

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
			Headwater								
				- CURRENT							
[50315] - CHIMARRA OBSCURA	MI	26	10.7	226	3.8	3.0	1.0	3.0	6.0	7.0	9.0
[13540] - STENONEMA MEDIOPUNCTATUM	I	12	8.3	20	5.8	6.0	1.0	3.0	8.5	10.0	11.0
[74673] - ATRICHOPOGON WEBSTERI		10	7.8	16	4.5	4.5	1.0	1.5	7.0	8.9	9.0
[11115] - BAETIS TRICAUDATUS	MI	9	7.5	39	3.8	3.0	1.0	2.0	6.0	8.0	8.5
[85625] - RHEOTANYTARSUS SP	MI	293	6.9	727	3.6	3.0	1.0	1.0	6.0	7.0	9.0
[84302] - PHAENOPSECTRA PUNCTIPES		6	6.7	9	4.7	5.0	1.8	3.7	6.2	7.0	7.0
[84469] - POLYPEDILUM (P.) ILLINOENSE GROUP		6	6.6	10	3.6	3.5	1.0	1.0	7.0	7.0	7.0
[85818] - TANYTARSUS GLABRESCENS GROUP SP 4	MI	6	6.5	23	3.9	3.0	1.0	3.0	6.0	6.2	7.7
[74100] - SIMULIUM SP		95	6.4	751	4.0	3.0	1.0	3.0	6.0	7.4	9.0
[84470] - POLYPEDILUM (P.) ILLINOENSE	T	193	6.4	846	3.2	3.0	1.0	1.0	4.0	7.0	8.0
[78450] - NILOTANYPUS FIMBRIATUS	MI	137	6.3	180	4.3	3.0	1.0	3.0	6.5	8.5	9.0
[48410] - CORYDALUS CORNUTUS	MI	18	6.3	87	4.3	3.0	2.0	3.0	6.0	8.0	9.0
[34500] - PERLESTA PLACIDA COMPLEX		5	6.2	46	4.0	3.0	1.0	1.0	6.0	8.0	9.0
[06904] - SYNURELLA DENTATA		5	6.2	61	3.4	3.0	1.0	1.0	6.0	7.0	7.0
[33100] - LEUCTRA SP	I	11	6.1	83	3.5	3.0	0.8	1.2	6.0	7.2	8.3
[11430] - DIPHETOR HAGENI	I	40	6.1	122	3.6	3.0	1.0	2.0	6.0	7.0	8.0
[52540] - HYDROPSYCHE DICANTHA	MI	6	6.0	43	5.0	5.0	2.6	3.0	7.0	9.0	9.0
[67500] - LACCOBIUS SP		6	6.0	196	3.0	3.0	1.0	1.0	4.0	7.0	7.7
[78600] - PENTANEURA INCONSPICUA		7	5.8	27	4.5	3.0	1.0	3.0	7.0	7.8	9.4
[84700] - STENOCHIRONOMUS SP		28	5.8	122	3.5	3.0	1.0	1.0	6.0	7.0	8.0
[52440] - CERATOPSYCHE SLOSSONAE	MI	42	5.7	163	4.2	3.0	1.8	3.0	6.0	7.0	8.0
[87501] - EMPIDIDAE		107	5.6	201	4.5	4.0	1.0	3.0	6.0	8.0	9.0
[11100] - BAETIS SP		48	5.5	220	3.9	3.0	1.0	3.0	6.0	7.0	8.0
[57900] - PYCNOPSYCHE SP	MI	19	5.5	215	3.7	3.0	1.0	3.0	6.0	7.0	8.0
[82121] - THIENEMANNIELLA LOBAPODEMA	MI	61	5.5	67	4.4	4.0	1.0	3.0	6.7	8.0	9.0
[52200] - CHEUMATOPSYCHE SP		302	5.5	1325	3.3	3.0	1.0	1.0	5.0	7.0	8.0
[11150] - PSEUDOCLOEON PROPINQUUM	I	7	5.4	37	4.1	3.0	0.2	2.5	7.0	8.8	9.0
[52430] - CERATOPSYCHE MOROSA GROUP	MI	120	5.4	470	4.1	3.0	1.0	3.0	6.0	8.0	9.0
[84430] - POLYPEDILUM (P.) ALBICORNE	MI	23	5.4	31	4.5	4.0	1.0	3.0	6.0	9.0	9.0

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Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[71100] - HEXATOMA SP	MI	15	5.4	429	3.5	3.0	1.0	2.0	6.0	7.0	8.0
[14900] - LEPTOPHLEBIA SP	I	6	5.3	14	3.5	3.0	1.0	3.0	3.0	7.0	7.0
[80351] - CORYNONEURA N.SP 1	MI	31	5.3	78	4.3	3.0	1.0	3.0	6.0	9.0	9.0
[52530] - HYDROPSYCHE DEPRAVATA GROUP		159	5.3	926	3.5	3.0	1.0	2.0	6.0	7.0	8.0
[11130] - BAETIS INTERCALARIS		119	5.2	490	3.6	3.0	1.0	2.0	6.0	7.0	9.0
[81240] - NANOCLADIUS (N.) DISTINCTUS	MT	36	5.2	50	3.7	3.0	1.0	2.0	6.0	7.0	9.0
[08601] - HYDRACARINA		113	5.2	277	3.7	3.0	1.0	1.7	6.0	7.0	9.0
[85815] - TANYTARSUS GLABRESCENS GROUP SP 1		5	5.2	7	4.4	4.0	0.2	1.5	7.0	8.6	9.0
[85261] - CLADOTANYTARSUS VANDERWULPI GROUP TYPE 1	I	43	5.2	72	4.7	4.0	1.0	3.0	7.0	8.3	9.0
[52450] - CERATOPSYCHE SPARNA	MI	6	5.2	40	5.3	6.0	3.0	3.0	7.0	8.5	9.0
[80204] - BRILLIA FLAVIFRONS GROUP		44	5.1	82	4.6	3.5	1.0	3.0	7.0	9.0	9.0
[81270] - NANOCLADIUS (N.) SPINIPILENUS	MI	49	5.1	73	4.4	3.0	1.0	3.0	7.0	8.0	9.0
[80430] - CRICOTOPUS (C.) TREMULUS GROUP		101	5.1	378	3.9	3.0	1.0	3.0	6.0	7.0	8.0
[84450] - POLYPEDILUM (URESIPEDILUM) FLAVUM		233	5.1	825	3.5	3.0	1.0	1.0	6.0	7.0	8.0
[34130] - ACRONEURIA FRISONI	MI	45	5.1	161	3.1	3.0	0.0	1.0	4.2	7.0	7.4
[50804] - LYPE DIVERSA	MI	59	5.1	83	4.4	3.0	1.0	3.0	6.0	8.2	9.0
