

APPENDIX A

Monthly physicochemical parameters of sampling sites in Mae Ngat Somboonchol dam during June 2013 – May 2014.

Table 1	Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during June 2013.
Table 2	Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during July 2013.
Table 3	Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during August 2013.
Table 4	Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during September 2013.
Table 5	Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during October 2013.
Table 6	Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during November 2013.
Table 7	Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during December 2013.
Table 8	Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during January 2014.
Table 9	Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during February 2014.
Table 10	Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during March 2014.
Table 11	Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during April 2014.
Table 12	Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during May 2014.

Table 1 Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during June 2013.

sampling sites	SU1	SU2	SD3	SD4	SD5	SD6	SD7
Air temperature (°C)	29.0	32.2	30.7	29.0	32.0	34.0	36.3
Water temperature (°C)	28.0	29.0	30.3	30.7	31.0	32.7	32.0
pH	7.31	7.15	6.65	5.85	5.78	6.03	6.13
Conductivity (µs/cm)	443	590	163	149	149	153	152
TDS (mg/l)	241	313	87	79	79	81	81
DO	6	8.4	2.4	2.6	3.6	3.6	3.2
BOD	0	0.07	1.4	1.1	0.87	0.6	0.26
Ammonia (mg/l)	0.09	0.15	0.47	0.74	0.87	0.44	0.26
Nitrate (mg/l)	0.7	1.1	0.86	0.1	0.6	0.8	0.97
Ortho-phosphate (mg/l)	0.15	0.1	0.03	0.19	0.07	0.08	0.04
Depth (m)	0.15	0.18	0.04	0.22	0.35	0.19	0.5
Width (m)	2.9	2.2	25	1.1	2.5	11	25
Velocity (m/s)	0.71	0.94	0.03	0.03	0.43	0.86	0.55

Table 2 Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during July 2013.

sampling sites	SU1	SU2	SD3	SD4	SD5	SD6	SD7
Air temperature (°C)	26.7	27.0	26.0	31.0	31.3	24.7	25.2
Water temperature (°C)	28.3	29.0	33.3	34.8	32.2	29.0	27.2
pH	7.23	7.32	6.74	6.37	5.72	5.94	6.14
Conductivity (µs/cm)	366	532	196	220	144	160	162
TDS (mg/l)	191	282	104	116	76	85	86
DO	8.34	12.74	2.66	2.6	5.2	5	4.2
BOD	0.34	0.74	1.06	3.2	1.8	1.2	2
Ammonia (mg/l)	0.1	0.21	0.13	0.81	0.72	0.18	0.81
Nitrate (mg/l)	0.76	0.8	0.87	0.37	1	1	0.27
Ortho-phosphate (mg/l)	0.17	0.09	0.34	0.18	0.14	0.23	0.15
Depth (m)	0.18	0.14	0.04	0.04	0.22	0.13	0.3
Width (m)	3.6	2.8	25	1.5	6	13.2	25
Velocity (m/s)	0.97	1.56	0.03	0.03	0.58	0.72	0.03

Table 3 Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during August 2013.

sampling sites	SU1	SU2	SD3	SD4	SD5	SD6	SD7
Air temperature (°C)	26.0	26.0	28.0	27.0	27.3	27.0	26.0
Water temperature (°C)	25.2	26.0	30.0	30.0	29.0	28.0	26.7
pH	6.97	6.95	8.37	6.31	5.95	6.50	6.77
Conductivity (µs/cm)	103	176	176	171	147	142	173
TDS (mg/l)	55	93	94	91	78	74	92
DO	10.2	9.4	1.8	4.7	5.2	7	7.1
BOD	0.1	0	3.3	4.5	2.1	1.9	2.2
Ammonia (mg/l)	0.76	0.34	1.02	0.53	0.54	0.46	1.03
Nitrate (mg/l)	1.07	0.83	0	0.03	0.9	0.3	0
Ortho-phosphate (mg/l)	0.08	0.26	0.1	0.23	0.26	0.19	0.34
Depth (m)	0.23	0.18	0.05	0.08	0.21	0.7	0.8
Width (m)	3.4	3.1	25	1	4.1	14	25
Velocity (m/s)	2.67	2.33	0.03	0.03	1.67	1.94	1.92

Table 4 Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during September 2013.

