

Appendix Table 3. APMP Phase 2 Mean values and std deviation for biological metrics by site

SiteName	SampleType	Pesticide	StationType	Metric	Application Interval	Mean for Site	Stdev
7 Mile Slough	Benthos	Diquat	Treated	Chironomidae	Pre-App	12.2	5.5
7 Mile Slough	Benthos	Diquat	Treated	Collectors	Pre-App	70.8	9.5
7 Mile Slough	Benthos	Diquat	Treated	Diptera	Pre-App	12.2	5.5
7 Mile Slough	Benthos	Diquat	Treated	Diversity	Pre-App	0.9	0.1
7 Mile Slough	Benthos	Diquat	Treated	Dominant Family	Pre-App	30.7	8.1
7 Mile Slough	Benthos	Diquat	Treated	Dominant Species	Pre-App	30.7	8.1
7 Mile Slough	Benthos	Diquat	Treated	EPT Taxa	Pre-App	0.0	0.0
7 Mile Slough	Benthos	Diquat	Treated	Filterers	Pre-App	0.0	0.0
7 Mile Slough	Benthos	Diquat	Treated	Grazers	Pre-App	1.3	1.3
7 Mile Slough	Benthos	Diquat	Treated	Intolerant Taxa	Pre-App	0.6	1.0
7 Mile Slough	Benthos	Diquat	Treated	Odonata	Pre-App	1.6	0.9
7 Mile Slough	Benthos	Diquat	Treated	Oligochaeta	Pre-App	55.9	16.7
7 Mile Slough	Benthos	Diquat	Treated	Predators	Pre-App	27.9	9.2
7 Mile Slough	Benthos	Diquat	Treated	Shredders	Pre-App	0.0	0.0
7 Mile Slough	Benthos	Diquat	Treated	Species Richness	Pre-App	17.3	3.1
7 Mile Slough	Benthos	Diquat	Treated	ToleranceValue	Pre-App	7.7	0.5
7 Mile Slough	Benthos	Diquat	Treated	Tolerant Taxa	Pre-App	71.1	5.3
7 Mile Slough	Benthos	Diquat	Treated	Total Relative Abundance	Pre-App	276.7	112.4
Big Bear Lake	Benthos	Fluridone	Reference	Chironomidae	2 week post	22.1	13.5
Big Bear Lake	Benthos	Fluridone	Reference	Collectors	2 week post	79.7	13.5
Big Bear Lake	Benthos	Fluridone	Reference	Diptera	2 week post	22.6	14.1
Big Bear Lake	Benthos	Fluridone	Reference	Diversity	2 week post	0.8	0.0
Big Bear Lake	Benthos	Fluridone	Reference	Dominant Family	2 week post	37.6	1.1
Big Bear Lake	Benthos	Fluridone	Reference	Dominant Species	2 week post	37.6	1.1
Big Bear Lake	Benthos	Fluridone	Reference	EPT Taxa	2 week post	0.0	0.0
Big Bear Lake	Benthos	Fluridone	Reference	Filterers	2 week post	0.5	0.5
Big Bear Lake	Benthos	Fluridone	Reference	Grazers	2 week post	0.6	1.0
Big Bear Lake	Benthos	Fluridone	Reference	Intolerant Taxa	2 week post	0.0	0.0
Big Bear Lake	Benthos	Fluridone	Reference	Odonata	2 week post	0.0	0.0
Big Bear Lake	Benthos	Fluridone	Reference	Oligochaeta	2 week post	74.2	18.4
Big Bear Lake	Benthos	Fluridone	Reference	Predators	2 week post	19.3	14.5
Big Bear Lake	Benthos	Fluridone	Reference	Shredders	2 week post	0.0	0.0
Big Bear Lake	Benthos	Fluridone	Reference	Species Richness	2 week post	16.0	3.6
Big Bear Lake	Benthos	Fluridone	Reference	ToleranceValue	2 week post	9.5	0.2
Big Bear Lake	Benthos	Fluridone	Reference	Tolerant Taxa	2 week post	95.2	3.3
Big Bear Lake	Benthos	Fluridone	Reference	Total Relative Abundance	2 week post	332.0	287.5
Big Bear Lake	Benthos	Fluridone	Treated	Chironomidae	2 week post	31.4	25.1
Big Bear Lake	Benthos	Fluridone	Treated	Collectors	2 week post	59.8	24.7
Big Bear Lake	Benthos	Fluridone	Treated	Diptera	2 week post	31.8	25.1
Big Bear Lake	Benthos	Fluridone	Treated	Diversity	2 week post	0.7	0.1
Big Bear Lake	Benthos	Fluridone	Treated	Dominant Family	2 week post	40.7	10.0
Big Bear Lake	Benthos	Fluridone	Treated	Dominant Species	2 week post	40.7	10.0
Big Bear Lake	Benthos	Fluridone	Treated	EPT Taxa	2 week post	0.0	0.0
Big Bear Lake	Benthos	Fluridone	Treated	Filterers	2 week post	0.0	0.0
Big Bear Lake	Benthos	Fluridone	Treated	Grazers	2 week post	5.9	12.3
Big Bear Lake	Benthos	Fluridone	Treated	Intolerant Taxa	2 week post	0.0	0.0
Big Bear Lake	Benthos	Fluridone	Treated	Odonata	2 week post	0.4	0.6
Big Bear Lake	Benthos	Fluridone	Treated	Oligochaeta	2 week post	66.8	24.5
Big Bear Lake	Benthos	Fluridone	Treated	Predators	2 week post	34.4	24.4
Big Bear Lake	Benthos	Fluridone	Treated	Shredders	2 week post	0.0	0.0
Big Bear Lake	Benthos	Fluridone	Treated	Species Richness	2 week post	9.1	2.5
Big Bear Lake	Benthos	Fluridone	Treated	ToleranceValue	2 week post	9.2	0.9
Big Bear Lake	Benthos	Fluridone	Treated	Tolerant Taxa	2 week post	90.8	13.6
Big Bear Lake	Benthos	Fluridone	Treated	Total Relative Abundance	2 week post	190.6	125.3
Bon Tempe Reservoir	Benthos	Copper	Treated	Chironomidae	Pre-App	37.0	13.4
Bon Tempe Reservoir	Benthos	Copper	Treated	Collectors	Pre-App	64.6	12.9
Bon Tempe Reservoir	Benthos	Copper	Treated	Diptera	Pre-App	38.2	12.4
Bon Tempe Reservoir	Benthos	Copper	Treated	Diversity	Pre-App	1.2	0.3
Bon Tempe Reservoir	Benthos	Copper	Treated	Dominant Family	Pre-App	55.5	12.1
Bon Tempe Reservoir	Benthos	Copper	Treated	Dominant Species	Pre-App	54.4	13.2
Bon Tempe Reservoir	Benthos	Copper	Treated	EPT Taxa	Pre-App	0.0	0.0
Bon Tempe Reservoir	Benthos	Copper	Treated	Filterers	Pre-App	3.2	4.8
Bon Tempe Reservoir	Benthos	Copper	Treated	Grazers	Pre-App	7.4	10.2
Bon Tempe Reservoir	Benthos	Copper	Treated	Intolerant Taxa	Pre-App	0.0	0.0
Bon Tempe Reservoir	Benthos	Copper	Treated	Odonata	Pre-App	0.0	0.0

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SiteName	SampleType	Pesticide	StationType	Metric	Application Interval	Mean for Site	Stdev
Bon Tempe Reservoir	Benthos	Copper	Treated	Oligochaeta	Pre-App	57.3	11.8
Bon Tempe Reservoir	Benthos	Copper	Treated	Predators	Pre-App	24.7	12.2
Bon Tempe Reservoir	Benthos	Copper	Treated	Shredders	Pre-App	0.0	0.0
Bon Tempe Reservoir	Benthos	Copper	Treated	Species Richness	Pre-App	5.6	1.8
Bon Tempe Reservoir	Benthos	Copper	Treated	ToleranceValue	Pre-App	9.1	0.5
Bon Tempe Reservoir	Benthos	Copper	Treated	Tolerant Taxa	Pre-App	83.1	13.5
Bon Tempe Reservoir	Benthos	Copper	Treated	Total Relative Abundance	Pre-App	28.4	14.0
Bon Tempe Reservoir	Benthos	Copper	Treated	Chironomidae	6 week post	34.0	16.7
Bon Tempe Reservoir	Benthos	Copper	Treated	Collectors	6 week post	60.7	20.0
Bon Tempe Reservoir	Benthos	Copper	Treated	Diptera	6 week post	38.7	21.2
Bon Tempe Reservoir	Benthos	Copper	Treated	Diversity	6 week post	0.8	0.1
Bon Tempe Reservoir	Benthos	Copper	Treated	Dominant Family	6 week post	35.8	11.6
Bon Tempe Reservoir	Benthos	Copper	Treated	Dominant Species	6 week post	35.8	11.6
Bon Tempe Reservoir	Benthos	Copper	Treated	EPT Taxa	6 week post	0.0	0.0
Bon Tempe Reservoir	Benthos	Copper	Treated	Filterers	6 week post	15.2	17.5
Bon Tempe Reservoir	Benthos	Copper	Treated	Grazers	6 week post	0.9	2.1
Bon Tempe Reservoir	Benthos	Copper	Treated	Intolerant Taxa	6 week post	0.0	0.0
Bon Tempe Reservoir	Benthos	Copper	Treated	Odonata	6 week post	0.0	0.0
Bon Tempe Reservoir	Benthos	Copper	Treated	Oligochaeta	6 week post	53.6	20.1
Bon Tempe Reservoir	Benthos	Copper	Treated	Predators	6 week post	23.2	13.2
Bon Tempe Reservoir	Benthos	Copper	Treated	Shredders	6 week post	0.0	0.0
Bon Tempe Reservoir	Benthos	Copper	Treated	Species Richness	6 week post	10.9	3.0
Bon Tempe Reservoir	Benthos	Copper	Treated	ToleranceValue	6 week post	8.3	0.8
Bon Tempe Reservoir	Benthos	Copper	Treated	Tolerant Taxa	6 week post	75.3	19.2
Bon Tempe Reservoir	Benthos	Copper	Treated	Total Relative Abundance	6 week post	145.4	53.8
Bon Tempe Reservoir	Benthos	Copper	Treated	Chironomidae	2 week post	34.4	16.9
Bon Tempe Reservoir	Benthos	Copper	Treated	Collectors	2 week post	63.8	18.7
Bon Tempe Reservoir	Benthos	Copper	Treated	Diptera	2 week post	34.9	17.4
Bon Tempe Reservoir	Benthos	Copper	Treated	Diversity	2 week post	0.7	0.1
Bon Tempe Reservoir	Benthos	Copper	Treated	Dominant Family	2 week post	37.6	7.7
Bon Tempe Reservoir	Benthos	Copper	Treated	Dominant Species	2 week post	37.6	7.7
Bon Tempe Reservoir	Benthos	Copper	Treated	EPT Taxa	2 week post	0.0	0.0
Bon Tempe Reservoir	Benthos	Copper	Treated	Filterers	2 week post	7.0	5.2
Bon Tempe Reservoir	Benthos	Copper	Treated	Grazers	2 week post	8.2	6.2
Bon Tempe Reservoir	Benthos	Copper	Treated	Intolerant Taxa	2 week post	0.0	0.0
Bon Tempe Reservoir	Benthos	Copper	Treated	Odonata	2 week post	0.0	0.0
Bon Tempe Reservoir	Benthos	Copper	Treated	Oligochaeta	2 week post	50.2	20.7
Bon Tempe Reservoir	Benthos	Copper	Treated	Predators	2 week post	21.0	16.5
Bon Tempe Reservoir	Benthos	Copper	Treated	Shredders	2 week post	0.0	0.0
Bon Tempe Reservoir	Benthos	Copper	Treated	Species Richness	2 week post	10.7	2.8
Bon Tempe Reservoir	Benthos	Copper	Treated	ToleranceValue	2 week post	8.7	0.4
Bon Tempe Reservoir	Benthos	Copper	Treated	Tolerant Taxa	2 week post	83.7	9.1
Bon Tempe Reservoir	Benthos	Copper	Treated	Total Relative Abundance	2 week post	171.6	99.7
Bymes Canal	Benthos	Copper	Treated	Chironomidae	Pre-App	70.6	39.1
Bymes Canal	Benthos	Copper	Treated	Collectors	Pre-App	50.4	23.2
Bymes Canal	Benthos	Copper	Treated	Diptera	Pre-App	71.9	37.9
Bymes Canal	Benthos	Copper	Treated	Diversity	Pre-App	0.7	0.0
Bymes Canal	Benthos	Copper	Treated	Dominant Family	Pre-App	41.6	3.9
Bymes Canal	Benthos	Copper	Treated	Dominant Species	Pre-App	41.6	3.9
Bymes Canal	Benthos	Copper	Treated	EPT Taxa	Pre-App	0.2	0.3
Bymes Canal	Benthos	Copper	Treated	Filterers	Pre-App	11.7	13.8
Bymes Canal	Benthos	Copper	Treated	Grazers	Pre-App	25.6	24.4
Bymes Canal	Benthos	Copper	Treated	Intolerant Taxa	Pre-App	0.0	0.0
Bymes Canal	Benthos	Copper	Treated	Odonata	Pre-App	0.0	0.0
Bymes Canal	Benthos	Copper	Treated	Oligochaeta	Pre-App	19.4	27.5
Bymes Canal	Benthos	Copper	Treated	Predators	Pre-App	12.0	14.7
Bymes Canal	Benthos	Copper	Treated	Shredders	Pre-App	0.2	0.3
Bymes Canal	Benthos	Copper	Treated	Species Richness	Pre-App	11.3	2.8
Bymes Canal	Benthos	Copper	Treated	ToleranceValue	Pre-App	7.0	0.3
Bymes Canal	Benthos	Copper	Treated	Tolerant Taxa	Pre-App	25.5	16.0
Bymes Canal	Benthos	Copper	Treated	Total Relative Abundance	Pre-App	290.3	226.7
Bymes Canal	Benthos	Copper	Treated	Chironomidae	2 week post	45.8	53.7
Bymes Canal	Benthos	Copper	Treated	Collectors	2 week post	21.9	21.6
Bymes Canal	Benthos	Copper	Treated	Diptera	2 week post	45.9	53.9
Bymes Canal	Benthos	Copper	Treated	Diversity	2 week post	0.9	0.2