[03045] - FREDERICELLA INDICA	MI	5	5.1	14	3.7	3.0	1.0	1.0	6.0	7.2	8.6
[48620] - NIGRONIA SERRICORNIS		40	5.0	211	3.7	3.0	1.0	2.0	6.0	7.0	8.0
[01900] - NEMERTEA		36	5.0	48	4.1	3.0	1.0	3.0	6.5	7.0	7.0
[80360] - CORYNONEURA "CELERIPES" (SENSU SIMPSON & BODE, 1980)	I	27	5.0	45	4.3	3.0	3.0	3.0	6.0	7.0	9.0
[13590] - STENONEMA VICARIUM	MI	129	5.0	329	4.0	3.0	1.0	3.0	6.0	8.0	9.0
[59580] - OECETIS PERSIMILIS	MI	7	5.0	23	4.8	4.0	2.6	3.0	7.0	7.4	9.7
[82141] - THIENEMANNIELLA XENA		164	5.0	317	4.2	3.0	1.0	3.0	6.0	8.0	9.0
[84155] - PARALAUTERBORNIELLA NIGROHALTERALIS		6	5.0	22	3.6	3.0	1.0	2.0	6.0	8.0	8.4
[13561] - STENONEMA PULCHELLUM	MI	30	4.9	65	4.0	3.0	1.0	3.0	6.0	7.0	9.0
[81825] - RHEOCRICOTOPUS (PSILOCRICOTOPUS) ROBACKI	MI	111	4.9	250	4.3	3.0	1.0	3.0	6.0	8.0	9.0

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[56001] - LIMNAPHILIDAE		5	4.9	10	3.9	3.0	1.5	3.0	5.0	7.5	8.0
[82220] - TVETENIA DISCOLORIPES GROUP	I	11	4.9	29	4.1	3.0	2.0	3.0	6.0	7.0	7.1
[13510] - STENONEMA EXIGUUM	I	10	4.9	15	4.7	5.0	1.0	3.0	7.0	7.0	8.5
[77740] - HAYESOMYIA SENATA		6	4.8	12	3.4	3.0	1.0	1.5	3.5	8.2	10.6
[81650] - PARAMETRIOCNEMUS SP	MI	121	4.8	432	3.9	3.0	1.0	3.0	6.0	8.0	9.0
[78350] - MEROPELOPIA SP		57	4.8	172	3.7	3.0	1.0	2.0	6.0	7.3	8.0
[80420] - CRICOTOPUS (C.) BICINCTUS	MT	153	4.8	592	3.8	3.0	1.0	2.0	6.0	7.0	9.0
[86100] - CHRYSOPS SP		17	4.8	393	3.3	3.0	1.0	1.0	5.0	7.0	8.0
[84440] - POLYPEDILUM (URESIPEDILUM) AVICEPS	MI	28	4.8	139	3.9	3.0	1.0	2.0	6.0	8.0	9.0
[85615] - RHEOTANYTARSUS PELLUCIDUS	MI	101	4.8	174	4.3	3.0	1.0	3.0	6.0	8.0	9.0
[11120] - BAETIS FLAVISTRIGA		148	4.8	532	3.8	3.0	1.0	3.0	6.0	7.0	8.9
[48610] - NIGRONIA FASCIATUS	MI	5	4.8	34	3.6	3.0	1.0	2.0	6.0	6.1	7.8
[69225] - OPTIOSERVUS FASTIDITUS	MI	14	4.7	121	3.9	3.0	1.0	3.0	6.0	8.0	8.4
[87510] - CHELIFERA SP	MI	6	4.7	14	4.8	5.0	1.9	3.0	7.0	8.1	8.8
[79085] - TELOPELOPIA OKOBOJI		10	4.7	15	4.0	3.0	1.0	1.2	6.7	8.0	8.7
[68601] - ANCYRONYX VARIEGATA	MI	50	4.7	162	3.9	3.0	1.0	3.0	6.0	7.0	8.4
[71910] - TIPULA ABDOMINALIS	MI	15	4.7	150	3.9	3.0	1.0	3.0	6.0	7.0	8.0
[81632] - PARAKIEFFERIELLA N.SP 2	MI	33	4.7	64	3.8	3.0	1.0	3.0	6.0	7.0	8.0
[12200] - ISONYCHIA SP	MI	80	4.6	305	4.0	3.0	1.0	3.0	6.0	7.0	9.0
[85803] - TANYTARSUS TYPE 3		10	4.6	16	3.7	3.0	0.1	2.0	6.0	6.9	8.4
[94201] - LYMNAEIDAE		5	4.6	17	4.0	3.0	1.0	3.0	6.0	7.0	8.3
[30000] - PLECOPTERA		16	4.6	25	3.9	3.0	1.0	2.5	6.0	9.0	9.0
[16200] - EURYLOPHELLA SP	MI	51	4.6	72	4.2	3.0	1.0	3.0	6.0	8.0	8.9
[85500] - PARATANYTARSUS SP		358	4.6	589	3.5	3.0	1.0	1.0	6.0	7.0	8.0
[84460] - POLYPEDILUM (P.) FALLAX GROUP		336	4.6	440	3.9	3.0	1.0	3.0	6.0	7.0	9.0
[21300] - HETAERINA SP		26	4.6	86	4.2	3.0	1.1	3.0	6.0	7.0	9.0
[86401] - ATHERIX LANTHA	MI	22	4.6	94	4.6	3.0	2.0	3.0	7.0	9.0	9.0
[80410] - CRICOTOPUS (C.) SP		116	4.5	232	4.1	3.0	1.0	3.0	6.0	7.0	9.0
[84300] - PHAENOPSECTRA OBEDIENS GROUP		123	4.5	323	3.8	3.0	1.0	3.0	6.0	7.0	9.0
[82101] - THIENEMANNIELLA TAUROCAPITA	I	56	4.5	71	4.2	3.0	3.0	3.0	6.0	7.0	8.9

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Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[51600] - POLYCENTROPUS SP	MI	59	4.5	235	3.3	3.0	1.0	1.0	5.0	7.0	8.0
[52315] - DIPLECTRONA MODESTA		5	4.4	79	3.5	3.0	1.0	3.0	5.0	6.6	7.0
[87540] - HEMERODROMIA SP		187	4.4	328	3.5	3.0	1.0	1.0	6.0	7.0	8.0
[80370] - CORYNONEURA LOBATA	MI	354	4.4	446	3.9	3.0	1.0	3.0	6.0	7.0	9.0
[84480] - POLYPEDILUM (P.) LAETUM GROUP	MI	9	4.3	106	3.6	3.0	1.0	2.0	6.0	8.0	9.0
