33	424	0	400	56	45	33	22	11	33
Acricotopus	0	11	0	45	22	524	0	0	75	22	0	0	0	0	134	0	22	11	435	22	0	11	98
Corynoneura	0	123	11	0	0	0	56	0	24	0	22	45	0	67	0	145	40	0	22	11	0	0	7
Cricotopus	0	0	11	0	0	0	0	0	1	0	0	0	33	0	0	0	5	0	0	0	0	0	0
Cricotopus/Orthocladius/Paro	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnophyes	0	0	0	0	11	11	67	0	11	0	0	0	0	0	11	0	2	0	0	45	0	0	9
Paraphaenocladius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Psectrocladius	0	0	0	0	11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Orthocladiinae (too small)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL ORTHOCLADIINAE	0	134	22	45	45	535	123	0	113	22	22	45	33	67	145	145	68	11	457	78	0	11	111
Ablabesmyia	0	0	11	22	0	56	45	0	17	0	0	0	0	0	33	45	11	0	0	0	0	0	0
Guttipelopia	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	2	0	0	0	0	0	0
Labrundinia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Larsia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monopelopia	0	11	11	11	0	0	0	0	4	11	0	0	0	0	0	11	3	0	0	0	0	0	0
Procladius	0	11	0	0	0	11	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanypodinae (too small/damaged)	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	3	0	0	0	0	0	0
TOTAL TANYPODINAE	0	22	22	33	0	67	45	0	24	22	0	0	11	0	33	67	19	0	0	0	0	0	0
TOTAL CHIRONOMIDAE	56	167	67	167	1014	747	212	0	304	78	156	67	2196	100	602	212	487	67	502	111	22	22	145
Alhazadomyia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atrichopogon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bezzia/Palpomyia	11	0	0	0	33	0	290	11	43	0	0	0	0	0	78	0	11	22	0	0	0	0	4
Culicoides	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Forcipomyia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CERATOPOGONIDAE	11	0	0	0	33	0	290	11	43	0	0	0	0	0	78	0	11	22	0	0	0	0	4
Coquillettidia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EPHYDRIDAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	2	0	0	0	0	0	0
Odontomyia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odontomyia/Hedriodiscus	0	0	0	0	11	11	0	0	3	0	0	0	0	0	0	0	0	0	11	0	0	0	2
Stratiomys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL STATIOMYIDAE	0	0	0	0	11	11	0	0	3	0	0	0	0	0	0	0	0	0	11	0	0	0	2
Limonia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	2	0	0	0	0	0	0
Prionocera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pseudolimnophila	0	45	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tipulidae (too small)	0	0	0	0	0	0	33	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL TIPULIDAE	0	45	0	0	0	0	33	0	10	0	0	0	0	0	11	0	2	0	0	0	0	0	0
TOTAL OTHER DIPTERA	11	45	0	0	45	11	323	11	56	0	0	0	0	0	100	0	14	22	11	0	0	0	7
TOTAL DIPTERA	67	212	67	167	1059	758	535	11	359	78	156	67	2196	100	702	212	502	89	513	111	22	22	152

Appendix Table 7 continued.

BENTHIC MACROINVERTEBRATE DENSITY (# / m2)

Artificial Substrate Samples- June 9-11, 1998

Group 3 disks outside plot

Treatment	BTI									Control								Methoprene					
Taxon / Site	4	6	7	11	20	22	23	30	Average	5	13	14	18	19	26	51	Average	3	10	21	25	29	Average
EPHEMEROPTERA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ODONATA	0	0	0	0	0	0	11	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coenagrionidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lestidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMIPTERA																							
Corixidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neoplea	0	0	0	0	11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CURCULIONIDAE	0	0	11	0	11	0	0	0	3	0	0	0	0	0	11	0	2	0	0	0	0	0	0
DYTISCIDAE																							
Liodessus-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dytiscid larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporinae larvae	0	22	0	0	0	0	22	0	6	0	22	11	11	0	0	0	6	0	22	0	11	0	7
Haliplus-larvae	0	11	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HYDROPHILIDAE						1																	
Cymbiodyta-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enochrus-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrobius-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrophilid larva	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	2	0	11	0	0	0	2
LAMPYRIDAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyphon-larvae	0	0	0	0	0	0	0	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SCIRTIDAE	0	1038	11	0	11	11	0	0	134	11	0	0	0	0	0	0	2	33	33	0	0	0	13
TOTAL COLEOPTERA	0	1070	22	0	22	12	22	11	145	11	33	11	11	0	11	0	11	33	67	0	11	0	22
Insect Pupae	0	0	0	0	11	0	0	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL INSECTS	67	1282	89	167	1103	770	566	33	510	89	189	78	2207	100	713	212	513	123	560	111	33	22	174
CRUSTACEA																							
Caecidotea	0	0	0	0	0	0	0	22	3	0	0	0	0	0	0	0	0	0	0	11	0	0	2
Hyalella azteca	0	0	0	0	234	0	0	0	29	0	0	111	0	0	11	0	18	0	0	0	0	0	0
BIVALVIA	22	368	0	0	0	22	0	0	52	0	111	0	11	0	0	0	18	0	234	22	0	0	51
GASTROPODA																							
Armiger	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fossaria	0	0	0	0	0	0	33	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gyraulus	0	0	11	0	11	0	22	0	6	0	0	0	0	0	22	0	3	0	11	0	0	22	7
Helisoma	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	2	0	0	0	0	0	0
Lymnaeidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physidae (Physa)	11	11	45	0	0	0	78	0	18	0	0	0	0	0	11	0	2	0	0	56	11	0	13
Planorbidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stagnicola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL GASTROPODA	11	11	56	0	11	0	134	0	28	0	0	11	0	0	33	0	6	0	11	56	11	22	20
ANNELIDA																							
Oligochaeta	11	33	0	0	212	11	367	33	82	22	0	22	223	0	67	0	48	11	0	67	0	0	16
Hirudinoidia	0	111	0	0	357	45	33	45	74	0	45	145	111	646	11	0	137	11	1137	0	0	0	230
TOTAL MACROINVERTEBRATES	111	1805	145	167	1917	848	1092	134	777	111	345	368	2552	747	836	212	739	145	1962	267	45	45	493

Appendix Table 7 continued.

BENTHIC MACROINVERTEBRATE DENSITY (# / m2)

Artificial Substrate Samples-July 19-22, 1998

Disks inside main plot -group 1

Treatment	BTI										Control									Methoprene						
Taxon / Site	4	6	7	11	20	22	23	24	30	Average	5	13	14	17	18	19	26	51	Average	3	9	10	21	25	29	Average
Unknown/damaged Chironomini	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88	0	11	11	11	0	20
Dicrotendipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Endochironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glyptotendipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kiefferulus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	2
Lauterborniella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	2
Microtendipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parachironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paratendipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	2
Polypedilum	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	11	0	1	0	11	11	0	0	0	4
Pseudochironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tribelos	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CHIRONOMINI	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	11	0	1	100	22	22	11	11	11	30
Cladotanytarsus/Neocorynella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micropsectra	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paratanytarsus	0	0	0	0	0	0	11	0	0	1	0	0	0	0	0	0	0	0	0	0	33	0	0	0	0	6
Stempellinella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	1	0	0	0	0	0	0	0
Tanytarsus	11	0	0	0	0	0	0	33	0	5	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	2
TOTAL TANYTARSINI	11	0	0	0	0	0	11	33	0	6	0	0	0	0	0	0	11	0	1	0	45	0	0	0	0	7
TOTAL CHIRONOMINAE	11	0	0	0	11	0	11	33	0	7	0	0	0	0	0	0	22	0	3	100	67	22	11	11	11	37
Acricotopus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corynoneura	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	1	0	0	11	0	0	0	2
Cricotopus	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	1	0	0	0	0	0	0	0
Cricotopus/Orthocladius/Para	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnophyes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	1	0	0	0	11	0	0	2
Parophanocladius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Psectrocladius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Orthocladiinae (too small)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL ORTHOCLADIINAE	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11	11	0	0	4	0	0	11	11	0	0	4
Ablabesmyia	0	0	22	22	0	0	33	0	0	9	0	0	0	11	0	0	0	0	1	0	0	0	0	0	11	2
Coelopelopia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	2
Labrundinia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Larsia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monopelopia	0	22	45	0	0	11	11	11	0	11	11	0	0	0	0	0	11	0	3	0	0	22	0	0	0	4
Procladius	0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	2
Tanypodinae (too small/damaged)	11	0	11	0	0	0	33	0	0	6	0	0	0	0	0	0	11	0	1	0	0	0	0	0	0	0
TOTAL TANYPODINAE	11	22	78	22	0	11	78	11	11	27	11	0	0	11	0	0	22	0	6	11	11	22	0	0	11	9
TOTAL CHIRONOMIDAE	22	22	78	22	11	11	89	45	11	35	11	0	11	11	11	11	45	0	13	111	78	56	22	11	22	50
Allocudomyia	0	11	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atrichopogon	0	0	11	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bezzia/Palpomyia	0	0	0	0	0	0	0	0	22	2	11	0	0	11	0	11	0	0	4	0	11	0	0	0	0	2
Culicoides	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Forcipomyia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CERATOPOGONIDAE	0	11	11	0	0	0	0	0	22	5	22	0	0	11	0	11	0	0	6	0	11	0	0	0	0	2
Coquillettidia	0	0	0	11	0	11	0	0	0	2	0	0	0	0	0	11	0	0	1	0	0	0	0	0	0	0
EPHYDRIDAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odontomyia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odontomyia/Hedriodiscus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stratiomys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL STATIOMYIDAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limonia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prionocera	0	0	45	0	0	0	0	11	0	6	0	0	0	0	0	0	0	0	0	0	0	11	11	0	0	4
Pseudolimnophila	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	1	0	0	0	0	0	0	0
Tipulidae (too small)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL TIPULIDAE	0	0	45	0	0	0	0	11	0	6	0	0	0	0	0	0	11	0	1	0	0	11	11	0	0	4
TOTAL OTHER DIPTERA	0	11	56	11	0	11	0	11	22	14	22	0	0	11	0	22	11	0	8	0	11	11	11	0	0	6
TOTAL DIPTERA	22	33	134	33	11	22	89	56	33	48	33	0	11	22	11	33	56	0	21	111	89	67	33	11	22	59