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SiteName	SampleType	Pesticide	StationType	Metric	Application Interval	Mean for Site	Stdev
Byrnes Canal	Benthos	Copper	Treated	Dominant Family	2 week post	34.3	9.9
Byrnes Canal	Benthos	Copper	Treated	Dominant Species	2 week post	34.3	9.9
Byrnes Canal	Benthos	Copper	Treated	EPT Taxa	2 week post	0.0	0.0
Byrnes Canal	Benthos	Copper	Treated	Filterers	2 week post	2.5	2.8
Byrnes Canal	Benthos	Copper	Treated	Grazers	2 week post	45.5	20.5
Byrnes Canal	Benthos	Copper	Treated	Intolerant Taxa	2 week post	0.0	0.0
Byrnes Canal	Benthos	Copper	Treated	Odonata	2 week post	0.0	0.0
Byrnes Canal	Benthos	Copper	Treated	Oligochaeta	2 week post	6.2	0.8
Byrnes Canal	Benthos	Copper	Treated	Predators	2 week post	30.1	3.9
Byrnes Canal	Benthos	Copper	Treated	Shredders	2 week post	0.0	0.0
Byrnes Canal	Benthos	Copper	Treated	Species Richness	2 week post	24.2	6.4
Byrnes Canal	Benthos	Copper	Treated	ToleranceValue	2 week post	7.4	0.2
Byrnes Canal	Benthos	Copper	Treated	Tolerant Taxa	2 week post	54.0	34.9
Byrnes Canal	Benthos	Copper	Treated	Total Relative Abunda	2 week post	405.3	292.7
Costa Ponds	Benthos	Fluridone	Reference	Chironomidae	Pre-App	1.2	2.1
Costa Ponds	Benthos	Fluridone	Reference	Collectors	Pre-App	89.5	11.7
Costa Ponds	Benthos	Fluridone	Reference	Diptera	Pre-App	6.8	6.5
Costa Ponds	Benthos	Fluridone	Reference	Diversity	Pre-App	0.2	0.2
Costa Ponds	Benthos	Fluridone	Reference	Dominant Family	Pre-App	66.1	23.3
Costa Ponds	Benthos	Fluridone	Reference	Dominant Species	Pre-App	66.1	23.3
Costa Ponds	Benthos	Fluridone	Reference	EPT Taxa	Pre-App	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Filterers	Pre-App	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Grazers	Pre-App	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Intolerant Taxa	Pre-App	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Odonata	Pre-App	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Oligochaeta	Pre-App	101.0	5.9
Costa Ponds	Benthos	Fluridone	Reference	Predators	Pre-App	10.5	11.7
Costa Ponds	Benthos	Fluridone	Reference	Shredders	Pre-App	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Species Richness	Pre-App	4.7	2.5
Costa Ponds	Benthos	Fluridone	Reference	ToleranceValue	Pre-App	5.0	4.4
Costa Ponds	Benthos	Fluridone	Reference	Tolerant Taxa	Pre-App	20.0	34.6
Costa Ponds	Benthos	Fluridone	Reference	Total Relative Abunda	Pre-App	32.3	18.8
Costa Ponds	Benthos	Fluridone	Treated	Chironomidae	Pre-App	35.0	19.2
Costa Ponds	Benthos	Fluridone	Treated	Collectors	Pre-App	53.4	15.0
Costa Ponds	Benthos	Fluridone	Treated	Diptera	Pre-App	37.9	19.0
Costa Ponds	Benthos	Fluridone	Treated	Diversity	Pre-App	0.5	0.1
Costa Ponds	Benthos	Fluridone	Treated	Dominant Family	Pre-App	45.0	9.2
Costa Ponds	Benthos	Fluridone	Treated	Dominant Species	Pre-App	45.0	9.2
Costa Ponds	Benthos	Fluridone	Treated	EPT Taxa	Pre-App	0.0	0.0
Costa Ponds	Benthos	Fluridone	Treated	Filterers	Pre-App	0.2	0.3
Costa Ponds	Benthos	Fluridone	Treated	Grazers	Pre-App	3.9	7.9
Costa Ponds	Benthos	Fluridone	Treated	Intolerant Taxa	Pre-App	0.0	0.0
Costa Ponds	Benthos	Fluridone	Treated	Odonata	Pre-App	0.0	0.0
Costa Ponds	Benthos	Fluridone	Treated	Oligochaeta	Pre-App	77.5	19.9
Costa Ponds	Benthos	Fluridone	Treated	Predators	Pre-App	42.5	20.3
Costa Ponds	Benthos	Fluridone	Treated	Shredders	Pre-App	0.0	0.0
Costa Ponds	Benthos	Fluridone	Treated	Species Richness	Pre-App	6.3	0.6
Costa Ponds	Benthos	Fluridone	Treated	ToleranceValue	Pre-App	8.9	0.2
Costa Ponds	Benthos	Fluridone	Treated	Tolerant Taxa	Pre-App	93.9	4.8
Costa Ponds	Benthos	Fluridone	Treated	Total Relative Abunda	Pre-App	41.3	19.6
Costa Ponds	Benthos	Fluridone	Reference	Chironomidae	6 week post	1.7	2.9
Costa Ponds	Benthos	Fluridone	Reference	Collectors	6 week post	97.3	2.5
Costa Ponds	Benthos	Fluridone	Reference	Diptera	6 week post	2.7	2.5
Costa Ponds	Benthos	Fluridone	Reference	Diversity	6 week post	0.2	0.1
Costa Ponds	Benthos	Fluridone	Reference	Dominant Family	6 week post	96.1	1.0
Costa Ponds	Benthos	Fluridone	Reference	Dominant Species	6 week post	96.1	1.0
Costa Ponds	Benthos	Fluridone	Reference	EPT Taxa	6 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Filterers	6 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Grazers	6 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Intolerant Taxa	6 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Odonata	6 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Oligochaeta	6 week post	97.3	2.5
Costa Ponds	Benthos	Fluridone	Reference	Predators	6 week post	2.7	2.5
Costa Ponds	Benthos	Fluridone	Reference	Shredders	6 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Species Richness	6 week post	2.0	0.0

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Costa Ponds	Benthos	Fluridone	Reference	ToleranceValue	6 week post	5.0	4.6
Costa Ponds	Benthos	Fluridone	Reference	Tolerant Taxa	6 week post	33.3	57.7
Costa Ponds	Benthos	Fluridone	Reference	Total Relative Abundance	6 week post	26.3	6.0
Costa Ponds	Benthos	Fluridone	Treated	Chironomidae	6 week post	37.6	22.5
Costa Ponds	Benthos	Fluridone	Treated	Collectors	6 week post	53.8	20.2
Costa Ponds	Benthos	Fluridone	Treated	Diptera	6 week post	47.4	28.5
Costa Ponds	Benthos	Fluridone	Treated	Diversity	6 week post	1.4	0.2
Costa Ponds	Benthos	Fluridone	Treated	Dominant Family	6 week post	43.5	13.6
Costa Ponds	Benthos	Fluridone	Treated	Dominant Species	6 week post	37.3	16.2
Costa Ponds	Benthos	Fluridone	Treated	EPT Taxa	6 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Treated	Filterers	6 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Treated	Grazers	6 week post	0.2	0.4
Costa Ponds	Benthos	Fluridone	Treated	Intolerant Taxa	6 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Treated	Odonata	6 week post	0.2	0.4
Costa Ponds	Benthos	Fluridone	Treated	Oligochaeta	6 week post	48.9	31.4
Costa Ponds	Benthos	Fluridone	Treated	Predators	6 week post	46.0	20.1
Costa Ponds	Benthos	Fluridone	Treated	Shredders	6 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Treated	Species Richness	6 week post	6.3	0.5
Costa Ponds	Benthos	Fluridone	Treated	ToleranceValue	6 week post	8.9	0.8
Costa Ponds	Benthos	Fluridone	Treated	Tolerant Taxa	6 week post	80.9	17.2
Costa Ponds	Benthos	Fluridone	Treated	Total Relative Abundance	6 week post	26.9	9.5
Costa Ponds	Benthos	Fluridone	Reference	Chironomidae	2 week post	6.1	2.7
Costa Ponds	Benthos	Fluridone	Reference	Collectors	2 week post	84.4	10.4
Costa Ponds	Benthos	Fluridone	Reference	Diptera	2 week post	15.1	10.0
Costa Ponds	Benthos	Fluridone	Reference	Diversity	2 week post	0.7	0.3
Costa Ponds	Benthos	Fluridone	Reference	Dominant Family	2 week post	81.2	10.1
Costa Ponds	Benthos	Fluridone	Reference	Dominant Species	2 week post	81.2	10.1
Costa Ponds	Benthos	Fluridone	Reference	EPT Taxa	2 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Filterers	2 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Grazers	2 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Intolerant Taxa	2 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Odonata	2 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Oligochaeta	2 week post	84.9	10.0
Costa Ponds	Benthos	Fluridone	Reference	Predators	2 week post	15.6	10.4
Costa Ponds	Benthos	Fluridone	Reference	Shredders	2 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Reference	Species Richness	2 week post	4.0	1.0
Costa Ponds	Benthos	Fluridone	Reference	ToleranceValue	2 week post	9.0	0.9
Costa Ponds	Benthos	Fluridone	Reference	Tolerant Taxa	2 week post	75.2	22.6
Costa Ponds	Benthos	Fluridone	Reference	Total Relative Abundance	2 week post	23.0	7.0
Costa Ponds	Benthos	Fluridone	Treated	Chironomidae	2 week post	29.9	12.7
Costa Ponds	Benthos	Fluridone	Treated	Collectors	2 week post	62.0	17.2
Costa Ponds	Benthos	Fluridone	Treated	Diptera	2 week post	34.2	16.7
Costa Ponds	Benthos	Fluridone	Treated	Diversity	2 week post	1.4	0.5
Costa Ponds	Benthos	Fluridone	Treated	Dominant Family	2 week post	41.4	10.3
Costa Ponds	Benthos	Fluridone	Treated	Dominant Species	2 week post	35.9	14.0
Costa Ponds	Benthos	Fluridone	Treated	EPT Taxa	2 week post	1.4	1.6
Costa Ponds	Benthos	Fluridone	Treated	Filterers	2 week post	0.5	0.9
Costa Ponds	Benthos	Fluridone	Treated	Grazers	2 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Treated	Intolerant Taxa	2 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Treated	Odonata	2 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Treated	Oligochaeta	2 week post	65.3	17.9
Costa Ponds	Benthos	Fluridone	Treated	Predators	2 week post	37.5	18.0
Costa Ponds	Benthos	Fluridone	Treated	Shredders	2 week post	0.0	0.0
Costa Ponds	Benthos	Fluridone	Treated	Species Richness	2 week post	6.1	1.9
Costa Ponds	Benthos	Fluridone	Treated	ToleranceValue	2 week post	9.0	0.4
Costa Ponds	Benthos	Fluridone	Treated	Tolerant Taxa	2 week post	88.3	8.6
Costa Ponds	Benthos	Fluridone	Treated	Total Relative Abundance	2 week post	23.6	8.1
Doris Drain	Benthos	Glyphosate	Treated	Chironomidae	3 hours post	16.8	4.6
Doris Drain	Benthos	Glyphosate	Treated	Collectors	3 hours post	94.5	1.1
Doris Drain	Benthos	Glyphosate	Treated	Diptera	3 hours post	16.9	4.8
Doris Drain	Benthos	Glyphosate	Treated	Diversity	3 hours post	0.8	0.0
Doris Drain	Benthos	Glyphosate	Treated	Dominant Family	3 hours post	29.8	1.2
Doris Drain	Benthos	Glyphosate	Treated	Dominant Species	3 hours post	29.8	1.2
Doris Drain	Benthos	Glyphosate	Treated	EPT Taxa	3 hours post	3.7	3.2
Doris Drain	Benthos	Glyphosate	Treated	Filterers	3 hours post	1.1	1.1

