

## Appendix I

### Macroinvertebrate faunal tables



**Table 64** Macroinvertebrate fauna of the Stony River: spring SEM survey sampled on 15 January 2009

Taxa List	Site Number	MCI score	1	2
	Site Code		STY000300	STY000400
	Sample Number		FWB09018	FWB09019
CRUSTACEA	Isopoda	5	-	R
EPHEMEROPTERA (MAYFLIES)	<i>Deleatidium</i>	8	A	R
PLECOPTERA (STONEFLIES)	<i>Zelandoperla</i>	8	R	-
TRICHOPTERA (CADDISFLIES)	<i>Costachorema</i>	7	R	-
DIPTERA (TRUE FLIES)	<i>Maoridiamesa</i>	3	-	R
	Orthocladiinae	2	C	C
	Muscidae	3	-	R
No of taxa			4	5
MCI			125	84
SQMCIs			6.9	3.2
EPT (taxa)			3	1
%EPT (taxa)			75	20
'Tolerant' taxa	'Moderately sensitive' taxa	'Highly sensitive' taxa		

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 65** Macroinvertebrate fauna of the Stony River: summer SEM survey sampled on 16 March 2009

Taxa List	Site Number	MCI score	1	2
	Site Code		STY000300	STY000400
	Sample Number		FWB09142	FWB09143
EPHEMEROPTERA (MAYFLIES)	<i>Deleatidium</i>	8	C	C
PLECOPTERA (STONEFLIES)	<i>Zelandoperla</i>	8	R	C
DIPTERA (TRUE FLIES)	Orthocladiinae	2	-	R
	Empididae	3	R	-
No of taxa			3	3
MCI			127	120
SQMCIs			7.3	7.5
EPT (taxa)			2	2
%EPT (taxa)			67	67
'Tolerant' taxa	'Moderately sensitive' taxa	'Highly sensitive' taxa		

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 66** Macroinvertebrate fauna of the Timaru Stream: spring SEM survey sampled on 11 December 2008

Taxa List	Site Number	MCI score	1	2
	Site Code		TMR000150	TMR000375
	Sample Number		FWB08386	FWB08387
NEMERTEA	Nemertea	3	-	R
ANNELIDA (WORMS)	Oligochaeta	1	-	A
MOLLUSCA	<i>Potamopyrgus</i>	4	-	C
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	-	R
	<i>Coloburiscus</i>	7	R	A
	<i>Deleatidium</i>	8	A	A
	<i>Nesameletus</i>	9	-	R
	<i>Rallidens</i>	9	-	R
	<i>Zephlebia group</i>	7	-	R
	PLECOPTERA (STONEFLIES)	<i>Austroperla</i>	9	-
<i>Zelandobius</i>		5	R	R
<i>Zelandoperla</i>		8	C	A
COLEOPTERA (BEETLES)	Elmidae	6	R	A
	Hydraenidae	8	R	-
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	-	C
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	-	A
	<i>Costachorema</i>	7	-	A
	<i>Hydrobiosis</i>	5	-	C
	<i>Hydrobiosella</i>	9	R	-
	<i>Neurochorema</i>	6	-	R
	<i>Beraeoptera</i>	8	-	C
	<i>Pycnocentroides</i>	5	-	C
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	-	A
	<i>Maoridiamesa</i>	3	-	C
	Orthoclaadiinae	2	-	A
	<i>Polypedilum</i>	3	-	R
	Tanypodinae	5	R	-
	<i>Austrosimulium</i>	3	-	C
	Tanyderidae	4	-	R
<b>No of taxa</b>			8	26
<b>MCI</b>			140	112
<b>SQMCI</b>			7.7	5.3
<b>EPT (taxa)</b>			5	15
<b>%EPT (taxa)</b>			63	58
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>	<b>'Highly sensitive' taxa</b>	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 67** Macroinvertebrate fauna of the Timaru Stream: summer SEM survey sampled on 16 March 2009

Taxa List	Site Number	MCI score	1	2
	Site Code		TMR000150	TMR000375
	Sample Number		FWB09138	FWB09139
<b>ANNELIDA (WORMS)</b>	Oligochaeta	1	R	R
<b>MOLLUSCA</b>	<i>Potamopyrgus</i>	4	-	R
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Austroclima</i>	7	-	R
	<i>Coloburiscus</i>	7	R	VA
	<i>Deleatidium</i>	8	A	VA
	<i>Nesameletus</i>	9	C	R
<b>PLECOPTERA (STONEFLIES)</b>	<i>Austroperla</i>	9	-	R
	<i>Megaleptoperla</i>	9	-	R
	<i>Spaniocerca</i>	8	R	-
	<i>Zelandobius</i>	5	R	-
<b>COLEOPTERA (BEETLES)</b>	<i>Zelandoperla</i>	8	C	A
	Elmidae	6	-	A
	Hydraenidae	8	R	-
<b>MEGALOPTERA (DOBSONFLIES)</b>	<i>Archichauliodes</i>	7	C	A
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	-	A
	<i>Costachorema</i>	7	R	C
	<i>Hydrobiosis</i>	5	C	-
	<i>Orthopsyche</i>	9	R	-
<b>DIPTERA (TRUE FLIES)</b>	<i>Beraeoptera</i>	8	-	R
	<i>Aphrophila</i>	5	-	A
	Eriopterini	5	R	C
	<i>Maoridiamesa</i>	3	-	R
	Orthoclaadiinae	2	C	A
	Tanytarsini	3	R	R
	Empididae	3	R	-
<b>No of taxa</b>			16	19
<b>MCI</b>			119	118
<b>SQMCIs</b>			6.7	6.6
<b>EPT (taxa)</b>			9	10
<b>%EPT (taxa)</b>			56	53
'Tolerant' taxa	'Moderately sensitive' taxa		'Highly sensitive' taxa	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 68** Macroinvertebrate fauna of the Mangaoraka Stream: spring SEM survey sampled on 15 November 2008

Taxa List	Site Number	MCI score	1
	Site Code		MRK000420
	Sample Number		FWB08325
<b>ANNELIDA (WORMS)</b>	Oligochaeta	1	VA
	Lumbricidae	5	R
<b>MOLLUSCA</b>	<i>Latia</i>	5	C
	<i>Potamopyrgus</i>	4	VA
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Austroclima</i>	7	A
	<i>Coloburiscus</i>	7	R
<b>PLECOPTERA (STONEFLIES)</b>	<i>Zelandobius</i>	5	A
<b>COLEOPTERA (BEETLES)</b>	Elmidae	6	XA
<b>MEGALOPTERA (DOBSONFLIES)</b>	<i>Archichauliodes</i>	7	C
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	A
	<i>Costachorema</i>	7	R
	<i>Hydrobiosis</i>	5	A
	<i>Neurochorema</i>	6	R
	<i>Pycnocentria</i>	7	A
	<i>Pycnocentroides</i>	5	VA
<b>DIPTERA (TRUE FLIES)</b>	<i>Aphrophila</i>	5	A
	Eriopterini	5	R
	<i>Maoridiamesa</i>	3	C
	Orthocladiinae	2	A
	Tanytarsini	3	C
	Empididae	3	R
	<i>Austrosimulium</i>	3	C
	Tanyderidae	4	R
		<b>No of taxa</b>	23
		<b>MCI</b>	95
		<b>SQMCIs</b>	5
		<b>EPT (taxa)</b>	9
		<b>%EPT (taxa)</b>	39
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 69** Macroinvertebrate fauna of the Mangaoraka Stream: summer SEM survey sampled on 4 February 2009

Taxa List	Site Number	MCI score	1	
	Site Code		MRK000420	
	Sample Number		FWB09079	
PLATYHELMINTHES (FLATWORMS)	<i>Cura</i>	3	R	
NEMERTEA	Nemertea	3	A	
ANNELIDA (WORMS)	Oligochaeta	1	VA	
	Lumbricidae	5	R	
MOLLUSCA	<i>Latia</i>	5	A	
	<i>Potamopyrgus</i>	4	VA	
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	VA	
	<i>Coloburiscus</i>	7	C	
	<i>Deleatidium</i>	8	R	
	<i>Nesameletus</i>	9	C	
	<i>Zephlebia group</i>	7	R	
PLECOPTERA (STONEFLIES)	<i>Zelandobius</i>	5	R	
COLEOPTERA (BEETLES)	Elmidae	6	XA	
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	A	
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	XA	
	<i>Hydrobiosis</i>	5	A	
	<i>Neurochorema</i>	6	R	
	<i>Oxyethira</i>	2	R	
	<i>Pycnocentroides</i>	5	A	
	DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	A
		<i>Maoridiamesa</i>	3	R
Orthocladiinae		2	C	
Empididae		3	C	
Muscidae		3	R	
<i>Austrosimulium</i>		3	R	
	Tanyderidae	4	R	
<b>No of taxa</b>			26	
<b>MCI</b>			94	
<b>SQMCI</b>			4.8	
<b>EPT (taxa)</b>			10	
<b>%EPT (taxa)</b>			38	
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>	<b>'Highly sensitive' taxa</b>	
R = Rare	C = Common	A = Abundant	VA = Very Abundant	
		Abundant	XA = Extremely Abundant	

**Table 70** Macroinvertebrate fauna of the Waiongana Stream: spring SEM survey sampled on 15 November 2008

Taxa List	Site Number	MCI score	1	2
	Site Code		WGA000260	WGA000450
	Sample Number		FWB08336	FWB08337
<b>NEMATODA</b>	Nematoda	3	R	R
<b>ANNELIDA (WORMS)</b>	Oligochaeta	1	C	A
	Lumbricidae	5	-	R
<b>MOLLUSCA</b>	<i>Potamopyrgus</i>	4	C	VA
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Austroclima</i>	7	R	R
	<i>Coloburiscus</i>	7	C	R
	<i>Deleatidium</i>	8	VA	A
	<i>Zephlebia group</i>	7	-	R
<b>PLECOPTERA (STONEFLIES)</b>	<i>Zelandobius</i>	5	C	C
<b>COLEOPTERA (BEETLES)</b>	Elmidae	6	VA	VA
<b>MEGALOPTERA (DOBSONFLIES)</b>	<i>Archichauliodes</i>	7	C	R
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	C	VA
	<i>Costachorema</i>	7	R	-
	<i>Hydrobiosis</i>	5	C	A
	<i>Neurochorema</i>	6	R	C
	<i>Beraeoptera</i>	8	C	-
	<i>Oxyethira</i>	2	R	-
	<i>Pycnocentria</i>	7	-	R
	<i>Pycnocentroides</i>	5	A	A
<b>DIPTERA (TRUE FLIES)</b>	<i>Aphrophila</i>	5	A	C
	Eriopterini	5	R	-
	<i>Maoridiamesa</i>	3	VA	A
	Orthoclaadiinae	2	XA	A
	Tanytarsini	3	R	A
	Empididae	3	C	-
	<i>Austrosimulium</i>	3	R	C
	Tanyderidae	4	R	-
<b>No of taxa</b>			24	21
<b>MCI</b>			94	98
<b>SQMCI</b>			3.5	4.4
<b>EPT (taxa)</b>			10	10
<b>%EPT (taxa)</b>			42	48
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>	<b>'Highly sensitive' taxa</b>	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 71** Macroinvertebrate fauna of the Waiongana Stream: summer SEM survey sampled on 2 February 2009

Taxa List	Site Number	MCI score	1	2
	Site Code		WGA000260	WGA000450
	Sample Number		FWB09061	FWB09062
NEMERTEA	Nemertea	3	C	-
NEMATODA	Nematoda	3	R	R
ANNELIDA (WORMS)	Oligochaeta	1	A	VA
	Lumbricidae	5	-	R
MOLLUSCA	Latia	5	R	A
	Potamopyrgus	4	C	XA
EPHEMEROPTERA (MAYFLIES)	Austroclima	7	A	A
	Deleatidium	8	A	-
	Nesameletus	9	C	-
	Rallidens	9	R	-
PLECOPTERA (STONEFLIES)	Zelandobius	5	R	R
COLEOPTERA (BEETLES)	Elmidae	6	VA	VA
	Hydraenidae	8	R	-
MEGALOPTERA (DOBSONFLIES)	Archichauliodes	7	A	A
TRICHOPTERA (CADDISFLIES)	Aoteapsyche	4	VA	XA
	Costachorema	7	R	R
	Hydrobiosis	5	VA	C
	Neurochorema	6	A	-
	Oxyethira	2	C	R
	Pycnocentria	7	-	R
	Pycnocentrodus	5	A	VA
	Pycnocentrodus	5	A	VA
DIPTERA (TRUE FLIES)	Aphrophila	5	VA	R
	Eriopterini	5	R	-
	Maoridiamesa	3	A	-
	Orthoclaadiinae	2	VA	C
	Tanytarsini	3	A	C
	Empididae	3	A	R
	Ephydridae	4	R	-
	Muscidae	3	C	-
	Austrosimulium	3	R	C
	Tanyderidae	4	R	R
<b>No of taxa</b>			29	21
<b>MCI</b>			96	89
<b>SQMCI</b>			4.5	4.1
<b>EPT (taxa)</b>			10	7
<b>%EPT (taxa)</b>			34	33
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>	<b>'Highly sensitive' taxa</b>	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 72** Macroinvertebrate fauna of the Waiwhakaiho River: spring SEM survey sampled on 8 December 2008