sampling sites	SU1	SU2	SD3	SD4	SD5	SD6	SD7
Air temperature (°C)	29.7	30.3	31.0	27.0	29.5	25.0	24.0
Water temperature (°C)	26.7	27.5	34.3	31.0	32.0	28.3	28.7
pH	6.88	7.08	8.14	5.80	6.03	6.29	6.73
Conductivity (µs/cm)	87	145	148	138	143	119	160
TDS (mg/l)	46	76	79	74	76	63	85
DO	11.6	10.8	8.8	5.74	7.6	9.66	8.72
BOD	1.2	0.68	1.86	4.36	0.34	2.2	3.4
Ammonia (mg/l)	0.41	0.37	0.4	0.71	0.29	0.43	0.45
Nitrate (mg/l)	0.7	0.83	0	2.1	1.13	0.73	0.8
Ortho-phosphate (mg/l)	0.66	0.12	0.16	0.06	0.06	0.09	0.09
Depth (m)	0.17	0.26	0.05	0.08	0.28	0.25	0.68
Width (m)	3.9	2.4	25	0.8	3.7	3.1	25
Velocity (m/s)	0.81	3.03	0.03	0.03	0.89	0.94	0.28

Table 5 Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during October 2013.

sampling sites	SU1	SU2	SD3	SD4	SD5	SD6	SD7
Air temperature (°C)	26.2	26.7	26.3	27.2	26.7	24.5	25.3
Water temperature (°C)	25.3	27.3	38.3	29.2	31.2	28.8	29.2
pH	7.29	7.40	7.64	6.19	5.88	5.95	5.94
Conductivity (µs/cm)	293	503	165	139	139	150	207
TDS (mg/l)	156	268	87	74	74	79	110
DO	12.8	13.2	9.3	6.6	7.5	8.6	7.6
BOD	2.1	1.1	4.3	0.3	2.1	0.9	3.2
Ammonia (mg/l)	0.32	0.18	0.32	0.67	0.33	0.44	0.48
Nitrate (mg/l)	0.87	0.6	0.67	0.23	0.4	0.43	0.37
Ortho-phosphate (mg/l)	0.07	0.21	0.13	0.19	0.15	0.15	0.23
Depth (m)	0.17	0.11	0.02	0.19	0.09	0.17	0.7
Width (m)	4.14	2.73	25	2	35.33	20	25
Velocity (m/s)	0.20	0.86	0.03	0.03	0.03	0.03	0.03

Table 6 Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during November 2013.

sampling sites	SU1	SU2	SD3	SD4	SD5	SD6	SD7
Air temperature (°C)	25.3	25.3	29.2	28.0	28.5	26.2	24.3
Water temperature (°C)	25.5	27.0	33.3	28.0	31.0	29.8	27.2
pH	7.25	7.21	7.53	6.29	6.01	6.20	6.61
Conductivity (µs/cm)	302	507	184	147	136	159	178
TDS (mg/l)	160	270	98	78	74	83	95
DO	14.8	13.3	12.4	10.6	15	12.2	12.8
BOD	4.8	7	5.4	6	8.1	6	7.9
Ammonia (mg/l)	0.44	0.38	0.46	0.61	0.56	0.46	0.4
Nitrate (mg/l)	1.13	1.2	1	0.97	1.13	0.17	1.23
Ortho-phosphate (mg/l)	0.28	0.17	0.14	0.21	0.23	0.25	0.08
Depth (m)	0.9	0.18	0.03	0.15	0.07	0.15	0.72
Width (m)	4.6	3.1	25	2	35	21	25

Velocity (m/s)	0.59	0.43	0.03	0.03	0.03	0.03	0.06
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Table 7 Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during December 2013.

sampling sites	SU1	SU2	SD3	SD4	SD5	SD6	SD7
Air temperature (°C)	24.3	24.2	24.7	23.7	23.3	23.7	20.2
Water temperature (°C)	24.5	27.7	28.3	25.0	26.3	24.5	24.2
pH	7.25	6.46	6.46	6.06	6.55	6.01	6.28
Conductivity (µs/cm)	340	131	125	141	180	143	165
TDS (mg/l)	180	69	67	74	96	79	88
DO	7	3.1	2.3	4	3.87	4	2.9
BOD	2.2	2.1	1.2	1.2	1.07	1	2.4
Ammonia (mg/l)	0.35	0.41	0.63	0.36	0.34	0.47	0.7
Nitrate (mg/l)	0.83	0.83	0.8	0.63	0.8	0.63	0.83
Ortho-phosphate (mg/l)	0.06	0.14	0.08	0.07	0.1	0.14	0.15

Depth (m)	0.07	1	0.05	0.03	0.19	0.21	0.73
Width (m)	4.43	6	25	3	25.33	10.67	25
Velocity (m/s)	0.58	0.03	0.03	0.03	1.02	0.78	0.58