Appendix Table 7 continued.

BENTHIC MACROINVERTEBRATE DENSITY (# / m2)

Artificial Substrate Samples-July 19-22, 1998

Disks inside main plot -group 1

Treatment	BTI										Control									Methoprene							
Taxon / Site	4	6	7	11	20	22	23	24	30	Average	5	13	14	17	18	19	26	51	Average	3	9	10	21	25	29	Average
EPHEMEROPTERA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis	0	0	0	11	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	2
ODONATA	0	0	0	0	0	0	0	11	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coenagrionidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lestidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMIPTERA	0	0	0	0	0	0	0	0	0																	
Corixidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neoplea	0	0	0	11	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CURCULIONIDAE	0	0	0	0	0	0	0	0	22	2	0	0	11	11	0	0	0	0	3	0	0	11	0	0	0	2
DYTISCIDAE																										
Liodessus-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dytiscid larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporinae larvae	0	11	11	0	11	0	0	11	0	5	0	0	0	0	0	11	0	0	1	0	0	0	11	0	0	2
Haliplus-larvae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	1	0	0	0	0	0	0	0
HYDROPHILIDAE																										
Cymbiodyta-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enochrus-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrobius-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrophilid larva	0	0	0	0	0	0	0	11	0	1	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	4
LAMPYRIDAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyphon-larvae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SCIRTIDAE	0	22	22	0	0	0	0	0	0	5	0	0	0	0	0	0	33	0	4	0	0	0	0	0	0	0
TOTAL COLEOPTERA	0	33	33	0	11	0	0	22	22	14	0	0	11	11	0	22	33	0	10	0	0	11	33	0	0	7
Insect Pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL INSECTS	22	67	167	56	22	22	89	89	56	66	33	0	22	33	11	56	89	0	31	111	100	78	67	11	22	65
CRUSTACEA																										
Corcidotea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	22	7
Hyalella azteca	0	0	0	0	33	134	11	0	223	45	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	0
BIVALVIA	11	89	45	11	0	11	0	0	0	19	0	11	0	0	0	0	11	0	3	0	45	11	0	0	0	9
GASTROPODA																										
Armiger	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fossaria	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	2
Gyraulus	0	0	0	0	0	0	11	78	0	10	0	0	0	11	0	0	0	0	1	0	22	0	0	0	11	6
Helisoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lymnaeidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physidae (Physa)	0	0	0	0	0	0	0	0	22	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Planorbidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stagnicola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL GASTROPODA	0	0	0	0	11	0	11	78	22	14	0	0	0	11	0	0	0	0	1	0	22	11	0	0	11	7
ANNELIDA																										
Oligochaeta	0	22	111	67	0	0	33	56	0	32	0	0	22	557	11	134	45	0	96	22	0	33	22	0	22	17
Hirudinoidia	11	45	0	0	0	11	0	0	11	9	0	0	100	0	0	11	0	0	14	0	0	0	0	0	0	0
TOTAL MACROINVERTEBRATES	45	223	323	134	67	178	145	223	312	183	33	11	145	613	22	201	145	0	146	134	167	134	111	11	78	106

Appendix Table 7 continued.

BENTHIC MACROINVERTEBRATE DENSITY (# / m2)

Artificial Substrate Samples-July 19-22, 1998

Disks outside main plot - group 2

Treatment	BTI										Control										Methoprene						
Taxon / Site	4	6	7	11	20	22	23	24	30	Average	5	13	14	17	18	19	26	51	Average	3	9	10	21	25	29	Average
Unknown/damaged Chironominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	2
Chironomus	0	0	0	0	0	0	11	45	0	6	33	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
Dicrotendipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Endochironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	0
Glyptotendipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kiefferulus	0	0	0	0	0	0	22	11	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lauterborniella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Microtendipes	0	0	0	0	0	11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parachironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parastendipes	0	0	0	0	22	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polypedilum	0	0	0	0	33	0	0	0	0	4	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	0
Pseudochironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tribelos	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CHIRONOMINI	0	0	0	0	56	11	33	56	0	17	33	0	0	22	0	0	0	0	7	0	0	0	0	0	0	0
Cladotanytarsus	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	1	0	0	0	0	0	0	0
Micropsectra	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	1	0	0	33	0	0	0	6
Paratanytarsus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stempellinella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanytarsus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	2
TOTAL TANYTARSINI	0	0	0	0	0	0	0	0	0	0	11	0	11	0	0	0	0	0	3	11	0	33	0	0	0	7
TOTAL CHIRONOMINAE	0	0	0	0	56	11	33	56	0	17	45	0	11	22	0	0	0	0	10	11	0	33	0	0	11	9
Acricotopus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	2
Corynoneura	0	0	0	0	0	11	0	0	0	1	0	0	0	0	0	11	0	11	3	0	0	0	0	0	0	0
Cricotopus	0	0	0	0	0	0	0	234	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cricotopus/Orthocladius/Para	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnophyes	0	0	0	0	0	11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	2
Paraphaenocladius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Psectrocladius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Orthocladiinae (too small)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL ORTHOCLADIINAE	0	0	0	0	0	22	0	234	0	28	0	0	0	0	0	11	0	11	3	0	11	11	0	0	0	4
Ablabesmyia	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	11	3	0	0	0	0	0	11	2
Guttipelopia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Labrundinia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Larsia	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Monopelopia	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Procladius	0	0	0	0	0	0	0	11	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanypodinae (too small/damaged)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL TANYPODINAE	0	0	0	0	11	0	0	11	0	2	0	11	0	11	0	0	0	11	4	0	0	0	0	0	11	2
TOTAL CHIRONOMIDAE	0	0	0	0	67	33	33	301	0	48	45	11	11	33	0	11	0	22	17	11	11	45	0	0	22	15
Alluaudomyia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atrichopogon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bezzia/Palpomyia	0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	0	0	33	4	0	0	11	0	0	0	2
Culicoides	0	0	0	0	33	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Forcipomyia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CERATOPOGONIDAE	0	0	0	0	33	0	0	0	11	5	0	0	0	0	0	0	0	33	4	0	0	11	0	0	0	2
Coquillettidia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EPHYDRIDAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odontomyia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odontomyia/Hedriodiscus	0	0	0	0	22	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stratiomys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL STATIOMYIDAE	0	0	0	0	22	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limonia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prionocera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	1	0	0	0	0	0	0	0
Pseudolimnophila	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tipulidae (too small)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL TIPULIDAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	1	0	0	0	0	0	0	0
TOTAL OTHER DIPTERA	0	0	0	0	56	0	0	0	11	7	0	0	0	0	0	11	0	0	33	6	0	0	11	0	0	0	2
TOTAL DIPTERA	0	0	0	0	123	33	33	301	11	56	45	11	11	33	11	11	0	56	22	11	11	56	0	0	22	17

Appendix Table 7 continued.