Appendix Table 3. APMP Phase 2 Mean values and std deviation for biological metrics by site

SiteName	SampleType	Pesticide	StationType	Metric	Application Interval	Mean for Site	Stdev
Doris Drain	Benthos	Glyphosate	Treated	Grazers	3 hours post	4.0	2.0
Doris Drain	Benthos	Glyphosate	Treated	Intolerant Taxa	3 hours post	0.0	0.0
Doris Drain	Benthos	Glyphosate	Treated	Odonata	3 hours post	0.0	0.0
Doris Drain	Benthos	Glyphosate	Treated	Oligochaeta	3 hours post	104.4	13.4
Doris Drain	Benthos	Glyphosate	Treated	Predators	3 hours post	0.4	0.3
Doris Drain	Benthos	Glyphosate	Treated	Shredders	3 hours post	0.0	0.0
Doris Drain	Benthos	Glyphosate	Treated	Species Richness	3 hours post	12.3	1.2
Doris Drain	Benthos	Glyphosate	Treated	ToleranceValue	3 hours post	9.4	0.2
Doris Drain	Benthos	Glyphosate	Treated	Tolerant Taxa	3 hours post	85.0	4.0
Doris Drain	Benthos	Glyphosate	Treated	Total Relative Abundance	3 hours post	615.7	3.5
East Fork Russian River	Benthos	Copper	Treated	Chironomidae	Pre-App	8.3	6.7
East Fork Russian River	Benthos	Copper	Treated	Collectors	Pre-App	81.0	4.0
East Fork Russian River	Benthos	Copper	Treated	Diptera	Pre-App	8.7	6.8
East Fork Russian River	Benthos	Copper	Treated	Diversity	Pre-App	1.5	0.1
East Fork Russian River	Benthos	Copper	Treated	Dominant Family	Pre-App	56.0	14.5
East Fork Russian River	Benthos	Copper	Treated	Dominant Species	Pre-App	56.0	14.5
East Fork Russian River	Benthos	Copper	Treated	EPT Taxa	Pre-App	0.9	1.5
East Fork Russian River	Benthos	Copper	Treated	Filterers	Pre-App	8.3	7.1
East Fork Russian River	Benthos	Copper	Treated	Grazers	Pre-App	7.0	3.3
East Fork Russian River	Benthos	Copper	Treated	Intolerant Taxa	Pre-App	0.0	0.0
East Fork Russian River	Benthos	Copper	Treated	Odonata	Pre-App	0.7	0.6
East Fork Russian River	Benthos	Copper	Treated	Oligochaeta	Pre-App	75.1	1.5
East Fork Russian River	Benthos	Copper	Treated	Predators	Pre-App	3.6	0.7
East Fork Russian River	Benthos	Copper	Treated	Shredders	Pre-App	0.0	0.0
East Fork Russian River	Benthos	Copper	Treated	Species Richness	Pre-App	16.7	7.8
East Fork Russian River	Benthos	Copper	Treated	ToleranceValue	Pre-App	9.2	0.2
East Fork Russian River	Benthos	Copper	Treated	Tolerant Taxa	Pre-App	83.4	3.3
East Fork Russian River	Benthos	Copper	Treated	Total Relative Abundance	Pre-App	420.7	254.4
East Fork Russian River	Benthos	Copper	Treated	Chironomidae	2 week post	6.3	4.6
East Fork Russian River	Benthos	Copper	Treated	Collectors	2 week post	88.7	3.0
East Fork Russian River	Benthos	Copper	Treated	Diptera	2 week post	6.8	5.2
East Fork Russian River	Benthos	Copper	Treated	Diversity	2 week post	0.5	0.1
East Fork Russian River	Benthos	Copper	Treated	Dominant Family	2 week post	54.2	14.2
East Fork Russian River	Benthos	Copper	Treated	Dominant Species	2 week post	54.2	14.2
East Fork Russian River	Benthos	Copper	Treated	EPT Taxa	2 week post	1.3	1.7
East Fork Russian River	Benthos	Copper	Treated	Filterers	2 week post	5.5	2.3
East Fork Russian River	Benthos	Copper	Treated	Grazers	2 week post	3.6	0.9
East Fork Russian River	Benthos	Copper	Treated	Intolerant Taxa	2 week post	0.4	0.4
East Fork Russian River	Benthos	Copper	Treated	Odonata	2 week post	0.5	0.4
East Fork Russian River	Benthos	Copper	Treated	Oligochaeta	2 week post	84.8	5.1
East Fork Russian River	Benthos	Copper	Treated	Predators	2 week post	2.3	1.1
East Fork Russian River	Benthos	Copper	Treated	Shredders	2 week post	0.0	0.0
East Fork Russian River	Benthos	Copper	Treated	Species Richness	2 week post	20.0	5.3
East Fork Russian River	Benthos	Copper	Treated	ToleranceValue	2 week post	9.3	0.1
East Fork Russian River	Benthos	Copper	Treated	Tolerant Taxa	2 week post	89.3	4.2
East Fork Russian River	Benthos	Copper	Treated	Total Relative Abundance	2 week post	606.7	106.5
Lake Lagunitas	Benthos	Copper	Reference	Chironomidae	Pre-App	72.8	3.1
Lake Lagunitas	Benthos	Copper	Reference	Collectors	Pre-App	28.9	11.5
Lake Lagunitas	Benthos	Copper	Reference	Diptera	Pre-App	77.3	6.1
Lake Lagunitas	Benthos	Copper	Reference	Diversity	Pre-App	1.7	0.3
Lake Lagunitas	Benthos	Copper	Reference	Dominant Family	Pre-App	42.0	7.4
Lake Lagunitas	Benthos	Copper	Reference	Dominant Species	Pre-App	21.5	3.0
Lake Lagunitas	Benthos	Copper	Reference	EPT Taxa	Pre-App	0.0	0.0
Lake Lagunitas	Benthos	Copper	Reference	Filterers	Pre-App	15.4	16.8
Lake Lagunitas	Benthos	Copper	Reference	Grazers	Pre-App	1.8	3.0
Lake Lagunitas	Benthos	Copper	Reference	Intolerant Taxa	Pre-App	0.0	0.0
Lake Lagunitas	Benthos	Copper	Reference	Odonata	Pre-App	0.0	0.0
Lake Lagunitas	Benthos	Copper	Reference	Oligochaeta	Pre-App	14.2	7.8
Lake Lagunitas	Benthos	Copper	Reference	Predators	Pre-App	54.0	10.4
Lake Lagunitas	Benthos	Copper	Reference	Shredders	Pre-App	0.0	0.0
Lake Lagunitas	Benthos	Copper	Reference	Species Richness	Pre-App	8.7	3.5
Lake Lagunitas	Benthos	Copper	Reference	ToleranceValue	Pre-App	8.6	0.5
Lake Lagunitas	Benthos	Copper	Reference	Tolerant Taxa	Pre-App	79.3	11.0
Lake Lagunitas	Benthos	Copper	Reference	Total Relative Abundance	Pre-App	42.3	26.7
Lake Lagunitas	Benthos	Copper	Reference	Chironomidae	6 week post	17.5	5.9

Appendix Table 3. APMP Phase 2 Mean values and std deviation for biological metrics by site

SiteName	SampleType	Pesticide	StationType	Metric	Application Interval	Mean for Site	Stdev
Lake Lagunitas	Benthos	Copper	Reference	Collectors	6 week post	57.0	18.7
Lake Lagunitas	Benthos	Copper	Reference	Diptera	6 week post	19.1	6.6
Lake Lagunitas	Benthos	Copper	Reference	Diversity	6 week post	0.9	0.1
Lake Lagunitas	Benthos	Copper	Reference	Dominant Family	6 week post	37.6	9.4
Lake Lagunitas	Benthos	Copper	Reference	Dominant Species	6 week post	37.6	9.4
Lake Lagunitas	Benthos	Copper	Reference	EPT Taxa	6 week post	0.0	0.0
Lake Lagunitas	Benthos	Copper	Reference	Filterers	6 week post	3.2	3.2
Lake Lagunitas	Benthos	Copper	Reference	Grazers	6 week post	17.6	14.2
Lake Lagunitas	Benthos	Copper	Reference	Intolerant Taxa	6 week post	0.0	0.0
Lake Lagunitas	Benthos	Copper	Reference	Odonata	6 week post	0.0	0.0
Lake Lagunitas	Benthos	Copper	Reference	Oligochaeta	6 week post	42.2	26.9
Lake Lagunitas	Benthos	Copper	Reference	Predators	6 week post	22.2	9.8
Lake Lagunitas	Benthos	Copper	Reference	Shredders	6 week post	0.0	0.0
Lake Lagunitas	Benthos	Copper	Reference	Species Richness	6 week post	17.7	5.0
Lake Lagunitas	Benthos	Copper	Reference	ToleranceValue	6 week post	6.8	0.5
Lake Lagunitas	Benthos	Copper	Reference	Tolerant Taxa	6 week post	53.6	19.8
Lake Lagunitas	Benthos	Copper	Reference	Total Relative Abunda	6 week post	250.3	147.1
Lake Lagunitas	Benthos	Copper	Reference	Chironomidae	2 week post	24.8	14.6
Lake Lagunitas	Benthos	Copper	Reference	Collectors	2 week post	60.1	7.6
Lake Lagunitas	Benthos	Copper	Reference	Diptera	2 week post	25.7	14.4
Lake Lagunitas	Benthos	Copper	Reference	Diversity	2 week post	1.1	0.0
Lake Lagunitas	Benthos	Copper	Reference	Dominant Family	2 week post	19.5	2.9
Lake Lagunitas	Benthos	Copper	Reference	Dominant Species	2 week post	19.5	2.9
Lake Lagunitas	Benthos	Copper	Reference	EPT Taxa	2 week post	0.0	0.0
Lake Lagunitas	Benthos	Copper	Reference	Filterers	2 week post	19.0	12.1
Lake Lagunitas	Benthos	Copper	Reference	Grazers	2 week post	8.8	3.8
Lake Lagunitas	Benthos	Copper	Reference	Intolerant Taxa	2 week post	0.0	0.0
Lake Lagunitas	Benthos	Copper	Reference	Odonata	2 week post	0.5	0.8
Lake Lagunitas	Benthos	Copper	Reference	Oligochaeta	2 week post	58.2	23.0
Lake Lagunitas	Benthos	Copper	Reference	Predators	2 week post	12.1	6.1
Lake Lagunitas	Benthos	Copper	Reference	Shredders	2 week post	0.0	0.0
Lake Lagunitas	Benthos	Copper	Reference	Species Richness	2 week post	19.7	2.1
Lake Lagunitas	Benthos	Copper	Reference	ToleranceValue	2 week post	6.7	0.2
Lake Lagunitas	Benthos	Copper	Reference	Tolerant Taxa	2 week post	50.1	13.0
Lake Lagunitas	Benthos	Copper	Reference	Total Relative Abunda	2 week post	80.7	17.8
Nicasio Reservoir	Benthos	Copper	Reference	Chironomidae	Pre-App	31.9	13.3
Nicasio Reservoir	Benthos	Copper	Reference	Collectors	Pre-App	72.4	5.9
Nicasio Reservoir	Benthos	Copper	Reference	Diptera	Pre-App	31.9	13.3
Nicasio Reservoir	Benthos	Copper	Reference	Diversity	Pre-App	0.7	0.2
Nicasio Reservoir	Benthos	Copper	Reference	Dominant Family	Pre-App	37.8	12.2
Nicasio Reservoir	Benthos	Copper	Reference	Dominant Species	Pre-App	37.8	12.2
Nicasio Reservoir	Benthos	Copper	Reference	EPT Taxa	Pre-App	0.0	0.0
Nicasio Reservoir	Benthos	Copper	Reference	Filterers	Pre-App	5.4	4.5
Nicasio Reservoir	Benthos	Copper	Reference	Grazers	Pre-App	2.6	3.7
Nicasio Reservoir	Benthos	Copper	Reference	Intolerant Taxa	Pre-App	0.0	0.0
Nicasio Reservoir	Benthos	Copper	Reference	Odonata	Pre-App	0.0	0.0
Nicasio Reservoir	Benthos	Copper	Reference	Oligochaeta	Pre-App	49.4	14.6
Nicasio Reservoir	Benthos	Copper	Reference	Predators	Pre-App	19.7	2.3
Nicasio Reservoir	Benthos	Copper	Reference	Shredders	Pre-App	0.0	0.0
Nicasio Reservoir	Benthos	Copper	Reference	Species Richness	Pre-App	8.7	1.9
Nicasio Reservoir	Benthos	Copper	Reference	ToleranceValue	Pre-App	9.6	0.2
Nicasio Reservoir	Benthos	Copper	Reference	Tolerant Taxa	Pre-App	96.1	4.7
Nicasio Reservoir	Benthos	Copper	Reference	Total Relative Abunda	Pre-App	91.3	39.6
Nicasio Reservoir	Benthos	Copper	Treated	Chironomidae	Pre-App	50.2	14.8
Nicasio Reservoir	Benthos	Copper	Treated	Collectors	Pre-App	46.7	31.7
Nicasio Reservoir	Benthos	Copper	Treated	Diptera	Pre-App	50.5	15.1
Nicasio Reservoir	Benthos	Copper	Treated	Diversity	Pre-App	0.7	0.0
Nicasio Reservoir	Benthos	Copper	Treated	Dominant Family	Pre-App	42.6	6.0
Nicasio Reservoir	Benthos	Copper	Treated	Dominant Species	Pre-App	42.6	6.0
Nicasio Reservoir	Benthos	Copper	Treated	EPT Taxa	Pre-App	0.0	0.0
Nicasio Reservoir	Benthos	Copper	Treated	Filterers	Pre-App	15.0	18.0
Nicasio Reservoir	Benthos	Copper	Treated	Grazers	Pre-App	1.9	1.9
Nicasio Reservoir	Benthos	Copper	Treated	Intolerant Taxa	Pre-App	0.3	0.5
Nicasio Reservoir	Benthos	Copper	Treated	Odonata	Pre-App	0.0	0.0
Nicasio Reservoir	Benthos	Copper	Treated	Oligochaeta	Pre-App	23.6	25.5

