

APPENDIX 12A
SPRING 2003 MACROINVERTEBRATE SAMPLING RESULTS

Table A-1. Total macroinvertebrate counts by sampling station. Spring 2003.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	BB1A	BB2A	BB3	BF1	BF2	BF3	BF4	BF 5	BF 6	KDB	KR 1	KR 2	KR 3	KR 4	KR 5	KR 6	LEKR
Taxon	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN
Acari	88.7	73.8	197.8	169.3	258.7	163.8	11.5	120.2	46.2	26.9	65.0	95.6	46.5	36.2	71.8	37.1	26.9
<i>Caecidotea</i>	23.9	0.0	0.0	11.2	229.4	343.7	28.6	58.8	117.2	46.9	136.3	0.6	1.2	0.0	0.0	0.0	381.9
<i>Crangonyx</i>	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.8	3.8	11.9	3.9	0.0	0.0	0.0	0.0	0.0	0.0
<i>Ferissia</i>	25.6	2.6	11.9	0.0	11.9	0.0	9.7	0.6	7.8	17.9	105.6	6.0	5.7	2.2	17.6	15.5	0.0
<i>Fluminicola</i>	0.0	840.0	336.5	0.0	9.0	93.9	0.0	0.0	0.0	0.0	0.0	44.3	11.3	10.5	0.0	0.0	0.0
Gastropoda	0.0	58.9	7.2	0.0	0.0	3.6	0.8	4.5	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	38.8
<i>Helobdella</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6	0.0	0.0	0.0	2.4	0.0	0.6	0.0	0.0	11.9
Hirudinea	0.0	0.0	0.0	0.0	8.1	10.7	4.1	5.1	9.7	6.0	0.9	0.0	0.0	4.5	0.0	0.0	199.9
<i>Hyalella</i>	0.0	0.0	0.0	9.9	223.8	143.2	0.0	6.6	3.0	6.0	16.4	67.9	15.5	43.0	0.0	1.2	9.0
<i>Hydra</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	2.7	5.5	0.0	0.9	0.0
Hydrobiidae	0.0	0.0	0.0	3.2	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
<i>Juga</i>	0.0	511.5	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Lanx</i>	7.7	0.0	159.6	0.6	14.9	3.6	2.4	17.9	12.3	6.0	15.2	0.0	0.6	0.0	0.0	0.6	0.0
<i>Manayunkia speciosa</i>	38.4	7.7	0.0	33.4	31.9	0.8	10.7	0.0	3.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	0.0
Nematoda	5.1	0.0	4.5	0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	1.3	2.7	0.0	1.9	0.9	0.0
Oligochaeta	40.1	91.2	124.7	327.0	207.6	25.9	125.0	173.0	203.3	95.9	215.4	36.7	115.8	251.3	64.1	21.5	149.2
<i>Pacifasticus</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Pisidium</i>	0.0	0.0	19.1	0.0	0.0	7.2	0.0	5.1	0.0	20.5	0.9	0.0	0.6	0.0	0.0	0.0	0.0
<i>Sphaerium</i>	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	0.0	0.0	0.0	3.0
Turbellaria	0.0	5.1	0.0	0.0	3.6	0.0	0.6	0.0	0.0	0.0	6.3	40.4	6.0	6.4	19.0	0.9	44.8
<i>Vorticifex</i>	0.0	30.9	52.5	0.6	29.8	28.6	4.1	14.0	10.0	0.0	17.9	33.3	5.1	10.2	2.7	0.6	14.9
TOTAL: NON INSECTS	229.4	1621.7	919.8	555.3	1028.7	824.9	201.1	408.1	416.2	237.8	583.8	335.8	213.6	370.5	182.2	79.1	880.1
<i>Argia</i>	16.2	2.6	0.0	0.0	0.0	0.0	0.0	0.0	1.8	169.2	34.0	17.8	10.7	13.0	5.0	1.2	26.9
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	1.1	0.0	0.0	0.0
<i>Gomphus</i>	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	1.1	0.0	0.0	0.0
<i>Hetaerina</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.1	0.0	0.0	0.0
<i>Octogomphus</i>	0.0	2.6	6.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	1.5	27.6	2.5	9.4	0.0	0.0