BENTHIC MACROINVERTEBRATE DENSITY (# / m2)

Artificial Substrate Samples-July 19-22, 1998

Disks outside main plot - group 2

Treatment	BTI										Control									Methoprene						
Taxon / Site	4	6	7	11	20	22	23	24	30	Average	5	13	14	17	18	19	26	51	Average	3	9	10	21	25	29	Average
EPHEMEROPTERA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ODONATA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cordulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lestidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMIPTERA																										
Corixidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neoplea	0	0	0	11	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CURCULIONIDAE	0	0	0	0	0	11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYTISCIDAE																										
Hodessus-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dytiscid larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporinae larvae	0	0	0	0	0	11	0	11	0	2	11	11	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Haliplus-larvae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HYDROPHILIDAE																										
Cymbiodyta-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	2
Enochrus-adult	0	11	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrobius-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrophilid larva	0	0	0	0	0	0	0	0	0	0	11	0	11	0	0	11	0	0	4	0	0	0	0	0	0	0
LAMPYRIDAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyphon-larvae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SCIRTIDAE	0	0	0	0	0	0	0	0	0	0	11	0	0	0	11	0	0	0	3	0	45	22	0	0	0	11
TOTAL COLEOPTERA	0	11	0	0	0	22	0	11	0	5	33	11	11	0	11	11	0	0	10	0	45	33	0	0	0	13
Insect Pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL INSECTS	0	11	0	11	123	56	33	312	11	62	78	22	22	33	22	22	0	56	32	11	56	89	0	0	22	30
CRUSTACEA																										
Cerclidotes	0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	0	0	0	0	0	0	0	33	0	0	6
Hyalella azteca	0	0	0	0	0	11	0	0	145	17	0	0	22	11	0	0	11	0	6	0	0	0	0	0	56	9
BIVALVIA	0	45	0	0	0	0	0	134	11	21	0	11	0	0	56	0	0	0	8	56	0	11	0	0	22	15
GASTROPODA																										
Armiger	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	2
Fossaria	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gyraulus	0	0	0	22	11	11	0	11	0	6	0	0	0	0	0	0	0	0	0	0	0	33	0	0	0	6
Helisoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lymnaeidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physidae (Physa)	0	11	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	2
Planorbidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stagnicola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL GASTROPODA	0	11	0	22	22	11	0	11	0	9	0	0	0	0	0	0	0	0	0	0	0	45	0	0	11	9
ANNELIDA																										
Oligochaeta	0	45	0	0	0	22	0	368	22	51	0	0	33	167	45	11	56	111	53	22	0	56	22	0	11	19
Hirudinoidia	11	0	0	11	22	0	0	0	0	5	0	0	11	11	11	22	11	11	10	22	0	0	0	0	0	4
TOTAL MACROINVERTEBRATES	11	111	0	45	167	100	33	825	201	166	78	33	89	223	134	56	78	178	109	111	56	201	56	0	123	91

Appendix Table 7 continued.

BENTHIC MACROINVERTEBRATE DENSITY (# / m2)

Artificial Substrate Samples-July 19-22, 1998

Disks outside main plot - group 3

Treatment	BTI								Control									Methoprene					
Taxon / Site	4	6	7	11	20	22	23	30 Average	5	13	14	17	18	19	26	51 Average	3	10	21	25	29 Average
Unknown/damaged Chironominae	0	0	0	0	11	0	0	0 1	0	0	22	0	0	0	0	0 3	11	0	0	0	0 2
Chironomus	0	0	0	0	67	0	11	0 10	0	0	0	0	0	0	0	0 0	11	0	0	0	0 2
Dicrotendipes	0	0	0	0	11	0	11	0 3	11	0	0	0	0	0	0	0 1	0	0	0	0	0 0
Endochironomus	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Glyptotendipes	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Kiefferulus	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Lauterborniella	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Microtendipes	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Parachironomus	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Paratendipes	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	11	0	0	0	0 2
Polypedilum	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	33	0	0	0	0 7
Pseudochironomus	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Tribelos	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
TOTAL CHIRONOMINI	0	0	0	0	78	0	22	0 13	11	0	0	0	0	0	0	0 1	55	0	0	0	0 11
Cladotanytarsus	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Micropsectra	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Paratanytarsus	0	0	0	0	11	0	0	0 1	11	0	0	0	0	0	0	0 1	0	0	0	0	0 0
Stempellinella	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Tanytarsus	0	0	0	0	11	0	0	0 1	0	0	0	11	0	0	0	0 1	33	0	0	0	0 7
TOTAL TANYTARSINI	0	0	0	0	22	0	0	0 3	11	0	0	11	0	0	0	0 3	33	0	0	0	0 7
TOTAL CHIRONOMINAE	0	0	0	0	111	0	22	0 17	22	0	22	11	0	0	0	0 7	100	0	0	0	0 20
Acricotopus	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Corynoneura	0	0	0	0	0	0	0	0 0	0	0	0	11	0	0	0	0 1	0	0	0	0	0 0
Cricotopus	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Cricotopus/Orthocladius/Para	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Limnophyes	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Paraphaenocladius	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Psectrocladius	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Orthocladiinae (too small)	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
TOTAL ORTHOCLADIINAE	0	0	0	0	0	0	0	0 0	0	0	0	11	0	0	0	0 1	0	0	0	0	0 0
Ablabesmyia	0	0	0	11	11	11	0	0 4	0	0	0	0	0	0	0	0 0	0	0	0	11	0 2
Guttipelopia	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Labrundinia	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Larsia	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Monopelopia	0	0	0	0	0	0	0	0 0	0	11	0	0	0	0	0	0 1	11	11	0	11	0 7
Procladius	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Tanypodinae (too small/damaged)	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
TOTAL TANYPODINAE	0	0	0	11	11	11	0	0 4	0	11	0	0	0	0	0	0 1	11	11	0	22	0 9
TOTAL CHIRONOMIDAE	0	0	0	11	123	11	22	0 21	22	11	22	22	0	0	0	0 10	111	11	0	22	0 29
Alluaudomyia	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Atrichopogon	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	11	0	0	0 2
Bezzia/Palpomyia	0	0	0	0	33	0	22	0 7	0	0	0	0	11	0	0	11 3	22	0	0	0	0 4
Culicoides	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Forcipomyia	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
TOTAL CERATOPOGONIDAE	0	0	0	0	33	0	22	0 7	0	0	0	0	11	0	0	11 3	22	11	0	0	0 7
Coquillettidia	0	11	0	0	0	0	0	0 1	0	0	0	0	0	0	0	22 3	56	0	0	0	0 11
EPHYDRIDAE	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Odontomyia	0	0	11	0	0	0	0	0 1	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Odontomyia/Hedriodiscus	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Stratiomys	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
TOTAL STATIOMYIDAE	0	0	11	0	0	0	0	0 1	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Limonia	0	11	0	0	0	0	0	0 1	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Prionocera	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Pseudolimnophila	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
Tipulidae (too small)	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
TOTAL TIPULIDAE	0	11	0	0	0	0	0	0 1	0	0	0	0	0	0	0	0 0	0	0	0	0	0 0
TOTAL OTHER DIPTERA	0	22	11	0	33	0	22	0 11	0	0	0	0	11	0	0	33 6	78	11	0	0	0 18
TOTAL DIPTERA	0	22	11	11	156	11	45	0 32	22	11	22	22	11	0	0	33 15	189	22	0	22	0 47

Appendix Table 7 continued.

BENTHIC MACROINVERTEBRATE DENSITY (# / m2)

Artificial Substrate Samples-July 19-22, 1998

Disks outside main plot - group 3

Treatment	BTI									Control									Methoprene					
Taxon / Site	4	6	7	11	20	22	23	30	Average	5	13	14	17	18	19	26	51	Average	3	10	21	25	29	Average
EPHEMEROPTERA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caenis	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0
ODONATA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coenduliidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lestidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMIPTERA																								
Corixidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neoplea	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0	3	0	0	0	0	0	0
CURCULIONIDAE	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0
DYTISCIDAE																								
Liodessus-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dytiscid larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporinae larvae	0	0	0	0	11	11	0	0	3	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0
Haliplus-larvae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HYDROPHILIDAE																								
Cymbiodyta-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enochrus-adult	11	0	0	0	0	0	0	0	1	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0
Hydrobius-adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrophilid larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	2
LAMPYRIDAE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyphon-larvae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SCIRTIDAE	0	0	0	0	0	0	0	0	0	0	11	0	22	0	0	0	0	4	45	0	0	0	0	9
TOTAL COLEOPTERA	11	0	0	0	11	11	0	0	4	0	11	0	56	0	0	0	0	8	45	0	0	11	0	11
Insect Pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL INSECTS	11	22	11	11	167	22	45	0	36	22	22	45	89	11	0	0	33	28	234	22	0	33	0	58
CRUSTACEA																								
Cascidotea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	2
Hyalella azteca	0	0	0	0	45	11	0	0	7	0	0	123	11	0	0	0	0	17	0	0	0	0	22	4
BIVALVIA	0	0	0 3	0	0	0	0	0	0	0	22	0	0	0	0	0	0	3	22	11	0	0	0	7
GASTROPODA																								
Armiger	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fossaria	11	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gyraulus	11	0	11	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	22	0	0	4
Helisoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lymnaeidae	0	0	0	0	0	0	11	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physidae (Physa)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Planorbidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stagnicola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	1	0	0	0	0	0	0
TOTAL GASTROPODA	22	0	11	0	0	0	11	0	6	0	0	0	0	0	11	0	0	1	0	0	22	0	0	4
ANNELIDA																								
Oligochaeta	0	11	33	0	11	22	178	0	32	0	0	33	111	201	22	0	0	46	45	11	0	11	33	20
Hirudinoidia	0	22	0	0	111	11	0	0	16	0	11	89	0	33	45	0	0	22	0	0	0	0	0	0
TOTAL MACROINVERTEBRATES	33	56	59	11	334	67	234	0	99	22	56	290	212	245	78	0	33	117	301	45	33	45	56	96

Appendix Table 8. Anova to compare density (#/m2) of benthic invertebrates on artificial substrates placed inside main plot versus those placed outside of the main plot. df, F, and p-values for main effects.