Taxa List	Site Number	MCI score	1	2	3	4
	Site Code		WKH000100	WKH000500	WKH000920	WKH000950
	Sample Number		FWB08372	FWB08373	FWB08374	FWB08376
NEMATODA	Nematoda	3	-	-	R	-
ANNELIDA (WORMS)	Oligochaeta	1	-	-	A	C
	Lumbricidae	5	-	-	-	R
MOLLUSCA	<i>Potamopyrgus</i>	4	-	-	-	R
CRUSTACEA	<i>Paratya</i>	3	-	-	C	-
EPHEMEROPTERA (MAYFLIES)	<i>Ameletopsis</i>	10	-	-	R	-
	<i>Austroclima</i>	7	-	R	-	R
	<i>Coloburiscus</i>	7	-	A	C	C
	<i>Deleatidium</i>	8	A	XA	A	C
	<i>Zephlebia group</i>	7	-	-	-	R
PLECOPTERA (STONEFLIES)	<i>Acroperla</i>	5	-	R	-	C
	<i>Megaleptoperla</i>	9	-	R	-	R
	<i>Zelandobius</i>	5	-	R	C	R
	<i>Zelandoperla</i>	8	R	R	R	C
COLEOPTERA (BEETLES)	Elmidae	6	C	A	A	A
	Hydraenidae	8	-	-	R	R
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	-	R	R	C
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	-	A	VA	VA
	<i>Costachorema</i>	7	-	A	C	A
	<i>Hydrobiosis</i>	5	R	-	R	R
	<i>Neurochorema</i>	6	-	-	R	-
	<i>Plectrocnemia</i>	8	-	R	-	-
	<i>Psilochorema</i>	6	-	R	-	-
	<i>Olinga</i>	9	-	-	-	R
	<i>Oxyethira</i>	2	-	-	-	A
	<i>Pycnocentroides</i>	5	-	C	R	R
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	-	A	C	VA
	Eriopterini	5	-	R	-	-
	<i>Maoridiamesa</i>	3	-	VA	R	VA
	Orthoclaadiinae	2	-	VA	A	A
	Tanypodinae	5	-	-	R	-
	Tanytarsini	3	-	R	-	R
	Empididae	3	-	R	-	R
	Muscidae	3	-	-	-	R
<i>Austrosimulium</i>	3	-	R	-	A	
No of taxa			4	21	20	27
MCI			135	110	108	104
SQMCIs			7.5	6.3	4.3	4.2
EPT (taxa)			3	12	10	13
%EPT (taxa)			75	57	50	48
'Tolerant' taxa		'Moderately sensitive' taxa		'Highly sensitive' taxa		

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 73** Macroinvertebrate fauna of the Waiwhakaiho River: summer SEM survey sampled on 18 March 2009

Taxa List	Site Number	MCI score	1	2	3	4
	Site Code		WKH000100	WKH000500	WKH000920	WKH000950
	Sample Number		FWB09156	FWB09157	FWB09159	FWB09161
NEMATODA	Nematoda	3	-	-	R	-
ANNELIDA (WORMS)	Oligochaeta	1	-	R	A	C
MOLLUSCA	<i>Potamopyrgus</i>	4	-	-	C	R
CRUSTACEA	<i>Paratya</i>	3	-	-	R	-
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	-	-	R	-
	<i>Coloburiscus</i>	7	-	C	C	-
	<i>Deleatidium</i>	8	XA	VA	C	A
	<i>Nesameletus</i>	9	A	-	R	-
PLECOPTERA (STONEFLIES)	<i>Austroperla</i>	9	R	-	-	-
	<i>Megaleptoperla</i>	9	R	-	-	-
	<i>Stenoperla</i>	10	-	-	-	R
	<i>Zelandobius</i>	5	R	-	-	-
	<i>Zelandoperla</i>	8	VA	A	-	R
HEMIPTERA (BUGS)	<i>Sigara</i>	3	-	R	-	-
COLEOPTERA (BEETLES)	Elmidae	6	A	C	A	R
	Hydraenidae	8	-	-	-	R
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	-	-	C	-
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	-	C	VA	A
	<i>Costachorema</i>	7	C	C	-	R
	<i>Hydrobiosis</i>	5	R	C	-	R
	<i>Neurochorema</i>	6	-	R	-	-
	<i>Plectrocnemia</i>	8	-	-	R	-
	<i>Psilochorema</i>	6	C	R	-	-
	<i>Oxyethira</i>	2	-	-	C	R
	<i>Pycnocentroides</i>	5	-	-	R	-
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	-	C	C	C
	Eriopterini	5	C	C	-	-
	<i>Maoridiamesa</i>	3	-	C	R	C
	Orthoclaadiinae	2	-	VA	A	A
	<i>Polypedilum</i>	3	-	R	R	-
	Tanytarsini	3	-	R	A	R
	Empididae	3	-	-	R	-
	Ephydriidae	4	-	-	R	-
<i>Austrosimulium</i>	3	-	-	-	R	
No of taxa			11	17	21	16
MCI			140	96	92	99
SQMCIs			7.9	5.2	3.9	4.5
EPT (taxa)			9	8	7	6
%EPT (taxa)			82	47	33	38
'Tolerant' taxa		'Moderately sensitive' taxa		'Highly sensitive' taxa		

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 74** Macroinvertebrate fauna of the Mangorei Stream: spring SEM survey sampled on 8 December 2008

Taxa List	Site Number	MCI score	1
	Site Code		MGE000970
	Sample Number		FWB08371
<b>NEMATODA</b>	Nematoda	3	R
<b>ANNELIDA (WORMS)</b>	Oligochaeta	1	A
<b>MOLLUSCA</b>	<i>Potamopyrgus</i>	4	A
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Ameletopsis</i>	10	R
	<i>Austroclima</i>	7	C
	<i>Coloburiscus</i>	7	C
	<i>Deleatidium</i>	8	VA
	<i>Nesameletus</i>	9	R
	<i>Rallidens</i>	9	R
	<i>Zelandoperla</i>	8	R
<b>PLECOPTERA (STONEFLIES)</b>	<i>Zelandoperla</i>	8	R
<b>COLEOPTERA (BEETLES)</b>	Elmidae	6	A
	Hydraenidae	8	R
<b>MEGALOPTERA (DOBSONFLIES)</b>	<i>Archichauliodes</i>	7	C
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	VA
	<i>Costachorema</i>	7	C
	<i>Hydrobiosis</i>	5	C
	<i>Neurochorema</i>	6	C
	<i>Beraeoptera</i>	8	R
	<i>Oxyethira</i>	2	C
	<i>Pycnocentrodes</i>	5	R
	<i>Aphrophila</i>	5	A
<b>DIPTERA (TRUE FLIES)</b>	Eriopterini	5	R
	<i>Maoridiamesa</i>	3	A
	Orthocladiinae	2	A
	Tanytarsini	3	C
	Empididae	3	R
	<i>Austrosimulium</i>	3	A
	Tanyderidae	4	R
	<i>Acarina</i>	5	R
<b>No of taxa</b>			29
<b>MCI</b>			108
<b>SQMCI</b>			5
<b>EPT (taxa)</b>			13
<b>%EPT (taxa)</b>			45
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>	<b>'Highly sensitive' taxa</b>

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 75** Macroinvertebrate fauna of the Mangorei Stream: summer SEM survey sampled on 18 March 2009

Taxa List	Site Number	MCI score	1
	Site Code		MGE000970
	Sample Number		FWB09158
<b>NEMERTEA</b>	Nemertea	3	A
<b>ANNELIDA (WORMS)</b>	Oligochaeta	1	VA
<b>MOLLUSCA</b>	<i>Latia</i>	5	R
	<i>Potamopyrgus</i>	4	C
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Austroclima</i>	7	A
	<i>Coloburiscus</i>	7	A
	<i>Deleatidium</i>	8	R
	<i>Nesameletus</i>	9	R
<b>PLECOPTERA (STONEFLIES)</b>	<i>Austroperla</i>	9	R
	<i>Zelandoperla</i>	8	C
<b>COLEOPTERA (BEETLES)</b>	Elmidae	6	VA
	Hydraenidae	8	R
	Ptilodactylidae	8	R
<b>MEGALOPTERA (DOBSONFLIES)</b>	<i>Archichauliodes</i>	7	A
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	XA
	<i>Hydrobiosis</i>	5	C
	<i>Neurochorema</i>	6	C
	<i>Beraeoptera</i>	8	R
	<i>Confluens</i>	5	C
	<i>Oxyethira</i>	2	A
<b>DIPTERA (TRUE FLIES)</b>	<i>Pycnocentroides</i>	5	R
	<i>Aphrophila</i>	5	VA
	Orthocladiinae	2	VA
	Tanytarsini	3	VA
	Empididae	3	C
	Muscidae	3	C
	<i>Austrosimulium</i>	3	A
	Tanyderidae	4	R
	<b>ACARINA (MITES)</b>	Acarina	5
<b>No of taxa</b>		29	
<b>MCI</b>		106	
<b>SQMCI</b>		3.9	
<b>EPT (taxa)</b>		12	
<b>%EPT (taxa)</b>		41	
'Tolerant' taxa		'Moderately sensitive' taxa	
		'Highly sensitive' taxa	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 76** Macroinvertebrate fauna of the Manganui River: spring SEM survey sampled on 15 November 2008

Taxa List	Site Number	MCI score	1	2
	Site Code		MGN000195	MGN000427
	Sample Number		FWB08334	FWB08335
<b>ANNELIDA (WORMS)</b>	Oligochaeta	1	-	A
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Austroclima</i>	7	R	-
	<i>Coloburiscus</i>	7	R	C
	<i>Deleatidium</i>	8	A	VA
	<i>Zephlebia group</i>	7	-	R
<b>PLECOPTERA (STONEFLIES)</b>	<i>Acroperla</i>	5	R	-
	<i>Megaleptoperla</i>	9	R	-
	<i>Zelandoperla</i>	8	R	-
<b>COLEOPTERA (BEETLES)</b>	Elmidae	6	C	A
	Hydraenidae	8	-	R
<b>MEGALOPTERA (DOBSONFLIES)</b>	<i>Archichauliodes</i>	7	-	R
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	-	C
	<i>Costachorema</i>	7	-	C
	<i>Hydrobiosis</i>	5	R	-
	<i>Hydrobiosella</i>	9	R	-
	<i>Beraeoptera</i>	8	-	R
	<i>Pycnocentroides</i>	5	-	R
	<i>Aphrophila</i>	5	C	C
<b>DIPTERA (TRUE FLIES)</b>	Eriopterini	5	R	R
	<i>Maoridiamesa</i>	3	R	C
	Orthoclaadiinae	2	C	VA
	Tanytarsini	3	-	R
	<i>Austrosimulium</i>	3	-	R
		<b>No of taxa</b>	13	17
		<b>MCI</b>	122	105
		<b>SQMCI</b> s	6.4	4.8
		<b>EPT (taxa)</b>	8	7
		<b>%EPT (taxa)</b>	62	41
		<b>'Tolerant' taxa</b>	<b>'Highly sensitive' taxa</b>	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 77** Macroinvertebrate fauna of the Manganui River: summer SEM survey sampled on 17 March 2009

Taxa List	Site Number	MCI score	1	2	
	Site Code		MGN000195	MGN000427	
	Sample Number		FWB09148	FWB09149	
<b>NEMATODA</b>	Nematoda	3	-	R	
<b>ANNELIDA (WORMS)</b>	Oligochaeta	1	-	C	
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Austroclima</i>	7	-	R	
	<i>Coloburiscus</i>	7	C	R	
	<i>Deleatidium</i>	8	VA	A	
	<i>Nesameletus</i>	9	C	-	
<b>PLECOPTERA (STONEFLIES)</b>	<i>Zelandoperla</i>	8	C	R	
<b>COLEOPTERA (BEETLES)</b>	Elmidae	6	C	A	
<b>MEGALOPTERA (DOBSONFLIES)</b>	<i>Archichauliodes</i>	7	R	C	
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	C	A	
	<i>Costachorema</i>	7	R	R	
	<i>Hydrobiosis</i>	5	-	R	
	<i>Neurochorema</i>	6	-	R	
	<i>Beraeoptera</i>	8	R	-	
	<i>Pycnocentroides</i>	5	-	R	
	<b>DIPTERA (TRUE FLIES)</b>	<i>Aphrophila</i>	5	R	A
	Eriopterini	5	R	-	
<i>Maoridamesa</i>	3	-	C		
Orthocladiinae	2	R	VA		
Tanytarsini	3	-	A		
Empididae	3	-	R		
Muscidae	3	-	R		
<i>Austrosimulium</i>	3	-	C		
		<b>No of taxa</b>	12	20	
		<b>MCI</b>	127	96	
		<b>SQMCI</b>	7.7	3.7	
		<b>EPT (taxa)</b>	7	9	
		<b>%EPT (taxa)</b>	58	45	
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>	<b>'Highly sensitive' taxa</b>		

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 78** Macroinvertebrate fauna of the Maketawa Stream: SEM spring survey sampled on 5 December 2008

Taxa List	Site Number	MCI score	1	2
	Site Code		MKW000200	MKW000300
	Sample Number		FWB08353	FWB08354
ANNELIDA (WORMS)	Oligochaeta	1	R	R
EPHEMEROPTERA (MAYFLIES)	<i>Coloburiscus</i>	7	-	C
	<i>Deleatidium</i>	8	A	C
PLECOPTERA (STONEFLIES)	<i>Zelandoperla</i>	8	R	R
COLEOPTERA (BEETLES)	Elmidae	6	R	C
	Dytiscidae	5	R	-
TRICHOPTERA (CADDISFLIES)	<i>Hydrobiosis</i>	5	R	-
	<i>Pycnocentroides</i>	5	-	R
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	R	R
	Eriopterini	5	R	R
	<i>Maoridiamesa</i>	3	-	C
	Orthoclaadiinae	2	R	A
	Psychodidae	1	-	R
	<i>Austrosimulium</i>	3	-	R
No of taxa			9	12
MCI			100	90
SQMCIs			7	4
EPT (taxa)			3	4
%EPT (taxa)			33	33
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 79** Macroinvertebrate fauna of the Maketawa Stream: summer SEM survey sampled on 17 March 2009

Taxa List	Site Number	MCI score	1	2
	Site Code		MKW000200	MKW000300
	Sample Number		FWB09150	FWB09151
ANNELIDA (WORMS)	Oligochaeta	1	-	R
EPHEMEROPTERA (MAYFLIES)	<i>Coloburiscus</i>	7	R	C
	<i>Deleatidium</i>	8	A	VA
	<i>Nesameletus</i>	9	R	C
PLECOPTERA (STONEFLIES)	<i>Zelandoperla</i>	8	A	C
COLEOPTERA (BEETLES)	Elmidae	6	-	A
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	-	C
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	-	A
	<i>Costachorema</i>	7	R	C
	<i>Hydrobiosis</i>	5	-	R
	<i>Psilochorema</i>	6	R	-
	<i>Oxyethira</i>	2	-	R
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	R	A
	Eriopterini	5	R	C
	<i>Maoridiamesa</i>	3	-	R
	Orthoclaadiinae	2	-	A
	Tanytarsini	3	-	C
	<i>Austrosimulium</i>	3	-	R
No of taxa			8	17
MCI			138	100
SQMCIs			7.8	6.3
EPT (taxa)			6	7
%EPT (taxa)			75	41
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 80** Macroinvertebrate fauna of the Waitara River: spring SEM survey sampled on 15 November 2008