[68901] - MACRONYCHUS GLABRATUS	MI	167	4.3	340	3.7	3.0	1.0	2.0	6.0	7.0	8.5
[77500] - CONCHAPELOPIA SP		357	4.3	1053	3.3	3.0	1.0	1.0	4.0	7.0	8.0
[80440] - CRICOTOPUS (C.) TRIFASCIA		7	4.3	78	5.0	5.0	3.0	3.0	7.0	8.0	9.0
[85840] - TANYTARSUS SEPP	MI	204	4.3	294	3.9	3.0	1.0	3.0	6.0	7.0	8.0
[85710] - STEPELLINELLA SP	MI	22	4.3	28	4.3	3.0	2.0	3.0	6.0	9.0	9.0
[50301] - CHIMARRA ATERRIMA	MI	17	4.3	240	3.3	3.0	1.0	2.0	4.0	6.0	7.0
[74650] - ATRICHOPOGON SP		12	4.3	19	3.2	3.0	1.0	1.5	3.7	6.2	8.1
[85501] - PARATANYTARSUS N.SP 1	MI	65	4.3	98	4.0	3.0	1.0	3.0	6.0	8.0	8.6
[16700] - TRICORYTHODES SP	MI	31	4.2	44	4.3	4.0	2.8	3.0	6.0	7.0	7.6
[71900] - TIPULA SP		46	4.2	615	3.5	3.0	1.0	1.0	5.7	7.0	8.0
[79100] - THIENEMANNIMYIA GROUP		21	4.2	131	3.3	3.0	1.0	2.0	4.0	7.0	7.0
[53800] - HYDROPTILA SP		99	4.2	365	3.5	3.0	1.0	2.0	6.0	7.0	8.0
[11250] - CENTROPTILUM SP (W/O HINDWING PADS)	MI	9	4.2	183	2.8	3.0	0.0	1.0	4.0	7.0	8.0
[85814] - TANYTARSUS GLABRESCENS GROUP		294	4.2	437	3.7	3.0	1.0	2.0	6.0	7.0	9.0
[06700] - CRANGONYX SP	MT	60	4.1	355	3.5	3.0	1.0	1.0	6.0	7.0	8.0
[93200] - HYDROBIIDAE	MT	12	4.1	38	3.1	3.0	1.0	1.0	4.0	6.7	8.6
[96900] - FERRISSIA SP		309	4.1	638	3.4	3.0	1.0	1.0	5.0	7.0	8.0
[77800] - HELOPELOPIA SP		287	4.1	707	3.7	3.0	1.0	2.0	6.0	7.0	9.0
[85720] - STEPELLINELLA N.SP NR. FLAVIDULA	I	61	4.1	90	3.8	3.0	1.0	3.0	6.0	7.0	8.0
[13570] - STENONEMA TERMINATUM	MI	13	4.1	31	3.3	3.0	1.0	1.2	4.0	6.4	7.0
[84540] - POLYPEDILUM (TRIPODURA) SCALAENUM GROUP		191	4.1	417	3.5	3.0	1.0	1.0	5.0	7.0	9.0
[78401] - NATARSIA SPECIES A (SENSU ROBACK, 1978)	T	38	4.0	331	3.1	3.0	1.0	1.0	4.0	7.0	8.0

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[21200] - CALOPTERYX SP		215	4.0	894	3.5	3.0	1.0	2.0	6.0	7.0	8.0
[51400] - NYCTIOPHYLAX SP	MI	48	4.0	135	3.6	3.0	1.0	1.0	6.0	8.0	9.0
[11650] - PROCLOEON SP (W/ HINDWING PADS)	MI	14	4.0	69	3.2	3.0	1.0	1.0	4.2	6.0	8.0
[81230] - NANOCLADIUS (N.) CRASSICORNUS (OLD)		18	4.0	25	3.8	3.0	1.0	1.0	6.0	7.0	8.2
[35001] - PERLODIDAE	MI	6	4.0	18	3.7	3.0	1.0	3.0	6.0	7.4	8.6
[84475] - POLYPEDILUM (P.) OPHIOIDES	MI	8	4.0	36	4.8	4.0	1.1	3.0	7.5	8.9	9.0
[13400] - STENACRON SP		290	4.0	952	3.2	3.0	1.0	1.0	4.0	7.0	8.0
[17200] - CAENIS SP		311	4.0	925	3.0	3.0	1.0	1.0	4.0	7.0	8.0
[01418] - CRASPEDACUSTA SOWERBYI		17	4.0	17	4.0	3.0	1.4	3.0	6.0	6.8	7.6
[60300] - DINEUTUS SP		6	4.0	74	3.9	3.0	1.0	1.0	6.0	8.0	9.0
[68025] - ECTOPRIA SP	MI	11	4.0	172	3.9	3.0	1.0	3.0	6.0	7.0	9.0
[77750] - HAYESOMYIA SENATA OR THIENEMANNIMYIA NORENA		151	3.9	312	3.5	3.0	1.0	1.0	6.0	7.0	8.0
[13580] - STENONEMA TRIPUNCTATUM (OLD)		67	3.9	151	3.9	3.0	1.0	3.0	6.0	8.0	9.0
[93900] - ELIMIA SP	MI	77	3.9	281	3.9	3.0	1.0	3.0	6.0	8.0	9.0
[98600] - SPHAERIUM SP		77	3.9	761	2.9	3.0	1.0	1.0	3.0	7.0	8.0
[01801] - TURBELLARIA		278	3.9	884	3.3	3.0	1.0	1.0	5.0	7.0	8.0
[85752] - SUBLETTEA COFFMANI	I	20	3.9	22	4.5	3.5	1.7	3.0	7.0	7.6	9.0
[59001] - LEPTOCERIDAE	MI	6	3.9	11	3.9	3.0	1.0	3.0	5.5	7.8	8.9
[07701] - CAMBARIDAE		7	3.8	50	2.9	3.0	1.0	1.0	3.0	7.0	7.0
[70600] - ANTOCHA SP	MI	39	3.8	79	4.6	4.0	2.4	3.0	6.0	7.0	9.0
[04964] - MOOREOBDELLA MICROSTOMA	T	24	3.8	184	2.8	3.0	1.0	1.0	3.0	6.0	7.0
[85230] - CLADOTANYTARSUS MANCUS GROUP		12	3.8	65	2.8	3.0	1.0	1.0	4.0	6.0	7.0
[78140] - LABRUNDINIA PILOSELLA	MI	144	3.8	159	3.6	3.0	1.0	3.0	6.0	7.0	8.0
[77115] - ABLABESMYIA JANTA		8	3.8	16	2.9	3.0	1.0	1.0	3.0	6.0	6.7
[68130] - HELICHUS SP	MI	45	3.8	435	3.2	3.0	0.0	1.0	4.0	7.0	8.0
[78500] - PARAMERINA FRAGILIS		24	3.8	37	3.1	3.0	1.0	1.0	3.5	7.0	8.3