TOTAL: ODONATA	16.2	5.1	6.0	0.0	0.0	0.0	0.0	0.0	1.8	169.2	37.6	17.8	12.8	43.7	7.5	10.6	26.9
<i>Acentrella</i>	2.6	2.6	135.7	1.6	690.9	90.5	8.2	233.3	136.0	11.9	310.9	267.2	199.3	415.8	316.1	128.1	0.0
<i>Ameletus</i>	0.0	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Asioplax</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	25.5	33.0	8.6	0.0
Baetidae	0.0	0.0	0.0	0.0	4.5	3.6	0.6	0.0	0.8	77.6	59.7	0.0	1.2	2.4	14.6	0.0	0.0
<i>Baetis tricaudatus</i>	2518.2	19.3	6.0	10.5	306.7	129.7	6.6	273.0	18.2	436.8	832.6	179.9	64.7	792.4	106.2	32.5	745.8
<i>Caudatella heterocaudata</i>	29.8	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.5	0.0	8.3	0.9	0.0
<i>Dipheter hageni</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.7	0.0	0.0	0.0	0.0	0.0	0.0
<i>Drunella flavilinea</i>	5.1	0.0	41.8	23.9	43.0	35.5	0.6	9.5	0.8	0.0	11.9	6.4	7.5	9.0	6.2	0.0	0.0
<i>Epeorus</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
<i>Epeorus albertae</i>	11.1	18.9	193.6	37.0	953.5	113.9	31.0	307.6	464.0	104.4	30.7	12.5	17.0	31.6	18.0	29.0	0.0
<i>Ephemerella inermis</i>	0.0	0.0	0.0	20.2	14.0	72.1	31.4	19.7	65.2	3.0	3.6	4.0	1.2	0.0	1.3	0.0	182.0
<i>Fallceon quillieri</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.6	9.1	0.0	0.0	0.0

Table A-1. Total macroinvertebrate counts by sampling station. Spring 2003.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	BB1A	BB2A	BB3	BF1	BF2	BF3	BF4	BF 5	BF 6	KDB	KR 1	KR 2	KR 3	KR 4	KR 5	KR 6	LEKR
<i>Heptagenia</i>	0.0	0.0	0.0	2.0	20.6	14.3	14.5	47.1	111.0	11.9	0.0	0.6	4.2	4.3	4.2	4.0	0.0
<i>Paraleptophlebia</i>	0.0	5.3	7.2	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	0.0
<i>Rhithrogena</i>	0.0	0.0	0.0	0.0	4.5	14.3	6.3	10.1	12.7	0.0	9.0	0.0	0.0	0.0	3.6	0.0	0.0
<i>Serratella micheneri</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.4	0.0	0.0	0.0	0.0	2.1	3.9	1.8	0.0
<i>Serratella tibialis</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Tricorythodes minutus</i>	94.6	0.0	0.0	0.0	62.7	27.5	0.0	0.0	3.0	40.5	116.4	116.4	17.6	28.0	12.2	5.8	47.7
TOTAL: EPHEMEROPTERA	2661.4	46.1	393.8	95.2	2104.7	501.3	99.2	900.4	870.5	686.1	1403.4	590.5	318.9	1320.3	527.7	210.7	975.6
<i>Calineuria californica</i>	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Hesperoperla pacifica</i>	0.0	1.4	40.9	1.6	6.6	7.2	0.0	4.5	14.7	0.0	3.9	3.8	4.5	10.2	12.5	5.2	0.0
<i>Isoperla</i>	0.0	0.0	0.0	0.0	0.0	3.6	2.4	1.2	49.5	0.0	3.0	0.0	0.0	0.0	0.7	0.0	0.0
<i>Malenka</i>	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	0.0	0.0	0.6	0.0	0.0	0.0
Perlodidae	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	0.6	0.0	0.0	0.0
<i>Pteronarcys californica</i>	0.0	0.0	120.8	8.7	3.6	14.0	0.8	4.5	5.9	0.0	3.6	5.0	6.0	10.0	13.5	7.8	0.0
<i>Sweltsa</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Zapada cinctipes</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0
TOTAL: PLECOPTERA	0.0	3.9	166.2	10.3	10.1	24.7	3.2	10.1	70.8	0.0	28.3	10.1	10.4	21.4	26.7	13.0	0.0