Taxa List	Site Number	MCI score	1
	Site Code		WTR000850
	Sample Number		FWB08338
ANNELIDA (WORMS)	Oligochaeta	1	C
MOLLUSCA	Potamopyrgus	4	R
EPHEMEROPTERA (MAYFLIES)	Coloburiscus	7	R
	Deleatidium	8	A
	Zephlebia group	7	R
PLECOPTERA (STONEFLIES)	Zelandobius	5	R
COLEOPTERA (BEETLES)	Elmidae	6	C
MEGALOPTERA (DOBSONFLIES)	Archichauliodes	7	R
TRICHOPTERA (CADDISFLIES)	Aoteapsyche	4	A
	Costachorema	7	R
	Hydrobiosis	5	R
	Olinga	9	R
	Pycnocentroides	5	R
DIPTERA (TRUE FLIES)	Aphrophila	5	R
	Maoriidamesa	3	C
	Orthoclaadiinae	2	A
	Tanytarsini	3	R
	Austrosimulium	3	R
No of taxa			18
MCI			101
SQMCIs			4.6
EPT (taxa)			9
%EPT (taxa)			50
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 81** Waitara River: summer SEM survey sampled on 2 February 2009

Taxa List	Site Number	MCI score	1
	Site Code		WTR000850
	Sample Number		FWB09063
HIRUDINEA (LEECHES)	Hirudinea	3	R
NEMERTEA	Nemertea	3	R
ANNELIDA (WORMS)	Oligochaeta	1	VA
	Lumbricidae	5	R
MOLLUSCA	Latia	5	R
	Potamopyrgus	4	A
EPHEMEROPTERA (MAYFLIES)	Austroclima	7	R
	Deleatidium	8	C
	Zephlebia group	7	C
COLEOPTERA (BEETLES)	Elmidae	6	C
MEGALOPTERA (DOBSONFLIES)	Archichauliodes	7	C
TRICHOPTERA (CADDISFLIES)	Aoteapsyche	4	A
	Hydrobiosis	5	R
	Neurochorema	6	R
	Oxyethira	2	A
	Pycnocentroides	5	R
DIPTERA (TRUE FLIES)	Aphrophila	5	A
	Maoriidamesa	3	R
	Orthoclaadiinae	2	A
	Tanytarsini	3	A
	Empididae	3	R
	Austrosimulium	3	R
	Tanyderidae	4	R
No of taxa			23
MCI			88
SQMCIs			2.7
EPT (taxa)			7
%EPT (taxa)			30
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 82** Macroinvertebrate fauna of the Mangati Stream: spring SEM survey sampled on 5 December 2008

Taxa List	Site Number	MCI score	1	2
	Site Code		MGT000488	MGT000520
	Sample Number		FWB08355	FWB08361
ANNELIDA (WORMS)	Oligochaeta	1	VA	VA
	Lumbricidae	5	R	-
MOLLUSCA	<i>Potamopyrgus</i>	4	VA	XA
CRUSTACEA	<i>Paracalliope</i>	5	C	R
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	C	-
TRICHOPTERA (CADDISFLIES)	<i>Hydrobiosis</i>	5	C	R
	<i>Psilochorema</i>	6	R	R
	<i>Triplectides</i>	5	-	R
DIPTERA (TRUE FLIES)	Hexatomini	5	R	-
	<i>Maoridiamesa</i>	3	R	-
	Orthoclaadiinae	2	C	C
	<i>Polypedilum</i>	3	-	R
	Paradixa	4	R	-
	Empididae	3	R	-
	Psychodidae	1	R	-
	<i>Austrosimulium</i>	3	A	A
Tanyderidae	4	-	R	
<b>No of taxa</b>			14	10
<b>MCI</b>			77	76
<b>SQMCI</b>			2.8	3.5
<b>EPT (taxa)</b>			3	3
<b>%EPT (taxa)</b>			21	30
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>	<b>'Highly sensitive' taxa</b>	

R = Rare      C = Common      A = Abundant      VA = Very Abundant      XA = Extremely Abundant

**Table 83** Macroinvertebrate fauna of the Mangati Stream: summer SEM survey sampled on 3 March 2009

Taxa List	Site Number	MCI score	1	2
	Site Code		MGT000488	MGT000520
	Sample Number		FWB09109	FWB09115
COELENTERATA	Coelenterata	3	R	-
NEMERTEA	Nemertea	3	R	C
NEMATODA	Nematoda	3	R	-
ANNELIDA (WORMS)	Oligochaeta	1	A	VA
	Lumbricidae	5	R	R
MOLLUSCA	<i>Physa</i>	3	R	-
	<i>Potamopyrgus</i>	4	A	XA
	Sphaeriidae	3	R	-
CRUSTACEA	Isopoda	5	C	-
	<i>Paracalliope</i>	5	VA	-
	Paraleptamphopidae	5	R	-
	Talitridae	5	-	R
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	R	-
ODONATA (DRAGONFLIES)	<i>Xanthocnemis</i>	4	R	-
	<i>Hemicordulia</i>	5	R	-
TRICHOPTERA (CADDISFLIES)	<i>Plectrocnemia</i>	8	R	-
	<i>Psilochorema</i>	6	R	-
	<i>Triplectides</i>	5	R	R
DIPTERA (TRUE FLIES)	Hexatomini	5	R	-
	<i>Zelandotipula</i>	6	R	-
	Orthoclaadiinae	2	A	A
	<i>Polypedilum</i>	3	R	R
	Muscidae	3	R	-
	<i>Austrosimulium</i>	3	VA	C
	Tanyderidae	4	-	R
ACARINA (MITES)	Acarina	5	C	-
No of taxa			24	10
MCI			85	70
SQMCIs			3.7	3.5
EPT (taxa)			4	1
%EPT (taxa)			17	10
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa	

R = Rare      C = Common      A = Abundant      VA = Very Abundant      XA = Extremely Abundant

**Table 84** Macroinvertebrate fauna of the Waimoku Stream: spring SEM survey sampled on 11 December 2008

Taxa List	Site Number	MCI score	1	2
	Site Code		WMK000100	WMK000298
	Sample Number		FWB08388	FWB08389
PLATYHELMINTHES (FLATWORMS)	<i>Neppia</i>	6	R	-
NEMATODA	Nematoda	3	R	-
ANNELIDA (WORMS)	Oligochaeta	1	-	A
MOLLUSCA	<i>Gyraulus</i>	3	R	-
	<i>Potamopyrgus</i>	4	R	C
CRUSTACEA	Ostracoda	1	-	R
	Isopoda	5	R	-
EPHEMEROPTERA (MAYFLIES)	<i>Ameletopsis</i>	10	R	-
	<i>Austroclima</i>	7	VA	A
	<i>Coloburiscus</i>	7	A	C
	<i>Deleatidium</i>	8	A	R
	<i>Ichthybotus</i>	8	C	-
	<i>Neozephlebia</i>	7	R	-
	<i>Nesameletus</i>	9	R	-
PLECOPTERA (STONEFLIES)	<i>Zephlebia group</i>	7	R	R
	<i>Acroperla</i>	5	-	R
	<i>Austroperla</i>	9	A	-
	<i>Megaleptoperla</i>	9	R	-
	<i>Stenoperla</i>	10	C	-
	<i>Zelandobius</i>	5	R	-
	<i>Zelandoperla</i>	8	R	-
COLEOPTERA (BEETLES)	Elmidae	6	R	R
	Hydraenidae	8	R	-
	Ptilodactylidae	8	C	-
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	R	R
TRICHOPTERA (CADDISFLIES)	<i>Hydrobiosis</i>	5	C	A
	<i>Hydrobiosella</i>	9	C	-
	<i>Hydrochorema</i>	9	R	-
	<i>Orthopsyche</i>	9	A	C
	<i>Psilochorema</i>	6	-	R
	<i>Helicopsyche</i>	10	R	-
	<i>Oxyethira</i>	2	-	R
	<i>Pycnocentria</i>	7	R	-
DIPTERA (TRUE FLIES)	<i>Triplectides</i>	5	-	R
	<i>Zelolessica</i>	7	R	-
	<i>Aphrophila</i>	5	R	A
	Eriopterini	5	R	-
	<i>Maoriamesa</i>	3	-	C
	Orthoclaadiinae	2	R	A
<i>Polypedilum</i>	3	A	C	
<i>Nothodixa</i>	4	R	-	
Empididae	3	-	R	
<i>Austrosimulium</i>	3	-	A	
Tanyderidae	4	-	R	
No of taxa			34	22
MCI			135	94
SQMCIs			7.1	4.1
EPT (taxa)			20	9
%EPT (taxa)			59	41
'Tolerant' taxa	'Moderately sensitive' taxa		'Highly sensitive' taxa	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 85** Macroinvertebrate fauna of the Waimoku Stream: summer SEM survey sampled on 16 March 2009

Taxa List	Site Number	MCI score	1	2
	Site Code		WMK000100	WMK000298
	Sample Number		FWB09140	FWB09141
PLATYHELMINTHES (FLATWORMS)	<i>Neppia</i>	6	C	-
NEMERTEA	Nemertea	3	-	A
ANNELIDA (WORMS)	Oligochaeta	1	R	A
MOLLUSCA	<i>Potamopyrgus</i>	4	R	VA
CRUSTACEA	Ostracoda	1	-	C
	<i>Paranephrops</i>	5	R	-
EPHEMEROPTERA (MAYFLIES)	<i>Ameletopsis</i>	10	R	-
	<i>Austroclima</i>	7	C	A
	<i>Coloburiscus</i>	7	VA	C
	<i>Deleatidium</i>	8	VA	-
	<i>Ichthybotus</i>	8	A	-
	<i>Nesameletus</i>	9	C	-
	<i>Zephlebia group</i>	7	A	C
PLECOPTERA (STONEFLIES)	<i>Acroperla</i>	5	R	-
	<i>Austroperla</i>	9	A	-
	<i>Megaleptoperla</i>	9	C	-
	<i>Stenoperla</i>	10	C	-
	<i>Zelandobius</i>	5	R	-
COLEOPTERA (BEETLES)	Elmidae	6	C	R
	Hydraenidae	8	R	-
	Ptilodactylidae	8	A	R
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	A	-
TRICHOPTERA (CADDISFLIES)	<i>Costachorema</i>	7	R	-
	<i>Hydrobiosis</i>	5	R	R
	<i>Hydrobiosella</i>	9	C	-
	<i>Hydrochorema</i>	9	R	-
	<i>Orthopsyche</i>	9	VA	R
	<i>Psilochorema</i>	6	R	R
	<i>Oxyethira</i>	2	-	R
	<i>Triplectides</i>	5	-	C
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	R	A
	Eriopterini	5	R	-
	Orthoclaadiinae	2	-	A
	<i>Polypedilum</i>	3	A	A
	Tanytarsini	3	R	-
	<i>Austrosimulium</i>	3	-	C
	Tanyderidae	4	-	R
ACARINA (MITES)	Acarina	5	-	R
No of taxa			30	20
MCI			133	93
SQMCIs			7.7	3.9
EPT (taxa)			18	7
%EPT (taxa)			60	35
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 86** Macroinvertebrate fauna of the Waiau Stream: spring SEM survey sampled on 15 November 2008

Taxa List	Site Number	MCI score	1
	Site Code		WAI000110
	Sample Number		FWB08326
ANNELIDA (WORMS)	<i>Oligochaeta</i>	1	C
MOLLUSCA	<i>Latia</i>	5	C
	<i>Potamopyrgus</i>	4	A
CRUSTACEA	<i>Paracalliope</i>	5	R
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	A
PLECOPTERA (STONEFLIES)	<i>Zelandobius</i>	5	C
COLEOPTERA (BEETLES)	Elmidae	6	VA
	Dytiscidae	5	R
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	R
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	A
	<i>Costachorema</i>	7	R
	<i>Hydrobiosis</i>	5	C
	<i>Psilochorema</i>	6	R
	<i>Pycnocentria</i>	7	C
	<i>Pycnocentrodes</i>	5	VA
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	C
	Eriopterini	5	R
	<i>Maoridamesa</i>	3	C
	Orthocladiinae	2	A
	<i>Austrosimulium</i>	3	C
		<b>No of taxa</b>	20
		<b>MCI</b>	97
		<b>SQMCI</b>	5
		<b>EPT (taxa)</b>	8
		<b>%EPT (taxa)</b>	40
		<b>'Tolerant' taxa</b>	<b>'Moderately sensitive' taxa</b>
		<b>'Highly sensitive' taxa</b>	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 87** Macroinvertebrate fauna of the Waiau Stream: summer SEM survey sampled on 4 February 2009

Taxa List	Site Number	MCI score	1	
	Site Code		WAI000110	
	Sample Number		FWB09080	
PLATYHELMINTHES (FLATWORMS)	<i>Cura</i>	3	R	
NEMERTEA	Nemertea	3	C	
ANNELIDA (WORMS)	Oligochaeta	1	A	
	Lumbricidae	5	R	
MOLLUSCA	<i>Latia</i>	5	A	
	<i>Potamopyrgus</i>	4	VA	
CRUSTACEA	Ostracoda	1	R	
	<i>Paracalliope</i>	5	A	
	<i>Paranephrops</i>	5	R	
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	VA	
	<i>Coloburiscus</i>	7	C	
	<i>Zephlebia group</i>	7	C	
COLEOPTERA (BEETLES)	Elmidae	6	VA	
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	R	
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	VA	
	<i>Hydrobiosis</i>	5	A	
	<i>Hudsonema</i>	6	A	
	<i>Oxyethira</i>	2	A	
	<i>Pycnocentria</i>	7	C	
	<i>Pycnocentroides</i>	5	VA	
	<i>Triplectides</i>	5	C	
	DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	C
		Hexatomini	5	R
<i>Maoridiamesa</i>		3	R	
Orthocladiinae		2	VA	
<i>Polypedilum</i>		3	A	
Tanypodinae		5	R	
Empididae		3	R	
<i>Austrosimulium</i>		3	R	
Tanyderidae	4	R		
<b>No of taxa</b>			30	
<b>MCI</b>			89	
<b>SQMCIs</b>			4.6	
<b>EPT (taxa)</b>			9	
<b>%EPT (taxa)</b>			30	
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>	<b>'Highly sensitive' taxa</b>	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 88** Macroinvertebrate fauna of the Punehu Stream: spring SEM survey sampled on 15 November 2008