[06201] - HYALELLA AZTECA		66	3.8	506	2.8	3.0	1.0	1.0	3.0	7.0	8.0
[82820] - CRYPTOCHIRONOMUS SP		77	3.8	702	3.4	3.0	1.0	1.0	5.0	7.0	8.0
[85802] - TANYTARSUS CURTICORNIS GROUP	MI	153	3.7	184	4.0	3.0	1.0	2.5	6.0	8.0	9.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[23909] - BOYERIA VINOSA		64	3.7	663	3.4	3.0	1.0	1.0	4.0	7.0	8.0
[53501] - HYDROPTILIDAE		18	3.7	109	3.6	3.0	1.0	1.0	6.0	7.0	8.0
[81231] - NANOCLADIUS (N.) CRASSICORNUS OR N. (N.) "RECTINERVIS"		90	3.7	113	3.8	3.0	1.0	2.0	6.0	7.0	8.0
[13521] - STENONEMA FEMORATUM		198	3.7	820	2.9	3.0	0.0	1.0	4.0	7.0	7.5
[08200] - ORCONNECTES SP		12	3.7	119	3.6	3.0	1.0	1.2	6.0	7.0	7.5
[83820] - MICROTENDIPES "CAELUM" (SENSU SIMPSON & BODE, 1980)	MI	63	3.7	208	3.4	3.0	1.0	1.5	4.0	7.0	8.0
[77355] - CLINOTANYPUS PINGUIS	T	12	3.6	175	2.3	2.0	1.0	1.0	3.0	5.0	6.0
[68075] - PSEPHENUS HERRICKI	MI	26	3.6	485	3.7	3.0	1.0	2.0	6.0	7.0	8.2
[85821] - TANYTARSUS GLABRESCENS GROUP SP 7	MI	107	3.6	214	3.2	3.0	1.0	1.0	5.0	7.0	7.0
[77120] - ABLABESMYIA MALLOCHI		218	3.6	537	3.2	3.0	1.0	1.0	4.0	7.0	8.0
[85800] - TANYTARSUS SP	MI	293	3.6	535	3.3	3.0	1.0	1.0	4.0	7.0	8.0
[01320] - HYDRA SP		234	3.6	258	3.6	3.0	1.0	1.0	6.0	7.0	9.0
[11651] - PROCLOEON SP (W/O HINDWING PADS)	MI	61	3.6	144	2.7	3.0	0.0	1.0	3.0	6.1	7.0
[18600] - EPHEMERA SP	MI	18	3.6	151	3.1	3.0	1.0	1.0	3.7	7.0	8.0
[13560] - STENONEMA PULCHELLUM GROUP	MI	5	3.6	29	3.5	3.0	1.0	3.0	4.0	7.0	8.0
[81690] - PARATRICHOCLADIUS SP	MI	30	3.6	58	4.4	3.5	1.0	3.0	6.0	8.0	9.0
[11018] - ACERPENNA MACDUNNOUGHII	I	24	3.6	51	3.8	3.0	1.0	2.2	6.0	8.0	8.9
[11300] - PROCLOEON SP (FORMERLY IN CENTROPTILUM)	MI	5	3.5	26	4.1	3.0	1.0	3.0	6.0	7.9	8.2
[85400] - MICROPSECTRA SP		30	3.5	82	3.6	3.0	1.0	1.0	6.0	7.0	7.4
[05900] - LIRCEUS SP		97	3.5	441	2.8	3.0	1.0	1.0	3.0	7.0	8.0
[11400] - CENTROPTILUM SP OR PROCLOEON SP (FORMERLY IN CLOEON)	MI	24	3.5	69	4.1	3.0	1.0	3.0	6.0	7.0	8.0
[82200] - TVETENIA BAVARICA GROUP	MI	35	3.5	124	4.4	4.0	1.0	3.0	6.0	8.0	9.0
[78400] - NATARSIA SP	MT	5	3.5	31	3.0	3.0	0.6	1.2	3.7	6.0	6.9
[81259] - NANOCLADIUS (N.) "RECTINERVIS" (SENSU SIMPSON AND BODE, 1980)	MI	11	3.5	12	4.3	3.0	1.0	3.0	6.5	7.6	8.8
[69400] - STENELMIS SP		278	3.5	1241	3.4	3.0	1.0	1.0	5.0	7.0	8.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[11020] - ACERPENNA PYGMAEA	I	21	3.5	42	3.2	3.0	1.0	1.0	6.0	6.3	8.0
[68700] - DUBIRAPHIA SP		71	3.5	141	3.4	3.0	1.0	1.0	6.0	7.0	8.0
[81631] - PARAKIEFFERIELLA N.SP 1		20	3.5	27	4.6	4.0	2.0	3.0	6.0	8.0	9.0
[83840] - MICROTENDIPES PEDELLUS GROUP	MI	206	3.4	494	3.2	3.0	1.0	1.0	5.0	7.0	8.0
[84315] - PHAENOPSECTRA FLAVIPES		111	3.4	237	3.1	3.0	1.0	1.0	4.0	7.0	8.0
[78100] - LABRUNDINIA SP		7	3.4	8	4.2	3.0	1.0	2.0	7.0	8.4	9.0
[85201] - CLADOTANYTARSUS SPECIES GROUP	MI	8	3.4	23	3.3	3.0	1.0	1.5	5.5	6.0	6.3
A											
[81465] - ORTHOCLADIUS (O.) CARLATUS	MI	12	3.4	15	3.8	3.0	3.0	3.0	4.7	7.0	7.0
[03360] - PLUMATELLA SP		90	3.4	364	3.4	3.0	1.0	1.0	6.0	7.0	8.0
[13000] - LEUCROCUTA SP	I	39	3.4	170	3.5	3.0	1.0	1.0	6.0	7.0	9.0
[68708] - DUBIRAPHIA VITTATA GROUP		127	3.4	764	3.1	3.0	1.0	1.0	4.0	7.0	8.0
[83040] - DICROTENDIPES NEOMODESTUS		279	3.3	526	3.2	3.0	1.0	1.0	4.0	7.0	8.0
[15000] - PARALEPTOPHLEBIA SP	MI	87	3.3	143	4.0	3.0	0.0	1.0	6.0	8.0	9.0
[85200] - CLADOTANYTARSUS SP		5	3.3	14	3.2	3.0	0.9	2.0	4.0	7.0	7.0
[83900] - NILOTHAUMA SP	MI	24	3.3	34	3.0	3.0	1.0	3.0	3.0	5.1	6.0
[98001] - SPHAERIIDAE		10	3.2	20	2.7	3.0	1.0	1.0	3.0	6.0	6.5
[15501] - EPHEMERELLIDAE	MI	10	3.2	15	3.9	3.0	2.0	3.0	5.5	7.0	8.5