Appendix Table 3. APMP Phase 2 Mean values and std deviation for biological metrics by site

SiteName	SampleType	Pesticide	StationType	Metric	Application Interval	Mean for Site	Stdev
Nicasio Reservoir	Benthos	Copper	Treated	Predators	Pre-App	36.4	21.2
Nicasio Reservoir	Benthos	Copper	Treated	Shredders	Pre-App	0.0	0.0
Nicasio Reservoir	Benthos	Copper	Treated	Species Richness	Pre-App	7.7	1.2
Nicasio Reservoir	Benthos	Copper	Treated	ToleranceValue	Pre-App	9.1	0.3
Nicasio Reservoir	Benthos	Copper	Treated	Tolerant Taxa	Pre-App	93.5	2.4
Nicasio Reservoir	Benthos	Copper	Treated	Total Relative Abundance	Pre-App	42.1	26.2
Nicasio Reservoir	Benthos	Copper	Reference	Chironomidae	2 week post	23.1	6.1
Nicasio Reservoir	Benthos	Copper	Reference	Collectors	2 week post	88.2	6.6
Nicasio Reservoir	Benthos	Copper	Reference	Diptera	2 week post	23.1	6.1
Nicasio Reservoir	Benthos	Copper	Reference	Diversity	2 week post	0.7	0.1
Nicasio Reservoir	Benthos	Copper	Reference	Dominant Family	2 week post	39.9	4.9
Nicasio Reservoir	Benthos	Copper	Reference	Dominant Species	2 week post	39.9	4.9
Nicasio Reservoir	Benthos	Copper	Reference	EPT Taxa	2 week post	3.9	4.5
Nicasio Reservoir	Benthos	Copper	Reference	Filterers	2 week post	1.5	2.6
Nicasio Reservoir	Benthos	Copper	Reference	Grazers	2 week post	0.0	0.0
Nicasio Reservoir	Benthos	Copper	Reference	Intolerant Taxa	2 week post	0.0	0.0
Nicasio Reservoir	Benthos	Copper	Reference	Odonata	2 week post	0.0	0.0
Nicasio Reservoir	Benthos	Copper	Reference	Oligochaeta	2 week post	71.6	2.5
Nicasio Reservoir	Benthos	Copper	Reference	Predators	2 week post	10.3	4.0
Nicasio Reservoir	Benthos	Copper	Reference	Shredders	2 week post	0.0	0.0
Nicasio Reservoir	Benthos	Copper	Reference	Species Richness	2 week post	7.7	1.2
Nicasio Reservoir	Benthos	Copper	Reference	ToleranceValue	2 week post	9.8	0.1
Nicasio Reservoir	Benthos	Copper	Reference	Tolerant Taxa	2 week post	100.0	0.0
Nicasio Reservoir	Benthos	Copper	Reference	Total Relative Abundance	2 week post	144.3	11.7
Nicasio Reservoir	Benthos	Copper	Treated	Chironomidae	2 week post	56.9	13.8
Nicasio Reservoir	Benthos	Copper	Treated	Collectors	2 week post	50.9	10.7
Nicasio Reservoir	Benthos	Copper	Treated	Diptera	2 week post	57.2	14.4
Nicasio Reservoir	Benthos	Copper	Treated	Diversity	2 week post	0.8	0.1
Nicasio Reservoir	Benthos	Copper	Treated	Dominant Family	2 week post	33.6	3.9
Nicasio Reservoir	Benthos	Copper	Treated	Dominant Species	2 week post	33.6	3.9
Nicasio Reservoir	Benthos	Copper	Treated	EPT Taxa	2 week post	0.9	1.9
Nicasio Reservoir	Benthos	Copper	Treated	Filterers	2 week post	9.7	8.5
Nicasio Reservoir	Benthos	Copper	Treated	Grazers	2 week post	7.2	1.9
Nicasio Reservoir	Benthos	Copper	Treated	Intolerant Taxa	2 week post	0.0	0.0
Nicasio Reservoir	Benthos	Copper	Treated	Odonata	2 week post	0.0	0.0
Nicasio Reservoir	Benthos	Copper	Treated	Oligochaeta	2 week post	28.7	12.6
Nicasio Reservoir	Benthos	Copper	Treated	Predators	2 week post	32.2	8.0
Nicasio Reservoir	Benthos	Copper	Treated	Shredders	2 week post	0.0	0.0
Nicasio Reservoir	Benthos	Copper	Treated	Species Richness	2 week post	9.3	2.2
Nicasio Reservoir	Benthos	Copper	Treated	ToleranceValue	2 week post	8.9	0.3
Nicasio Reservoir	Benthos	Copper	Treated	Tolerant Taxa	2 week post	80.9	7.8
Nicasio Reservoir	Benthos	Copper	Treated	Total Relative Abundance	2 week post	52.4	33.1
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Chironomidae	Pre-App	43.8	21.3
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Collectors	Pre-App	19.0	1.8
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Diptera	Pre-App	43.8	21.3
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Diversity	Pre-App	1.0	0.0
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Dominant Family	Pre-App	25.8	8.6
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Dominant Species	Pre-App	25.8	8.6
Sand Bay Isle	Benthos	Diquat/Copper	Treated	EPT Taxa	Pre-App	0.0	0.0
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Filterers	Pre-App	28.5	9.8
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Grazers	Pre-App	33.8	22.3
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Intolerant Taxa	Pre-App	0.0	0.0
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Odonata	Pre-App	0.0	0.0
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Oligochaeta	Pre-App	6.9	1.9
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Predators	Pre-App	18.7	12.5
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Shredders	Pre-App	0.0	0.0
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Species Richness	Pre-App	18.7	4.0
Sand Bay Isle	Benthos	Diquat/Copper	Treated	ToleranceValue	Pre-App	7.9	0.0
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Tolerant Taxa	Pre-App	77.1	11.1
Sand Bay Isle	Benthos	Diquat/Copper	Treated	Total Relative Abundance	Pre-App	118.0	47.6
Sand Bay Isle	Benthos	Diquat	Treated	Chironomidae	2 week post	34.7	9.0
Sand Bay Isle	Benthos	Diquat	Treated	Collectors	2 week post	31.0	5.9
Sand Bay Isle	Benthos	Diquat	Treated	Diptera	2 week post	34.7	9.0
Sand Bay Isle	Benthos	Diquat	Treated	Diversity	2 week post	1.1	0.1
Sand Bay Isle	Benthos	Diquat	Treated	Dominant Family	2 week post	23.7	13.2

Appendix Table 3. APMP Phase 2 Mean values and std deviation for biological metrics by site

SiteName	SampleType	Pesticide	StationType	Metric	Application Interval	Mean for Site	Stdev
Sand Bay Isle	Benthos	Diquat	Treated	Dominant Species	2 week post	23.7	13.2
Sand Bay Isle	Benthos	Diquat	Treated	EPT Taxa	2 week post	0.0	0.0
Sand Bay Isle	Benthos	Diquat	Treated	Filterers	2 week post	16.8	9.2
Sand Bay Isle	Benthos	Diquat	Treated	Grazers	2 week post	36.9	19.4
Sand Bay Isle	Benthos	Diquat	Treated	Intolerant Taxa	2 week post	0.0	0.0
Sand Bay Isle	Benthos	Diquat	Treated	Odonata	2 week post	1.0	1.4
Sand Bay Isle	Benthos	Diquat	Treated	Oligochaeta	2 week post	31.6	5.9
Sand Bay Isle	Benthos	Diquat	Treated	Predators	2 week post	15.3	6.8
Sand Bay Isle	Benthos	Diquat	Treated	Shredders	2 week post	0.0	0.0
Sand Bay Isle	Benthos	Diquat	Treated	Species Richness	2 week post	21.3	5.1
Sand Bay Isle	Benthos	Diquat	Treated	ToleranceValue	2 week post	7.9	0.2
Sand Bay Isle	Benthos	Diquat	Treated	Tolerant Taxa	2 week post	81.3	8.0
Sand Bay Isle	Benthos	Diquat	Treated	Total Relative Abunda	2 week post	275.7	63.3
Sand Bay Isle	Benthos	Copper	Reference	Chironomidae	1 week post	2.7	1.8
Sand Bay Isle	Benthos	Copper	Reference	Collectors	1 week post	5.2	8.6
Sand Bay Isle	Benthos	Copper	Reference	Diptera	1 week post	2.7	1.8
Sand Bay Isle	Benthos	Copper	Reference	Diversity	1 week post	0.6	0.1
Sand Bay Isle	Benthos	Copper	Reference	Dominant Family	1 week post	46.8	10.7
Sand Bay Isle	Benthos	Copper	Reference	Dominant Species	1 week post	46.8	10.7
Sand Bay Isle	Benthos	Copper	Reference	EPT Taxa	1 week post	1.7	1.5
Sand Bay Isle	Benthos	Copper	Reference	Filterers	1 week post	0.2	0.3
Sand Bay Isle	Benthos	Copper	Reference	Grazers	1 week post	93.6	9.1
Sand Bay Isle	Benthos	Copper	Reference	Intolerant Taxa	1 week post	0.0	0.0
Sand Bay Isle	Benthos	Copper	Reference	Odonata	1 week post	0.1	0.2
Sand Bay Isle	Benthos	Copper	Reference	Oligochaeta	1 week post	12.1	2.6
Sand Bay Isle	Benthos	Copper	Reference	Predators	1 week post	1.0	0.9
Sand Bay Isle	Benthos	Copper	Reference	Shredders	1 week post	0.0	0.0
Sand Bay Isle	Benthos	Copper	Reference	Species Richness	1 week post	10.0	4.4
Sand Bay Isle	Benthos	Copper	Reference	ToleranceValue	1 week post	7.9	0.1
Sand Bay Isle	Benthos	Copper	Reference	Tolerant Taxa	1 week post	93.8	7.9
Sand Bay Isle	Benthos	Copper	Reference	Total Relative Abunda	1 week post	1729.0	2786.0
Sand Bay Isle	Benthos	Copper	Treated	Chironomidae	1 week post	1.4	1.3
Sand Bay Isle	Benthos	Copper	Treated	Collectors	1 week post	22.3	12.2
Sand Bay Isle	Benthos	Copper	Treated	Diptera	1 week post	1.4	1.3
Sand Bay Isle	Benthos	Copper	Treated	Diversity	1 week post	0.7	0.0
Sand Bay Isle	Benthos	Copper	Treated	Dominant Family	1 week post	38.0	1.5
Sand Bay Isle	Benthos	Copper	Treated	Dominant Species	1 week post	38.0	1.5
Sand Bay Isle	Benthos	Copper	Treated	EPT Taxa	1 week post	0.0	0.0
Sand Bay Isle	Benthos	Copper	Treated	Filterers	1 week post	0.0	0.0
Sand Bay Isle	Benthos	Copper	Treated	Grazers	1 week post	62.6	11.3
Sand Bay Isle	Benthos	Copper	Treated	Intolerant Taxa	1 week post	0.0	0.0
Sand Bay Isle	Benthos	Copper	Treated	Odonata	1 week post	0.5	0.2
Sand Bay Isle	Benthos	Copper	Treated	Oligochaeta	1 week post	10.9	15.6
Sand Bay Isle	Benthos	Copper	Treated	Predators	1 week post	15.1	18.3
Sand Bay Isle	Benthos	Copper	Treated	Shredders	1 week post	0.0	0.0
Sand Bay Isle	Benthos	Copper	Treated	Species Richness	1 week post	13.0	1.0
Sand Bay Isle	Benthos	Copper	Treated	ToleranceValue	1 week post	7.4	0.9
Sand Bay Isle	Benthos	Copper	Treated	Tolerant Taxa	1 week post	77.8	19.2
Sand Bay Isle	Benthos	Copper	Treated	Total Relative Abunda	1 week post	625.7	423.9
Stone Lake	Benthos	Glyphosate	Treated	Chironomidae	Pre-App	5.5	0.1
Stone Lake	Benthos	Glyphosate	Treated	Collectors	Pre-App	86.2	2.3
Stone Lake	Benthos	Glyphosate	Treated	Diptera	Pre-App	6.5	0.6
Stone Lake	Benthos	Glyphosate	Treated	Diversity	Pre-App	0.9	0.1
Stone Lake	Benthos	Glyphosate	Treated	Dominant Family	Pre-App	36.5	11.5
Stone Lake	Benthos	Glyphosate	Treated	Dominant Species	Pre-App	36.5	11.5
Stone Lake	Benthos	Glyphosate	Treated	EPT Taxa	Pre-App	3.1	1.6
Stone Lake	Benthos	Glyphosate	Treated	Filterers	Pre-App	1.2	1.1
Stone Lake	Benthos	Glyphosate	Treated	Grazers	Pre-App	0.7	0.3
Stone Lake	Benthos	Glyphosate	Treated	Intolerant Taxa	Pre-App	0.0	0.0
Stone Lake	Benthos	Glyphosate	Treated	Odonata	Pre-App	0.0	0.0
Stone Lake	Benthos	Glyphosate	Treated	Oligochaeta	Pre-App	92.3	7.4
Stone Lake	Benthos	Glyphosate	Treated	Predators	Pre-App	11.9	3.8
Stone Lake	Benthos	Glyphosate	Treated	Shredders	Pre-App	0.0	0.0
Stone Lake	Benthos	Glyphosate	Treated	Species Richness	Pre-App	16.7	2.8
Stone Lake	Benthos	Glyphosate	Treated	ToleranceValue	Pre-App	7.9	0.3