Block NOT in the model, each treatment run separately

	Con			BTI			Meth		
	df	F	p-val	df	F	p-val	df	F	p-val
Date = June									
Total macroinvertebrates	20	1.044	0.319	24	0.200	0.658	15	0.001	0.976
Total Non-insects	20	0.521	0.479	24	0.744	0.397	15	0.212	0.652
Total Annelida	20	0.010	0.921	24	0.010	0.922	15	0.182	0.676
Total Mollusca	20	0.000	0.984	24	0.927	0.345	15	0.057	0.815
Bivalvia	20	0.364	0.553	24	0.315	0.580	15	0.334	0.572
Gastropoda	20	0.331	0.571	24	0.892	0.354	15	0.058	0.813
Total Insects	20	0.996	0.330	24	0.336	0.568	15	0.067	0.800
Total Coleoptera	20	1.329	0.263	24	0.065	0.801	15	0.030	0.865
Scirtidae	20	0.026	0.874	24	0.115	0.738	15	0.031	0.863
Total Diptera	20	0.481	0.496	24	0.429	0.519	15	0.034	0.857
Non-chironomid Diptera	20	0.372	0.549	24	0.141	0.711	15	0.282	0.603
Ceratopogonidae	20	0.181	0.675	24	0.019	0.891	15	0.062	0.807
Chironomidae	20	0.709	0.410	24	0.382	0.542	15	0.017	0.898
Tanypodinae	20	0.505	0.485	24	0.066	0.799	15	0.249	0.625
Orthocladiinae	20	2.654	0.119	24	0.167	0.687	15	0.091	0.767
Chironomini	20	0.306	0.586	24	0.191	0.666	15	0.047	0.831
All other Chironominae	20	0.011	0.919	24	0.025	0.876	15	0.006	0.939
Tanytarsini	20	0.402	0.533	24	0.152	0.700	15	1.126	0.305
Nematocera	20	0.477	0.498	24	0.423	0.521	15	0.026	0.873
Date = July									
Total macroinvertebrates	22	0.162	0.692	24	3.302	0.082	15	0.222	0.644
Total Non-insects	22	0.229	0.637	24	1.523	0.229	15	0.118	0.735
Total Annelida	22	0.046	0.832	24	0.024	0.878	15	0.001	0.972
Gastropoda	22	0.000	1.000	24	1.608	0.217	15	0.159	0.696
Total Insects	22	0.008	0.931	24	2.717	0.112	15	1.670	0.216
Total Coleoptera	22	0.000	0.999	24	2.788	0.108	15	0.000	0.983
Total Diptera	22	0.089	0.769	24	0.765	0.391	15	2.473	0.137
Non-chironomid Diptera	22	0.356	0.557	24	1.358	0.255	15	0.001	0.976
Ceratopogonidae	22	0.226	0.639	24	0.184	0.672	15	0.011	0.917
Chironomidae	22	0.415	0.526	24	0.286	0.598	15	2.247	0.155
Tanypodinae	22	0.010	0.920	24	0.551	0.465	15	0.799	0.386
Chironomini	22	0.392	0.538	24	0.015	0.905	15	0.305	0.589

Appendix Table 9. Anova to compare density (#/m2) of benthic invertebrates on artificial substrates placed inside main plot (group 1) versus those placed outside of the main plot (groups 2 and 3). df, F, and p-values for main effects.

All treatments included, blocks used previously are also included in the model

(MAIN=compares group=1 vs group=2,3)

	MAIN			MAIN*TREAT			TREAT		
	df	F	p-val	df	F	p-val	df	F	p-val
Date=June									
Total macroinvertebrates	56	0.128	0.722	56	0.534	0.589	56	0.374	0.689
Total Non-insects	56	0.079	0.779	56	0.678	0.512	56	0.395	0.676
Total Annelida	56	0.094	0.760	56	0.044	0.957	56	1.767	0.180
Total Mollusca	56	0.163	0.688	56	0.477	0.623	56	4.388	0.017
Bivalvia	56	0.169	0.683	56	0.488	0.616	56	3.368	0.042
Gastropoda	56	0.579	0.450	56	0.375	0.689	56	4.654	0.013
Total Insects	56	0.002	0.967	56	0.627	0.538	56	0.527	0.593
Total Coleoptera	56	0.218	0.643	56	0.258	0.774	56	1.734	0.186
Scirtidae	56	0.138	0.712	56	0.004	0.996	56	2.521	0.089
Total Diptera	56	0.018	0.895	56	0.406	0.668	56	0.223	0.801
Non-chironomid Diptera	56	0.000	0.990	56	0.397	0.674	56	4.811	0.012
Ceratopogonidae	56	0.065	0.800	56	0.090	0.914	56	5.401	0.007
Chironomidae	56	0.002	0.967	56	0.492	0.614	56	0.191	0.827
Tanypodinae	56	0.260	0.612	56	0.309	0.736	56	3.777	0.029
Orthocladiinae	56	0.533	0.468	56	0.715	0.493	56	1.552	0.221
Chironomini	56	0.001	0.972	56	0.297	0.744	56	0.180	0.836
All other Chironominae	56	0.024	0.878	56	0.007	0.993	56	0.712	0.495
Tanytarsini	56	0.075	0.786	56	1.314	0.277	56	1.941	0.153
Nematocera	56	0.014	0.907	56	0.397	0.674	56	0.226	0.798
Date= July									
Total macroinvertebrates	58	1.241	0.270	58	1.437	0.246	58	0.125	0.882
Total Non-insects	58	0.298	0.587	58	0.951	0.392	58	1.294	0.282
Total Annelida	58	0.037	0.848	58	0.046	0.955	58	3.179	0.049
Gastropoda	58	0.085	0.772	58	0.696	0.503	58	18.246	0.000
Total Insects	58	3.641	0.061	58	0.856	0.430	58	1.023	0.366
Total Coleoptera	58	0.474	0.494	58	0.595	0.555	58	1.388	0.258
Total Diptera	58	2.993	0.089	58	0.628	0.537	58	2.517	0.089
Non-chironomid Diptera	58	0.074	0.787	58	0.694	0.503	58	1.362	0.264
Ceratopogonidae	58	0.027	0.869	58	0.277	0.759	58	1.118	0.334
Chironomidae	58	1.168	0.284	58	1.029	0.364	58	3.330	0.043
Tanypodinae	58	0.779	0.381	58	0.283	0.755	58	8.226	0.001
Chironomini	58	0.281	0.598	58	0.186	0.831	58	4.008	0.023

Appendix Table 10. Tests of treatment effects on density (#/m2) of benthic invertebrates on artificial substrates used in 1998. Treatment effects were evaluated using an ANOVA for each sampling date. The blocks that were used in previously were included as a term in the model. Means are back-transformed least-square estimates with their 95% confidence intervals. Of the 8 control sites, one site only had one set of substrates in June instead of the standard three sets. Of the 9 BTI sites, one only had two sets of substrates in June and July. One of the 6 Methoprene sites only had two sets of substrates in both June and July. The model was adjusted to account for this uneven design.