<i>Ambrysus</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	4.5	1.2	0.6	0.0	0.0	0.0
TOTAL: HEMIPTERA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	4.5	1.2	0.6	0.0	0.0	0.0
<i>Amiocentrus aspilus</i>	161.1	358.2	3053.4	58.3	350.2	44.2	0.6	57.9	3.0	28.6	42.1	41.0	12.8	42.2	19.1	2.9	6.0
<i>Ceraclea</i>	6.0	0.0	0.0	2.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.9
<i>Cheumatopsyche</i>	0.0	0.0	0.0	0.0	0.0	0.0	4.0	49.2	19.0	3.0	0.9	0.0	0.0	0.0	0.0	0.9	0.0
<i>Dicosmoecus gilvipes</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	4.5	0.0	0.0	0.0
<i>Glossosoma</i>	2.6	0.0	43.6	0.0	7.2	7.2	1.6	0.0	20.9	0.0	1.8	7.7	3.3	1.6	17.9	1.2	0.0
<i>Hydropsyche</i>	355.5	0.0	35.8	19.5	182.9	146.4	11.5	14.0	122.1	55.0	158.4	18.4	12.8	81.3	42.9	21.2	396.8
<i>Hydroptila</i>	19.6	32.3	56.1	5.6	19.7	0.8	1.2	13.4	0.0	8.1	0.0	3.6	0.0	5.5	0.6	0.0	6.0
<i>Lepidostoma-turret case larvae</i>	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.1	0.0	0.0	0.0
<i>Leucotrichia</i>	279.6	0.0	0.0	0.0	3.0	0.0	0.0	40.0	0.0	6.0	2.7	0.0	0.0	0.0	8.1	0.9	3.0
<i>Nectopsyche</i>	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	16.3	0.0	0.6	0.0
<i>Ochrotrichia</i>	0.0	0.0	4.5	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	0.0
<i>Oecetis</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.6	0.6	0.0	0.0	0.0	0.0
<i>Onocosmoecus unicolor</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	4.5	0.6	0.0	0.0	0.0	0.0
<i>Polycentropus</i>	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	7.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Protophila</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	2.1	2.7	0.0	0.0
<i>Psychomyia</i>	0.0	0.0	0.0	0.0	0.0	0.0	2.2	23.6	10.5	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
<i>Rhyacophila Coloradensis Gr.</i>	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	0.0	0.0	0.0	44.8
TOTAL: TRICHOPTERA	824.4	390.5	3200.5	85.4	567.4	198.6	23.7	202.6	188.4	103.6	210.6	75.7	33.7	154.7	92.2	27.6	477.3

Table A-1. Total macroinvertebrate counts by sampling station. Spring 2003.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	BB1A	BB2A	BB3	BF1	BF2	BF3	BF4	BF 5	BF 6	KDB	KR 1	KR 2	KR 3	KR 4	KR 5	KR 6	LEKR
<i>Cleptelmis addenda</i>	0.0	11.8	35.5	6.2	7.5	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0
<i>Dubiraphia</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	3.0	5.8	5.1	0.6	0.0
<i>Microcylloepus</i>	11.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		1.5	1.1	0.6	0.0	20.9
<i>Optioservus</i>	63.9	70.1	761.9	22.9	112.2	277.9	7.4	23.0	68.0	68.6	0.9	12.8	0.0	0.0	0.6	0.6	0.0
<i>Psephenus</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.7	0.6	459.4
<i>Zaitzevia</i>	0.0	0.0	0.0	0.0	8.1	148.1	19.3	58.8	47.8	0.0	1.8	104.1	43.9	74.6	43.6	8.9	0.0
TOTAL: COLEOPTERA	75.9	81.9	797.4	29.1	127.7	426.0	27.9	81.7	115.8	68.6	2.7	119.4	48.9	82.1	50.7	10.7	6.0