Appendix Table 3. APMP Phase 2 Mean values and std deviation for biological metrics by site

SiteName	SampleType	Pesticide	StationType	Metric	Application Interval	Mean for Site	Stdev
Stone Lake	Benthos	Glyphosate	Treated	Tolerant Taxa	Pre-App	62.3	5.1
Stone Lake	Benthos	Glyphosate	Treated	Total Relative Abundance	Pre-App	121.0	56.6
Stone Lake	Benthos	Glyphosate	Reference	Chironomidae	8 week post	10.9	12.8
Stone Lake	Benthos	Glyphosate	Reference	Collectors	8 week post	91.7	14.4
Stone Lake	Benthos	Glyphosate	Reference	Diptera	8 week post	19.2	26.9
Stone Lake	Benthos	Glyphosate	Reference	Diversity	8 week post	0.8	0.2
Stone Lake	Benthos	Glyphosate	Reference	Dominant Family	8 week post	59.0	15.5
Stone Lake	Benthos	Glyphosate	Reference	Dominant Species	8 week post	59.0	15.5
Stone Lake	Benthos	Glyphosate	Reference	EPT Taxa	8 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Reference	Filterers	8 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Reference	Grazers	8 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Reference	Intolerant Taxa	8 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Reference	Odonata	8 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Reference	Oligochaeta	8 week post	50.0	50.0
Stone Lake	Benthos	Glyphosate	Reference	Predators	8 week post	8.3	14.4
Stone Lake	Benthos	Glyphosate	Reference	Shredders	8 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Reference	Species Richness	8 week post	3.0	1.0
Stone Lake	Benthos	Glyphosate	Reference	ToleranceValue	8 week post	7.4	1.5
Stone Lake	Benthos	Glyphosate	Reference	Tolerant Taxa	8 week post	58.3	38.2
Stone Lake	Benthos	Glyphosate	Reference	Total Relative Abundance	8 week post	6.3	5.9
Stone Lake	Benthos	Glyphosate	Treated	Chironomidae	8 week post	36.2	21.6
Stone Lake	Benthos	Glyphosate	Treated	Collectors	8 week post	64.5	11.3
Stone Lake	Benthos	Glyphosate	Treated	Diptera	8 week post	44.8	13.7
Stone Lake	Benthos	Glyphosate	Treated	Diversity	8 week post	2.1	0.5
Stone Lake	Benthos	Glyphosate	Treated	Dominant Family	8 week post	25.8	14.3
Stone Lake	Benthos	Glyphosate	Treated	Dominant Species	8 week post	25.8	14.3
Stone Lake	Benthos	Glyphosate	Treated	EPT Taxa	8 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Treated	Filterers	8 week post	2.6	1.8
Stone Lake	Benthos	Glyphosate	Treated	Grazers	8 week post	2.8	4.0
Stone Lake	Benthos	Glyphosate	Treated	Intolerant Taxa	8 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Treated	Odonata	8 week post	0.8	1.1
Stone Lake	Benthos	Glyphosate	Treated	Oligochaeta	8 week post	18.4	2.8
Stone Lake	Benthos	Glyphosate	Treated	Predators	8 week post	30.1	17.2
Stone Lake	Benthos	Glyphosate	Treated	Shredders	8 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Treated	Species Richness	8 week post	12.0	6.6
Stone Lake	Benthos	Glyphosate	Treated	ToleranceValue	8 week post	7.7	0.1
Stone Lake	Benthos	Glyphosate	Treated	Tolerant Taxa	8 week post	62.7	3.5
Stone Lake	Benthos	Glyphosate	Treated	Total Relative Abundance	8 week post	46.2	50.7
Stone Lake	Benthos	Glyphosate	Reference	Chironomidae	4 week post	26.8	20.2
Stone Lake	Benthos	Glyphosate	Reference	Collectors	4 week post	80.2	26.5
Stone Lake	Benthos	Glyphosate	Reference	Diptera	4 week post	26.8	20.2
Stone Lake	Benthos	Glyphosate	Reference	Diversity	4 week post	1.0	0.3
Stone Lake	Benthos	Glyphosate	Reference	Dominant Family	4 week post	52.0	19.8
Stone Lake	Benthos	Glyphosate	Reference	Dominant Species	4 week post	52.0	19.8
Stone Lake	Benthos	Glyphosate	Reference	EPT Taxa	4 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Reference	Filterers	4 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Reference	Grazers	4 week post	1.6	2.7
Stone Lake	Benthos	Glyphosate	Reference	Intolerant Taxa	4 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Reference	Odonata	4 week post	1.5	2.6
Stone Lake	Benthos	Glyphosate	Reference	Oligochaeta	4 week post	34.8	26.2
Stone Lake	Benthos	Glyphosate	Reference	Predators	4 week post	18.3	27.6
Stone Lake	Benthos	Glyphosate	Reference	Shredders	4 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Reference	Species Richness	4 week post	3.7	1.5
Stone Lake	Benthos	Glyphosate	Reference	ToleranceValue	4 week post	9.0	1.0
Stone Lake	Benthos	Glyphosate	Reference	Tolerant Taxa	4 week post	100.0	0.0
Stone Lake	Benthos	Glyphosate	Reference	Total Relative Abundance	4 week post	10.0	10.6
Stone Lake	Benthos	Glyphosate	Treated	Chironomidae	4 week post	30.3	4.3
Stone Lake	Benthos	Glyphosate	Treated	Collectors	4 week post	54.0	20.8
Stone Lake	Benthos	Glyphosate	Treated	Diptera	4 week post	30.5	4.0
Stone Lake	Benthos	Glyphosate	Treated	Diversity	4 week post	1.1	0.1
Stone Lake	Benthos	Glyphosate	Treated	Dominant Family	4 week post	44.8	14.1
Stone Lake	Benthos	Glyphosate	Treated	Dominant Species	4 week post	44.8	14.1
Stone Lake	Benthos	Glyphosate	Treated	EPT Taxa	4 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Treated	Filterers	4 week post	0.6	0.9
Stone Lake	Benthos	Glyphosate	Treated	Grazers	4 week post	4.2	5.9

Appendix Table 3. APMP Phase 2 Mean values and std deviation for biological metrics by site

SiteName	SampleType	Pesticide	StationType	Metric	Application Interval	Mean for Site	Stdev
Stone Lake	Benthos	Glyphosate	Treated	Intolerant Taxa	4 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Treated	Odonata	4 week post	10.6	15.0
Stone Lake	Benthos	Glyphosate	Treated	Oligochaeta	4 week post	46.3	26.9
Stone Lake	Benthos	Glyphosate	Treated	Predators	4 week post	41.2	14.0
Stone Lake	Benthos	Glyphosate	Treated	Shredders	4 week post	0.0	0.0
Stone Lake	Benthos	Glyphosate	Treated	Species Richness	4 week post	6.3	3.9
Stone Lake	Benthos	Glyphosate	Treated	ToleranceValue	4 week post	7.9	0.3
Stone Lake	Benthos	Glyphosate	Treated	Tolerant Taxa	4 week post	68.1	9.7
Stone Lake	Benthos	Glyphosate	Treated	Total Relative Abunda	4 week post	39.5	46.0
7 Mile Slough	El	Diquat	Treated	Chironomidae	Pre-App	7.4	3.9
7 Mile Slough	El	Diquat	Treated	Collectors	Pre-App	89.3	0.6
7 Mile Slough	El	Diquat	Treated	Diptera	Pre-App	7.4	3.9
7 Mile Slough	El	Diquat	Treated	Diversity	Pre-App	0.7	0.1
7 Mile Slough	El	Diquat	Treated	Dominant Family	Pre-App	50.9	13.8
7 Mile Slough	El	Diquat	Treated	Dominant Species	Pre-App	50.9	13.8
7 Mile Slough	El	Diquat	Treated	EPT Taxa	Pre-App	0.0	0.0
7 Mile Slough	El	Diquat	Treated	Filterers	Pre-App	0.0	0.0
7 Mile Slough	El	Diquat	Treated	Grazers	Pre-App	1.7	1.0
7 Mile Slough	El	Diquat	Treated	Intolerant Taxa	Pre-App	0.0	0.0
7 Mile Slough	El	Diquat	Treated	Odonata	Pre-App	0.8	0.7
7 Mile Slough	El	Diquat	Treated	Oligochaeta	Pre-App	72.9	37.7
7 Mile Slough	El	Diquat	Treated	Predators	Pre-App	9.0	1.5
7 Mile Slough	El	Diquat	Treated	Shredders	Pre-App	0.0	0.0
7 Mile Slough	El	Diquat	Treated	Species Richness	Pre-App	16.7	3.1
7 Mile Slough	El	Diquat	Treated	ToleranceValue	Pre-App	7.5	0.4
7 Mile Slough	El	Diquat	Treated	Tolerant Taxa	Pre-App	84.7	12.8
7 Mile Slough	El	Diquat	Treated	Total Relative Abunda	Pre-App	676.0	46.9
Bear Creek	El	Triclopyr	Treated	Chironomidae	Pre-App	10.8	4.0
Bear Creek	El	Triclopyr	Treated	Collectors	Pre-App	81.4	8.8
Bear Creek	El	Triclopyr	Treated	Diptera	Pre-App	13.4	4.4
Bear Creek	El	Triclopyr	Treated	Diversity	Pre-App	0.7	0.2
Bear Creek	El	Triclopyr	Treated	Dominant Family	Pre-App	54.7	16.1
Bear Creek	El	Triclopyr	Treated	Dominant Species	Pre-App	54.7	16.1
Bear Creek	El	Triclopyr	Treated	EPT Taxa	Pre-App	0.1	0.1
Bear Creek	El	Triclopyr	Treated	Filterers	Pre-App	0.7	0.9
Bear Creek	El	Triclopyr	Treated	Grazers	Pre-App	2.8	2.8
Bear Creek	El	Triclopyr	Treated	Intolerant Taxa	Pre-App	0.0	0.0
Bear Creek	El	Triclopyr	Treated	Odonata	Pre-App	11.9	5.6
Bear Creek	El	Triclopyr	Treated	Oligochaeta	Pre-App	115.0	28.9
Bear Creek	El	Triclopyr	Treated	Predators	Pre-App	15.1	7.5
Bear Creek	El	Triclopyr	Treated	Shredders	Pre-App	0.0	0.0
Bear Creek	El	Triclopyr	Treated	Species Richness	Pre-App	18.3	3.2
Bear Creek	El	Triclopyr	Treated	ToleranceValue	Pre-App	7.5	0.4
Bear Creek	El	Triclopyr	Treated	Tolerant Taxa	Pre-App	62.7	13.4
Bear Creek	El	Triclopyr	Treated	Total Relative Abunda	Pre-App	479.7	284.1
Bear Creek	El	Triclopyr	Treated	Chironomidae	24 hours post	13.4	5.5
Bear Creek	El	Triclopyr	Treated	Collectors	24 hours post	79.3	2.2
Bear Creek	El	Triclopyr	Treated	Diptera	24 hours post	18.7	5.5
Bear Creek	El	Triclopyr	Treated	Diversity	24 hours post	0.9	0.1
Bear Creek	El	Triclopyr	Treated	Dominant Family	24 hours post	45.3	6.5
Bear Creek	El	Triclopyr	Treated	Dominant Species	24 hours post	45.3	6.5
Bear Creek	El	Triclopyr	Treated	EPT Taxa	24 hours post	0.4	0.1
Bear Creek	El	Triclopyr	Treated	Filterers	24 hours post	0.6	0.2
Bear Creek	El	Triclopyr	Treated	Grazers	24 hours post	2.1	1.2
Bear Creek	El	Triclopyr	Treated	Intolerant Taxa	24 hours post	0.0	0.0
Bear Creek	El	Triclopyr	Treated	Odonata	24 hours post	12.6	3.1
Bear Creek	El	Triclopyr	Treated	Oligochaeta	24 hours post	96.1	13.2
Bear Creek	El	Triclopyr	Treated	Predators	24 hours post	18.1	2.8
Bear Creek	El	Triclopyr	Treated	Shredders	24 hours post	0.0	0.0
Bear Creek	El	Triclopyr	Treated	Species Richness	24 hours post	22.7	2.3
Bear Creek	El	Triclopyr	Treated	ToleranceValue	24 hours post	7.5	0.1
Bear Creek	El	Triclopyr	Treated	Tolerant Taxa	24 hours post	64.6	2.8
Bear Creek	El	Triclopyr	Treated	Total Relative Abunda	24 hours post	666.7	2.3
Bear Creek	El	Triclopyr	Treated	Chironomidae	2 week post	19.6	12.8
Bear Creek	El	Triclopyr	Treated	Collectors	2 week post	77.3	2.2