	Control		BTI		Methoprene		C v BTI		C v Meth		% Diff	
Date	Mean	95% CI	Mean	95% CI	Mean	95% CI	F	p-value	F	p-value	BTI	Meth
Total macroinvertebrates												
June 9-11	462.3	(200.5-1048.4)	478.3	(217.8-1035.3)	356.6	(134.2-919.9)	0.0	0.947	0.2	0.653	65	70
July 19-21	98.0	(53.7-172.8)	130.2	(75.3-220.1)	83.9	(40.9-162.5)	0.6	0.443	0.1	0.710	50	55
Total Non-insects												
June 9-11	107.0	(38.4-271.1)	160.7	(64.5-379.5)	128.0	(39.8-369.1)	0.5	0.504	0.1	0.792	70	75
July 19-21	63.9	(29.3-128.4)	91.4	(46.0-173.0)	48.1	(17.8-110.1)	0.6	0.437	0.3	0.594	55	60
Total Annelida												
June 9-11	70.1	(21.4-192.5)	117.8	(42.9-296.4)	53.0	(11.3-172.5)	0.8	0.392	0.2	0.695	65	70
July 19-21	54.4	(23.2-114.1)	46.9	(20.4-95.9)	17.6	(2.6-49.2)	0.1	0.746	3.9	0.070	55	60
Total Mollusca												
June 9-11	17.1	(3.3-44.1)	51.0	(21.9-106.1)	66.1	(24.4-156.7)	3.7	0.080	4.8	0.050*	60	65
July 19-21	8.5	(1.1-20.3)	25.2	(12.2-45.7)	24.2	(9.3-49.9)	4.3	0.060	3.2	0.101	45	50
Bivalvia												
June 9-11	10.3	(0.0-31.5)	26.2	(8.4-60.6)	44.7	(14.1-112.7)	1.8	0.204	4.2	0.062	60	65
July 19-21	5.3	(0.0-18.0)	16.5	(5.0-36.3)	13.6	(1.7-36.7)	2.1	0.176	1.0	0.332	55	60
Gastropoda												
June 9-11	5.5	(0.0-18.3)	25.2	(10.1-51.2)	20.5	(5.2-50.1)	4.7	0.051	2.6	0.135	55	60
July 19-21	2.0	(0.0-6.9)	16.6	(9.5-26.2)	11.4	(4.5-21.3)	14.8	0.002**	6.2	0.029*	30	35
Total Insects												
June 9-11	295.7	(128.2-664.7)	311.1	(142.0-667.3)	220.4	(82.0-565.0)	0.0	0.923	0.3	0.618	65	70
July 19-21	30.6	(16.1-52.7)	46.4	(27.4-74.8)	43.6	(22.3-78.3)	1.4	0.255	0.8	0.382	40	45
Remaining insects												
June 9-11	4.6	(0.0-11.7)	6.0	(0.9-13.2)	6.3	(0.2-15.7)	0.1	0.729	0.2	0.696	40	40
July 19-21	2.7	(0.0-7.1)	2.1	(0.0-6.0)	0.9	(0.0-5.3)	0.1	0.763	0.7	0.425	25	30

Appendix Table 10 Continued. Tests of treatment effects on density (#/m2)- block included

	Control		BTI		Methoprene		C v BTI		C v Meth		% Diff	
Date	Mean	95% CI	Mean	95% CI	Mean	95% CI	F	p-value	F	p-value	BTI	Meth
Total Coleoptera												
June 9-11	24.0	(7.8-54.3)	50.4	(22.8-100.4)	38.3	(13.6-87.9)	3.5	0.087	1.0	0.345	45	50
July 19-21	15.4	(7.0-27.7)	10.1	(3.7-19.3)	20.8	(9.4-38.5)	0.8	0.377	0.5	0.503	40	40
Hydrophilidae												
June 9-11	1.7	(0.0-6.9)	4.7	(0.3-10.8)	8.3	(2.1-17.4)	1.5	0.238	4.5	0.055	25	30
July 19-21	4.6	(0.6-10.0)	2.9	(0.0-7.4)	5.2	(0.5-11.9)	0.4	0.550	0.0	0.860	30	35
Dytiscidae												
June 9-11	6.3	(0.5-14.8)	5.2	(0.1-12.8)	13.8	(4.7-28.2)	0.1	0.772	2.2	0.165	35	40
July 19-21	4.4	(0.8-9.2)	4.0	(0.6-8.3)	1.4	(0.0-5.9)	0.0	0.855	1.7	0.221	25	25
Scirtidae												
June 9-11	16.3	(2.7-43.6)	44.2	(17.5-95.9)	29.6	(7.7-77.1)	4.4	0.058	1.1	0.325	50	55
July 19-21	7.8	(1.2-18.2)	2.7	(0.0-9.7)	11.7	(2.7-26.6)	1.3	0.268	0.4	0.555	45	45
Other Coleoptera												
June 9-11	3.3	(0.0-10.1)	2.9	(0.0-9.0)	4.3	(0.0-12.9)	0.0	0.909	0.1	0.811	40	45
July 19-21	2.1	(0.0-5.8)	2.1	(0.0-5.5)	1.4	(0.0-5.5)	0.0	0.991	0.1	0.745	25	30
Total Diptera												
June 9-11	261.5	(106.5-620.9)	239.3	(102.3-542.2)	182.7	(62.3-500.5)	0.0	0.875	0.3	0.573	70	70
July 19-21	19.4	(9.0-35.4)	40.4	(23.5-65.5)	33.7	(16.5-61.8)	3.9	0.073	1.7	0.219	40	45
Non-chironomid Diptera												
June 9-11	17.2	(2.9-46.5)	36.1	(13.1-81.2)	9.8	(0.0-36.1)	1.5	0.242	0.4	0.527	60	65
July 19-21	10.1	(3.2-20.4)	14.4	(6.5-26.0)	13.8	(4.7-28.2)	0.5	0.474	0.3	0.574	40	45
Ceratopogonidae												
June 9-11	11.1	(1.6-27.7)	28.8	(12.4-56.5)	7.6	(0.0-24.4)	3.0	0.108	0.2	0.657	50	55
July 19-21	6.5	(1.1-14.3)	7.0	(1.7-14.5)	5.7	(0.0-14.6)	0.0	0.912	0.0	0.860	35	40
Stratiomyidae												
June 9-11	1.0	(0.0-4.9)	4.7	(1.1-9.4)	2.9	(0.0-8.2)	2.3	0.153	0.6	0.471	30	30
July 19-21	0.0	(0.0-2.7)	2.2	(0.0-5.2)	1.4	(0.0-4.9)	1.7	0.215	0.6	0.462	20	25
Odontomyia												
June 9-11	1.0	(0.0-3.5)	1.8	(0.0-4.3)	0.0	(0.0-2.7)	0.3	0.577	0.4	0.519	15	20
July 19-21	0.0	(0.0-1.0)	0.6	(0.0-1.6)	0.0	(0.0-1.1)	1.2	0.299	0.0	1.000	5	5

Appendix Table 10 Continued. Tests of treatment effects on density (#/m2)- block included

	Control		BTI		Methoprene		C v BTI		C v Meth		% Diff	
Date	Mean	95% CI	Mean	95% CI	Mean	95% CI	F	p-value	F	p-value	BTI	Meth
Other Stratiomyidae												
June 9-11	0.0	(0.0-3.0)	3.3	(0.4-7.0)	2.9	(0.0-7.3)	3.0	0.108	1.9	0.195	25	25
July 19-21	0.0	(0.0-2.6)	1.4	(0.0-4.2)	1.4	(0.0-4.8)	0.9	0.373	0.6	0.446	20	25
Tipulidae												
June 9-11	1.9	(0.0-7.4)	9.0	(3.3-16.9)	1.5	(0.0-7.8)	4.4	0.058	0.0	0.881	35	35
July 19-21	1.8	(0.0-6.3)	3.9	(0.2-8.8)	2.9	(0.0-8.7)	0.6	0.451	0.1	0.709	30	35
Culicidae												
June 9-11	1.1	(0.0-3.2)	0.0	(0.0-1.8)	1.5	(0.0-3.9)	1.1	0.313	0.1	0.787	10	15
July 19-21	2.4	(0.0-8.3)	2.9	(0.0-8.7)	5.7	(0.0-14.5)	0.0	0.871	0.7	0.406	35	40
Other non-chironomid Diptera												
June 9-11	6.6	(0.0-18.0)	0.0	(0.0-6.7)	4.2	(0.0-16.2)	2.4	0.146	0.2	0.684	45	50
July 19-21	0.0	(0.0-1.3)	0.0	(0.0-1.2)	1.4	(0.0-3.0)	0.0	1.000	2.3	0.156	5	10
Chironomidae												
June 9-11	246.7	(104.3-564.9)	215.8	(95.2-473.1)	175.4	(62.6-460.8)	0.1	0.805	0.3	0.576	65	70
July 19-21	15.4	(6.5-28.7)	30.9	(17.5-50.7)	31.3	(15.4-56.9)	3.3	0.095	2.7	0.123	40	45
Tanypodinae												
June 9-11	15.0	(3.6-35.2)	23.9	(9.3-49.0)	18.0	(3.9-45.4)	0.7	0.434	0.1	0.791	55	60
July 19-21	5.8	(1.0-12.5)	19.2	(10.9-30.7)	11.1	(4.0-21.3)	11.3	0.006**	1.9	0.198	30	30
Orthocladiinae												
June 9-11	71.9	(22.7-192.5)	107.1	(39.6-264.5)	66.9	(16.6-208.9)	0.4	0.544	0.0	0.924	70	75
July 19-21	5.6	(0.0-18.0)	6.6	(0.0-18.7)	4.6	(0.0-18.6)	0.0	0.874	0.0	0.873	50	55
Chironomini												
June 9-11	91.1	(32.8-227.0)	53.1	(17.9-131.4)	63.6	(17.1-187.1)	0.8	0.391	0.3	0.600	65	70
July 19-21	4.2	(0.0-13.7)	9.0	(1.7-20.6)	19.5	(6.5-42.3)	0.8	0.387	4.2	0.063	45	50
Paratendipes												
June 9-11	0.0	(0.0-2.2)	1.4	(0.0-3.7)	0.0	(0.0-2.5)	1.2	0.299	0.0	1.000	15	20
July 19-21	0.0	(0.0-2.6)	1.4	(0.0-4.2)	1.4	(0.0-4.8)	0.9	0.373	0.6	0.446	20	25
Polypedilum												
June 9-11	8.7	(1.3-20.5)	4.7	(0.0-13.5)	4.6	(0.0-15.8)	0.6	0.441	0.5	0.474	45	50
July 19-21	1.8	(0.0-6.7)	1.6	(0.0-6.1)	6.5	(1.1-14.4)	0.0	0.935	1.9	0.190	35	35