Table 8 Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during January 2014.

sampling sites	SU1	SU2	SD3	SD4	SD5	SD6	SD7
Air temperature (°C)	25.0	26.0	31.0	25.0	27.0	24.7	22.0
Water temperature (°C)	23.0	25.0	29.0	22.0	27.0	25.0	23.0
pH	7.12	6.75	7.90	6.23	5.93	6.04	6.09
Conductivity (µs/cm)	404	134	135	65	129	140	150
TDS (mg/l)	215	71	72	127	69	74	80
DO	7.73	2.87	4.86	3.8	4.07	2.87	5.67
BOD	3.26	1.74	1.53	1.8	1.54	1.27	1.54
Ammonia (mg/l)	0.09	0.13	0.16	0.17	0.13	0.22	0.15
Nitrate (mg/l)	0.77	0.77	0.9	0.63	0.73	0.63	0.33
Ortho-phosphate (mg/l)	0.25	0.1	0.13	0.14	0.21	0.32	0.25

Depth (m)	0.12	1	0.05	0.03	0.7	0.7	0.75
Width (m)	3.9	6.1	25	2.3	1.5	12.7	25
Velocity (m/s)	0.56	0.03	0.03	0.03	0.43	0.65	0.50

Table 9 Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during February 2014.

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sampling sites	SU1	SU2	SD3	SD4	SD5	SD6	SD7
Air temperature (°C)	29.0	29.0	28.5	28.5	29.8	23.0	18.5
Water temperature (°C)	27.0	27.0	23.3	22.2	24.3	24.0	23.3
pH	7.30	6.92	6.12	5.73	6.11	5.93	5.86
Conductivity (µs/cm)	425	597	119	115	120	119	118
TDS (mg/l)	226	317	63	61	64	63	62
DO	7.53	7.4	2.4	2.27	3.07	4.2	4.47
BOD	2.93	3.94	0.33	1.67	1.07	2	1.8
Ammonia (mg/l)	0.32	0.35	0.34	0.51	0.44	0.42	0.48
Nitrate (mg/l)	1.37	1.03	0.63	0.93	0.7	0.9	0.87

Ortho-phosphate (mg/l)	0.25	0.11	0.24	0.24	0.31	0.09	0.18
Depth (m)	0.06	0.13	0.85	0.5	0.82	0.7	0.65
Width (m)	3.55	3.23	25	4	25	20	25
Velocity (m/s)	0.31	0.62	4.09	0.03	2.71	1.15	1.53

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Table 10 Monthly physico-chemical parameters of water in Mae Ngat Somboonchol dam during March 2014.

sampling sites	SU1	SU2	SD3	SD4	SD5	SD6	SD7
Air temperature (°C)	32.8	24.2	31.3	32.2	33.2	26.2	18.2
Water temperature (°C)	26.0	27.2	26.5	24.8	27.8	24.3	23.3
pH	6.02	7.20	8.79	6.54	5.92	5.98	5.89
Conductivity (µs/cm)	477	620	166	172	139	144	130
TDS (mg/l)	253	328	88	91	74	76	69
DO	6.6	6.7	4.8	2.7	4.5	4.8	4.8
BOD	0.4	0.1	1.3	0.7	0.9	0.8	0.8
Ammonia (mg/l)	0.07	0.09	0.19	0.32	0.27	0.28	0.29

Nitrate (mg/l)	0.83	1.07	0.8	0.63	1.1	0.73	0.9
Ortho-phosphate (mg/l)	0.4	0.37	0.36	0.23	0.25	0.23	0.14
Depth (m)	0.86	0.73	0.63	0.05	0.36	0.2	0.83
Width (m)	3.97	2.23	25	3	10.9	13.67	22.5
Velocity (m/s)	0.19	0.82	1.83	0.01	0.59	0.37	1.42

Table 11 Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during April 2014.

sampling sites	SU1	SU2	SD3	SD4	SD5	SD6	SD7
Air temperature (°C)	28.7	28.2	31.8	30.2	29.2	28.2	27.3
Water temperature (°C)	28.0	28.3	25.2	31.0	30.2	26.3	24.7
pH	7.29	7.19	6.68	6.54	7.32	6.20	6.05
Conductivity (µs/cm)	505	635	126	183	126	156	138
TDS (mg/l)	268.33	337	67	97	66	83	73
DO	5.8	7.5	3.1	2	3.7	4.3	4.8
BOD	0.2	2	1.1	1.1	0.3	0.3	1.6