Appendix Table 3. APMP Phase 2 Mean values and std deviation for biological metrics by site

SiteName	SampleType	Pesticide	StationType	Metric	Application Interval	Mean for Site	Stdev
Bear Creek	EI	Triclopyr	Treated	Diptera	2 week post	38.2	19.9
Bear Creek	EI	Triclopyr	Treated	Diversity	2 week post	0.9	0.1
Bear Creek	EI	Triclopyr	Treated	Dominant Family	2 week post	41.1	17.1
Bear Creek	EI	Triclopyr	Treated	Dominant Species	2 week post	41.1	17.1
Bear Creek	EI	Triclopyr	Treated	EPT Taxa	2 week post	0.4	0.4
Bear Creek	EI	Triclopyr	Treated	Filterers	2 week post	1.3	1.1
Bear Creek	EI	Triclopyr	Treated	Grazers	2 week post	3.2	2.7
Bear Creek	EI	Triclopyr	Treated	Intolerant Taxa	2 week post	0.0	0.0
Bear Creek	EI	Triclopyr	Treated	Odonata	2 week post	9.4	0.7
Bear Creek	EI	Triclopyr	Treated	Oligochaeta	2 week post	82.0	36.2
Bear Creek	EI	Triclopyr	Treated	Predators	2 week post	18.3	2.0
Bear Creek	EI	Triclopyr	Treated	Shredders	2 week post	0.0	0.0
Bear Creek	EI	Triclopyr	Treated	Species Richness	2 week post	20.7	0.6
Bear Creek	EI	Triclopyr	Treated	ToleranceValue	2 week post	7.1	0.2
Bear Creek	EI	Triclopyr	Treated	Tolerant Taxa	2 week post	43.0	9.6
Bear Creek	EI	Triclopyr	Treated	Total Relative Abunda	2 week post	632.7	110.1
Big Bear Lake	EI	Fluridone	Reference	Chironomidae	2 week post	26.7	23.1
Big Bear Lake	EI	Fluridone	Reference	Collectors	2 week post	56.3	35.9
Big Bear Lake	EI	Fluridone	Reference	Diptera	2 week post	27.4	22.2
Big Bear Lake	EI	Fluridone	Reference	Diversity	2 week post	0.6	0.1
Big Bear Lake	EI	Fluridone	Reference	Dominant Family	2 week post	47.8	6.2
Big Bear Lake	EI	Fluridone	Reference	Dominant Species	2 week post	47.8	6.2
Big Bear Lake	EI	Fluridone	Reference	EPT Taxa	2 week post	3.9	3.4
Big Bear Lake	EI	Fluridone	Reference	Filterers	2 week post	0.0	0.0
Big Bear Lake	EI	Fluridone	Reference	Grazers	2 week post	0.8	1.3
Big Bear Lake	EI	Fluridone	Reference	Intolerant Taxa	2 week post	0.0	0.0
Big Bear Lake	EI	Fluridone	Reference	Odonata	2 week post	3.4	3.3
Big Bear Lake	EI	Fluridone	Reference	Oligochaeta	2 week post	67.4	35.8
Big Bear Lake	EI	Fluridone	Reference	Predators	2 week post	43.0	34.8
Big Bear Lake	EI	Fluridone	Reference	Shredders	2 week post	0.0	0.0
Big Bear Lake	EI	Fluridone	Reference	Species Richness	2 week post	9.3	1.5
Big Bear Lake	EI	Fluridone	Reference	ToleranceValue	2 week post	6.4	1.9
Big Bear Lake	EI	Fluridone	Reference	Tolerant Taxa	2 week post	38.6	53.5
Big Bear Lake	EI	Fluridone	Reference	Total Relative Abunda	2 week post	165.3	45.8
Big Bear Lake	EI	Fluridone	Treated	Chironomidae	2 week post	3.8	0.0
Big Bear Lake	EI	Fluridone	Treated	Collectors	2 week post	6.8	0.0
Big Bear Lake	EI	Fluridone	Treated	Diptera	2 week post	4.1	0.0
Big Bear Lake	EI	Fluridone	Treated	Diversity	2 week post	0.7	0.0
Big Bear Lake	EI	Fluridone	Treated	Dominant Family	2 week post	51.4	0.0
Big Bear Lake	EI	Fluridone	Treated	Dominant Species	2 week post	51.4	0.0
Big Bear Lake	EI	Fluridone	Treated	EPT Taxa	2 week post	50.0	0.0
Big Bear Lake	EI	Fluridone	Treated	Filterers	2 week post	0.0	0.0
Big Bear Lake	EI	Fluridone	Treated	Grazers	2 week post	0.0	0.0
Big Bear Lake	EI	Fluridone	Treated	Intolerant Taxa	2 week post	0.0	0.0
Big Bear Lake	EI	Fluridone	Treated	Odonata	2 week post	0.6	0.0
Big Bear Lake	EI	Fluridone	Treated	Oligochaeta	2 week post	84.6	0.0
Big Bear Lake	EI	Fluridone	Treated	Predators	2 week post	93.2	0.0
Big Bear Lake	EI	Fluridone	Treated	Shredders	2 week post	0.0	0.0
Big Bear Lake	EI	Fluridone	Treated	Species Richness	2 week post	16.0	0.0
Big Bear Lake	EI	Fluridone	Treated	ToleranceValue	2 week post	5.1	0.0
Big Bear Lake	EI	Fluridone	Treated	Tolerant Taxa	2 week post	2.7	0.0
Big Bear Lake	EI	Fluridone	Treated	Total Relative Abunda	2 week post	654.0	0.0
Byrnes Canal	EI	Copper	Treated	Chironomidae	Pre-App	60.1	17.9
Byrnes Canal	EI	Copper	Treated	Collectors	Pre-App	8.6	2.6
Byrnes Canal	EI	Copper	Treated	Diptera	Pre-App	61.0	18.3
Byrnes Canal	EI	Copper	Treated	Diversity	Pre-App	0.8	0.2
Byrnes Canal	EI	Copper	Treated	Dominant Family	Pre-App	42.8	18.3
Byrnes Canal	EI	Copper	Treated	Dominant Species	Pre-App	42.8	18.3
Byrnes Canal	EI	Copper	Treated	EPT Taxa	Pre-App	30.0	28.3
Byrnes Canal	EI	Copper	Treated	Filterers	Pre-App	1.0	1.5
Byrnes Canal	EI	Copper	Treated	Grazers	Pre-App	43.2	3.7
Byrnes Canal	EI	Copper	Treated	Intolerant Taxa	Pre-App	0.0	0.0
Byrnes Canal	EI	Copper	Treated	Odonata	Pre-App	0.3	0.4
Byrnes Canal	EI	Copper	Treated	Oligochaeta	Pre-App	0.3	0.5
Byrnes Canal	EI	Copper	Treated	Predators	Pre-App	46.1	9.3

Appendix Table 3. APMP Phase 2 Mean values and std deviation for biological metrics by site