Appendix Table 10 Continued. Tests of treatment effects on density (#/m2)- block included

	Control		BTI		Methoprene		C v BTI		C v Meth		% Diff	
Date	Mean	95% CI	Mean	95% CI	Mean	95% CI	F	p-value	F	p-value	BTI	Meth
All other Chironominae												
June 9-11	17.8	(2.8-49.1)	11.3	(0.2-33.7)	14.5	(0.0-48.6)	0.3	0.595	0.1	0.817	65	65
July 19-21	1.8	(0.0-5.4)	1.0	(0.0-4.2)	3.0	(0.0-7.7)	0.2	0.697	0.3	0.619	25	30
Tanytarsini												
June 9-11	64.3	(25.9-142.5)	39.2	(14.6-87.5)	18.7	(2.1-56.4)	1.0	0.344	4.0	0.069	60	65
July 19-21	4.2	(0.0-12.6)	6.0	(0.2-14.6)	11.2	(2.5-25.8)	0.2	0.704	1.5	0.239	45	45
Nematocera												
June 9-11	260.4	(106.3-616.6)	237.0	(101.5-535.8)	181.3	(62.0-495.3)	0.0	0.868	0.3	0.568	70	70
July 19-21	19.4	(9.1-35.1)	39.6	(23.2-63.9)	34.6	(17.2-62.6)	3.8	0.076	1.9	0.191	40	45
Brachycera												
June 9-11	3.3	(0.0-9.3)	4.7	(0.3-10.9)	4.6	(0.0-12.4)	0.2	0.679	0.1	0.728	35	40
July 19-21	0.0	(0.0-2.7)	2.2	(0.0-5.2)	1.4	(0.0-4.9)	1.7	0.215	0.6	0.462	20	25
Total insect predators												
June 9-11	29.0	(14.1-52.8)	49.2	(27.8-82.5)	38.2	(17.7-73.4)	1.9	0.190	0.4	0.537	45	50
July 19-21	14.5	(9.3-20.9)	26.0	(18.9-34.7)	20.8	(13.5-30.2)	6.9	0.022*	2.0	0.184	20	25
Total insect non-predators												
June 9-11	259.1	(108.8-598.0)	223.3	(97.8-493.3)	184.8	(65.6-489.2)	0.1	0.780	0.3	0.574	65	70
July 19-21	21.4	(9.9-39.3)	32.5	(17.7-54.8)	29.6	(13.5-56.5)	1.1	0.310	0.5	0.477	45	45
Total insect unclassified												
June 9-11	29.3	(11.3-61.9)	27.6	(11.1-56.6)	19.3	(4.3-48.8)	0.0	0.901	0.5	0.474	50	55
July 19-21	4.8	(0.0-11.7)	1.9	(0.0-7.2)	9.6	(2.5-20.4)	0.8	0.399	1.1	0.313	35	40
Dipteran predators												
June 9-11	22.2	(8.2-46.2)	43.7	(21.7-80.3)	20.9	(6.0-48.8)	2.1	0.171	0.0	0.922	50	55
July 19-21	10.7	(5.0-18.2)	22.0	(13.8-32.8)	13.2	(6.1-23.2)	4.9	0.046*	0.3	0.612	30	35
Dipteran non-predators												
June 9-11	229.2	(93.9-539.2)	173.0	(73.3-390.9)	160.6	(54.9-435.6)	0.3	0.617	0.3	0.571	65	70
July 19-21	13.0	(3.8-27.9)	25.7	(12.3-46.8)	24.0	(9.1-50.1)	1.9	0.189	1.2	0.287	45	50
Total non-dipteran predators												
June 9-11	11.2	(5.0-20.0)	8.7	(3.3-16.2)	21.4	(11.6-35.7)	0.7	0.412	5.4	0.039*	20	25
July 19-21	7.6	(1.9-15.8)	6.0	(1.0-13.0)	4.1	(0.0-12.1)	0.2	0.703	0.6	0.442	35	40

Appendix Table 10 Continued. Tests of treatment effects on density (#/m2)- block included

	Control		BTI		Methoprene		C v BTI		C v Meth		% Diff	
Date	Mean	95% CI	Mean	95% CI	Mean	95% CI	F	p-value	F	p-value	BTI	Meth
Total non-dipteran non-predators												
June 9-11	19.7	(4.1-51.2)	46.7	(18.3-102.5)	32.8	(8.8-86.0)	3.3	0.094	0.8	0.389	50	55
July 19-21	12.7	(5.0-24.2)	7.5	(1.7-15.8)	10.0	(2.3-22.1)	1.0	0.335	0.2	0.666	40	45
Predatory Chironomidae												
June 9-11	15.0	(3.6-35.2)	23.9	(9.3-49.0)	18.0	(3.9-45.4)	0.7	0.434	0.1	0.791	55	60
July 19-21	5.8	(1.0-12.5)	19.2	(10.9-30.7)	11.1	(4.0-21.3)	11.3	0.006**	1.9	0.198	30	30
Non-predatory Chironomidae												
June 9-11	220.5	(91.8-510.6)	163.3	(70.1-363.9)	159.1	(55.6-423.4)	0.3	0.589	0.3	0.598	65	70
July 19-21	10.6	(1.4-26.8)	15.7	(4.8-34.3)	24.3	(7.5-56.2)	0.4	0.559	1.6	0.237	55	55
Unclassified Chironomidae												
June 9-11	28.2	(9.6-63.5)	20.7	(6.3-47.1)	15.7	(1.8-45.1)	0.3	0.593	0.8	0.397	55	60
July 19-21	3.4	(0.0-9.2)	1.4	(0.0-6.1)	9.6	(3.0-19.4)	0.5	0.494	2.3	0.155	35	35
Non-chironomid dipteran predators												
June 9-11	8.1	(0.4-21.0)	19.4	(7.7-38.4)	7.7	(0.0-23.0)	2.0	0.178	0.0	0.962	50	55
July 19-21	5.6	(0.6-12.9)	6.0	(1.0-12.9)	5.7	(0.0-14.4)	0.0	0.931	0.0	0.988	35	40
Non-chironomid dipteran non-predator												
June 9-11	8.2	(0.0-25.2)	14.7	(3.0-36.1)	7.6	(0.0-27.5)	0.7	0.410	0.0	0.942	50	55
July 19-21	4.5	(0.0-11.9)	9.1	(2.9-17.9)	10.1	(2.5-22.0)	1.1	0.317	1.2	0.286	40	45
Non-chironomid dipteran unclassified												
June 9-11	3.3	(0.0-8.6)	5.2	(1.0-10.8)	1.4	(0.0-6.8)	0.4	0.527	0.5	0.509	30	35
July 19-21	1.0	(0.0-4.5)	1.8	(0.0-5.3)	0.0	(0.0-3.7)	0.2	0.678	0.2	0.632	25	30

Appendix Table 11. Tests of treatment effects on density (#/m2) of benthic invertebrates on artificial substrates used in 1998. Treatment effects were evaluated using an ANOVA for each sampling date. Blocks were not included in this model. Means are back-transformed least-square estimates with their 95% confidence intervals. Of the 8 control sites, one site only had one set of substrates in June instead of the standard three sets. Of the 9 BTI sites, one only had two sets of substrates in June and July. One of the 6 Methoprene sites only had two sets of substrates in both June and July. The model was adjusted to account for this uneven design.