Ammonia (mg/l)	0.47	0.48	0.46	0.69	0.63	0.6	0.74
Nitrate (mg/l)	0.7	0.73	0.73	0.37	0.7	0.7	0.77
Ortho-phosphate (mg/l)	0.35	0.4	0.41	0.29	0.13	0.3	0.25
Depth (m)	0.91	1.3	1.2	0.44	0.16	0.21	0.51
Width (m)	3.9	2.3	25	4.6	2.33	13.15	25
Velocity (m/s)	0.25	0.58	4.02	0.08	0.70	0.26	0.20

Table 12 Monthly physic-chemical parameters of water in Mae Ngat Somboonchol dam during May 2014.

sampling sites	SU1	SU2	SD3	SD4	SD5	SD6	SD7
Air temperature (°C)	28.4	34.2	33.3	32.2	31.8	29.0	29.0
Water temperature (°C)	29.2	30.2	23.8	29.5	26.2	26.2	24.5
pH	7.32	7.28	6.08	5.69	6.52	6.39	6.44
Conductivity (µs/cm)	494	637	124	131	122	121	123
TDS (mg/l)	263	339	66	71	65	64	65
DO	5.9	6.5	0.8	1.2	2.7	2.3	1.9

BOD	0.1	2.5	0	0	0.9	1.5	0.9
Ammonia (mg/l)	0.16	0.09	0.36	0.43	0.26	0.33	0.33
Nitrate (mg/l)	1.03	0.67	0.73	0.67	0.5	0.83	0.63
Ortho-phosphate (mg/l)	0.61	0.27	0.21	0.17	0.23	0.18	0.31
Depth (m)	0.82	0.98	0.95	0.39	0.71	0.52	0.61
Width (m)	3.67	2.2	25	3.2	20	20	25
Velocity (m/s)	0.32	0.58	4.79	0.03	3.56	1.88	1.52

APPENDIX B

Number of larvae Trichoptera in Mae Ngat Somboonchol dam among all upstream and downstream sampling sites during June 2013 – May 2014

Table 1	Total number of Trichoptera larvae in all sampling sites in Mae Ngat Somboonchol dam during June 2013 - May 2014
Table 2	Number of Trichoptera larvae in upstream sampling site 1 in Mae Ngat Somboonchol dam during June 2013 - May 2014
Table 3	Number of Trichoptera larvae in upstream sampling site 2 in Mae Ngat Somboonchol dam during June 2013 - May 2014
Table 4	Number of Trichoptera larvae in downstream sampling site 3 in Mae Ngat Somboonchol dam during June 2013 - May 2014
Table 5	Number of Trichoptera larvae in downstream sampling site 4 in Mae Ngat Somboonchol dam during June 2013 - May 2014
Table 6	Number of Trichoptera larvae in downstream sampling site 5 in Mae Ngat Somboonchol dam during June 2013 - May 2014
Table 7	Number of Trichoptera larvae in downstream sampling site 6 in Mae Ngat Somboonchol dam during June 2013 - May 2014
Table 8	Number of Trichoptera larvae in downstream sampling site 7 in Mae Ngat Somboonchol dam during June 2013 - May 2014

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Table 1 Total number of Trichoptera larvae in all sampling sites in Mae Ngat Somboonchol dam during June 2013 - May 2014.

Sampling sites/ Month	SU1	SU2	SD3	SD4	SD5	SD6	SD7	Total
June 2013	88	230			1	2		321
July 2013	294	228					1	523
Aug 2013	5	65	60					130
Sep 2013	38	77			29	19		163
Oct 2013	432	171						603
Nov 2013	79	87			94			260
Dec 2013	181			6				187
Jan 2014	382	4		26		55	67	534
Feb 2014	285	83			122			490
Mar 2014	390	422		4	72	118	26	1,032
Apr 2014	258	162				261	123	804
May 2014	306	96				147		549
Total	2,738	1,625	60	36	318	602	217	5,596

Table 2 Number of Trichoptera larvae in upstream sampling site 1 in Mae Ngat Somboonchol dam during June 2013 - May 2014.