SiteName	SampleType	Pesticide	StationType	Metric	Application Interval	Mean for Site	Stdev
Byrnes Canal	EI	Copper	Treated	Shredders	Pre-App	1.0	1.5
Byrnes Canal	EI	Copper	Treated	Species Richness	Pre-App	18.5	0.7
Byrnes Canal	EI	Copper	Treated	ToleranceValue	Pre-App	6.4	0.3
Byrnes Canal	EI	Copper	Treated	Tolerant Taxa	Pre-App	28.0	17.2
Byrnes Canal	EI	Copper	Treated	Total Relative Abunda	Pre-App	337.5	16.3
Byrnes Canal	EI	Copper	Treated	Chironomidae	2 week post	10.6	1.0
Byrnes Canal	EI	Copper	Treated	Collectors	2 week post	10.4	1.5
Byrnes Canal	EI	Copper	Treated	Diptera	2 week post	10.6	1.0
Byrnes Canal	EI	Copper	Treated	Diversity	2 week post	0.6	0.1
Byrnes Canal	EI	Copper	Treated	Dominant Family	2 week post	65.9	7.2
Byrnes Canal	EI	Copper	Treated	Dominant Species	2 week post	65.9	7.2
Byrnes Canal	EI	Copper	Treated	EPT Taxa	2 week post	3.3	5.8
Byrnes Canal	EI	Copper	Treated	Filterers	2 week post	0.5	0.5
Byrnes Canal	EI	Copper	Treated	Grazers	2 week post	76.4	5.6
Byrnes Canal	EI	Copper	Treated	Intolerant Taxa	2 week post	0.0	0.0
Byrnes Canal	EI	Copper	Treated	Odonata	2 week post	0.0	0.0
Byrnes Canal	EI	Copper	Treated	Oligochaeta	2 week post	1.6	1.6
Byrnes Canal	EI	Copper	Treated	Predators	2 week post	12.7	6.2
Byrnes Canal	EI	Copper	Treated	Shredders	2 week post	0.0	0.0
Byrnes Canal	EI	Copper	Treated	Species Richness	2 week post	20.0	5.0
Byrnes Canal	EI	Copper	Treated	ToleranceValue	2 week post	7.6	0.1
Byrnes Canal	EI	Copper	Treated	Tolerant Taxa	2 week post	85.5	2.5
Byrnes Canal	EI	Copper	Treated	Total Relative Abunda	2 week post	275.7	136.6
Costa Ponds	EI	Fluridone	Reference	Chironomidae	Pre-App	4.1	3.7
Costa Ponds	EI	Fluridone	Reference	Collectors	Pre-App	84.1	9.8
Costa Ponds	EI	Fluridone	Reference	Diptera	Pre-App	17.8	13.9
Costa Ponds	EI	Fluridone	Reference	Diversity	Pre-App	1.4	0.4
Costa Ponds	EI	Fluridone	Reference	Dominant Family	Pre-App	61.4	13.3
Costa Ponds	EI	Fluridone	Reference	Dominant Species	Pre-App	61.4	13.3
Costa Ponds	EI	Fluridone	Reference	EPT Taxa	Pre-App	4.6	0.8
Costa Ponds	EI	Fluridone	Reference	Filterers	Pre-App	0.1	0.2
Costa Ponds	EI	Fluridone	Reference	Grazers	Pre-App	2.6	2.7
Costa Ponds	EI	Fluridone	Reference	Intolerant Taxa	Pre-App	0.0	0.0
Costa Ponds	EI	Fluridone	Reference	Odonata	Pre-App	1.0	1.2
Costa Ponds	EI	Fluridone	Reference	Oligochaeta	Pre-App	20.8	25.9
Costa Ponds	EI	Fluridone	Reference	Predators	Pre-App	13.1	7.1
Costa Ponds	EI	Fluridone	Reference	Shredders	Pre-App	0.1	0.2
Costa Ponds	EI	Fluridone	Reference	Species Richness	Pre-App	16.3	6.0
Costa Ponds	EI	Fluridone	Reference	ToleranceValue	Pre-App	7.6	0.2
Costa Ponds	EI	Fluridone	Reference	Tolerant Taxa	Pre-App	80.5	11.8
Costa Ponds	EI	Fluridone	Reference	Total Relative Abunda	Pre-App	6272.4	1471.6
Costa Ponds	EI	Fluridone	Treated	Chironomidae	Pre-App	11.4	3.8
Costa Ponds	EI	Fluridone	Treated	Collectors	Pre-App	35.2	5.7
Costa Ponds	EI	Fluridone	Treated	Diptera	Pre-App	47.9	8.2
Costa Ponds	EI	Fluridone	Treated	Diversity	Pre-App	2.4	0.2
Costa Ponds	EI	Fluridone	Treated	Dominant Family	Pre-App	26.2	11.2
Costa Ponds	EI	Fluridone	Treated	Dominant Species	Pre-App	26.2	11.2
Costa Ponds	EI	Fluridone	Treated	EPT Taxa	Pre-App	1.9	3.2
Costa Ponds	EI	Fluridone	Treated	Filterers	Pre-App	0.0	0.0
Costa Ponds	EI	Fluridone	Treated	Grazers	Pre-App	27.2	2.9
Costa Ponds	EI	Fluridone	Treated	Intolerant Taxa	Pre-App	0.0	0.0
Costa Ponds	EI	Fluridone	Treated	Odonata	Pre-App	4.9	2.5
Costa Ponds	EI	Fluridone	Treated	Oligochaeta	Pre-App	48.2	27.7
Costa Ponds	EI	Fluridone	Treated	Predators	Pre-App	37.3	3.2
Costa Ponds	EI	Fluridone	Treated	Shredders	Pre-App	0.3	0.2
Costa Ponds	EI	Fluridone	Treated	Species Richness	Pre-App	24.3	0.6
Costa Ponds	EI	Fluridone	Treated	ToleranceValue	Pre-App	6.9	0.1
Costa Ponds	EI	Fluridone	Treated	Tolerant Taxa	Pre-App	39.4	5.6
Costa Ponds	EI	Fluridone	Treated	Total Relative Abunda	Pre-App	1842.6	1369.6
Costa Ponds	EI	Fluridone	Reference	Chironomidae	6 week post	3.8	4.4
Costa Ponds	EI	Fluridone	Reference	Collectors	6 week post	50.6	23.0
Costa Ponds	EI	Fluridone	Reference	Diptera	6 week post	35.5	18.6
Costa Ponds	EI	Fluridone	Reference	Diversity	6 week post	1.9	0.3
Costa Ponds	EI	Fluridone	Reference	Dominant Family	6 week post	41.6	13.0
Costa Ponds	EI	Fluridone	Reference	Dominant Species	6 week post	41.6	13.0

Appendix Table 3. APMP Phase 2 Mean values and std deviation for biological metrics by site

SiteName	SampleType	Pesticide	StationType	Metric	Application Interval	Mean for Site	Stdev
Costa Ponds	EI	Fluridone	Reference	EPT Taxa	6 week post	1.2	1.0
Costa Ponds	EI	Fluridone	Reference	Filterers	6 week post	0.0	0.0
Costa Ponds	EI	Fluridone	Reference	Grazers	6 week post	2.4	1.6
Costa Ponds	EI	Fluridone	Reference	Intolerant Taxa	6 week post	0.0	0.0
Costa Ponds	EI	Fluridone	Reference	Odonata	6 week post	0.7	0.6
Costa Ponds	EI	Fluridone	Reference	Oligochaeta	6 week post	37.9	11.3
Costa Ponds	EI	Fluridone	Reference	Predators	6 week post	46.9	22.4
Costa Ponds	EI	Fluridone	Reference	Shredders	6 week post	0.0	0.0
Costa Ponds	EI	Fluridone	Reference	Species Richness	6 week post	18.3	4.6
Costa Ponds	EI	Fluridone	Reference	ToleranceValue	6 week post	6.2	0.7
Costa Ponds	EI	Fluridone	Reference	Tolerant Taxa	6 week post	31.2	27.9
Costa Ponds	EI	Fluridone	Reference	Total Relative Abunda	6 week post	564.3	583.5
Costa Ponds	EI	Fluridone	Treated	Chironomidae	6 week post	14.5	1.8
Costa Ponds	EI	Fluridone	Treated	Collectors	6 week post	54.4	28.4
Costa Ponds	EI	Fluridone	Treated	Diptera	6 week post	61.1	9.4
Costa Ponds	EI	Fluridone	Treated	Diversity	6 week post	2.1	0.2
Costa Ponds	EI	Fluridone	Treated	Dominant Family	6 week post	32.6	6.5
Costa Ponds	EI	Fluridone	Treated	Dominant Species	6 week post	32.6	6.5
Costa Ponds	EI	Fluridone	Treated	EPT Taxa	6 week post	0.2	0.2
Costa Ponds	EI	Fluridone	Treated	Filterers	6 week post	0.0	0.0
Costa Ponds	EI	Fluridone	Treated	Grazers	6 week post	10.1	10.1
Costa Ponds	EI	Fluridone	Treated	Intolerant Taxa	6 week post	0.0	0.0
Costa Ponds	EI	Fluridone	Treated	Odonata	6 week post	2.8	2.1
Costa Ponds	EI	Fluridone	Treated	Oligochaeta	6 week post	40.4	38.9
Costa Ponds	EI	Fluridone	Treated	Predators	6 week post	35.5	18.5
Costa Ponds	EI	Fluridone	Treated	Shredders	6 week post	0.0	0.0
Costa Ponds	EI	Fluridone	Treated	Species Richness	6 week post	17.7	5.0
Costa Ponds	EI	Fluridone	Treated	ToleranceValue	6 week post	6.4	0.2
Costa Ponds	EI	Fluridone	Treated	Tolerant Taxa	6 week post	17.7	10.1
Costa Ponds	EI	Fluridone	Treated	Total Relative Abunda	6 week post	184.0	159.4
Costa Ponds	EI	Fluridone	Reference	Chironomidae	2 week post	4.8	3.1
Costa Ponds	EI	Fluridone	Reference	Collectors	2 week post	70.8	3.4
Costa Ponds	EI	Fluridone	Reference	Diptera	2 week post	27.6	5.4
Costa Ponds	EI	Fluridone	Reference	Diversity	2 week post	1.9	0.3
Costa Ponds	EI	Fluridone	Reference	Dominant Family	2 week post	35.2	5.6
Costa Ponds	EI	Fluridone	Reference	Dominant Species	2 week post	35.2	5.6
Costa Ponds	EI	Fluridone	Reference	EPT Taxa	2 week post	0.7	0.3
Costa Ponds	EI	Fluridone	Reference	Filterers	2 week post	0.0	0.0
Costa Ponds	EI	Fluridone	Reference	Grazers	2 week post	2.3	2.0
Costa Ponds	EI	Fluridone	Reference	Intolerant Taxa	2 week post	0.0	0.0
Costa Ponds	EI	Fluridone	Reference	Odonata	2 week post	0.5	0.5
Costa Ponds	EI	Fluridone	Reference	Oligochaeta	2 week post	52.9	12.4
Costa Ponds	EI	Fluridone	Reference	Predators	2 week post	26.9	1.5
Costa Ponds	EI	Fluridone	Reference	Shredders	2 week post	0.0	0.0
Costa Ponds	EI	Fluridone	Reference	Species Richness	2 week post	20.0	4.6
Costa Ponds	EI	Fluridone	Reference	ToleranceValue	2 week post	7.0	0.1
Costa Ponds	EI	Fluridone	Reference	Tolerant Taxa	2 week post	57.4	0.9
Costa Ponds	EI	Fluridone	Reference	Total Relative Abunda	2 week post	3562.3	1861.7
Costa Ponds	EI	Fluridone	Treated	Chironomidae	2 week post	24.8	16.8
Costa Ponds	EI	Fluridone	Treated	Collectors	2 week post	44.9	7.7
Costa Ponds	EI	Fluridone	Treated	Diptera	2 week post	51.8	18.2
Costa Ponds	EI	Fluridone	Treated	Diversity	2 week post	2.5	0.1
Costa Ponds	EI	Fluridone	Treated	Dominant Family	2 week post	22.3	8.8
Costa Ponds	EI	Fluridone	Treated	Dominant Species	2 week post	22.3	8.8
Costa Ponds	EI	Fluridone	Treated	EPT Taxa	2 week post	0.1	0.2
Costa Ponds	EI	Fluridone	Treated	Filterers	2 week post	0.0	0.0
Costa Ponds	EI	Fluridone	Treated	Grazers	2 week post	21.3	13.0
Costa Ponds	EI	Fluridone	Treated	Intolerant Taxa	2 week post	0.0	0.0
Costa Ponds	EI	Fluridone	Treated	Odonata	2 week post	2.9	3.3
Costa Ponds	EI	Fluridone	Treated	Oligochaeta	2 week post	48.1	31.4
Costa Ponds	EI	Fluridone	Treated	Predators	2 week post	33.9	6.1
Costa Ponds	EI	Fluridone	Treated	Shredders	2 week post	0.0	0.0
Costa Ponds	EI	Fluridone	Treated	Species Richness	2 week post	21.3	1.5
Costa Ponds	EI	Fluridone	Treated	ToleranceValue	2 week post	6.8	0.5
Costa Ponds	EI	Fluridone	Treated	Tolerant Taxa	2 week post	37.1	23.3

Appendix Table 3. APMP Phase 2 Mean values and std deviation for biological metrics by site