	Control		BTI		Methoprene		C v BTI		C v Meth		% Diff	
Date	Mean	95% CI	Mean	95% CI	Mean	95% CI	F	p-value	F	p-value	BTI	Meth
Total macroinvertebrates												
June 9-11	461.9	(207.4-1013.0)	478.3	(225.2-1002.7)	363.0	(142.3-901.6)	0.0	0.947	0.2	0.683	65	70
July 19-21	98.2	(55.2-169.0)	130.2	(77.1-215.3)	84.3	(42.5-158.7)	0.6	0.444	0.1	0.714	50	50
Total Non-insects												
June 9-11	107.3	(40.4-261.4)	160.7	(67.2-366.1)	128.2	(42.1-353.8)	0.5	0.505	0.1	0.792	70	70
July 19-21	64.0	(30.4-125.0)	91.4	(47.5-168.5)	48.1	(18.8-106.5)	0.6	0.436	0.3	0.591	55	60
Total Annelida												
June 9-11	71.0	(22.7-188.5)	117.8	(44.7-286.6)	55.4	(12.8-174.4)	0.6	0.450	0.1	0.749	70	75
July 19-21	54.8	(24.2-112.3)	46.9	(21.1-93.6)	17.7	(2.9-48.1)	0.1	0.759	3.3	0.085	55	60
Total Mollusca												
June 9-11	17.2	(3.8-42.8)	51.0	(22.8-103.0)	64.9	(25.0-148.8)	3.4	0.079	4.4	0.049*	60	60
July 19-21	8.5	(1.3-19.7)	25.2	(12.6-44.7)	24.2	(9.8-48.5)	4.3	0.051	3.2	0.091	45	50
Bivalvia												
June 9-11	10.3	(0.0-30.4)	26.2	(8.9-58.6)	43.8	(14.4-106.9)	1.6	0.217	3.8	0.067	60	65
July 19-21	5.3	(0.0-17.3)	16.5	(5.4-35.2)	13.6	(2.0-35.4)	2.1	0.166	1.0	0.324	50	55
Gastropoda												
June 9-11	5.5	(0.0-17.6)	25.2	(10.6-49.8)	20.5	(5.7-48.4)	4.7	0.042*	2.6	0.124	50	55
July 19-21	2.1	(0.0-6.8)	16.6	(9.7-25.8)	11.6	(4.9-21.0)	13.8	0.001**	6.0	0.024*	30	35
Total Insects												
June 9-11	295.4	(132.8-641.7)	311.1	(146.9-646.1)	221.3	(86.0-545.2)	0.0	0.921	0.3	0.622	65	70
July 19-21	30.6	(16.6-51.6)	46.4	(28.0-73.3)	43.6	(23.0-76.4)	1.4	0.246	0.8	0.375	40	45
Remaining insects												
June 9-11	4.6	(0.0-11.3)	6.0	(1.1-12.8)	6.3	(0.4-15.2)	0.1	0.727	0.2	0.694	35	40
July 19-21	2.8	(0.0-7.0)	2.1	(0.0-5.8)	1.4	(0.0-5.9)	0.1	0.766	0.3	0.585	25	30

Appendix Table 11 continued. Tests of treatment effects on density (#/m2) - no blocks included

	Control		BTI		Methoprene		C v BTI		C v Meth		% Diff	
Date	Mean	95% CI	Mean	95% CI	Mean	95% CI	F	p-value	F	p-value	BTI	Meth
Total Coleoptera												
June 9-11	24.7	(8.3-55.3)	50.4	(23.3-98.9)	37.6	(12.8-88.2)	1.8	0.199	0.5	0.504	55	60
July 19-21	15.4	(7.2-27.1)	10.1	(3.9-18.9)	20.8	(9.8-37.6)	0.8	0.370	0.5	0.498	35	40
Hydrophilidae												
June 9-11	2.1	(0.0-7.4)	4.7	(0.4-10.6)	7.7	(1.7-16.7)	0.7	0.427	2.1	0.164	35	40
July 19-21	4.6	(0.7-9.8)	2.9	(0.0-7.2)	5.2	(0.6-11.6)	0.4	0.546	0.0	0.859	30	30
Dytiscidae												
June 9-11	6.9	(1.2-15.3)	5.2	(0.3-12.3)	11.5	(3.4-24.2)	0.2	0.700	0.7	0.424	40	40
July 19-21	4.6	(1.0-9.2)	4.0	(0.8-8.1)	1.4	(0.0-5.7)	0.1	0.822	1.5	0.234	25	30
Scirtidae												
June 9-11	16.6	(3.0-43.5)	44.2	(18.0-93.9)	27.3	(6.5-73.1)	2.4	0.138	0.4	0.516	60	65
July 19-21	7.8	(1.4-17.6)	2.7	(0.0-9.3)	11.7	(3.0-25.8)	1.3	0.259	0.4	0.550	40	45
Other Coleoptera												
June 9-11	3.3	(0.0-9.7)	2.9	(0.0-8.7)	4.2	(0.0-12.4)	0.0	0.907	0.1	0.815	35	40
July 19-21	2.1	(0.0-5.6)	2.1	(0.0-5.4)	1.4	(0.0-5.3)	0.0	0.990	0.1	0.742	25	25
Total Diptera												
June 9-11	261.4	(110.8-598.5)	239.3	(106.2-523.9)	182.8	(65.5-480.0)	0.0	0.875	0.3	0.570	65	70
July 19-21	19.4	(9.3-34.6)	40.4	(24.1-64.2)	33.7	(17.0-60.3)	3.9	0.063	1.7	0.209	40	45
Non-chironomid Diptera												
June 9-11	17.2	(3.2-44.8)	36.1	(13.7-78.7)	9.8	(0.0-34.8)	1.3	0.268	0.4	0.549	60	65
July 19-21	10.1	(3.5-19.9)	14.4	(6.8-25.4)	13.8	(5.0-27.5)	0.5	0.468	0.3	0.570	40	40
Ceratopogonidae												
June 9-11	11.0	(1.9-26.7)	28.8	(13.0-55.0)	7.4	(0.0-23.2)	2.8	0.111	0.2	0.650	50	55
July 19-21	6.5	(1.3-13.9)	7.0	(1.9-14.1)	5.7	(0.1-14.1)	0.0	0.911	0.0	0.859	35	40
Stratiomyidae												
June 9-11	1.0	(0.0-4.7)	4.7	(1.2-9.2)	2.9	(0.0-7.9)	2.3	0.143	0.6	0.466	25	30
July 19-21	0.0	(0.0-2.6)	2.2	(0.0-5.0)	1.4	(0.0-4.7)	1.7	0.205	0.6	0.456	20	25
Odontomyia												
June 9-11	1.0	(0.0-3.4)	1.8	(0.0-4.2)	0.0	(0.0-2.5)	0.3	0.572	0.4	0.514	15	20
July 19-21	0.0	(0.0-0.9)	0.6	(0.0-1.6)	0.0	(0.0-1.1)	1.2	0.291	0.0	1.000	5	5

Appendix Table 11 continued. Tests of treatment effects on density (#/m2) - no blocks included