SU1	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total	family	percent
Brachycentridae													0	0	0.00%
Calamoceratidae		1				1		6	2			5	15	5	0.55%
Dipseudopsidae	1				6		3	1					11	4	0.40%
Ecnomidae					3	3	3	1	3			1	14	6	0.51%
Glossosomatidae					8	2	5	1	2		1		19	6	0.69%
Goeridae	1				1								2	2	0.07%
Helicopsychidae	10	5		5	10	4	24	68	59	47	103	69	404	11	14.76%
Hydropsychidae	29	9	1		120	17	48	22	9	34	40	6	335	11	12.24%
Hydroptilidae	41	4	1	5	190	10	43	192	124	212	39	45	906	12	33.09%
Lepidostomatidae		1	1		5	14	22	6	18		14	1	82	9	2.99%
Leptoceridae		268	1	28	81	23	26	81	59	90	54	174	885	11	32.32%
Odontoceridae	5	3			5	2				6	2	4	27	7	0.99%
Philopotamidae		3	1		3	3	5	1	7		3		26	8	0.95%
Polycentropodidae	1						2	1	1		2	1	8	6	0.29%
Psychomyiidae								2		1			3	2	0.11%
Xiphoncentronidae									1				1	1	0.04%
Total	88	294	5	38	432	79	181	382	285	390	258	306	2,738		100.00%
Family	7	8	5	3	11	10	10	12	11	6	9	9		15	

Table 3 Number of Trichoptera larvae in upstream sampling site 2 in Mae Ngat Somboonchol dam during June 2013 - May 2014.

SU2	JUN	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total	family	percent
Brachycentridae													0	0	0.00%
Calamoceratidae		1				7			1				9	3	0.55%
Dipseudopsidae		1			1		2			5			9	4	0.55%
Ecnomidae				3	4					7		3	17	4	1.05%
Glossosomatidae		4		2	9	3			4	6	2	1	31	8	1.91%
Goeridae					1								1	1	0.06%
Helicopsychidae				1	2					3			6	3	0.37%
Hydropsychidae	34	99	11	21	86	21			8	176	59	51	566	10	34.83%
Hydroptilidae	135	32	1	12		24				74	30		308	7	18.95%
Lepidostomatidae					1	2							3	2	0.18%
Leptoceridae	40	68	31	17	66	21			8	62	49	15	377	10	23.20%
Odontoceridae	21	22	22	13	1	6	2		58	64	22	17	248	11	15.26%
Philopotamatidae				2		1			4	9		4	20	5	1.23%
Polycentropodidae		1		6		2				14		3	26	5	1.60%
Psychomyiidae										2		2	4	2	0.25%
Xiphoncentronidae													0	0	0.00%
Total	230	228	65	77	171	87	4		83	422	162	96	1,625		100.00%
Family	4	8	4	9	9	9	2	0	6	11	5	8		14	

Table 4 Number of Trichoptera larvae in downstream sampling site 3 in Mae Ngat Somboonchol dam during June 2013 - May 2014.

SD3	JUN	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total	family	percent
Brachycentridae													0	0	0.00%
Calamoceratidae													0	0	0.00%
Dipseudopsidae													0	0	0.00%
Ecnomidae													0	0	0.00%
Glossosomatidae													0	0	0.00%
Goeridae													0	0	0.00%
Helicopsychidae													0	0	0.00%
Hydropsychidae			56										56	1	93.33%
Hydroptilidae													0	0	0.00%
Lepidostomatidae													0	0	0.00%
Leptoceridae			4										4	1	6.67%
Odontoceridae													0	0	0.00%
Philopotamatidae													0	0	0.00%
Polycentropodidae													0	0	0.00%
Psychomyiidae													0	0	0.00%
Xiphoncentronidae													0	0	0.00%
Total	0	0	60	0	0	0	0	0	0	0	0	0	60		100.00%
Family	0	0	2	0	0	0	0	0	0	0	0	0		2	

Table 5 Number of Trichoptera larvae in downstream sampling site 4 in Mae Ngat Somboonchol dam during June 2013 - May 2014.

SD4	JUN	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total	family	percent
Brachycentridae													0	0	0.00%
Calamoceratidae													0	0	0.00%
Dipseudopsidae													0	0	0.00%
Ecnomidae													0	0	0.00%
Glossosomatidae													0	0	0.00%
Goeridae													0	0	0.00%
Helicopsychidae													0	0	0.00%
Hydropsychidae								14					14	1	38.89%
Hydroptilidae							2	4		3			9	3	25.00%
Lepidostomatidae													0	0	0.00%
Leptoceridae							3	5		1			9	3	25.00%
Odontoceridae							1	1					2	2	5.56%
Philopotamatidae								1					1	1	2.78%
Polycentropodidae													0	0	0.00%
Psychomyiidae								1					1	1	2.78%
Xiphoncentronidae													0	0	0.00%
Total	0	0	0	0	0	0	6	26	0	4	0	0	36		100.00%
Family	0	0	0	0	0	0	3	6	0	2	0	0		6	

Table 6 Number of Trichoptera larvae in downstream sampling site 5 in Mae Ngat Somboonchol dam during June 2013 - May 2014.