[80570] - DONCRICOTOPUS BICAUDATUS		9	3.2	18	3.2	3.0	1.0	3.0	4.0	5.7	6.6
[69200] - OPTIOSERVUS SP	MI	6	3.2	74	4.3	3.0	1.0	3.0	6.0	7.2	9.0
[84750] - STICTOCHIRONOMUS SP		29	3.2	675	2.8	3.0	0.0	1.0	3.0	6.0	8.0
[83158] - ENDOCHIRONOMUS NIGRICANS		18	3.1	64	2.2	1.0	0.0	1.0	3.0	4.1	6.0
[83003] - DICROTENDIPES FUMIDUS		32	3.1	135	3.6	3.0	1.0	1.0	6.0	7.0	8.0
[22300] - ARGIA SP		164	3.1	674	3.3	3.0	1.0	1.0	4.0	7.0	8.0
[84210] - PARATENDIPES ALBIMANUS OR P. DUPLICATUS	MI	283	3.1	666	3.1	3.0	1.0	1.0	4.0	7.0	8.0
[04666] - HELOBDELLA TRISERIALIS	T	37	3.1	197	2.4	3.0	0.0	1.0	3.0	6.0	7.0
[63300] - HYDROPORUS SP		9	3.1	728	2.8	3.0	0.0	1.0	3.0	7.0	8.0
[95907] - GYRAULUS (TORQUIS) PARVUS	MT	28	3.1	93	3.1	3.0	1.0	1.0	3.2	7.0	8.8
[79400] - ZAVRELIMYIA SP		82	3.0	154	2.8	3.0	0.9	1.0	3.0	7.0	8.0
[82730] - CHIRONOMUS (C.) DECORUS GROUP	T	114	3.0	570	2.8	3.0	1.0	1.0	3.0	6.5	7.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[08230] - ORCONECTES (CROKERINUS) OBSCURUS		5	3.0	62	3.7	3.0	2.0	3.0	5.0	7.0	7.4
[65800] - BEROSUS SP	MT	102	2.9	455	2.7	3.0	1.0	1.0	3.0	6.0	7.0
[08250] - ORCONECTES (PROCERICAMBARUS) RUSTICUS		43	2.9	439	3.2	3.0	1.0	1.0	5.0	7.0	8.0
[84800] - TRIBELOS JUCUNDUM		35	2.9	95	2.8	3.0	1.0	1.0	3.0	6.0	7.0
[72160] - PSYCHODA SP	T	5	2.9	11	2.9	3.0	0.6	1.0	3.0	6.6	8.8
[82710] - CHIRONOMUS (C.) SP	T	40	2.9	107	3.3	3.0	1.0	1.0	4.7	7.0	9.0
[81201] - NANOCLADIUS (N.) SP		5	2.8	19	3.5	3.0	2.0	3.0	3.0	7.2	8.0
[83000] - DICROTENDIPES SP		9	2.8	19	3.7	3.0	1.0	1.5	6.0	7.6	8.5
[58505] - HELICOPSYCHE BOREALIS	MI	35	2.8	258	3.1	3.0	1.0	1.0	4.0	7.0	8.0
[74501] - CERATOPOGONIDAE		168	2.8	581	2.8	3.0	1.0	1.0	3.0	6.0	7.0
[05800] - CAECIDOTEA SP	MT	74	2.8	356	3.1	3.0	1.0	1.0	4.0	7.0	8.0
[81250] - NANOCLADIUS (N.) MINIMUS		30	2.8	32	3.0	3.0	1.0	1.0	3.5	6.3	7.0
[77130] - ABLABESMYIA RHAMPHE GROUP	MT	15	2.8	27	2.4	3.0	0.2	1.0	3.0	4.0	9.0
[97601] - CORBICULA FLUMINEA	MI	6	2.8	47	2.9	3.0	1.0	1.0	3.0	5.6	9.0
[96120] - MENETUS (MICROMENETUS) DILATATUS	T	23	2.8	43	3.3	3.0	1.0	1.0	5.5	7.0	8.0
[78200] - LARSIA SP		34	2.7	65	2.3	3.0	1.0	1.0	3.0	5.0	6.0
[54300] - OXYETHIRA SP		8	2.7	10	4.0	3.0	1.0	3.0	7.0	7.5	8.0
[03600] - OLIGOCHAETA	T	497	2.7	1340	3.2	3.0	1.0	1.0	5.0	7.0	8.0
[66500] - ENOCHRUS SP		5	2.7	229	2.7	3.0	0.0	1.0	3.0	6.0	7.0
[84410] - POLYPEDILUM (PENTAPEDILUM) TRITUM VAR. I	VT	5	2.6	17	3.4	3.0	1.0	1.0	6.0	6.0	7.3
[14950] - LEPTOPHLEBIA SP OR PARALEPTOPHLEBIA SP	MI	56	2.6	106	2.7	3.0	1.0	1.0	3.0	6.0	7.0
[78402] - NATARSIA BALTIMOREUS		7	2.6	32	3.3	3.0	1.0	3.0	4.0	6.3	7.0
[59500] - OECETIS SP	MI	11	2.6	48	3.0	3.0	0.3	1.0	3.0	7.7	8.1
[78702] - PSECTROTANYPUS DYARI	VT	8	2.6	101	2.2	1.0	0.0	1.0	3.0	6.0	7.4
[81260] - NANOCLADIUS (N.) "RECTINERVIS" (OLD)		9	2.6	12	3.5	3.0	0.4	2.0	6.0	7.0	7.0
[04935] - ERPOBDELLA PUNCTATA PUNCTATA	T	57	2.6	394	2.8	3.0	1.0	1.0	3.0	7.0	7.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[84520] - POLYPEDILUM (TRIPODURA) HALTERALE GROUP		24	2.5	69	2.2	1.0	0.4	1.0	3.0	5.2	7.0
[78655] - PROCLADIUS (HOLOTANYPUS) SP	MT	15	2.5	194	2.5	3.0	0.9	1.0	3.0	6.0	7.0
[08260] - ORCONNECTES (CROKERINUS) SANBORNII SANBORNII		35	2.4	464	3.0	3.0	0.0	1.0	4.0	7.0	8.0
[52001] - HYDROPSYCHIDAE		9	2.4	12	1.8	2.5	-1.0	1.0	3.0	3.3	3.9
[60900] - PELTODYTES SP	MT	8	2.4	824	2.8	3.0	1.0	1.0	3.0	7.0	8.0
[47600] - SIALIS SP		111	2.4	960	3.0	3.0	1.0	1.0	4.0	7.0	8.0
[83050] - DICROTENDIPES LUCIFER	MT	24	2.4	31	2.6	2.0	1.0	1.0	4.0	6.0	6.9
[83300] - GLYPTOTENDIPES (G.) SP	MT	125	2.3	215	2.3	1.0	0.0	1.0	3.0	6.0	7.0