Taxa List	Site Number	MCI score	1	2
	Site Code		PNH000200	PNH000900
	Sample Number		FWB08332	FWB08333
<b>NEMERTEA</b>	Nemertea	3	-	R
<b>ANNELIDA (WORMS)</b>	Oligochaeta	1	-	VA
	Lumbricidae	5	-	R
<b>MOLLUSCA</b>	<i>Potamopyrgus</i>	4	R	A
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Austroclima</i>	7	-	C
	<i>Coloburiscus</i>	7	A	R
	<i>Deleatidium</i>	8	XA	VA
	<i>Nesameletus</i>	9	A	R
	<i>Zephlebia group</i>	7	R	-
<b>PLECOPTERA (STONEFLIES)</b>	<i>Acroperla</i>	5	C	R
	<i>Megaleptoperla</i>	9	C	-
	<i>Stenoperla</i>	10	R	-
	<i>Zelandoperla</i>	8	VA	-
<b>COLEOPTERA (BEETLES)</b>	Elmidae	6	XA	XA
	Hydraenidae	8	C	-
<b>MEGALOPTERA (DOBSONFLIES)</b>	<i>Archichauliodes</i>	7	R	R
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	C	R
	<i>Costachorema</i>	7	A	R
	<i>Hydrobiosis</i>	5	A	A
	<i>Plectrocnemia</i>	8	R	-
	<i>Beraeoptera</i>	8	XA	R
	<i>Helicopsyche</i>	10	A	-
	<i>Olinga</i>	9	C	-
	<i>Pycnocentroides</i>	5	XA	VA
<b>DIPTERA (TRUE FLIES)</b>	<i>Aphrophila</i>	5	A	C
	Eriopterini	5	C	R
	<i>Maoridiamesa</i>	3	R	A
	Orthoclaadiinae	2	C	A
	Tanypodinae	5	R	-
	Tanytarsini	3	-	R
	Empididae	3	-	R
	<i>Austrosimulium</i>	3	R	C
	Tabanidae	3	R	-
	Tanyderidae	4	-	R
<b>No of taxa</b>			27	24
<b>MCI</b>			126	99
<b>SQMCI</b>			6.8	5.3
<b>EPT (taxa)</b>			16	10
<b>%EPT (taxa)</b>			59	42
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>	<b>'Highly sensitive' taxa</b>	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 89** Macroinvertebrate fauna of the Punehu Stream: summer SEM survey sampled on 3 February 2009

Taxa List	Site Number	MCI score	1	2
	Site Code		PNH000200	PNH000900
	Sample Number		FWB09077	FWB09078
PLATYHELMINTHES (FLATWORMS)	<i>Cura</i>	3	-	R
NEMERTEA	Nemertea	3	-	C
NEMATODA	Nematoda	3	-	R
ANNELIDA (WORMS)	Oligochaeta	1	R	A
MOLLUSCA	<i>Potamopyrgus</i>	4	R	R
CRUSTACEA	Ostracoda	1	R	-
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	A	C
	<i>Coloburiscus</i>	7	A	-
	<i>Deleatidium</i>	8	XA	C
	<i>Nesameletus</i>	9	VA	-
PLECOPTERA (STONEFLIES)	<i>Austroperla</i>	9	R	-
	<i>Megaleptoperla</i>	9	C	-
	<i>Stenoperla</i>	10	R	-
	<i>Zelandoperla</i>	8	A	-
HEMIPTERA (BUGS)	<i>Sigara</i>	3	-	R
COLEOPTERA (BEETLES)	Elmidae	6	XA	XA
	Hydraenidae	8	C	-
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	A	C
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	VA	C
	<i>Costachorema</i>	7	A	R
	<i>Hydrobiosis</i>	5	A	A
	<i>Neurochorema</i>	6	R	-
	<i>Psilochorema</i>	6	R	-
	<i>Beraeoptera</i>	8	A	-
	<i>Olinga</i>	9	C	-
	<i>Oxyethira</i>	2	R	C
	<i>Pycnocentroides</i>	5	VA	A
	DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	C
Eriopterini		5	A	-
<i>Maoridiamesa</i>		3	VA	A
Orthoclaadiinae		2	A	A
Tanytarsini		3	-	VA
Empididae		3	-	A
Ephydriidae		4	R	-
Muscidae		3	R	-
<i>Austrosimulium</i>		3	-	A
Tanyderidae		4	-	R
<b>No of taxa</b>			29	22
<b>MCI</b>			116	83
<b>SQMCI</b> s			6.5	5
<b>EPT (taxa)</b>			16	6
<b>%EPT (taxa)</b>			55	27
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>	<b>'Highly sensitive' taxa</b>	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 90** Macroinvertebrate fauna of the Patea River: spring SEM survey sampled on 4 November 2008

Taxa List	Site Number	MCI score	1	2	3
	Site Code		PAT000200	PAT000315	PAT000360
	Sample Number		FWB08308	FWB08309	FWB08312
<b>ANNELIDA (WORMS)</b>	Oligochaeta	1	-	-	A
	Lumbricidae	5	-	-	R
<b>MOLLUSCA</b>	<i>Potamopyrgus</i>	4	R	-	R
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Acanthophlebia</i>	9	R	-	-
	<i>Austroclima</i>	7	R	A	R
	<i>Coloburiscus</i>	7	VA	VA	C
	<i>Deleatidium</i>	8	XA	XA	A
	<i>Zephlebia group</i>	7	-	-	R
<b>PLECOPTERA (STONEFLIES)</b>	<i>Acroperla</i>	5	C	C	R
	<i>Austroperla</i>	9	R	R	-
	<i>Megaleptoperla</i>	9	C	R	-
	<i>Stenoperla</i>	10	R	-	-
	<i>Zelandobius</i>	5	A	R	-
	<i>Zelandoperla</i>	8	A	R	-
<b>COLEOPTERA (BEETLES)</b>	Elmidae	6	A	C	A
	Hydraenidae	8	R	C	R
<b>MEGALOPTERA (DOBSONFLIES)</b>	<i>Archichauliodes</i>	7	R	C	R
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	R	A	C
	<i>Costachorema</i>	7	R	A	C
	<i>Hydrobiosis</i>	5	-	-	C
	<i>Hydrobiosella</i>	9	C	-	-
	<i>Neurochorema</i>	6	-	R	R
	<i>Orthopsyche</i>	9	C	-	-
	<i>Psilochorema</i>	6	R	-	-
	<i>Beraeoptera</i>	8	A	C	-
	<i>Confluens</i>	5	R	-	R
	<i>Helicopsyche</i>	10	R	-	-
	<i>Olinga</i>	9	R	R	-
	<i>Pycnocentria</i>	7	R	-	-
	<i>Pycnocentroides</i>	5	-	R	R
	<i>Zelolessica</i>	7	R	-	-
	<b>DIPTERA (TRUE FLIES)</b>	<i>Aphrophila</i>	5	C	C
Eriopterini		5	-	-	R
<i>Maoridiamesa</i>		3	R	A	VA
Orthoclaadiinae		2	R	A	A
Tanytarsini		3	-	-	R
Empididae		3	R	R	R
<i>Austrosimulium</i>		3	-	C	A
<b>ACARINA (MITES)</b>	Acarina	5	-	R	R
<b>No of taxa</b>			29	23	25
<b>MCI</b>			135	121	101
<b>SQMCI</b> s			7.7	7.3	3.8
<b>EPT (taxa)</b>			21	14	11
<b>%EPT (taxa)</b>			72	61	44
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>		<b>'Highly sensitive' taxa</b>	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 91** Macroinvertebrate fauna of the Patea River: summer SEM survey sampled on 25 March 2009

Taxa List	Site Number	MCI score	1	2	3
	Site Code		PAT000200	PAT000315	PAT000360
	Sample Number		FWB09181	FWB09182	FWB09188
ANNELIDA (WORMS)	Oligochaeta	1	-	C	A
MOLLUSCA	Potamopyrgus	4	-	-	C
CRUSTACEA	Paracalliope	5	-	-	R
EPHEMEROPTERA (MAYFLIES)	Acanthophlebia	9	C	-	-
	Ameletopsis	10	C	-	-
	Austroclima	7	C	C	R
	Coloburiscus	7	VA	VA	C
	Deleatidium	8	XA	XA	VA
	Nesameletus	9	A	A	-
	Zephlebia group	7	R	-	-
	PLECOPTERA (STONEFLIES)	Austroperla	9	C	-
Megaleptoperla		9	A	-	-
Stenoperla		10	C	-	-
Zelandobius		5	A	-	-
Zelandoperla		8	VA	R	R
COLEOPTERA (BEETLES)	Elmidae	6	VA	VA	A
	Hydraenidae	8	C	C	C
	Hydrophilidae	5	R	-	-
	Ptilodactylidae	8	-	R	-
MEGALOPTERA (DOBSONFLIES)	Archichauliodes	7	A	A	A
TRICHOPTERA (CADDISFLIES)	Aoteapsyche	4	R	VA	VA
	Costachorema	7	C	C	C
	Hydrobiosis	5	C	R	C
	Hydrobiosella	9	R	-	-
	Neurochorema	6	-	R	-
	Orthopsyche	9	VA	-	-
	Psilochorema	6	C	-	-
	Beraeoptera	8	A	C	-
	Confluens	5	C	C	-
	Helicopsyche	10	VA	-	-
	Olinga	9	C	R	-
	Oxyethira	2	-	R	R
	Pycnocentria	7	C	-	-
	Pycnocentroides	5	-	C	R
	Zelolessica	7	R	-	-
	DIPTERA (TRUE FLIES)	Aphrophila	5	A	A
Eriopterini		5	R	R	R
Chironomus		1	-	-	R
Maoridiamesa		3	-	R	A
Orthoclaadiinae		2	C	A	VA
Polypedilum		3	R	-	-
Tanytarsini		3	R	A	C
Empididae		3	-	-	R
Ephydriidae		4	-	R	-
Muscidae		3	-	R	R
Austrosimulium		3	R	R	C
No of taxa			34	27	24
MCI			136	110	93
SQMCIs			7.9	6.9	4.6
EPT (taxa)			24	13	8
%EPT (taxa)			71	48	33
'Tolerant' taxa		'Moderately sensitive' taxa		'Highly sensitive' taxa	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 92** Macroinvertebrate fauna of the Mangaehu River: spring SEM survey sampled on 4 November 2008

Taxa List	Site Number	MCI score	1
	Site Code		MGH000950
	Sample Number		FWB08315
<b>NEMATODA</b>	Nematoda	3	R
<b>MOLLUSCA</b>	<i>Potamopyrgus</i>	4	R
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Austroclima</i>	7	C
	<i>Deleatidium</i>	8	R
<b>PLECOPTERA (STONEFLIES)</b>	<i>Acroperla</i>	5	C
	<i>Zelandobius</i>	5	R
<b>COLEOPTERA (BEETLES)</b>	Elmidae	6	C
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	R
	<i>Costachorema</i>	7	R
	<i>Hydrobiosis</i>	5	A
	<i>Pycnocentrodes</i>	5	C
<b>DIPTERA (TRUE FLIES)</b>	<i>Aphrophila</i>	5	A
	<i>Maoridiamesa</i>	3	VA
	Orthocladiinae	2	VA
	Tanytarsini	3	C
	Empididae	3	R
	<i>Austrosimulium</i>	3	C
<b>No of taxa</b>			17
<b>MCI</b>			92
<b>SQMCI</b>			3.2
<b>EPT (taxa)</b>			8
<b>%EPT (taxa)</b>			47
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 93** Macroinvertebrate fauna of the Mangaehu River: summer SEM survey sampled on 25 March 2009

Taxa List	Site Number	MCI score	1
	Site Code		MGH000950
	Sample Number		FWB09191
ANNELIDA (WORMS)	Oligochaeta	1	C
MOLLUSCA	<i>Latia</i>	5	R
	<i>Potamopyrgus</i>	4	C
CRUSTACEA	<i>Paracalliope</i>	5	R
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	C
	<i>Coloburiscus</i>	7	R
	<i>Zephlebia group</i>	7	R
COLEOPTERA (BEETLES)	Elmidae	6	C
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	R
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	VA
	<i>Hydrobiosis</i>	5	A
	<i>Oxyethira</i>	2	C
	<i>Pycnocentria</i>	7	R
DIPTERA (TRUE FLIES)	<i>Pycnocentroides</i>	5	A
	<i>Aphrophila</i>	5	VA
	<i>Maoridiamesa</i>	3	C
	Orthocladiinae	2	A
	Tanytarsini	3	A
	Empididae	3	R
	Muscidae	3	R
<b>No of taxa</b>			20
<b>MCI</b>			91
<b>SQMCIs</b>			4.3
<b>EPT (taxa)</b>			7
<b>%EPT (taxa)</b>			35
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa

R = Rare      C = Common      A = Abundant      VA = Very Abundant      XA = Extremely Abundant