SD5	JUN	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total	family	percent
Brachycentridae													0	0	0.00%
Calamoceratidae													0	0	0.00%
Dipseudopsidae				1					2	1			4	3	1.07%
Ecnomidae													0	0	0.00%
Glossosomatidae													0	0	0.00%
Goeridae													0	0	0.00%
Helicopsychidae													0	0	0.00%
Hydropsychidae	1			27		94		47	115	65			349	6	93.57%
Hydroptilidae								2	1				3	2	0.80%
Lepidostomatidae													0	0	0.00%
Leptoceridae				1				5	3	4			13	4	3.49%
Odontoceridae										1			1	1	0.27%
Philopotamatidae									1				1	1	0.27%
Polycentropodidae										1			1	1	0.27%
Psychomyiidae								1					1	1	0.27%
Xiphoncentronidae													0	0	0.00%
Total	1	0	0	29	0	94	0	55	122	72	0	0	373		100.00%
Family	1	0	0	3	0	1	0	4	5	5	0	0		8	

Table 7 Number of Trichoptera larvae in downstream sampling site 6 in Mae Ngat Somboonchol dam during June 2013 - May 2014.

SD6	JUN	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total	family	percent
Brachycentridae													0	0	0.00%
Calamoceratidae													0	0	0.00%
Dipseudopsidae											1		1	1	0.17%
Ecnomidae													0	0	0.00%
Glossosomatidae								1					1	1	0.17%
Goeridae													0	0	0.00%
Helicopsychidae													0	0	0.00%
Hydropsychidae	2							57		79	80	66	284	5	47.73%
Hydroptilidae										39	180	78	297	3	49.92%
Lepidostomatidae													0	0	0.00%
Leptoceridae								7				3	10	2	1.68%
Odontoceridae													0	0	0.00%
Philopotamatidae													0	0	0.00%
Polycentropodidae													0	0	0.00%
Psychomyiidae								2					2	1	0.34%
Xiphoncentronidae													0	0	0.00%
Total	2	0	0	0	0	0	0	67	0	118	261	147	595		100.00%
Family	1	0	0	0	0	0	0	4	0	2	3	3		6	

Table 8 Number of Trichoptera larvae in downstream sampling site 7 in Mae Ngat Somboonchol dam during June 2013 - May 2014.

SD7	JUN	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total	family	percent
Brachycentridae													0	0	0.00%
Calamoceratidae													0	0	0.00%
Dipseudopsidae											1		1	1	0.59%
Ecnomidae													0	0	0.00%
Glossosomatidae													0	0	0.00%
Goeridae													0	0	0.00%
Helicopsychidae													0	0	0.00%
Hydropsychidae													0	0	0.00%
Hydroptilidae				18						26	122		166	3	98.22%
Lepidostomatidae													0	0	0.00%
Leptoceridae		1		1									2	2	1.18%
Odontoceridae													0	0	0.00%
Philopotamatidae													0	0	0.00%
Polycentropodidae													0	0	0.00%
Psychomyiidae													0	0	0.00%
Xiphoncentronidae													0	0	0.00%
Total	0	1	0	19	0	0	0	0	0	26	123	0	169		100.00%
Family	0	1	0	2	0	0	0	0	0	1	2	0		3	

APPENDIX C

Number of individuals of adult male Trichoptera in Mae Ngat Somboonchol dam among all upstream and downstream sampling sites during June 2013 – May 2014

Table 1	Number of individuals of adult male Trichoptera in upstream sampling site 1 in Mae Ngat Somboonchol dam during June 2013 - May 2014
Table 2	Number of individuals of adult male Trichoptera in upstream sampling site 2 in Mae Ngat Somboonchol dam during June 2013 - May 2014
Table 3	Number of individuals of adult male Trichoptera in downstream sampling site 3 in Mae Ngat Somboonchol dam during June 2013 - May 2014
Table 4	Number of individuals of adult male Trichoptera in downstream sampling site 4 in Mae Ngat Somboonchol dam during June 2013 - May 2014
Table 5	Number of individuals of adult male Trichoptera in downstream sampling site 5 in Mae Ngat Somboonchol dam during June 2013 - May 2014
Table 6	Number of individuals of adult male Trichoptera in downstream sampling site 6 in Mae Ngat Somboonchol dam during June 2013 - May 2014
Table 7	Number of individuals of adult male Trichoptera in downstream sampling site 7 in Mae Ngat Somboonchol dam during June 2013 - May 2014