[82880] - CRYPTOTENDIPES SP	MI	7	2.3	45	3.4	3.0	1.0	1.0	6.0	7.0	7.2
[04685] - PLACOBDELLA ORNATA		8	2.3	120	2.6	3.0	1.0	1.0	3.0	6.0	6.5
[94400] - FOSSARIA SP		39	2.3	199	2.4	2.0	0.0	1.0	3.0	6.0	7.0
[71300] - LIMONIA SP		5	2.3	88	3.1	3.0	1.0	1.0	3.0	6.0	8.1
[83051] - DICROTENDIPES SIMPSONI	T	98	2.3	157	2.2	1.0	0.0	1.0	3.0	5.0	6.0
[85801] - TANYTARSUS TYPE 1	MI	5	2.3	6	3.6	3.0	1.2	3.0	3.0	8.4	9.0
[78650] - PROCLADIUS SP	MT	60	2.3	289	2.7	3.0	1.0	1.0	3.0	6.0	8.0
[80510] - CRICOTOPUS (ISOCLADIUS) SYLVESTRIS GROUP	VT	17	2.2	91	2.9	3.0	1.0	1.0	3.0	6.0	8.0
[22001] - COENAGRIONIDAE	MT	153	2.2	1126	2.8	3.0	1.0	1.0	3.0	7.0	7.0
[98200] - PISIDIUM SP		66	2.2	374	2.7	3.0	1.0	1.0	3.0	6.0	8.0
[96280] - PLANORBELLA (PIEROSOMA) TRIVOLVIS	VT	7	2.2	33	2.6	3.0	1.0	1.0	3.0	6.0	6.0
[83002] - DICROTENDIPES MODESTUS		16	2.2	53	2.3	3.0	0.8	1.0	3.0	4.0	5.8
[95100] - PHYSELLA SP	T	323	2.1	1435	2.9	3.0	1.0	1.0	3.0	7.0	8.0
[84960] - PSEUDOCHIRONOMUS SP		11	2.1	41	1.9	1.0	1.0	1.0	3.0	3.0	3.0
[27500] - SOMATOCHLORA SP	T	6	2.1	224	2.3	2.0	0.0	1.0	3.0	6.0	7.0
[04686] - PLACOBDELLA PAPILLIFERA		7	2.1	67	2.9	3.0	1.0	1.0	3.0	7.0	8.0
[08240] - ORCONNECTES (CROKERINUS) PROPINQUUS		5	2.0	44	3.8	3.0	1.0	3.0	4.5	7.0	8.3
[96264] - PLANORBELLA (PIEROSOMA) PILSBRYI	T	31	1.8	164	2.1	1.0	0.0	1.0	3.0	6.0	6.3

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Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[82770] - CHIRONOMUS (C.) RIPARIUS GROUP	VT	54	1.8	198	3.0	3.0	0.0	1.0	4.0	7.0	8.0
[78101] - LABRUNDINIA BECKI		10	1.8	10	2.0	2.0	1.0	1.0	3.0	3.0	3.0
[84790] - TRIBELOS FUSCICORNE		13	1.8	24	2.7	3.0	1.0	1.0	3.0	6.1	7.0
[84020] - PARACHIRONOMUS CARINATUS		5	1.7	7	2.0	1.0	1.0	1.0	3.2	4.8	5.0
[11645] - PROCLOEON SP	MI	5	1.7	6	3.6	3.0	1.0	1.0	5.0	8.6	9.0
[04664] - HELOBDELLA STAGNALIS	T	47	1.6	287	2.4	2.0	1.0	1.0	3.0	6.0	7.0
[95501] - PLANORBIDAE	MT	18	1.6	26	2.4	1.0	1.0	1.0	3.0	5.9	7.2
[68707] - DUBIRAPHIA QUADRINOTATA		18	1.5	240	3.0	3.0	1.0	1.0	4.0	7.0	7.0
[96002] - HELISOMA ANCEPS ANCEPS	MT	30	1.5	202	2.8	3.0	1.0	1.0	3.0	6.0	7.0
[68702] - DUBIRAPHIA BIVITTATA		13	1.5	82	2.7	3.0	1.0	1.0	3.0	6.0	7.0
[83600] - KIEFFERULUS (K.) DUX		16	1.4	25	1.8	1.0	0.0	1.0	3.0	3.0	4.7
[11001] - BAETIDAE		8	1.4	13	1.6	1.0	-0.2	0.7	1.2	6.4	7.7
[11200] - CALLIBAETIS SP	MT	35	1.3	369	2.3	1.0	1.0	1.0	3.0	5.0	7.0
[67800] - TROPISTERNUS SP	MT	9	1.2	496	2.5	2.0	0.0	1.0	3.0	6.0	7.0
[28705] - PACHYDIPLAX LONGIPENNIS	T	7	1.1	16	1.5	1.0	1.0	1.0	3.0	3.0	3.0
[78130] - LABRUNDINIA NEOPILOSELLA		6	1.1	6	1.1	1.0	0.1	1.0	1.0	2.8	3.0
[82711] - CHIRONOMUS (C.) SP 1	VT	6	1.0	16	1.8	1.0	0.0	0.0	3.0	3.0	7.2
[79020] - TANYPUS NEOPUNCTIPENNIS	VT	8	1.0	69	2.1	1.0	0.0	1.0	3.0	4.6	7.1
[77140] - ABLABESMYIA PELEENSIS		5	1.0	14	1.2	1.0	-0.1	1.0	2.0	3.0	3.0
[77250] - ALOTANYPUS VENUSTUS	VT	5	1.0	22	1.9	1.0	1.0	1.0	3.0	3.9	6.0
[28001] - LIBELLULIDAE	T	5	0.1	21	2.1	1.0	1.0	1.0	3.0	4.2	6.4

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Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
			Headwater								
				- CURRENT							
[43014] - TONGUETIED MINNOW	S	6	9.3	6	5.6	3.0	2.0	2.0	12.0	12.0	12.0
[80017] - VARIEGATE DARTER	I	10	6.5	10	6.4	7.0	3.0	5.0	8.0	8.5	9.0
[43007] - BIGEYE CHUB	I	22	6.5	22	6.5	7.0	3.0	6.0	7.0	9.0	9.0
[43005] - RIVER CHUB	I	84	6.5	84	5.6	6.0	3.0	3.0	7.0	9.0	9.0
[47008] - STONECAT MADTOM	I	55	6.4	55	5.7	7.0	2.0	3.0	7.7	9.0	9.0
[43035] - MIMIC SHINER	I	21	6.3	21	5.6	6.0	2.6	3.7	7.0	9.0	9.0
[43012] - LONGNOSE DACE	R	7	6.0	7	6.0	6.0	6.0	6.0	6.0	6.0	6.0