<i>Petrophila</i>	67.3	0.0	0.0	2.0	159.3	3.6	2.8	18.5	11.3	65.2	4.5	4.6	6.3	7.2	16.1	1.4	68.6
TOTAL: LEPIDOPTERA	67.3	0.0	0.0	2.0	159.3	3.6	2.8	18.5	11.3	65.2	4.5	4.6	6.3	7.2	16.1	1.4	68.6
<i>Antocha</i>	229.3	12.8	100.2	11.4	43.9	21.1	1.4	62.4	10.4	20.9	4.5	0.0	0.0	0.0	0.0	0.0	11.9
<i>Atherix</i>	32.4	4.1	40.3	0.6	10.7	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Blephariceridae	6.0	0.0	9.5	0.0	3.0	0.0	0.0	0.0	3.0	0.0	3.6	8.3	0.6	5.7	5.1	1.2	6.0
Ceratopogoninae	0.0	2.6	0.0	2.0	0.0	0.0	0.0	0.6	0.0	0.0	0.9	0.0	0.0	4.5	0.0	0.0	0.0
<i>Chelifera</i>	0.0	2.6	0.0	1.6	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Clinocera</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.6	0.0	0.0	0.0	0.0
Empididae-pupae	2.6	0.0	0.0	1.6	0.0	0.0	0.6	0.0	0.8	0.0	0.0	0.0	1.5	2.1	0.0	0.0	17.9
<i>Hemerodromia</i>	85.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	22.2	9.0	7.3	13.1	1.1	4.1	0.0	0.0
<i>Pericoma</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0
<i>Simulium</i>	2075.1	0.0	22.4	26.4	0.0	4.1	0.0	139.0	0.0	1665.3	548.0	35.2	12.8	31.2	19.0	2.3	50.7
TOTAL: DIPTERA	2430.6	22.1	172.4	43.6	57.6	25.2	2.6	202.0	17.3	1711.3	565.9	55.2	28.6	44.5	28.2	3.5	498.2
<i>Brillia</i>	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0
<i>Cardiocladius</i>	0.0	0.0	0.0	11.4	17.0	294.0	0.8	19.7	7.0	0.0	106.2	31.5	19.1	75.4	34.4	29.2	0.0
Chironomidae-pupae	82.7	16.9	41.5	62.9	150.7	135.3	18.2	28.3	21.2	156.4	77.9	25.8	27.1	19.6	19.2	9.8	56.7
<i>Cricotopus</i>	25.6	18.1	32.8	124.8	88.9	81.1	12.6	29.5	5.6	38.8	27.7	40.4	3.0	9.0	0.6	0.6	137.2
<i>Cricotopus (Isocladius) type 1</i>	0.0	0.0	0.0	0.0	63.2	20.3	1.4	20.3	3.0	0.0	0.0	6.7	3.0	1.6	1.2	0.0	0.0
<i>Cricotopus Trifascia Gr.</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.6	18.5	0.0	0.0	0.0
<i>Cryptochironomus</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
<i>Dicrotendipes</i>	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0
<i>Endochironomus</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.2	0.0	0.0	0.0	0.0	0.0
<i>Eukiefferiella</i>	26.4	6.5	4.5	8.5	11.6	0.0	1.2	14.6	3.9	32.8	14.9	18.0	2.1	12.4	12.1	7.9	11.9
<i>Eukiefferiella Devonica Gr.</i>	59.7	20.3	0.0	25.4	3.0	36.3	7.8	36.4	14.9	0.0	19.4	8.1	4.5	91.9	8.5	3.8	0.0
<i>Limnophyes</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Macropelopia</i>	0.0	5.1	4.5	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	0.0
<i>Microtendipes</i>	5.1	1.4	3.6	3.2	3.0	0.0	13.2	16.7	30.4	70.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Micropectra</i>	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	0.0	0.0	0.9	0.0
<i>Nanocladius</i>	0.0	0.0	0.0	9.6	0.0	0.0	0.6	0.6	0.0	6.0	0.9	0.0	0.0	0.0	0.0	0.0	9.0
<i>Nilotanytus</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Orthocladius</i>	0.0	0.0	6.0	2.6	50.1	22.8	2.0	14.0	5.6	0.0	74.9	61.2	19.1	21.9	17.3	21.3	0.0