Family	Species	Sampling site 1 (SU1)												
		JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	Total
	<i>Oecetis scutulata</i>		2	2									12	16
	<i>Oecetis kodros</i>													
	<i>Parasetodes respersella</i>													
	<i>Setodes brevicaudatus</i>	2											4	6
	<i>Setodes endymion</i>	6										1		7
	<i>Setodes isis</i>	26										5	2	33
	<i>Setodes argentiguttatus</i>		2										7	9
	<i>Setodes fluviialis</i>												22	22
	<i>Setodes kybele</i>											5	1	6
	<i>Setodes okyrrhoe</i>													
	<i>Setodes opheltes</i>													
	<i>Setodes opora</i>												2	2
	<i>Setodes orcus</i>													
	<i>Setodes sarapis</i>	3												3
	<i>Setodes thoneti</i>	18									1	1	2	22
	<i>Setodes tcharurupa</i>	3								2		7	12	24
	<i>Trichosetodes anaksepuluh</i>											1	4	5
	<i>Leptocerus dirghachuka</i>											1	2	3

Family	Species	Sampling site 1 (SU1)												
		JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	Total
	<i>Psychomyia lak</i>												1	1
	<i>Psychomyia mento</i>											1	2	3
	<i>Psychomyia amphiaraos</i>										2		1	3
	<i>Psychomyia sampati</i>													
	<i>Psychomyia kerynitia</i>													
	<i>Tinodes ragu</i>							2						2
Philopotamidae														
	<i>Chimarra akkaorum</i>								1			2	8	11
	<i>Chimarra momma</i>													
	<i>Chimarra Chiangmaiensis</i>								1			1		2
	<i>Chimarra helios</i>				1									1
	<i>Kiasura peleg</i>		2											2
	<i>Wormaldia nyctimon</i>											4		4
Ecnomiidae														
	<i>Ecnomus alkios</i>													
	<i>Ecnomus cincibilis</i>													
	<i>Ecnomus puro</i>													
	<i>Ecnomus jojachin</i>		5									1		6

Family	Species	Sampling site 1 (SU1)												
		JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	Total
	<i>Hydroptilia thuna</i>				3	1			1			22	29	56
	<i>Hydroptilia</i> sp.							1						1
	<i>Orthotrichia maendrica</i>													
Xiphocentronidae														
	<i>Drepanocentron curmisagius</i>													
	<i>Proxiphocentron patrus</i>								2					2
Brachycentridae														
	<i>Micrasema</i> sp.													0
Total		107	38	5	19	2	1	13	4	12	132	238	506	1,077

Table 2 Number of individuals of adult male Trichoptera in upstream sampling site 2 (SU2) in Mae Ngat Somboonchol dam during June 2013 – May 2014; catches by light pan trap one night.

Family	Species	Sampling site 2 (SU2)												
		JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total
Hydropsychidae														
	<i>Macrostemum midas</i>	3										1	4	8
	<i>Macrostemum floridum</i>	2										8	8	18
	<i>Macrostemum fenestratum</i>	1												1
	<i>Macrostemum hestia</i>													
	<i>Anthaloptera sexpunctata</i>													
	<i>Amphisyche meridiana</i>											1		1
	<i>Cheumatopsyche banksi</i>													
	<i>Cheumatopsyche caieta</i>													
	<i>Cheumatopsyche chrysothemis</i>				3	4	2	2			7	42		60
	<i>Cheumatopsyche criseyde</i>										3	4		7
	<i>Cheumatopsyche copia</i>													
	<i>Cheumatopsyche globosa</i>							1				93		94
	<i>Cheumatopsyche lucida</i>	9	7	1				1	2		3	18		41
	<i>Diplectona aurovittata</i>													
	<i>Cheumatopsyche cacus</i>							1						1

Family	Species	Sampling site 2 (SU2)												
		JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total
	<i>Oecetis scutulata</i>										3	43	2	48
	<i>Oecetis kodros</i>													
	<i>Parasetodes respersella</i>													
	<i>Setodes brevicaudatus</i>	2										1		3
	<i>Setodes endymion</i>	1					2					4		7
	<i>Setodes isis</i>	7				1						1		9
	<i>Setodes argentiguttatus</i>		2						2			20	2	26
	<i>Setodes fluvialis</i>	2										4		6
	<i>Setodes kybele</i>	1										4		5
	<i>Setodes okyrrhoe</i>													
	<i>Setodes opheltes</i>													
	<i>Setodes opora</i>													
	<i>Setodes orcus</i>						1					1		2
	<i>Setodes sarapis</i>													
	<i>Setodes thoneti</i>											1		1
	<i>Setodes tcharurupa</i>	1							2		2	3		8
	<i>Trichosetodes anaksepuluh</i>													
	<i>Leptocerus dirghachuka</i>											1		1