**Table 94** Macroinvertebrate fauna of the Waingongoro River: spring SEM survey sampled on 8 December 2008

Taxa List	Site Number	MCI score	1	2	3	4	5	6
	Site Code		WGG000115	WGG000150	WGG000500	WGG000665	WGG000895	WGG000995
	Sample Number		FWB08363	FWB08364	FWB08365	FWB08368	FWB08369	FWB08370
<b>NEMATODA</b>	Nematoda	3	-	-	-	R	R	R
<b>ANNELIDA (WORMS)</b>	Oligochaeta	1	-	-	C	A	A	A
	Lumbricidae	5	-	-	-	-	C	-
<b>MOLLUSCA</b>	<i>Latia</i>	5	-	-	-	-	R	-
	<i>Potamopyrgus</i>	4	-	R	A	R	VA	C
<b>CRUSTACEA</b>	Isopoda	5	-	-	-	-	R	-
	<i>Paracalliope</i>	5	-	-	-	R	R	-
	<i>Paratya</i>	3	-	-	-	-	-	C
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Austroclima</i>	7	VA	C	C	C	C	C
	<i>Coloburiscus</i>	7	VA	XA	A	C	-	-
	<i>Deleatidium</i>	8	XA	XA	VA	A	A	C
	<i>Nesameletus</i>	9	C	C	C	-	-	-
	<i>Zephlebia group</i>	7	-	R	-	-	R	R
<b>PLECOPTERA (STONEFLIES)</b>	<i>Acroperla</i>	5	C	R	-	-	-	-
	<i>Austroperla</i>	9	R	R	-	-	-	-
	<i>Megaleptoperla</i>	9	A	C	R	-	-	-
	<i>Stenoperla</i>	10	R	-	-	-	-	-
	<i>Zelandobius</i>	5	C	R	R	-	R	R
	<i>Zelandoperla</i>	8	A	A	-	R	-	-
<b>COLEOPTERA (BEETLES)</b>	Elmidae	6	VA	A	VA	A	VA	VA
	Hydraenidae	8	R	C	R	R	-	-
	Ptilodactylidae	8	-	R	-	-	-	-
<b>MEGALOPTERA (DOBSONFLIES)</b>	<i>Archichauliodes</i>	7	R	C	C	R	R	-
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	A	A	VA	VA	VA	VA
	<i>Costachorema</i>	7	C	-	A	C	C	R
	<i>Hydrobiosis</i>	5	-	R	C	A	A	C
	<i>Hydrobiosella</i>	9	R	R	-	-	-	-
	<i>Neurochorema</i>	6	-	-	-	-	-	R
	<i>Beraeoptera</i>	8	A	VA	-	-	-	-
	<i>Confluens</i>	5	-	R	-	-	-	-
	<i>Helicopsyche</i>	10	C	C	-	-	-	-
	<i>Olinga</i>	9	R	C	-	-	-	-
	<i>Oxyethira</i>	2	-	-	-	R	-	-
	<i>Pycnocentria</i>	7	-	-	-	-	R	R
	<i>Pycnocentroides</i>	5	R	A	R	R	VA	A
	<i>Zellessica</i>	7	A	-	-	-	-	-
<b>DIPTERA (TRUE FLIES)</b>	<i>Aphrophila</i>	5	VA	VA	R	C	-	C
	Eriopterini	5	-	C	C	-	-	-
	<i>Chironomus</i>	1	-	-	-	-	R	-
	<i>Maoridiamesa</i>	3	R	R	C	VA	C	XA
	Orthoclaadiinae	2	C	R	A	VA	C	XA
	Tanytarsini	3	-	-	C	A	R	C
	Empididae	3	-	R	R	-	-	-
	Ephydridae	4	-	-	-	-	-	R
	<i>Austrosimulium</i>	3	-	R	A	A	A	A
	Tabanidae	3	-	-	R	-	R	-
<b>No of taxa</b>			24	29	23	21	24	21
<b>MCI</b>			139	126	103	98	93	93
<b>SQMCIs</b>			7.2	7.2	5.6	3.6	4.7	3
<b>EPT (taxa)</b>			18	18	10	8	9	10
<b>%EPT (taxa)</b>			75	62	43	38	38	48
'Tolerant' taxa		'Moderately sensitive' taxa			'Highly sensitive' taxa			
R = Rare		C = Common		A = Abundant		VA = Very Abundant		XA = Extremely Abundant

**Table 95** Macroinvertebrate fauna of the Waingongoro River: summer SEM survey sampled on 3 March 2009

Taxa List	Site Number	MCI score	1	2	3	4	5	6
	Site Code		WGG000115	WGG000150	WGG000500	WGG000665	WGG000895	WGG000995
	Sample Number		FWB09119	FWB09120	FWB09121	FWB09126	FWB09127	FWB09128
<b>PLATYHELMINTHES (FLATWORMS)</b>	<i>Cura</i>	3	-	-	-	-	R	-
<b>NEMERTEA</b>	Nemertea	3	-	-	R	-	R	C
<b>ANNELIDA (WORMS)</b>	Oligochaeta	1	R	-	R	C	C	C
	Lumbricidae	5	-	-	-	-	A	-
<b>MOLLUSCA</b>	<i>Latia</i>	5	-	-	-	-	C	-
	<i>Potamopyrgus</i>	4	-	-	C	C	XA	VA
	Sphaeriidae	3	-	-	-	-	-	R
<b>CRUSTACEA</b>	Ostracoda	1	-	-	-	R	-	-
	<i>Paratya</i>	3	-	-	-	-	-	C
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Austroclima</i>	7	C	C	R	R	R	C
	<i>Coloburiscus</i>	7	VA	VA	C	C	-	R
	<i>Deleatidium</i>	8	XA	XA	XA	A	C	-
	<i>Nesameletus</i>	9	XA	A	R	-	-	-
<b>PLECOPTERA (STONEFLIES)</b>	<i>Austroperla</i>	9	R	-	-	-	-	-
	<i>Megaleptoperla</i>	9	A	C	R	R	-	-
	<i>Stenoperla</i>	10	R	-	-	-	-	-
	<i>Taraperla</i>	10	C	R	-	-	-	-
	<i>Zelandobius</i>	5	R	-	-	-	-	R
	<i>Zelandoperla</i>	8	XA	A	-	R	R	-
<b>COLEOPTERA (BEETLES)</b>	Elmidae	6	VA	VA	XA	VA	XA	VA
	Hydraenidae	8	C	C	R	R	-	-
	Ptilodactylidae	8	-	-	R	-	-	-
<b>MEGALOPTERA (DOBSONFLIES)</b>	<i>Archichauliodes</i>	7	C	A	A	C	A	R
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	A	VA	VA	VA	XA	XA
	<i>Costachorema</i>	7	-	R	C	R	-	-
	<i>Hydrobiosis</i>	5	C	C	A	A	A	C
	<i>Hydrobiosella</i>	9	R	-	-	-	-	-
	<i>Neurochorema</i>	6	-	-	-	-	R	-
	<i>Orthopsyche</i>	9	R	-	-	-	-	-
	<i>Psilochorema</i>	6	-	R	-	-	-	-
	<i>Beraeoptera</i>	8	VA	C	-	-	-	-
	<i>Confluens</i>	5	C	R	-	-	-	-
	<i>Helicopsyche</i>	10	C	R	-	-	-	-
	<i>Olinga</i>	9	A	R	-	-	-	-
	<i>Pycnocentria</i>	7	R	R	-	-	-	-
	<i>Pycnocentrodus</i>	5	-	-	-	R	XA	A
	<i>Zelolessica</i>	7	R	R	-	-	-	-
<b>DIPTERA (TRUE FLIES)</b>	<i>Aphrophila</i>	5	A	A	-	R	-	R
	Eriopterini	5	R	C	C	-	-	-
	<i>Harrisius</i>	6	-	-	-	-	-	R
	<i>Maoridiamesa</i>	3	-	R	R	A	A	C
	Orthoclaadiinae	2	A	C	R	VA	A	A
	<i>Polypedilum</i>	3	R	C	-	-	-	-
	Tanytarsini	3	-	-	R	C	R	A
	Empididae	3	-	-	-	R	-	-
	Ephydriidae	4	-	-	-	-	-	C
	Muscidae	3	R	-	-	-	-	-
	<i>Austrosimulium</i>	3	-	R	R	R	-	R
	Tanyderidae	4	-	-	R	-	-	-
<b>No of taxa</b>			29	26	21	21	18	20
<b>MCI</b>			134	129	108	101	94	86
<b>SQMCI</b>			8	7.1	6.7	4.3	4.7	4.2
<b>EPT (taxa)</b>			20	17	8	9	7	6
<b>%EPT (taxa)</b>			69	65	38	43	39	30
'Tolerant' taxa		'Moderately sensitive' taxa			'Highly sensitive' taxa			
R = Rare		C = Common		A = Abundant		VA = Very Abundant		XA = Extremely Abundant

**Table 96** Macroinvertebrate fauna of the Mangawhero Stream: spring SEM survey sampled on 5 December 2008

Taxa List	Site Number	MCI score	1	2
	Site Code		MWH000380	MWH000490
	Sample Number		FWB08351	FWB08352
COELENTERATA	Coelenterata	3	-	C
ANNELIDA (WORMS)	Oligochaeta	1	A	XA
	Lumbricidae	5	-	R
MOLLUSCA	<i>Potamopyrgus</i>	4	-	A
CRUSTACEA	Ostracoda	1	-	VA
	<i>Paracalliope</i>	5	R	XA
EPEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	A	R
COLEOPTERA (BEETLES)	Elmidae	6	R	R
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	-	C
	<i>Hydrobiosis</i>	5	A	C
	<i>Oxyethira</i>	2	C	C
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	R	-
	<i>Chironomus</i>	1	R	-
	<i>Maoridiamesa</i>	3	A	A
	Orthoclaadiinae	2	A	C
	<i>Polypedilum</i>	3	R	-
	Tanytarsini	3	-	R
	Empididae	3	R	-
	<i>Austrosimulium</i>	3	-	C
			<b>No of taxa</b>	12
		<b>MCI</b>	72	72
		<b>SQMCI</b>	3.5	2.9
		<b>EPT (taxa)</b>	2	3
		<b>%EPT (taxa)</b>	17	20
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 97** Macroinvertebrate fauna of the Mangawhero Stream: summer SEM survey sampled on 4 March 2009

Taxa List	Site Number	MCI score	1	2
	Site Code		MWH000380	MWH000490
	Sample Number		FWB09129	FWB09132
<b>NEMATODA</b>	Nematoda	3	-	C
<b>ANNELIDA (WORMS)</b>	Oligochaeta	1	C	XA
	Lumbricidae	5	-	R
<b>MOLLUSCA</b>	<i>Potamopyrgus</i>	4	-	VA
<b>CRUSTACEA</b>	Ostracoda	1	C	XA
	<i>Paracalliope</i>	5	A	XA
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Austroclima</i>	7	A	-
<b>PLECOPTERA (STONEFLIES)</b>	<i>Zelandobius</i>	5	R	-
<b>COLEOPTERA (BEETLES)</b>	Elmidae	6	R	C
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	R	C
	<i>Hydrobiosis</i>	5	C	R
	<i>Oxyethira</i>	2	C	A
	<i>Paroxyethira</i>	2	-	R
<b>DIPTERA (TRUE FLIES)</b>	<i>Aphrophila</i>	5	C	-
	<i>Chironomus</i>	1	R	R
	Orthoclaadiinae	2	A	A
	<i>Polypedilum</i>	3	C	R
	Muscidae	3	-	C
	<i>Austrosimulium</i>	3	-	A
<b>No of taxa</b>			13	16
<b>MCI</b>			72	63
<b>SQMCI</b>			4.1	2.5
<b>EPT (taxa)</b>			4	2
<b>%EPT (taxa)</b>			31	13
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>	<b>'Highly sensitive' taxa</b>	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 98** Macroinvertebrate fauna of the Huatoki Stream: spring SEM survey sampled on 15 November 2008

Taxa List	Site Number	MCI score	1	2	3
	Site Code		HTK000350	HTK000425	HTK000745
	Sample Number		FWB08327	FWB08328	FWB08329
HIRUDINEA (LEECHES)	Hirudinea	3	-	-	R
ANNELIDA (WORMS)	Oligochaeta	1	C	A	XA
	Lumbricidae	5	-	-	R
MOLLUSCA	<i>Latia</i>	5	C	C	C
	<i>Physa</i>	3	-	-	R
	<i>Potamopyrgus</i>	4	VA	A	XA
	Sphaeriidae	3	-	-	R
CRUSTACEA	<i>Paratya</i>	3	-	-	R
	<i>Paranephrops</i>	5	R	-	-
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	A	A	R
	<i>Coloburiscus</i>	7	R	R	-
	<i>Nesameletus</i>	9	A	-	-
	<i>Zephlebia group</i>	7	A	A	R
PLECOPTERA (STONEFLIES)	<i>Zelandobius</i>	5	A	A	-
COLEOPTERA (BEETLES)	Elmidae	6	VA	A	VA
	Ptilodactylidae	8	C	R	-
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	C	C	R
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	VA	A	R
	<i>Costachorema</i>	7	A	C	-
	<i>Hydrobiosis</i>	5	C	R	R
	<i>Oxyethira</i>	2	-	-	R
	<i>Pycnocentroides</i>	5	A	A	C
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	A	C	-
	Eriopterini	5	-	-	R
	<i>Chironomus</i>	1	-	-	R
	<i>Maoridiamesa</i>	3	VA	-	-
	Orthoclaadiinae	2	VA	C	R
	Tanytarsini	3	C	-	-
	Ceratopogonidae	3	-	-	R
	Ephydriidae	4	R	-	-
	<i>Austrosimulium</i>	3	C	A	C
	Tanyderidae	4	-	-	C
<b>No of taxa</b>			22	17	22
<b>MCI</b>			102	104	80
<b>SQMCIs</b>			4.4	4.8	2.9
<b>EPT (taxa)</b>			9	8	5
<b>%EPT (taxa)</b>			41	47	23
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa		

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 99** Macroinvertebrate fauna of the Huatoki Stream: summer SEM survey sampled on 19 March 2009

Taxa List	Site Number	MCI score	1	2	3
	Site Code		HTK000350	HTK000425	HTK000745
	Sample Number		FWB09174	FWB09175	FWB09176
HIRUDINEA (LEECHES)	Hirudinea	3	-	R	R
PLATYHELMINTHES (FLATWORMS)	<i>Cura</i>	3	R	-	R
NEMERTEA	Nemertea	3	R	C	C
ANNELIDA (WORMS)	Oligochaeta	1	C	A	VA
	Lumbricidae	5	-	-	R
MOLLUSCA	<i>Latia</i>	5	C	A	C
	<i>Potamopyrgus</i>	4	VA	VA	XA
	Sphaeriidae	3	-	-	C
CRUSTACEA	<i>Paracalliope</i>	5	R	-	-
	<i>Paranephrops</i>	5	R	-	-
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	A	C	-
	<i>Coloburiscus</i>	7	VA	XA	C
	<i>Mauiulus</i>	5	-	C	R
	<i>Nesameletus</i>	9	VA	R	-
	<i>Zephlebia group</i>	7	A	A	C
PLECOPTERA (STONEFLIES)	<i>Zelandobius</i>	5	-	R	-
COLEOPTERA (BEETLES)	Elmidae	6	VA	XA	VA
	Ptilodactylidae	8	C	C	-
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	C	A	R
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	VA	VA	R
	<i>Costachorema</i>	7	-	R	-
	<i>Hydrobiosis</i>	5	A	-	-
	<i>Neurochorema</i>	6	C	-	-
	<i>Oxyethira</i>	2	C	-	-
	<i>Pycnocentroides</i>	5	C	R	R
	<i>Triplectides</i>	5	-	R	C
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	VA	R	-
	<i>Maoridamesa</i>	3	C	-	-
	Orthoclaadiinae	2	A	R	R
	<i>Polypedilum</i>	3	-	R	-
	Tanytarsini	3	A	-	-
	Empididae	3	R	-	R
	<i>Austrosimulium</i>	3	R	VA	-
	Tanyderidae	4	-	R	C
No of taxa			25	23	19
MCI			94	100	86
SQMCIs			5.6	5.8	3.9
EPT (taxa)			8	10	6
%EPT (taxa)			32	43	32
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa		

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 100** Macroinvertebrate fauna of the Kaupokonui River: spring SEM survey sampled on 21 October 2008