<i>Orthocladius Complex</i>	35.0	124.2	231.8	413.1	332.6	580.2	20.2	57.9	6.7	6.0	51.6	140.0	19.7	19.4	9.4	8.1	6.0

Table A-1. Total macroinvertebrate counts by sampling station. Spring 2003.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	BB1A	BB2A	BB3	BF1	BF2	BF3	BF4	BF 5	BF 6	KDB	KR 1	KR 2	KR 3	KR 4	KR 5	KR 6	LEKR
<i>Parachironomus</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.4	2.2	0.0	0.0	0.0	0.0	0.0
<i>Parakiefferiella</i>	2.6	5.1	0.0	0.0	0.0	0.8	3.0	2.4	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Parametriochnemus</i>	0.0	2.6	0.0	2.8	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Paratanytarsus</i>	11.9	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	0.0	0.0	0.0
<i>Pentaneura</i>	14.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	6.9	3.1	12.2	23.3	0.0	0.9	0.0
<i>Phaenopsectra</i>	0.0	0.0	0.0	1.6	0.0	0.0	0.6	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0
<i>Polypedilum</i>	0.0	1.4	8.1	7.2	64.1	73.7	8.2	10.4	27.6	77.6	5.4	29.1	12.8	19.5	0.0	2.6	86.5
<i>Potthastia</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Potthastia Longimana Gr.</i>	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Pseudochironomus</i>	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Rheocricotopus</i>	8.5	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0
<i>Rheotanytarsus</i>	644.5	0.0	0.0	13.8	9.0	8.8	0.0	4.5	0.0	647.8	7.5	2.5	0.0	1.1	2.1	0.0	104.4
<i>Sublettea</i>	0.0	11.6	15.2	6.5	38.2	4.4	2.4	1.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Synorthocladus</i>	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	1.1	0.0	0.0	0.0
<i>Thienemanniella</i>	8.5	11.8	25.4	0.0	11.9	0.8	5.6	1.8	19.5	0.0	3.9	0.6	3.0	0.0	0.0	0.6	0.0
<i>Thienemannimyia</i>	14.5	5.3	14.3	6.6	32.5	7.2	0.0	1.2	0.0	72.4	15.2	9.0	0.0	0.0	0.0	0.0	59.7
<i>Tvetenia Bavarica Gr.</i>	37.5	1.4	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Tvetenia Vitracies Gr.</i>	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	7.0	4.6	0.6	0.0
<i>Xenochironomus</i>	2.6	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	0.0	0.0	0.0
TOTAL: CHIRONOMIDAE	985.6	231.8	387.5	706.2	875.9	1265.8	98.4	261.9	148.7	1137.1	444.5	389.4	126.2	321.6	109.4	87.9	557.9
GRAND TOTAL	7290.8	2403.0	6043.6	1527.0	4931.5	3270.1	459.0	2085.4	1840.8	4178.9	3290.3	1603.0	800.7	2366.5	1040.6	444.5	3490.5

Table 12A-2. Klamath River benthic Macroinvertebrate Biomonitoring. Metrics Summary.																	
	LEKR	KDB	BB 1	BB 2	BB 3	BF 1	BF 2	BF 3	BF 4	BF 5	BF 6	KR 1	KR 2	KR3	KR 4	KR 5	KR 6
	5/22/2003	5/22/2003	5/22/2003	5/22/2003	5/21/2003	5/21/2003	5/20/2003	5/20/2003	5/19/2003	5/19/2003	5/19/2003	5/20/2003	5/20/2003	5/21/2003	5/21/2003	5/20/2003	5/21/2003
Total invertebrate abundance (m2)	3491	4179	7290	2403	6044	1527	4932	3270	459	2086	1842	3291	1603	801	2367	1040	445
Total taxa richness	39	43	45	39	44	48	50	45	54	53	54	64	57	59	62	50	48