[80016] - BANDED DARTER	I	167	5.7	167	4.9	5.0	1.2	3.0	7.0	9.0	9.0
[43031] - STEELCOLOR SHINER	MT	13	5.6	13	5.6	6.0	2.6	3.0	7.5	9.0	9.0
[85001] - FRESHWATER DRUM	MT	19	5.5	19	4.7	4.0	1.0	3.0	7.7	8.6	9.0
[47012] - BRINDLED MADTOM	I	18	5.4	18	4.9	5.0	3.0	3.0	6.0	8.7	9.0
[47002] - CHANNEL CATFISH		43	5.4	43	4.0	3.0	1.0	1.0	7.0	8.0	9.0
[43022] - ROSYFACE SHINER	I	113	5.3	113	5.1	5.0	2.0	3.0	7.0	9.0	9.0
[80015] - GREENSIDE DARTER	MI	1004	4.9	1004	4.2	3.0	1.0	3.0	6.0	8.0	9.0
[40015] - NORTHERN HOG SUCKER	MI	1021	4.9	1021	4.3	3.0	1.0	3.0	6.2	8.0	9.0
[40009] - BLACK REDHORSE	I	76	4.9	76	4.7	3.5	1.0	3.0	7.0	8.0	9.0
[77004] - SMALLMOUTH BASS	MI	396	4.5	396	4.2	3.0	1.0	3.0	6.0	8.0	9.0
[25001] - BROWN TROUT		25	4.5	25	4.0	3.0	2.0	3.0	4.0	8.0	12.0
[77005] - SPOTTED BASS		144	4.5	144	4.1	3.0	1.0	3.0	7.0	8.0	9.0
[43032] - SPOTFIN SHINER		464	4.5	464	4.1	3.0	1.0	2.5	6.0	8.0	9.0
[80022] - RAINBOW DARTER	MI	1255	4.4	1255	4.0	3.0	1.0	3.0	6.0	8.0	9.0
[40008] - SILVER REDHORSE	MI	26	4.4	26	4.7	3.0	1.0	3.0	7.0	9.0	9.0
[37003] - NORTHERN PIKE		15	4.4	15	3.6	3.0	1.0	1.5	5.7	7.0	7.0
[01007] - AMER BROOK LAMPREY	R	37	4.3	37	4.7	3.0	3.0	3.0	6.0	7.0	10.9
[43021] - SILVER SHINER	I	188	4.3	188	4.5	4.0	1.0	3.0	7.0	8.0	9.0
[43017] - REDSIDE DACE	I	216	4.2	216	4.2	3.0	1.0	3.0	6.0	8.0	9.0
[80011] - LOGPERCH	MI	240	4.2	240	4.0	3.0	1.0	2.0	6.0	9.0	9.0
[43034] - SAND SHINER	MI	492	4.1	492	4.1	3.0	1.0	3.0	6.0	7.3	9.0
[90002] - MOTTLED SCULPIN		705	4.1	705	4.1	3.0	1.0	3.0	6.0	8.0	9.0
[77003] - ROCK BASS		680	4.1	680	4.0	3.0	1.0	3.0	6.0	7.0	9.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[63001] - TROUT-PERCH		104	4.0	104	4.2	4.0	1.0	3.0	6.0	8.0	9.0
[43033] - BIGMOUTH SHINER		47	4.0	47	4.0	3.0	1.0	3.0	6.0	6.0	6.4
[40010] - GOLDEN REDHORSE	MI	322	4.0	322	3.7	3.0	1.0	2.0	6.0	7.0	9.0
[43011] - WESTERN BLACKNOSE DACE	T	2206	3.9	2206	3.6	3.0	1.0	2.0	6.0	7.0	8.0
[43044] - CENTRAL STONEROLLER		2841	3.8	2841	3.4	3.0	1.0	1.0	6.0	7.0	8.0
[43024] - SCARLET SHINER	MI	275	3.7	275	3.8	3.0	1.0	2.2	6.0	8.0	8.7
[43026] - COMMON SHINER		504	3.7	504	3.6	3.0	1.0	1.0	6.0	7.1	9.0
[43025] - STRIPED SHINER		1755	3.7	1755	3.6	3.0	1.0	1.0	6.0	7.0	8.0
[80024] - FANTAIL DARTER		1483	3.6	1483	3.7	3.0	1.0	2.0	6.0	7.0	9.0
[43015] - SUCKERMOUTH MINNOW		193	3.6	193	3.3	3.0	1.0	1.0	6.0	7.0	8.0
[43004] - HORNYHEAD CHUB	I	136	3.5	136	3.8	3.0	1.0	1.0	6.0	8.0	9.0
[01006] - LEAST BROOK LAMPREY		186	3.5	186	3.8	3.0	1.0	3.0	6.0	7.0	9.0
[77002] - BLACK CRAPPIE		41	3.5	41	3.1	3.0	1.0	1.0	4.0	7.0	7.9
[77011] - LONGEAR SUNFISH	MI	621	3.4	621	3.3	3.0	1.0	1.0	6.0	7.0	8.0
[40016] - WHITE SUCKER	T	3129	3.3	3129	3.3	3.0	1.0	1.0	5.0	7.0	8.0
[10004] - LONGNOSE GAR		5	3.3	5	3.6	3.0	-1.0	0.5	6.7	9.0	9.0
[43039] - SILVERJAW MINNOW		1249	3.2	1249	3.5	3.0	1.0	1.0	6.0	7.0	8.0
[43013] - CREEK CHUB	T	3634	3.2	3634	3.2	3.0	1.0	1.0	5.0	7.0	8.0
[40018] - SPOTTED SUCKER		81	3.2	81	3.1	3.0	1.0	1.0	4.2	7.0	8.0
[77013] - PUMPKINSEED SUNFISH	MT	322	3.2	322	3.5	3.0	1.0	1.0	5.0	7.0	8.4
[25002] - RAINBOW TROUT		19	3.2	19	3.6	3.0	1.4	3.0	4.0	7.2	8.0
[47004] - YELLOW BULLHEAD	T	1449	3.1	1449	3.2	3.0	1.0	1.0	4.0	7.0	8.0
[80005] - BLACKSIDE DARTER		397	3.1	397	3.3	3.0	1.0	1.0	5.0	7.0	8.0
[80023] - ORANGETHROAT DARTER		669	3.1	669	3.4	3.0	1.0	1.0	6.0	7.0	8.0
[95001] - BROOK STICKLEBACK		194	3.1	194	2.9	3.0	1.0	1.0	3.0	6.0	7.0
[77008] - GREEN SUNFISH	T	2827	3.0	2827	3.2	3.0	1.0	1.0	4.0	7.0	8.0
[77006] - LARGEMOUTH BASS		1360	3.0	1360	3.3	3.0	1.0	1.0	5.0	7.0	8.0