Taxa List	Site Number	MCI score	1	2	3	4	5
	Site Code		KPK000660	KPK000880	KPK000250	KPK000500	KPK000990
	Sample Number		FWB08293	FWB08296	FWB08299	FWB08300	FWB08301
PLATYHELMINTHES (FLATWORMS)	<i>Cura</i>	3	-	-	-	-	R
NEMERTEA	Nemertea	3	-	-	-	-	R
ANNELIDA (WORMS)	Oligochaeta	1	C	A	-	-	VA
	Lumbricidae	5	-	R	-	-	R
MOLLUSCA	<i>Potamopyrgus</i>	4	R	C	-	-	VA
CRUSTACEA	<i>Paratya</i>	3	-	-	-	-	R
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	-	-	-	C	R
	<i>Coloburiscus</i>	7	A	R	A	VA	C
	<i>Deleatidium</i>	8	XA	A	XA	XA	VA
	<i>Nesameletus</i>	9	R	-	C	A	-
PLECOPTERA (STONEFLIES)	<i>Acroperla</i>	5	R	-	C	C	R
	<i>Megaleptoperla</i>	9	-	-	C	R	-
	<i>Stenoperla</i>	10	R	-	R	-	-
	<i>Zelandobius</i>	5	R	-	R	R	R
	<i>Zelandoperla</i>	8	-	-	A	A	R
COLEOPTERA (BEETLES)	Elmidae	6	VA	VA	VA	VA	A
	Hydraenidae	8	R	R	R	-	-
	Ptilodactylidae	8	-	-	-	R	-
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	C	-	C	C	R
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	R	R	C	A	C
	<i>Costachorema</i>	7	A	R	-	C	-
	<i>Hydrobiosis</i>	5	C	C	C	-	A
	<i>Beraeoptera</i>	8	R	-	A	VA	-
	<i>Helicopsyche</i>	10	-	-	C	-	-
	<i>Olinga</i>	9	R	-	A	C	-
	<i>Pycnocentroides</i>	5	A	C	C	XA	VA
	<i>Zelollessica</i>	7	-	-	R	-	-
	<i>Aphrophila</i>	5	C	R	VA	A	R
DIPTERA (TRUE FLIES)	Eriopterini	5	R	R	C	C	R
	<i>Maoridiamesa</i>	3	C	C	-	C	VA
	Orthoclaadiinae	2	A	VA	C	C	VA
	Tanypodinae	5	-	R	-	-	-
	Tanytarsini	3	R	-	R	-	R
	Empididae	3	-	-	R	-	-
	<i>Austrosimulium</i>	3	R	-	-	R	R
	Tabanidae	3	-	-	-	R	-
	<b>No of taxa</b>			23	16	23	22
<b>MCI</b>			112	100	129	121	93
<b>SQMCI</b>			7.2	4.1	7.3	6.6	4
<b>EPT (taxa)</b>			12	6	15	13	9
<b>%EPT (taxa)</b>			52	38	65	59	39
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>			<b>'Highly sensitive' taxa</b>		

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 101** Macroinvertebrate fauna of the Kaupokonui Stream: summer SEM survey sampled on 3 February 2009

Taxa List	Site Number	MCI score	1	2	3	4	5
	Site Code		KPK000660	KPK000880	KPK000250	KPK000500	KPK000990
	Sample Number		FWB09065	FWB09068	FWB09072	FWB09073	FWB09076
<b>PLATYHELMINTHES (FLATWORMS)</b>	<i>Cura</i>	3	-	-	-	-	C
<b>NEMERTEA</b>	Nemertea	3	C	C	-	-	R
<b>NEMATODA</b>	Nematoda	3	-	R	-	-	-
<b>ANNELIDA (WORMS)</b>	Oligochaeta	1	A	A	-	C	VA
	Lumbricidae	5	C	R	-	-	-
<b>MOLLUSCA</b>	<i>Potamopyrgus</i>	4	C	VA	R	-	VA
<b>CRUSTACEA</b>	Ostracoda	1	-	R	-	-	-
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Ameletopsis</i>	10	-	-	R	-	-
	<i>Austroclima</i>	7	R	R	R	C	C
	<i>Coloburiscus</i>	7	C	-	A	A	-
	<i>Deleatidium</i>	8	VA	C	XA	XA	C
	<i>Nesameletus</i>	9	C	R	VA	A	-
	<i>Zephlebia group</i>	7	-	-	-	-	R
<b>PLECOPTERA (STONEFLIES)</b>	<i>Acroperla</i>	5	-	-	R	-	-
	<i>Megaleptoperla</i>	9	-	-	VA	R	-
	<i>Spaniocerca</i>	8	-	-	R	-	-
	<i>Stenoperla</i>	10	-	-	C	-	-
	<i>Zelandobius</i>	5	-	-	-	-	R
	<i>Zelandoperla</i>	8	-	-	A	C	-
<b>COLEOPTERA (BEETLES)</b>	Elmidae	6	XA	VA	VA	VA	C
	Hydraenidae	8	R	-	C	R	-
<b>MEGALOPTERA (DOBSONFLIES)</b>	<i>Archichauliodes</i>	7	C	R	R	A	-
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	VA	VA	VA	VA	VA
	<i>Costachorema</i>	7	A	R	A	A	-
	<i>Hydrobiosis</i>	5	A	VA	R	VA	A
	<i>Hydrobiosella</i>	9	-	-	R	-	-
	<i>Neurochorema</i>	6	-	-	-	R	-
	<i>Polypectropus</i>	6	-	-	R	-	-
	<i>Psilochorema</i>	6	-	-	R	R	-
	<i>Olinga</i>	9	R	-	VA	C	-
	<i>Oxyethira</i>	2	-	R	-	-	R
	<i>Pycnocentroides</i>	5	C	A	A	R	A
<b>DIPTERA (TRUE FLIES)</b>	<i>Aphrophila</i>	5	A	-	VA	VA	-
	Eriopterini	5	C	-	C	C	-
	Hexatomini	5	-	-	R	-	-
	<i>Chironomus</i>	1	-	R	-	-	-
	<i>Maoridiamesa</i>	3	A	C	R	VA	R
	Orthoclaadiinae	2	VA	XA	C	VA	VA
	<i>Polypedilum</i>	3	-	-	C	-	-
	Tanytarsini	3	C	A	R	C	A
	Empididae	3	C	R	-	-	-
	Ephydriidae	4	-	-	-	R	-
	Muscidae	3	-	C	-	C	C
	<i>Austrosimulium</i>	3	R	R	-	C	R
	Tabanidae	3	C	-	-	-	-
<b>No of taxa</b>			24	23	29	25	18
<b>MCI</b>			102	83	126	112	82
<b>SQMCI</b>			5.3	3.2	7.4	6	3.1
<b>EPT (taxa)</b>			9	7	18	13	7
<b>%EPT (taxa)</b>			38	30	62	52	39
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>			<b>'Highly sensitive' taxa</b>		

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 102** Macroinvertebrate fauna of the Katikara Stream: spring SEM survey sampled on 15 November 2008

Taxa List	Site Number	MCI score	1	2
	Site Code		KTK000150	KTK000248
	Sample Number		FWB08330	FWB08331
<b>NEMERTEA</b>	Nemertea	3	-	R
<b>ANNELIDA (WORMS)</b>	Oligochaeta	1	-	A
<b>MOLLUSCA</b>	<i>Potamopyrgus</i>	4	-	A
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Austroclima</i>	7	-	C
	<i>Coloburiscus</i>	7	-	C
	<i>Deleatidium</i>	8	-	A
	<i>Zephlebia</i> group	7	R	-
<b>PLECOPTERA (STONEFLIES)</b>	<i>Acroperla</i>	5	C	-
	<i>Austroperla</i>	9	R	-
	<i>Spaniocerca</i>	8	R	-
	<i>Zelandobius</i>	5	C	R
	<i>Zelandoperla</i>	8	C	R
<b>COLEOPTERA (BEETLES)</b>	Elmidae	6	-	VA
	Hydraenidae	8	-	R
	Ptilodactylidae	8	-	R
<b>MEGALOPTERA (DOBSONFLIES)</b>	<i>Archichauliodes</i>	7	-	A
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	R	A
	<i>Costachorema</i>	7	-	R
	<i>Hydrobiosis</i>	5	R	A
	<i>Hydrobiosella</i>	9	R	-
	<i>Psilochorema</i>	6	-	R
	<i>Beraeoptera</i>	8	-	R
	<i>Pycnocentroides</i>	5	-	VA
<b>DIPTERA (TRUE FLIES)</b>	<i>Aphrophila</i>	5	-	C
	Hexatomini	5	R	-
	Orthoclaadiinae	2	A	A
	<i>Polypedilum</i>	3	R	-
	Tanytarsini	3	-	C
	Ceratopogonidae	3	R	-
	<i>Austrosimulium</i>	3	-	A
			<b>No of taxa</b>	13
		<b>MCI</b>	112	109
		<b>SQMCI</b>	4.2	5
		<b>EPT (taxa)</b>	9	11
		<b>%EPT (taxa)</b>	69	50
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 103** Macroinvertebrate fauna of the Katikara Stream: summer SEM survey sampled on 19 March 2009

Taxa List	Site Number	MCI score	1	2
	Site Code		KTK000150	KTK000248
	Sample Number		FWB09169	FWB09170
ANNELIDA (WORMS)	Oligochaeta	1	-	C
	Lumbricidae	5	-	R
MOLLUSCA	<i>Potamopyrgus</i>	4	-	A
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	-	C
	<i>Coloburiscus</i>	7	R	A
	<i>Deleatidium</i>	8	-	A
	<i>Nesameletus</i>	9	-	R
	<i>Zephlebia group</i>	7	-	R
PLECOPTERA (STONEFLIES)	<i>Spaniocerca</i>	8	R	-
	<i>Zelandobius</i>	5	R	-
	<i>Zelandoperla</i>	8	A	R
COLEOPTERA (BEETLES)	Elmidae	6	-	VA
	Hydraenidae	8	-	R
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	C	A
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	-	VA
	<i>Costachorema</i>	7	R	C
	<i>Hydrobiosis</i>	5	-	C
	<i>Orthopsyche</i>	9	R	-
	<i>Beraeoptera</i>	8	-	R
DIPTERA (TRUE FLIES)	<i>Pycnocentodes</i>	5	-	R
	<i>Aphrophila</i>	5	-	A
	Eriopterini	5	R	-
	Hexatomini	5	-	R
	<i>Maoridiamesa</i>	3	-	R
	Orthoclaadiinae	2	C	C
	<i>Polypedilum</i>	3	C	R
	Tanypodinae	5	R	-
	Tanytarsini	3	-	C
	<i>Austrosimulium</i>	3	-	C
Tanyderidae	4	-	R	
No of taxa			11	25
MCI			120	107
SQMCIs			6.3	5.3
EPT (taxa)			6	11
%EPT (taxa)			55	44
'Tolerant' taxa		'Moderately sensitive' taxa		'Highly sensitive' taxa

R = Rare      C = Common      A = Abundant      VA = Very Abundant      XA = Extremely Abundant

**Table 104** Macroinvertebrate fauna of the Kapoiaia Stream: spring SEM survey sampled on 5 December 2008

Taxa List	Site Number	MCI score	1	2	3
	Site Code		KPA000250	KPA000700	KPA000950
	Sample Number		FWB08345	FWB08346	FWB08347
PLATYHELMINTHES (FLATWORMS)	<i>Cura</i>	3	-	-	R
ANNELIDA (WORMS)	Oligochaeta	1	C	A	XA
MOLLUSCA	<i>Potamopyrgus</i>	4	-	C	A
EPHEMEROPTERA (MAYFLIES)	<i>Ameletopsis</i>	10	-	-	R
	<i>Austroclima</i>	7	C	C	R
	<i>Coloburiscus</i>	7	VA	C	-
	<i>Deleatidium</i>	8	XA	A	R
	<i>Nesameletus</i>	9	R	R	R
	<i>Nesameletus</i>	9	R	R	R
PLECOPTERA (STONEFLIES)	<i>Acroperla</i>	5	C	R	-
	<i>Austroperla</i>	9	R	-	-
	<i>Megaleptoperla</i>	9	R	R	-
	<i>Spaniocerca</i>	8	-	R	-
	<i>Stenoperla</i>	10	R	-	-
	<i>Zelandoperla</i>	8	A	C	-
	<i>Zelandoperla</i>	8	A	C	-
COLEOPTERA (BEETLES)	Elmidae	6	VA	XA	A
	Hydraenidae	8	R	-	R
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	C	C	C
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	A	VA	A
	<i>Costachorema</i>	7	A	A	R
	<i>Hydrobiosis</i>	5	A	A	A
	<i>Psilochorema</i>	6	R	-	-
	<i>Confluens</i>	5	R	-	-
	<i>Olinga</i>	9	R	R	-
	<i>Oxyethira</i>	2	-	-	A
	<i>Pycnocentroides</i>	5	C	-	C
	<i>Pycnocentroides</i>	5	C	-	C
	<i>Pycnocentroides</i>	5	C	-	C
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	A	C	C
	Eriopterini	5	C	R	-
	<i>Chironomus</i>	1	-	C	R
	<i>Maoridiamesa</i>	3	-	VA	A
	Orthoclaadiinae	2	A	A	VA
	<i>Polypedilum</i>	3	C	-	-
	Tanytarsini	3	-	R	-
	Empididae	3	-	R	-
	Ephydriidae	4	R	-	-
	Muscidae	3	-	-	A
	<i>Austrosimulium</i>	3	-	C	A
No of taxa			25	24	21
MCI			123	108	98
SQMCIs			7.1	5.2	1.8
EPT (taxa)			16	12	8
%EPT (taxa)			64	50	38
'Tolerant' taxa		'Moderately sensitive' taxa		'Highly sensitive' taxa	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 105** Macroinvertebrate fauna of the Kapoiaia Stream: summer SEM survey sampled on 16 March 2009