	Control		BTI		Methoprene		C v BTI		C v Meth		% Diff	
Date	Mean	95% CI	Mean	95% CI	Mean	95% CI	F	p-value	F	p-value	BTI	Meth
Other Stratiomyidae												
June 9-11	0.0	(0.0-2.9)	3.3	(0.5-6.8)	2.9	(0.0-7.1)	3.0	0.098	1.9	0.185	20	25
July 19-21	0.0	(0.0-2.5)	1.4	(0.0-4.0)	1.4	(0.0-4.6)	0.9	0.365	0.6	0.440	20	20
Tipulidae												
June 9-11	2.1	(0.0-7.4)	9.0	(3.5-16.5)	1.4	(0.0-7.3)	3.6	0.074	0.1	0.818	35	40
July 19-21	1.8	(0.0-6.1)	3.9	(0.3-8.5)	2.9	(0.0-8.4)	0.6	0.445	0.1	0.707	30	30
Culicidae												
June 9-11	1.0	(0.0-3.0)	0.0	(0.0-1.7)	1.4	(0.0-3.7)	0.8	0.389	0.1	0.794	10	15
July 19-21	2.4	(0.0-8.0)	2.9	(0.0-8.4)	5.7	(0.1-14.1)	0.0	0.870	0.7	0.400	35	40
Other non-chironomid Diptera												
June 9-11	6.5	(0.0-17.3)	0.0	(0.0-6.3)	4.6	(0.0-16.2)	2.1	0.160	0.1	0.749	45	50
July 19-21	0.0	(0.0-1.2)	0.0	(0.0-1.1)	1.4	(0.0-2.9)	0.0	1.000	2.3	0.146	5	10
Chironomidae												
June 9-11	246.5	(108.2-545.2)	215.8	(98.7-457.7)	175.7	(65.7-443.2)	0.1	0.805	0.3	0.575	65	70
July 19-21	15.3	(6.8-28.0)	30.9	(18.0-49.7)	31.4	(15.9-55.6)	3.2	0.087	2.7	0.113	40	45
Tanypodinae												
June 9-11	15.0	(4.0-34.1)	23.9	(9.8-47.6)	18.0	(4.4-43.8)	0.7	0.428	0.1	0.789	50	55
July 19-21	6.0	(1.3-12.4)	19.2	(11.3-30.0)	9.7	(3.3-19.1)	7.4	0.013*	0.7	0.406	35	35
Orthocladiinae												
June 9-11	71.9	(24.0-184.9)	107.1	(41.5-254.7)	66.9	(17.8-199.4)	0.4	0.539	0.0	0.923	70	75
July 19-21	5.6	(0.0-17.3)	6.6	(0.0-18.0)	4.6	(0.0-17.9)	0.0	0.879	0.0	0.871	50	55
Chironomini												
June 9-11	90.9	(34.3-218.1)	53.1	(18.9-126.7)	65.3	(19.0-183.5)	0.8	0.396	0.2	0.632	65	70
July 19-21	4.2	(0.0-13.2)	9.0	(2.0-20.0)	19.5	(6.9-41.0)	0.8	0.380	4.2	0.054	45	50
Paratendipes												
June 9-11	0.0	(0.0-2.1)	1.4	(0.0-3.6)	0.0	(0.0-2.4)	1.2	0.291	0.0	1.000	15	20
July 19-21	0.0	(0.0-2.5)	1.4	(0.0-4.0)	1.4	(0.0-4.6)	0.9	0.365	0.6	0.440	20	20
Polypedilum												
June 9-11	8.5	(1.4-19.6)	4.7	(0.0-13.0)	5.0	(0.0-15.9)	0.5	0.471	0.4	0.554	45	50
July 19-21	1.8	(0.0-6.4)	1.6	(0.0-5.8)	6.5	(1.3-14.0)	0.0	0.935	1.9	0.180	30	35

Appendix Table 11 continued. Tests of treatment effects on density (#/m2) - no blocks included

	Control		BTI		Methoprene		C v BTI		C v Meth		% Diff	
Date	Mean	95% CI	Mean	95% CI	Mean	95% CI	F	p-value	F	p-value	BTI	Meth
All other Chironominae												
June 9-11	17.8	(3.2-47.2)	11.3	(0.5-32.4)	14.5	(0.3-46.5)	0.3	0.591	0.1	0.816	60	65
July 19-21	1.8	(0.0-5.3)	1.0	(0.0-4.1)	3.0	(0.0-7.5)	0.2	0.695	0.3	0.615	25	25
Tanytarsini												
June 9-11	61.6	(25.7-132.9)	39.2	(15.3-84.7)	20.6	(3.4-58.7)	0.7	0.422	2.8	0.113	60	65
July 19-21	4.2	(0.0-12.1)	6.0	(0.4-14.1)	11.2	(2.7-25.0)	0.2	0.701	1.5	0.229	40	45
Nematocera												
June 9-11	260.3	(110.6-594.5)	237.0	(105.4-517.7)	181.4	(65.1-475.1)	0.0	0.867	0.3	0.565	65	70
July 19-21	19.4	(9.5-34.3)	39.6	(23.8-62.6)	34.6	(17.8-61.1)	3.8	0.066	1.9	0.181	40	45
Brachycera												
June 9-11	3.3	(0.0-9.0)	4.7	(0.4-10.5)	4.6	(0.0-12.0)	0.2	0.676	0.1	0.726	35	40
July 19-21	0.0	(0.0-2.6)	2.2	(0.0-5.0)	1.4	(0.0-4.7)	1.7	0.205	0.6	0.456	20	25
Total insect predators												
June 9-11	29.0	(14.6-51.5)	49.2	(28.5-80.8)	38.2	(18.4-71.5)	1.9	0.180	0.4	0.533	45	50
July 19-21	14.5	(9.5-20.6)	26.0	(19.2-34.3)	20.8	(13.8-29.8)	6.9	0.016*	2.0	0.174	20	25
Total insect non-predators												
June 9-11	258.3	(112.6-575.8)	223.3	(101.4-477.2)	187.9	(69.9-478.0)	0.1	0.789	0.3	0.601	65	70
July 19-21	21.4	(10.3-38.3)	32.5	(18.2-53.6)	29.6	(14.0-55.0)	1.1	0.301	0.5	0.471	40	45
Total insect unclassified												
June 9-11	28.9	(11.6-59.5)	27.6	(11.6-55.0)	21.4	(5.8-51.4)	0.0	0.930	0.3	0.620	55	55
July 19-21	4.8	(0.1-11.3)	1.9	(0.0-6.9)	9.6	(2.8-19.8)	0.8	0.392	1.1	0.305	35	40
Dipteran predators												
June 9-11	22.2	(8.7-44.8)	43.7	(22.4-78.3)	20.9	(6.5-47.3)	2.1	0.161	0.0	0.921	50	55
July 19-21	10.7	(5.2-17.9)	22.0	(14.2-32.3)	13.2	(6.3-22.7)	4.9	0.038*	0.3	0.609	30	30
Dipteran non-predators												
June 9-11	229.0	(97.6-519.5)	173.0	(76.1-377.7)	161.2	(57.9-419.3)	0.3	0.617	0.3	0.574	65	70
July 19-21	13.0	(4.1-27.1)	25.7	(12.7-45.7)	24.0	(9.5-48.7)	1.9	0.179	1.2	0.278	45	50
Total non-dipteran predators												
June 9-11	12.3	(5.9-21.0)	8.7	(3.6-15.7)	18.3	(9.2-31.4)	0.6	0.446	1.0	0.339	30	35
July 19-21	7.6	(2.1-15.4)	6.0	(1.2-12.6)	4.1	(0.0-11.7)	0.2	0.700	0.6	0.436	35	40

Appendix Table 11 continued. Tests of treatment effects on density (#/m2) - no blocks included

	Control		BTI		Methoprene		C v BTI		C v Meth		% Diff	
Date	Mean	95% CI	Mean	95% CI	Mean	95% CI	F	p-value	F	p-value	BTI	Meth
Total non-dipteran non-predators												
June 9-11	20.3	(4.6-51.8)	46.7	(18.9-100.2)	31.1	(7.8-83.1)	1.8	0.197	0.3	0.567	60	65
July 19-21	12.7	(5.2-23.6)	7.5	(1.9-15.4)	10.0	(2.5-21.5)	1.0	0.328	0.2	0.663	40	40
Predatory Chironomidae												
June 9-11	15.0	(4.0-34.1)	23.9	(9.8-47.6)	18.0	(4.4-43.8)	0.7	0.428	0.1	0.789	50	55
July 19-21	6.0	(1.3-12.4)	19.2	(11.3-30.0)	9.7	(3.3-19.1)	7.4	0.013*	0.7	0.406	35	35
Non-predatory Chironomidae												
June 9-11	220.5	(95.4-492.8)	163.3	(72.8-351.8)	159.1	(58.3-406.5)	0.3	0.586	0.3	0.594	65	70
July 19-21	10.6	(1.7-26.0)	15.7	(5.2-33.3)	24.3	(8.0-54.4)	0.4	0.555	1.6	0.227	50	55
Unclassified Chironomidae												
June 9-11	27.7	(9.9-60.7)	20.7	(6.7-45.6)	17.0	(2.7-46.0)	0.2	0.625	0.5	0.478	55	60
July 19-21	3.4	(0.0-8.9)	1.4	(0.0-5.8)	9.6	(3.2-18.9)	0.5	0.488	2.3	0.145	30	35
Non-chironomid dipteran predators												
June 9-11	8.1	(0.6-20.3)	19.4	(8.1-37.4)	7.7	(0.0-22.2)	2.0	0.168	0.0	0.961	50	50
July 19-21	5.6	(0.7-12.6)	6.0	(1.2-12.6)	5.7	(0.2-14.0)	0.0	0.931	0.0	0.988	35	40
Non-chironomid dipteran non-predator												
June 9-11	8.5	(0.0-25.3)	14.7	(3.3-35.2)	7.7	(0.0-27.4)	0.5	0.508	0.0	0.930	55	60
July 19-21	4.5	(0.0-11.5)	9.1	(3.1-17.5)	10.1	(2.7-21.3)	1.1	0.308	1.2	0.277	35	40
Non-chironomid dipteran unclassified												
June 9-11	3.3	(0.0-8.3)	5.2	(1.2-10.6)	1.4	(0.0-6.5)	0.4	0.535	0.4	0.520	30	35
July 19-21	1.0	(0.0-4.3)	1.8	(0.0-5.1)	0.0	(0.0-3.5)	0.2	0.675	0.2	0.628	25	25