EPT taxa richness	9	13	12	8	16	12	18	16	17	17	22	24	18	21	22	22	16
Ephemeroptera taxa richness	3	7	6	4	6	6	10	9	8	7	11	10	9	12	10	12	8
Plecoptera taxa richness	0	0	0	2	3	2	2	3	2	3	4	6	3	2	4	3	2
Trichoptera taxa richness	6	6	6	2	7	4	6	4	7	7	7	8	6	7	8	7	6
% Tolerant taxa	17.7	2.8	0.7	0.3	0.4	2.2	9.6	15.4	7.4	4.4	7.3	5.6	5.7	2.5	2.6	1.2	2.1
Tolerant taxa richness	7	7	2	1	2	5	4	4	3	6	5	8	6	5	4	1	2
% Intolerant taxa	6.7	2.6	1.3	1.1	8.4	6.0	21.3	8.2	16.6	18.5	38.7	3.1	3.4	5.4	3.4	9.1	10.6
Intolerant taxa richness	3	3	8	4	10	6	10	8	8	9	14	16	10	11	13	13	7
% Long-lived taxa	7.6	0.3	0.1	60.3	12.1	1.0	1.4	5.0	2.1	2.4	2.9	1.8	6.0	3.8	3.4	3.1	5.4
Long-lived taxa richness	4	2	1	7	8	5	6	7	6	7	6	9	7	8	10	5	6
% Hydropsychidae	11.4	1.4	4.9	0.0	0.6	1.3	3.7	4.5	3.4	3.0	7.7	4.8	1.2	1.6	3.4	4.1	5.0
% Baetidae	21.4	12.6	34.6	0.9	2.4	0.8	20.3	6.9	3.4	24.3	8.4	11.4	28.0	33.2	51.5	42.0	36.1
% Predators	11.5	6.7	2.1	1.4	1.8	1.7	1.6	9.9	2.9	1.6	6.0	6.6	7.8	7.8	6.5	7.5	10.5
% Collector-gatherers	50.1	21.7	44.6	27.7	63.1	68.2	55.5	50.2	56.8	51.0	37.4	59.6	61.9	63.4	73.1	60.0	53.2
% Collector-filterers	27.5	57.2	42.7	0.3	1.3	6.1	4.5	5.1	6.6	10.2	8.0	21.8	3.5	3.3	4.8	6.7	5.5
% Scrapers	3.9	6.8	6.4	63.8	26.2	4.6	27.1	21.7	21.9	26.2	42.1	6.0	14.8	12.4	6.5	13.6	14.7
% Shredders	0.2	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.1	0.0	0.0
% Dominant taxon	21.4	39.9	34.5	35.0	50.5	27.1	19.3	17.7	27.2	14.8	25.2	25.3	16.7	24.9	33.5	30.4	28.8
Shannon Diversity Index (loge)	2.73	2.33	2.13	2.16	2.08	2.52	2.92	2.97	3.02	3.05	2.9	2.77	3.11	2.95	2.58	2.86	2.79
Shannon Diversity Index (log2)	3.94	3.36	3.08	3.11	3	3.64	4.21	4.29	4.36	4.41	4.18	4	4.49	4.26	3.72	4.13	4.02

Table 12A-3. Klamath River Macroinvertebrate Sampling, May 2003. Mollusks.
(Determinations by Dr. Terrence Frest, Deixus Consultants, Seattle, WA. Densities expressed on a square meter basis.)

	LEKR	KDB	BB 1	BB 2	BB 3	BF 1	BF 2	BF 3	BF 4	BF 5	BF 6	KR 1	KR 2	KR3	KR 4	KR 5	KR 6
	5/22/2003	5/22/2003	5/22/2003	5/22/2003	5/21/2003	5/21/2003	5/20/2003	5/20/2003	5/19/2003	5/19/2003	5/19/2003	5/20/2003	5/20/2003	5/21/2003	5/21/2003	5/20/2003	5/21/2003
Pelecypoda (clams and mussels)																	
<i>Pisidium casertanum</i>					19									1			
<i>Pisidium ultramontanum</i>							7			3							
<i>Pisidium variabile</i>		21							4	3		1					
<i>Sphaenium securis</i>	3																
Gastropoda (snails and limpets)																	
<i>Ferissia probably rivularis</i>		18	26	3	12		12		10	1	8	106	6	6	2	18	16
Hydrobiidae unknown				20													
<i>Colligyrus new species #3</i>	39			39	7			4	1	5							
<i>Fluminicola new species #1</i>				840	337	1	9	94					44	11	11		
<i>Pyrgulopsis archimedes</i>						2											
<i>Lanx alta</i>		6	8		160	1	15	4	2	18	12	15		1			1
<i>Vorticifex effusa effusa</i>	15			31	53	1	30	29	4	14	10	18	33	5	10	3	1
<i>Juga (Creobasis) new species</i>				512	6												
<i>Valvata humeralis</i>												2					