Taxa List	Site Number	MCI score	1	2	3
	Site Code		KPA000250	KPA000700	KPA000950
	Sample Number		FWB09144	FWB09145	FWB09146
PLATYHELMINTHES (FLATWORMS)	<i>Cura</i>	3	-	R	-
NEMERTEA	Nemertea	3	-	R	R
NEMATODA	Nematoda	3	-	R	-
ANNELIDA (WORMS)	Oligochaeta	1	C	A	XA
	Lumbricidae	5	-	R	-
MOLLUSCA	<i>Ferrissia</i>	3	-	-	R
	<i>Potamopyrgus</i>	4	R	C	VA
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	C	-	R
	<i>Coloburiscus</i>	7	VA	C	-
	<i>Deleatidium</i>	8	VA	R	-
	<i>Nesameletus</i>	9	C	-	-
	<i>Zephlebia group</i>	7	R	R	-
PLECOPTERA (STONEFLIES)	<i>Austroperla</i>	9	R	-	-
	<i>Megaleptoperla</i>	9	-	R	-
	<i>Zelandoperla</i>	8	A	-	-
COLEOPTERA (BEETLES)	Elmidae	6	VA	VA	VA
	Hydraenidae	8	C	R	-
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	A	A	R
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	VA	VA	VA
	<i>Costachorema</i>	7	A	R	-
	<i>Hydrobiosis</i>	5	C	C	R
	<i>Confluens</i>	5	-	R	-
	<i>Olinga</i>	9	R	-	-
	<i>Oxyethira</i>	2	-	-	R
	<i>Pycnocentroides</i>	5	-	-	R
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	A	VA	VA
	Eriopterini	5	A	R	-
	<i>Maoridiamesa</i>	3	A	C	R
	Orthocladiinae	2	VA	VA	XA
	Tanytarsini	3	-	C	C
	Empididae	3	R	A	-
	Muscidae	3	-	-	R
	<i>Austrosimulium</i>	3	-	C	-
No of taxa			21	24	16
MCI			118	97	79
SQMCIs			5.5	4.2	2.4
EPT (taxa)			11	8	4
%EPT (taxa)			52	33	25
'Tolerant' taxa		'Moderately sensitive' taxa		'Highly sensitive' taxa	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 106** Macroinvertebrate fauna of the Kurapete Stream: spring SEM survey sampled on 15 November 2008

Taxa List	Site Number	MCI score	1	2
	Site Code		KRP000300	KRP000660
	Sample Number		FWB08323	FWB08324
PLATYHELMINTHES (FLATWORMS)	<i>Cura</i>	3	-	R
NEMERTEA	Nemertea	3	R	R
ANNELIDA (WORMS)	Oligochaeta	1	A	A
	Lumbricidae	5	C	-
MOLLUSCA	<i>Potamopyrgus</i>	4	VA	A
CRUSTACEA	Paraleptamphopidae	5	R	-
	<i>Paranephrops</i>	5	R	-
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	C	R
	<i>Coloburiscus</i>	7	-	R
	<i>Zephlebia group</i>	7	VA	A
PLECOPTERA (STONEFLIES)	<i>Acroperla</i>	5	R	-
	<i>Spaniocerca</i>	8	-	R
	<i>Zelandobius</i>	5	C	A
COLEOPTERA (BEETLES)	Elmidae	6	VA	A
	Ptilodactylidae	8	C	C
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	A	A
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	A	VA
	<i>Costachorema</i>	7	-	R
	<i>Hydrobiosis</i>	5	-	C
	<i>Oxyethira</i>	2	-	R
DIPTERA (TRUE FLIES)	<i>Pycnocentroides</i>	5	-	R
	<i>Aphrophila</i>	5	A	C
	Eriopterini	5	R	-
	<i>Maoridiamesa</i>	3	R	A
	Orthoclaadiinae	2	A	VA
	Tanypodinae	5	R	-
	Tanytarsini	3	-	R
	Empididae	3	-	R
<i>Austrosimulium</i>	3	A	C	
	Tanyderidae	4	R	R
<b>No of taxa</b>			21	24
<b>MCI</b>			94	93
<b>SQMCI</b>			5.1	3.8
<b>EPT (taxa)</b>			5	9
<b>%EPT (taxa)</b>			24	38
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>	<b>'Highly sensitive' taxa</b>	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 107** Macroinvertebrate fauna of the Kurapete Stream: summer SEM survey sampled on 4 February 2009

Taxa List	Site Number	MCI score	1	2
	Site Code		KRP000300	KRP000660
	Sample Number		FWB09081	FWB09082
PLATYHELMINTHES (FLATWORMS)	<i>Cura</i>	3	C	C
NEMERTEA	Nemertea	3	-	C
NEMATODA	Nematoda	3	R	R
ANNELIDA (WORMS)	Oligochaeta	1	VA	VA
MOLLUSCA	<i>Potamopyrgus</i>	4	XA	A
CRUSTACEA	Isopoda	5	R	-
	Paraleptamphopidae	5	R	-
	<i>Paranephrops</i>	5	R	-
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	VA	R
	<i>Coloburiscus</i>	7	-	R
	<i>Deleatidium</i>	8	R	R
	<i>Zephlebia group</i>	7	VA	VA
COLEOPTERA (BEETLES)	Elmidae	6	VA	C
	Ptilodactylidae	8	C	R
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	C	R
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	VA	VA
	<i>Hydrobiosis</i>	5	R	A
	<i>Neurochorema</i>	6	-	C
	<i>Polypsectopus</i>	6	-	R
	<i>Oxyethira</i>	2	-	A
	<i>Pycnocentroides</i>	5	-	C
	<i>Triplectides</i>	5	R	R
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	R	A
	Eriopterini	5	R	-
	<i>Limonia</i>	6	R	-
	<i>Chironomus</i>	1	-	R
	<i>Harrisius</i>	6	R	R
	Orthoclaadiinae	2	C	VA
	<i>Polypedilum</i>	3	-	R
	Tanypodinae	5	C	-
	Tanytarsini	3	-	R
	Empididae	3	R	R
	<i>Austrosimulium</i>	3	A	A
	Tanyderidae	4	R	R
ACARINA (MITES)	Acarina	5	R	-
No of taxa			26	28
MCI			98	91
SQMCIs			4.5	3.6
EPT (taxa)			6	10
%EPT (taxa)			23	36
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 108** Macroinvertebrate fauna of the Waiokura Stream: spring SEM survey sampled on 21 October 2008

Taxa List	Site Number	MCI score	1	2
	Site Code		WKR000500	WKR000700
	Sample Number		FWB08297	FWB08298
NEMERTEA	Nemertea	3	-	R
NEMATODA	Nematoda	3	R	A
ANNELIDA (WORMS)	Oligochaeta	1	R	A
MOLLUSCA	<i>Potamopyrgus</i>	4	C	A
CRUSTACEA	Ostracoda	1	-	C
	<i>Paracalliope</i>	5	R	A
	Paraleptamphopidae	5	R	C
	<i>Paranephrops</i>	5	-	R
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	VA	XA
	<i>Coloburiscus</i>	7	C	C
	<i>Deleatidium</i>	8	R	-
	<i>Neozephlebia</i>	7	-	R
	<i>Zephlebia group</i>	7	A	VA
PLECOPTERA (STONEFLIES)	<i>Zelandobius</i>	5	-	A
COLEOPTERA (BEETLES)	Elmidae	6	VA	VA
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	C	A
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	VA	VA
	<i>Costachorema</i>	7	C	-
	Ecnomidae/Psychomyiidae	6	-	R
	<i>Hydrobiosis</i>	5	R	C
	<i>Psilochorema</i>	6	-	C
	<i>Confluens</i>	5	R	R
	<i>Oxyethira</i>	2	-	R
	<i>Pycnocentria</i>	7	-	R
	<i>Pycnocentroides</i>	5	A	A
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	R	-
	<i>Maoridiamesa</i>	3	C	-
	Orthoclaadiinae	2	C	C
	<i>Austrosimulium</i>	3	R	R
<b>No of taxa</b>			20	25
<b>MCI</b>			99	94
<b>SQMCI</b>			5.6	6.1
<b>EPT (taxa)</b>			9	12
<b>%EPT (taxa)</b>			45	48
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>	<b>'Highly sensitive' taxa</b>	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 109** Macroinvertebrate fauna of the Waiokura Stream: summer SEM survey sampled on 3 February 2009

Taxa List	Site Number	MCI score	1	2
	Site Code		WKR000500	WKR000700
	Sample Number		FWB09069	FWB09071
NEMERTEA	Nemertea	3	C	-
NEMATODA	Nematoda	3	R	C
ANNELIDA (WORMS)	Oligochaeta	1	A	VA
	Lumbricidae	5	R	R
MOLLUSCA	<i>Potamopyrgus</i>	4	A	C
CRUSTACEA	Ostracoda	1	R	R
	<i>Paracalliope</i>	5	R	C
	Paraleptamphopidae	5	A	R
	<i>Paranephrops</i>	5	-	R
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	XA	A
	<i>Coloburiscus</i>	7	R	VA
	<i>Deleatidium</i>	8	C	-
	<i>Zephlebia group</i>	7	C	XA
COLEOPTERA (BEETLES)	Elmidae	6	XA	VA
	Hydraenidae	8	R	-
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	C	A
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	XA	VA
	<i>Costachorema</i>	7	R	-
	<i>Hydrobiosis</i>	5	A	C
	<i>Psilochorema</i>	6	R	C
	<i>Oxyethira</i>	2	R	-
	<i>Pycnocentroides</i>	5	C	-
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	R	-
	<i>Maoridiamesa</i>	3	C	-
	Orthoclaadiinae	2	A	R
	Tanytarsini	3	C	-
	Empididae	3	R	-
	Ephydridae	4	R	-
	<i>Austrosimulium</i>	3	R	C
<b>No of taxa</b>			28	18
<b>MCI</b>			92	92
<b>SQMCI</b> s			5.5	5.9
<b>EPT (taxa)</b>			9	6
<b>%EPT (taxa)</b>			32	33
<b>'Tolerant' taxa</b>		<b>'Moderately sensitive' taxa</b>	<b>'Highly sensitive' taxa</b>	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 110** Macroinvertebrate fauna of the Tangahoe River: spring SEM survey sampled on 13 November 2008

Taxa List	Site Number	MCI score	1	2	3
	Site Code		TNH000090	TNH000200	TNH000515
	Sample Number		FWB08320	FWB08321	FWB08322
<b>ANNELIDA (WORMS)</b>	Oligochaeta	1	C	C	A
<b>MOLLUSCA</b>	<i>Latia</i>	5	-	-	A
	<i>Potamopyrgus</i>	4	XA	A	VA
<b>CRUSTACEA</b>	Talitridae	5	-	-	R
<b>EPHEMEROPTERA (MAYFLIES)</b>	<i>Austroclima</i>	7	A	VA	C
	<i>Coloburiscus</i>	7	-	R	-
	<i>Deleatidium</i>	8	VA	C	R
	<i>Rallidens</i>	9	-	R	-
	<i>Zephlebia group</i>	7	R	A	C
<b>PLECOPTERA (STONEFLIES)</b>	<i>Acroperla</i>	5	C	R	-
	<i>Zelandobius</i>	5	-	A	-
<b>COLEOPTERA (BEETLES)</b>	Elmidae	6	A	VA	XA
	Ptilodactylidae	8	-	R	-
	Staphylinidae	5	R	R	-
<b>MEGALOPTERA (DOBSONFLIES)</b>	<i>Archichauliodes</i>	7	R	C	R
<b>TRICHOPTERA (CADDISFLIES)</b>	<i>Aoteapsyche</i>	4	-	A	A
	<i>Costachorema</i>	7	-	R	-
	Ecnomidae/Psychomyiidae	6	R	-	-
	<i>Hydrobiosis</i>	5	C	A	R
	<i>Orthopsyche</i>	9	R	-	-
	<i>Pycnocentroides</i>	5	-	R	A
<b>DIPTERA (TRUE FLIES)</b>	<i>Aphrophila</i>	5	R	A	R
	Hexatomini	5	R	-	-
	<i>Harrisius</i>	6	-	R	-
	Orthoclaadiinae	2	C	A	A
	Tanytarsini	3	-	A	C
	Empididae	3	R	-	-
	<i>Austrosimulium</i>	3	-	-	C
	Tabanidae	3	-	R	-
	Tanyderidae	4	-	R	-
<b>ACARINA (MITES)</b>	Acarina	5	R	-	-
<b>No of taxa</b>			17	23	16
<b>MCI</b>			106	107	96
<b>SQMCI</b>			4.7	5.6	5.3
<b>EPT (taxa)</b>			7	11	6
<b>%EPT (taxa)</b>			41	48	38
'Tolerant' taxa		'Moderately sensitive' taxa		'Highly sensitive' taxa	

R = Rare      C = Common      A = Abundant      VA = Very Abundant      XA = Extremely Abundant

**Table 111** Macroinvertebrate fauna of the Tangahoe River: summer SEM survey sampled on 16 March 2009

Taxa List	Site Number	MCI score	1	2	3
	Site Code		TNH000090	TNH000200	TNH000515
	Sample Number		FWB09135	FWB09136	FWB09137
NEMERTEA	Nemertea	3	C	R	C
NEMATODA	Nematoda	3	R	R	-
ANNELIDA (WORMS)	Oligochaeta	1	A	-	A
MOLLUSCA	<i>Latia</i>	5	-	-	C
	<i>Potamopyrgus</i>	4	XA	A	A
CRUSTACEA	Talitridae	5	-	-	C
	<i>Paratya</i>	3	-	-	R
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	A	A	C
	<i>Coloburiscus</i>	7	C	C	R
	<i>Deleatidium</i>	8	A	VA	-
	<i>Rallidens</i>	9	-	R	-
	<i>Zephlebia group</i>	7	VA	C	R
PLECOPTERA (STONEFLIES)	<i>Acroperla</i>	5	-	R	-
	<i>Megaleptoperla</i>	9	A	-	-
	<i>Zelandobius</i>	5	R	C	-
COLEOPTERA (BEETLES)	Elmidae	6	VA	VA	VA
	Dytiscidae	5	R	-	-
	Hydraenidae	8	-	R	-
	Scirtidae	8	C	-	-
MEGALOPTERA (DOBSONFLIES)	<i>Archichauliodes</i>	7	A	A	R
TRICHOPTERA (CADDISFLIES)	<i>Aoteapsyche</i>	4	C	VA	XA
	<i>Costachorema</i>	7	-	R	-
	Ecnomidae/Psychomyiidae	6	R	-	-
	<i>Hydrobiosis</i>	5	R	C	C
	<i>Psilochorema</i>	6	R	-	-
	<i>Oxyethira</i>	2	R	-	R
	<i>Pycnocentria</i>	7	-	R	-
	<i>Pycnocentroides</i>	5	-	-	C
DIPTERA (TRUE FLIES)	<i>Triplectides</i>	5	C	-	-
	<i>Aphrophila</i>	5	R	VA	A
	Eriopterini	5	C	-	-
	<i>Harrisius</i>	6	R	-	-
	<i>Maoridamesa</i>	3	-	-	C
	Orthoclaadiinae	2	R	A	VA
	<i>Polypedilum</i>	3	-	R	R
	Tanytarsini	3	R	VA	C
	Empididae	3	-	-	R
	Muscidae	3	-	R	-
	<i>Austrosimulium</i>	3	A	C	R
	Tanyderidae	4	R	-	R
No of taxa			27	23	23
MCI			101	105	84
SQMCIs			4.9	5.2	4
EPT (taxa)			11	11	6
%EPT (taxa)			41	48	26
'Tolerant' taxa		'Moderately sensitive' taxa		'Highly sensitive' taxa	