SiteName	SampleType	Pesticide	StationType	Metric	Application Interval	Mean for Site	Stdev
Costa Ponds	EI	Fluridone	Treated	Total Relative Abundance	2 week post	517.7	363.0
Doris Drain	EI	Glyphosate	Treated	Chironomidae	3 hours post	24.8	4.3
Doris Drain	EI	Glyphosate	Treated	Collectors	3 hours post	29.4	4.8
Doris Drain	EI	Glyphosate	Treated	Diptera	3 hours post	29.9	2.0
Doris Drain	EI	Glyphosate	Treated	Diversity	3 hours post	0.7	0.0
Doris Drain	EI	Glyphosate	Treated	Dominant Family	3 hours post	53.5	2.4
Doris Drain	EI	Glyphosate	Treated	Dominant Species	3 hours post	53.5	2.4
Doris Drain	EI	Glyphosate	Treated	EPT Taxa	3 hours post	0.0	0.0
Doris Drain	EI	Glyphosate	Treated	Filterers	3 hours post	0.1	0.2
Doris Drain	EI	Glyphosate	Treated	Grazers	3 hours post	68.6	5.1
Doris Drain	EI	Glyphosate	Treated	Intolerant Taxa	3 hours post	0.0	0.0
Doris Drain	EI	Glyphosate	Treated	Odonata	3 hours post	0.0	0.0
Doris Drain	EI	Glyphosate	Treated	Oligochaeta	3 hours post	26.7	4.9
Doris Drain	EI	Glyphosate	Treated	Predators	3 hours post	1.8	1.0
Doris Drain	EI	Glyphosate	Treated	Shredders	3 hours post	0.0	0.0
Doris Drain	EI	Glyphosate	Treated	Species Richness	3 hours post	19.0	1.7
Doris Drain	EI	Glyphosate	Treated	ToleranceValue	3 hours post	8.0	0.1
Doris Drain	EI	Glyphosate	Treated	Tolerant Taxa	3 hours post	91.0	1.4
Doris Drain	EI	Glyphosate	Treated	Total Relative Abundance	3 hours post	627.0	7.8
Sand Bay Isle	EI	Diquat	Treated	Chironomidae	Pre-App	2.5	0.0
Sand Bay Isle	EI	Diquat	Treated	Collectors	Pre-App	6.7	0.0
Sand Bay Isle	EI	Diquat	Treated	Diptera	Pre-App	2.5	0.0
Sand Bay Isle	EI	Diquat	Treated	Diversity	Pre-App	0.5	0.0
Sand Bay Isle	EI	Diquat	Treated	Dominant Family	Pre-App	66.4	0.0
Sand Bay Isle	EI	Diquat	Treated	Dominant Species	Pre-App	66.3	0.0
Sand Bay Isle	EI	Diquat	Treated	EPT Taxa	Pre-App	0.7	0.0
Sand Bay Isle	EI	Diquat	Treated	Filterers	Pre-App	1.0	0.0
Sand Bay Isle	EI	Diquat	Treated	Grazers	Pre-App	91.0	0.0
Sand Bay Isle	EI	Diquat	Treated	Intolerant Taxa	Pre-App	0.0	0.0
Sand Bay Isle	EI	Diquat	Treated	Odonata	Pre-App	0.3	0.0
Sand Bay Isle	EI	Diquat	Treated	Oligochaeta	Pre-App	0.3	0.0
Sand Bay Isle	EI	Diquat	Treated	Predators	Pre-App	1.3	0.0
Sand Bay Isle	EI	Diquat	Treated	Shredders	Pre-App	0.0	0.0
Sand Bay Isle	EI	Diquat	Treated	Species Richness	Pre-App	14.0	0.0
Sand Bay Isle	EI	Diquat	Treated	ToleranceValue	Pre-App	8.0	0.0
Sand Bay Isle	EI	Diquat	Treated	Tolerant Taxa	Pre-App	99.3	0.0
Sand Bay Isle	EI	Diquat	Treated	Total Relative Abundance	Pre-App	2856.0	0.0
Sand Bay Isle	EI	Diquat	Treated	Chironomidae	2 week post	24.3	22.6
Sand Bay Isle	EI	Diquat	Treated	Collectors	2 week post	30.4	7.4
Sand Bay Isle	EI	Diquat	Treated	Diptera	2 week post	24.3	22.6
Sand Bay Isle	EI	Diquat	Treated	Diversity	2 week post	1.0	0.1
Sand Bay Isle	EI	Diquat	Treated	Dominant Family	2 week post	33.8	11.3
Sand Bay Isle	EI	Diquat	Treated	Dominant Species	2 week post	33.8	11.3
Sand Bay Isle	EI	Diquat	Treated	EPT Taxa	2 week post	0.2	0.4
Sand Bay Isle	EI	Diquat	Treated	Filterers	2 week post	16.3	24.6
Sand Bay Isle	EI	Diquat	Treated	Grazers	2 week post	44.6	23.8
Sand Bay Isle	EI	Diquat	Treated	Intolerant Taxa	2 week post	0.0	0.0
Sand Bay Isle	EI	Diquat	Treated	Odonata	2 week post	0.7	0.4
Sand Bay Isle	EI	Diquat	Treated	Oligochaeta	2 week post	16.9	8.7
Sand Bay Isle	EI	Diquat	Treated	Predators	2 week post	8.4	4.3
Sand Bay Isle	EI	Diquat	Treated	Shredders	2 week post	0.3	0.6
Sand Bay Isle	EI	Diquat	Treated	Species Richness	2 week post	24.0	2.0
Sand Bay Isle	EI	Diquat	Treated	ToleranceValue	2 week post	7.3	0.2
Sand Bay Isle	EI	Diquat	Treated	Tolerant Taxa	2 week post	65.6	16.3
Sand Bay Isle	EI	Diquat	Treated	Total Relative Abundance	2 week post	671.5	262.2
Stone Lake	EI	Glyphosate	Treated	Chironomidae	Pre-App	9.8	6.8
Stone Lake	EI	Glyphosate	Treated	Collectors	Pre-App	84.4	3.0
Stone Lake	EI	Glyphosate	Treated	Diptera	Pre-App	16.3	9.9
Stone Lake	EI	Glyphosate	Treated	Diversity	Pre-App	1.5	0.3
Stone Lake	EI	Glyphosate	Treated	Dominant Family	Pre-App	67.7	9.3
Stone Lake	EI	Glyphosate	Treated	Dominant Species	Pre-App	67.7	9.3
Stone Lake	EI	Glyphosate	Treated	EPT Taxa	Pre-App	0.8	0.2
Stone Lake	EI	Glyphosate	Treated	Filterers	Pre-App	0.0	0.0
Stone Lake	EI	Glyphosate	Treated	Grazers	Pre-App	5.0	4.1
Stone Lake	EI	Glyphosate	Treated	Intolerant Taxa	Pre-App	0.0	0.0

Appendix Table 3. APMP Phase 2 Mean values and std deviation for biological metrics by site

SiteName	SampleType	Pesticide	StationType	Metric	Application Interval	Mean for Site	Stdev
Stone Lake	EI	Glyphosate	Treated	Odonata	Pre-App	2.8	3.0
Stone Lake	EI	Glyphosate	Treated	Oligochaeta	Pre-App	11.8	0.3
Stone Lake	EI	Glyphosate	Treated	Predators	Pre-App	4.8	3.5
Stone Lake	EI	Glyphosate	Treated	Shredders	Pre-App	5.7	3.7
Stone Lake	EI	Glyphosate	Treated	Species Richness	Pre-App	27.0	1.4
Stone Lake	EI	Glyphosate	Treated	ToleranceValue	Pre-App	7.7	0.1
Stone Lake	EI	Glyphosate	Treated	Tolerant Taxa	Pre-App	83.5	4.1
Stone Lake	EI	Glyphosate	Treated	Total Relative Abunda	Pre-App	652.1	326.4
Stone Lake	EI	Glyphosate	Reference	Chironomidae	8 week post	4.3	5.1
Stone Lake	EI	Glyphosate	Reference	Collectors	8 week post	89.5	6.0
Stone Lake	EI	Glyphosate	Reference	Diptera	8 week post	4.3	5.1
Stone Lake	EI	Glyphosate	Reference	Diversity	8 week post	1.7	0.3
Stone Lake	EI	Glyphosate	Reference	Dominant Family	8 week post	40.5	7.1
Stone Lake	EI	Glyphosate	Reference	Dominant Species	8 week post	40.5	7.1
Stone Lake	EI	Glyphosate	Reference	EPT Taxa	8 week post	0.9	0.8
Stone Lake	EI	Glyphosate	Reference	Filterers	8 week post	0.0	0.0
Stone Lake	EI	Glyphosate	Reference	Grazers	8 week post	10.5	6.0
Stone Lake	EI	Glyphosate	Reference	Intolerant Taxa	8 week post	0.0	0.0
Stone Lake	EI	Glyphosate	Reference	Odonata	8 week post	0.0	0.0
Stone Lake	EI	Glyphosate	Reference	Oligochaeta	8 week post	34.1	17.2
Stone Lake	EI	Glyphosate	Reference	Predators	8 week post	0.0	0.0
Stone Lake	EI	Glyphosate	Reference	Shredders	8 week post	0.0	0.0
Stone Lake	EI	Glyphosate	Reference	Species Richness	8 week post	11.3	7.1
Stone Lake	EI	Glyphosate	Reference	ToleranceValue	8 week post	7.0	1.1
Stone Lake	EI	Glyphosate	Reference	Tolerant Taxa	8 week post	69.3	29.4
Stone Lake	EI	Glyphosate	Reference	Total Relative Abunda	8 week post	222.0	337.8
Stone Lake	EI	Glyphosate	Treated	Chironomidae	8 week post	14.2	3.3
Stone Lake	EI	Glyphosate	Treated	Collectors	8 week post	75.8	7.6
Stone Lake	EI	Glyphosate	Treated	Diptera	8 week post	19.5	3.5
Stone Lake	EI	Glyphosate	Treated	Diversity	8 week post	2.2	0.9
Stone Lake	EI	Glyphosate	Treated	Dominant Family	8 week post	31.9	6.5
Stone Lake	EI	Glyphosate	Treated	Dominant Species	8 week post	31.9	6.5
Stone Lake	EI	Glyphosate	Treated	EPT Taxa	8 week post	2.2	1.4
Stone Lake	EI	Glyphosate	Treated	Filterers	8 week post	0.1	0.1
Stone Lake	EI	Glyphosate	Treated	Grazers	8 week post	6.3	5.0
Stone Lake	EI	Glyphosate	Treated	Intolerant Taxa	8 week post	0.0	0.0
Stone Lake	EI	Glyphosate	Treated	Odonata	8 week post	6.7	0.9
Stone Lake	EI	Glyphosate	Treated	Oligochaeta	8 week post	57.3	18.5
Stone Lake	EI	Glyphosate	Treated	Predators	8 week post	16.1	2.9
Stone Lake	EI	Glyphosate	Treated	Shredders	8 week post	1.7	0.9
Stone Lake	EI	Glyphosate	Treated	Species Richness	8 week post	37.0	5.3
Stone Lake	EI	Glyphosate	Treated	ToleranceValue	8 week post	7.6	0.2
Stone Lake	EI	Glyphosate	Treated	Tolerant Taxa	8 week post	68.3	9.8
Stone Lake	EI	Glyphosate	Treated	Total Relative Abunda	8 week post	1576.1	508.1
Stone Lake	EI	Glyphosate	Reference	Chironomidae	4 week post	1.2	1.5
Stone Lake	EI	Glyphosate	Reference	Collectors	4 week post	88.5	1.8
Stone Lake	EI	Glyphosate	Reference	Diptera	4 week post	2.6	1.7
Stone Lake	EI	Glyphosate	Reference	Diversity	4 week post	0.7	0.1
Stone Lake	EI	Glyphosate	Reference	Dominant Family	4 week post	86.1	1.3
Stone Lake	EI	Glyphosate	Reference	Dominant Species	4 week post	86.1	1.3
Stone Lake	EI	Glyphosate	Reference	EPT Taxa	4 week post	1.0	0.0
Stone Lake	EI	Glyphosate	Reference	Filterers	4 week post	0.0	0.0
Stone Lake	EI	Glyphosate	Reference	Grazers	4 week post	4.5	1.4
Stone Lake	EI	Glyphosate	Reference	Intolerant Taxa	4 week post	0.1	0.2
Stone Lake	EI	Glyphosate	Reference	Odonata	4 week post	5.0	2.3
Stone Lake	EI	Glyphosate	Reference	Oligochaeta	4 week post	0.9	1.2
Stone Lake	EI	Glyphosate	Reference	Predators	4 week post	5.6	2.7
Stone Lake	EI	Glyphosate	Reference	Shredders	4 week post	1.4	0.4
Stone Lake	EI	Glyphosate	Reference	Species Richness	4 week post	13.0	1.0
Stone Lake	EI	Glyphosate	Reference	ToleranceValue	4 week post	8.0	0.0
Stone Lake	EI	Glyphosate	Reference	Tolerant Taxa	4 week post	97.2	0.7
Stone Lake	EI	Glyphosate	Reference	Total Relative Abunda	4 week post	667.2	178.8
Stone Lake	EI	Glyphosate	Treated	Chironomidae	4 week post	3.7	2.7
Stone Lake	EI	Glyphosate	Treated	Collectors	4 week post	83.6	7.5
Stone Lake	EI	Glyphosate	Treated	Diptera	4 week post	12.0	7.6

Appendix Table 3. APMP Phase 2 Mean values and std deviation for biological metrics by site

SiteName	SampleType	Pesticide	StationType	Metric	Application Interval	Mean for Site	Stdev
Stone Lake	EI	Glyphosate	Treated	Diversity	4 week post	1.5	0.7
Stone Lake	EI	Glyphosate	Treated	Dominant Family	4 week post	63.4	17.1
Stone Lake	EI	Glyphosate	Treated	Dominant Species	4 week post	63.4	17.1
Stone Lake	EI	Glyphosate	Treated	EPT Taxa	4 week post	0.5	0.2
Stone Lake	EI	Glyphosate	Treated	Filterers	4 week post	0.3	0.3
Stone Lake	EI	Glyphosate	Treated	Grazers	4 week post	2.9	2.0
Stone Lake	EI	Glyphosate	Treated	Intolerant Taxa	4 week post	0.0	0.0
Stone Lake	EI	Glyphosate	Treated	Odonata	4 week post	4.4	0.7
Stone Lake	EI	Glyphosate	Treated	Oligochaeta	4 week post	28.0	25.8
Stone Lake	EI	Glyphosate	Treated	Predators	4 week post	5.9	1.9
Stone Lake	EI	Glyphosate	Treated	Shredders	4 week post	7.3	3.9
Stone Lake	EI	Glyphosate	Treated	Species Richness	4 week post	26.3	9.0
Stone Lake	EI	Glyphosate	Treated	ToleranceValue	4 week post	7.7	0.2
Stone Lake	EI	Glyphosate	Treated	Tolerant Taxa	4 week post	85.3	9.2
Stone Lake	EI	Glyphosate	Treated	Total Relative Abunda	4 week post	3783.8	4437.8