Family	Species	Sampling site 2 (SU2)												
		JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total
	<i>Psychomyia lak</i>												1	1
	<i>Psychomyia mento</i>													
	<i>Psychomyia amphiaraos</i>												1	1
	<i>Psychomyia sampati</i>													
	<i>Psychomyia kerynitia</i>													
	<i>Tinodes ragu</i>													
Philopotamidae														
	<i>Chimarra akkaorum</i>				2		4	1						7
	<i>Chimarra momma</i>													
	<i>Chimarra chiangmaiensis</i>					1	2	1						4
	<i>Chimarra helios</i>													
	<i>Kiasura peleg</i>													
	<i>Wormaldia nyctimon</i>											2		2
Ecnomiidae														
	<i>Ecnomus alkios</i>													
	<i>Ecnomus cincibilus</i>													
	<i>Ecnomus puro</i>													
	<i>Ecnomus jojachin</i>					2		1			2	3		8

Family	Species	Sampling site 2 (SU2)												
		JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total
	<i>Hydroptilia thuna</i>	6		2		1			1	35		31		76
	<i>Hydroptilia</i> sp.													
	<i>Orthotrichia maendrica</i>													
Xiphocentronidae														
	<i>Drepanocentron curmisagius</i>													
	<i>Proxiphocentron patrus</i>													
Brachycentridae														
	<i>Micrasema</i> sp.		1											1
Total		49	27	4	10	15	29	13	3	44	41	352	36	623

Family	Species	Sampling site 3 (SD3)													
		JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total	
	<i>Hydroptilia thuna</i>										11	13	16	9	49
	<i>Hydroptilia</i> sp.														
	<i>Orthotrichia maendrica</i>														
Xiphocentronidae															
	<i>Drepanocentron curmisagius</i>														
	<i>Proxiphocentron patrus</i>														
Brachycentridae															
	<i>Micrasema</i> sp.														
Total		20	17	20	16	6	29	38	8	24	36	292	172	678	

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Family	Species	Sampling site 4 (SD4)												
		JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total
	<i>Hydroptilia thuna</i>											7	7	14
	<i>Hydroptilia</i> sp.													
	<i>Orthotrichia maendrica</i>													
Xiphocentronidae														
	<i>Drepanocentron curmisagius</i>													
	<i>Proxiphocentron patrus</i>													
Brachycentridae														
	<i>Micrasema</i> sp.													
Total		84	7	27	19	1	49	5	4	1	25	130	60	412

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Family	Species	Sampling site 5 (SD5)													
		JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total	
	<i>Hydroptilia thuna</i>		3									4	7	16	30
	<i>Hydroptilia</i> sp.											2			2
	<i>Orthotrichia maendrica</i>												2		2
Xiphocentronidae															
	<i>Drepanocentron curmisagius</i>														
	<i>Proxiphocentron patrus</i>														
Brachycentridae															
	<i>Micrasema</i> sp.														
Total		39	84	83	2	1	11	41	14	5	9	80	51	420	

Family	Species	Sampling site 6 (SD6)													
		JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total	
	<i>Hydroptilia thuna</i>										2		19	4	25
	<i>Hydroptilia</i> sp.														
	<i>Orthotrichia maendrica</i>														
Xiphocentronidae															
	<i>Drepanocentron curmisagius</i>												1		1
	<i>Proxiphocentron patrus</i>														
Brachycentridae															
	<i>Micrasema</i> sp.														
Total		42	20	31	31	2	3	114	12	18	8	36	16	333	

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Family	Species	Sampling site 7 (SD7)												
		JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	total
	<i>Hydroptilia thuna</i>	3	1									12		16
	<i>Hydroptilia</i> sp.		2											2
	<i>Orthotrichia maendrica</i>													
Xiphocentronidae														
	<i>Drepanocentron curmisagius</i>													
	<i>Proxiphocentron patrus</i>													
Brachycentridae														
	<i>Micrasema</i> sp.												1	1
Total		36	19	12	13	11	5	12	2	8	33	98	52	301

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