R = Rare      C = Common      A = Abundant      VA = Very Abundant      XA = Extremely Abundant

**Table 112** Macroinvertebrate fauna of the Herekawe Stream: spring SEM survey sampled on 5 December 2008

Taxa List	Site Number	MCI score	1	
	Site Code		HRK000085	
	Sample Number		FWB08349	
NEMERTEA	Nemertea	3	R	
ANNELIDA (WORMS)	Oligochaeta	1	XA	
	Lumbricidae	5	R	
MOLLUSCA	<i>Potamopyrgus</i>	4	VA	
CRUSTACEA	<i>Paracalliope</i>	5	VA	
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	C	
TRICHOPTERA (CADDISFLIES)	<i>Hydrobiosis</i>	5	R	
	<i>Orthopsyche</i>	9	R	
	<i>Oxyethira</i>	2	R	
	<i>Tripletides</i>	5	R	
DIPTERA (TRUE FLIES)	<i>Aphrophila</i>	5	C	
	Eriopterini	5	R	
	<i>Harrisius</i>	6	R	
	Orthocladiinae	2	A	
	<i>Polypedilum</i>	3	C	
	Empididae	3	R	
	Ephyrididae	4	R	
	<i>Austrosimulium</i>	3	R	
	<b>No of taxa</b>			18
	<b>MCI</b>			86
<b>SQMCIs</b>			2.1	
<b>EPT (taxa)</b>			4	
<b>%EPT (taxa)</b>			22	
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa	

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

**Table 113** Macroinvertebrate fauna of the Herekawe Stream: summer SEM survey sampled on 19 March 2009

Taxa List	Site Number	MCI score	1
	Site Code		HRK000085
	Sample Number		FWB09172
HIRUDINEA (LEECHES)	Hirudinea	3	R
NEMERTEA	Nemertea	3	R
ANNELIDA (WORMS)	Oligochaeta	1	A
	Lumbricidae	5	R
MOLLUSCA	<i>Potamopyrgus</i>	4	XA
CRUSTACEA	Ostracoda	1	C
	<i>Paracalliope</i>	5	VA
EPHEMEROPTERA (MAYFLIES)	<i>Austroclima</i>	7	R
COLEOPTERA (BEETLES)	Elmidae	6	R
TRICHOPTERA (CADDISFLIES)	<i>Hydrobiosis</i>	5	R
	<i>Tripletides</i>	5	A
DIPTERA (TRUE FLIES)	Orthocladiinae	2	C
	<i>Polypedilum</i>	3	R
	<i>Austrosimulium</i>	3	A
	Tanyderidae	4	R
<b>No of taxa</b>			15
<b>MCI</b>			76
<b>SQMCIs</b>			4
<b>EPT (taxa)</b>			3
<b>%EPT (taxa)</b>			20
'Tolerant' taxa		'Moderately sensitive' taxa	'Highly sensitive' taxa

R = Rare    C = Common    A = Abundant    VA = Very Abundant    XA = Extremely Abundant

## Appendix II

Summary of SEM sites' information, 2008-2009  
and historical MCI scores, predicted scores  
and 1995-2009 trends



Summary of MCI scores at all SEM sites: significance in relation to various predictive methodologies (Stark and Fowles<sup>1</sup>, 2009; Leathwick, 2008<sup>2</sup>), and trends over the SEM period 1995 to 2009

SITE CODE	River Environment Classification (REC)	Altitude (masl)	Distance from National Park (km)	MCI VALUES								TRENDS (1995-2009)			
				SEM 1995-2009		Predicted			p	p>FDR	+/-	Ecological significance			
				Spring 2008	Summer 2009	Range	Median	'Stream Health' [from median]					Altitude <sup>1</sup>	Distance <sup>1</sup>	REC <sup>2</sup>
STY000300	CX/H/VA/S/MO/MG	160	7.3	(125)	(127)	64-160	113	Good	101[+]	109[0]	128[-]	0.202	0.404	-ve	-
STY000400	CX/H/VA/S/MO/MG	70	12.5	(84)	(120)	0-160	108	Good	92[+]	103[0]	115[0]	0.236	0.423	-ve	-
TMR000150	CX/H/VA/IF/LO/HG	420	0	(140)	(119)	119-144	136	Very good	127[0]	132[0]	141[0]	0.306	0.496	-ve	-
TMR000375	CX/L/VA/P/MO/MG	100	10.9	112	118	89-120	100	Good	95[0]	105[0]	117[-]	0.0007	0.0013	+ve	Yes
MRK000420	WW/L/VA/P/MO/LG	60	N/A	95	94	75-104	89	Fair	91[0]	N/A	92[0]	0.0001	0.0017	+ve	Yes
WGA000260	CX/L/VA/P/MO/LG	140	16.1	94	96	82-112	94	Fair	99[0]	100[0]	99[0]	0.646	0.763	+ve	-
WGA000450	WW/L/VA/P/MO/LG	20	31.2	98	89	72-102	84	Fair	86[0]	93[0]	88[0]	0.0002	0.0019	+ve	Yes
WKH000100	CX/H/VA/IF/LO/HG	460	0	(135)	(140)	121-146	129	Very good	131[0]	132[0]	137[0]	0.347	0.506	+ve	-
WKH000500	CX/H/VA/P/MO/MG	175	10.6	110	96	87-122	108	Good	102[0]	105[0]	115[0]	0.179	0.388	+ve	-
WKH000920	CX/H/VA/P/HO/LG	20	26.6	108	92	71-108	93	Fair	86[0]	95[0]	97[0]	0.315	0.496	+ve	-
WKH000950	CX/H/VA/P/HO/LG	2	28.4	104	99	70-111	87	Fair	85[0]	94[0]	97[0]	0.401	0.543	+ve	-
MGE000970	CX/L/VA/P/MO/LG	90	21.6	108	106	86-113	105	Good	94[+]	97[0]	101[0]	0.826	0.895	-ve	-
MGN000195	CX/H/VA/P/MO/LG	330	8.7	(122)	(127)	113-143	126	Very good	118[0]	107[+]	124[0]	0.115	0.284	-ve	-
MGN000427	CX/L/VA/P/HO/MG	140	37.9	105	96	77-115	98	Fair	99[0]	91[0]	103[0]	0.573	0.693	-ve	-
MKW000200	CX/H/VA/IF/MO/MG	380	2.3	(100)	(138)	100-141	128	Very good	123[0]	121[0]	130[0]	0.333	0.506	-ve	-
MKW000300	CX/H/VA/P/MO/LG	150	15.5	(90)	(100)	90-115	99	Fair	100[0]	101[0]	111[-]	0.221	0.411	-ve	-
WTR000850	WX/L/SS/P/HO/LG	15	N/A	101	88	64-101	85	Fair	N/A	N/A	98[-]	0.074	0.215	+ve	-
MGT000488	WN/L/VA/P/LO/LG	30	N/A	77	85	56-85	77	N/A	N/A	N/A	80[0]	0.407	0.543	-ve	-
MGT000520	WW/L/VA/U/LO/LG	20	N/A	76	70	44-76	63	N/A	N/A	N/A	88[-]	0.0028	0.018	+ve	Yes
WMK000100	WW/L/VA/P/LO/HG	160	0	135	133	121-137	132	Very good	101[+]	132[0]	128[0]	0.421	0.547	+ve	-
WMK000298	WW/L/VA/P/MO/MG	1	4.0	94	93	75-101	88	Fair	85[0]	116[-]	103[-]	0.222	0.411	+ve	-
WAI000110	WW/L/VA/P/MO/LG	50	N/A	97	89	80-98	88	Fair	N/A	N/A	91[0]	0.081	0.223	+ve	-
PNH000200	CX/H/YA/IF/MO/MG	270	4.4	126	116	104-133	121	Very good	112[0]	115[0]	121[0]	0.196	0.404	+ve	-
PNH000900	CW/L/VA/P/MO/LG	20	20.9	99	83	70-99	85	Fair	86[0]	98[-]	100[-]	0.035	0.115	+ve	Yes
PAT000200	CX/H/VA/IF/MO/MG	500	1.9	135	136	127-143	137	Very good	135[0]	125[+]	129[0]	0.745	0.824	+ve	-
PAT000315	CX/H/VA/P/MO/LG	300	12.9	121	110	99-130	110	Good	115[0]	103[0]	112[0]	0.718	0.811	+ve	-
PAT000360	CW/L/VA/P/HO/LG	240	19.2	101	93	86-104	97	Fair	109[-]	99[0]	109[-]	0.854	0.907	-ve	-
MGH000950	CW/L/SS/P/HO/LG	120	N/A	92	91	77-104	86	Fair	N/A	N/A	117[-]	0.0002	0.0019	+ve	Yes
WGG000115	CX/H/VA/IF/LO/MG	540	0.7	139	134	122-139	133	Very good	140[0]	130[0]	131[0]	0.0010	0.0075	+ve	No
WGG000150	CX/H/VA/P/LO/MG	380	7.2	127	129	119-139	127	Very good	123[0]	110[+]	124[0]	0.485	0.615	-ve	-
WGG000500	CW/L/VA/P/MO/LG	200	23.0	103	108	91-115	101	Good	105[0]	97[0]	110[0]	0.034	0.115	+ve	No
WGG000665	CW/L/VA/P/HO/MG	180	29.6	98	101	77-105	93	Fair	103[0]	94[0]	102[0]	0.253	0.439	+ve	-
WGG000895	CW/L/VA/P/HO/LG	40	63.0	93	94	73-105	94	Fair	89[0]	85[0]	92[0]	0.350	0.506	+ve	-
WGG000995	CW/L/VA/P/HO/MG	5	66.6	93	86	69-98	87	Fair	85[0]	85	95[0]	0.132	0.311	+ve	-
MWH000380	WW/L/M/P/MO/LG	200	N/A	72	72	58-79	73	N/A	N/A	N/A	92[-]	0.070	0.215	+ve	-
MWH000490	CN/L/VA/P/MO/LG	190	N/A	72	63	63-86	77	Poor	104[-]	N/A	93[-]	0.366	0.514	+ve	-
HTK000350	WX/L/VA/P/MO/LG	60	N/A	102	94	79-105	94	Fair	91[0]	N/A	95[0]	0.0046	0.023	+ve	Yes
HTK000425	WW/L/VA/P/MO/LG	30	N/A	104	100	91-115	102	Good	87[+]	N/A	92[0]	0.028	0.105	+ve	Yes
HTK000745	WW/L/VA/U/MO/MG	5	N/A	80	86	69-99	86	Fair	85[0]	N/A	93[0]	0.717	0.811	+ve	-
KPK000250	CX/H/VA/IF/MO/MG	380	3.3	129	126	125-138	129	Very good	123[0]	118[+]	137[0]	0.900	0.918	-ve	-
KPK000500	CX/H/VA/P/MO/MG	260	9.2	121	112	98-126	114	Good	111[0]	107[0]	127[-]	0.014	0.057	+ve	Yes
KPK000660	CX/H/VA/P/MO/LG	170	15.5	112	102	71-118	99	Fair	102[0]	101[0]	122[-]	<0.0001	0.0007	+ve	Yes

KPK000880	CW/H/VA/P/MO/LG	60	25.7	100	83	66-101	91	Fair	91[0]	95[0]	106[-]	0.095	0.247	+ve	-
KPK000990	CW/L/VA/P/HO/LG	5	31.1	93	82	69-98	87	Fair	85[0]	93[0]	96[-]	0.291	0.489	+ve	-
KTK000150	CW/L/VA/P/HO/LG	420	0	(112)	(120)	112-148	138	Very good	127[+]	132[0]	131[0]	0.947	0.947	-ve	-
KTK000248	WX/L/VA/P/MO/LG	5	18.1	109	107	81-116	103	Good	85[+]	99[0]	96[0]	0.0033	0.019	+ve	Yes
KPA000250	CX/H/VA/P/MO/MG	240	5.7	123	118	83-123	105	Good	109[0]	112[0]	111[0]	0.0118	0.056	+ve	Yes
KPA000700	CX/H/VA/P/MO/MG	140	13.5	108	97	78-108	91	Fair	99[0]	103[-]	105[-]	0.162	0.365	+ve	-
KPA000950	CX/L/VA/P/MO/LG	20	25.2	98	79	76-98	84	Fair	86[0]	96[-]	99[-]	0.530	0.656	+ve	-
KRP000300	WX/L/VA/P/LO/LG	180	N/A	94	98	80-100	91	Fair	103[-]	N/A	92[0]	<0.0001	0.0007	+ve	Yes
KRP000660	WW/L/VA/P/LO/LG	120	N/A	93	91	70-103	90	Fair	97[0]	N/A	102	[-]0.0134	0.057	+ve	Yes
WKR000500	WW/L/VA/P/MO/LG	150	N/A	99	92	88-99	94	Fair	100[0]	N/A	97[0]	N/A	N/A	N/A	N/A
WKR000700	WW/L/VA/P/MO/LG	70	N/A	94	92	92-97	95	Fair	92[0]	N/A	95[0]	N/A	N/A	N/A	N/A
TNH000090	WW/L/SS/P/MO/LG	85	N/A	106	101	93-106	100	Good	N/A	N/A	110[0]	N/A	N/A	N/A	N/A
TNH000200	WW/L/SS/P/HO/LG	65	N/A	107	105	92-107	105	Good	N/A	N/A	108[0]	N/A	N/A	N/A	N/A
TNH000515	WW/L/SS/P/HO/LG	15	N/A	96	84	84-96	88	Fair	N/A	N/A	95[0]	N/A	N/A	N/A	N/A
HRK000085	WW/L/VA/U/MO/MG	5	N/A	86	76	68-96	87	Fair	N/A	N/A	89[0]	0.887	0.918	-ve	-

Notes:

() = severely affected by recent headwater erosion events

[+/-] = ecologically significant deviation from predicted scores

Trend **significant**/not significant at p <0.305

N/A = soft-bedded sites