[77009] - BLUEGILL SUNFISH	MT	1842	3.0	1842	3.3	3.0	1.0	1.0	5.0	7.0	8.0
[80014] - JOHNNY DARTER		2265	3.0	2265	3.3	3.0	1.0	1.0	5.0	7.0	8.0
[43043] - BLUNTNOSE MINNOW	T	2895	3.0	2895	3.3	3.0	1.0	1.0	5.0	7.0	8.0
[43018] - ROSYSIDE DACE	S	5	3.0	5	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[43045] - COMMON CARP X GOLDFISH	T	20	2.8	20	2.8	2.5	1.0	1.0	3.5	7.0	8.0
[43016] - SOUTH. REDBELLY DACE		721	2.8	721	3.4	3.0	1.0	1.0	6.0	7.0	8.0
[77007] - WARMOUTH SUNFISH		124	2.8	124	2.8	3.0	1.0	1.0	4.0	6.0	8.0
[47005] - BROWN BULLHEAD	T	122	2.8	122	3.2	3.0	1.0	1.0	4.0	6.0	7.0
[43003] - GOLDEN SHINER	T	376	2.6	376	2.5	2.0	1.0	1.0	3.0	6.0	7.0
[77001] - WHITE CRAPPIE		123	2.6	123	2.4	2.0	0.0	1.0	3.0	6.0	7.0
[43001] - COMMON CARP	T	759	2.6	759	2.8	3.0	1.0	1.0	3.0	6.0	7.0
[20003] - GIZZARD SHAD		147	2.6	147	3.3	3.0	1.0	1.0	4.7	7.8	9.0
[37001] - GRASS PICKEREL	MT	449	2.6	449	2.9	3.0	1.0	1.0	3.2	6.6	7.0
[40020] - CREEK CHUBSUCKER		62	2.6	62	2.8	3.0	1.0	1.0	3.0	6.3	7.0
[43020] - EMERALD SHINER		73	2.5	73	3.8	3.0	1.0	2.0	6.0	7.0	9.0
[80025] - LEAST DARTER		48	2.5	48	3.2	3.0	1.0	1.0	3.0	7.0	8.0
[34001] - CENTRAL MUDMINNOW	T	223	2.5	223	3.4	3.0	1.0	2.0	4.0	6.2	7.0
[80003] - YELLOW PERCH		31	2.5	31	3.2	3.0	1.0	1.0	4.0	7.0	8.9
[43002] - GOLDFISH	T	111	2.4	111	2.6	1.0	1.0	1.0	3.0	6.0	7.0
[01002] - NORTHERN BROOK LAMPREY	R	5	2.4	5	2.8	4.0	1.0	1.0	4.0	4.0	4.0
[47013] - TADPOLE MADTOM		67	2.3	67	2.1	2.0	1.0	1.0	3.0	3.0	6.0
[47006] - BLACK BULLHEAD	MT	387	2.2	387	2.6	3.0	1.0	1.0	3.0	6.0	6.1
[40005] - QUILLBACK CARPSUCKER		89	2.1	89	2.6	3.0	1.0	1.0	3.0	6.0	7.0
[43023] - REDFIN SHINER		274	1.8	274	2.4	1.0	1.0	1.0	3.0	6.0	7.0
[43042] - FATHEAD MINNOW	T	1046	1.7	1046	2.7	3.0	1.0	1.0	3.0	6.0	7.0
[77010] - ORANGESPOTTED SUNFISH		71	1.7	71	2.1	1.0	1.0	1.0	3.0	6.0	7.0
[70001] - BROOK SILVERSIDE	MI	28	1.6	28	3.2	2.5	1.0	1.0	5.0	7.0	8.1
[54002] - BLACKSTRIPE TOPMINNOW		432	1.5	432	1.9	1.0	0.0	1.0	3.0	3.0	6.0
[77012] - REDEAR SUNFISH		18	1.4	18	2.2	1.5	-0.4	1.0	3.0	6.0	6.6
[40002] - BIGMOUTH BUFFALO		5	1.0	5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
[80004] - DUSKY DARTER	MI	5	0.8	5	0.6	1.0	-1.0	0.5	1.0	1.0	1.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
			Headwater	- DEPTH							
[50315] - CHIMARRA OBSCURA	MI	26	12.1	226	6.3	7.5	2.0	3.0	9.0	10.0	10.0
[74673] - ATRICHOPOGON WEBSTERI		10	10.1	16	6.1	7.5	1.1	2.5	9.0	10.0	10.7
[84302] - PHAENOPSECTRA PUNCTIPES		6	9.6	9	6.4	7.0	1.4	3.5	9.2	10.0	10.0
[85815] - TANYTARSUS GLABRESCENS GROUP SP 1		5	9.1	7	8.5	9.0	5.6	8.0	10.0	10.0	10.0
[33100] - LEUCTRA SP	I	11	9.1	83	5.9	7.0	0.8	2.0	9.0	10.0	11.0
[85200] - CLADOTANYTARSUS SP		5	9.1	14	6.0	8.0	0.9	2.0	9.0	10.0	10.0
[34500] - PERLESTA PLACIDA COMPLEX		5	9.1	46	6.0	7.5	1.0	3.0	8.0	9.0	10.0
[13510] - STENONEMA EXIGUUM	I	10	9.0	15	7.6	9.0	2.0	5.7	10.0	10.0	10.7
[74100] - SIMULIUM SP		95	9.0	751	5.5	6.0	1.0	3.0	9.0	10.0	10.0
[85625] - RHEOTANYTARSUS SP	MI	293	8.8	727	5.3	6.0	1.0	2.0	9.0	10.0	10.0
[52540] - HYDROPSYCHE DICANTHA	MI	6	8.8	43	5.5	4.0	2.0	3.0	9.0	11.0	11.0
[84470] - POLYPEDILUM (P.) ILLINOENSE	T	193	8.7	846	5.1	5.0	1.0	2.0	8.0	9.0	10.0
[69200] - OPTIOSERVUS SP	MI	6	8.7	74	6.0	7.0	1.0	3.0	9.0	10.0	10.8
[84469] - POLYPEDILUM (P.) ILLINOENSE GROUP		6	8.7	10	4.6	3.5	0.0	1.0	9.0	9.0	9.0
[85261] - CLADOTANYTARSUS VANDERWULPI GROUP TYPE 1	I	43	8.6	72	6.9	8.0	2.0	3.0	9.0	10.0	11.0
[13540] - STENONEMA MEDIOPUNCTATUM	I	12	8.6	20	6.6	8.5	1.0	2.5	9.0	10.0	10.5
[03045] - FREDERICELLA INDICA	MI	5	8.5	14	5.4	5.5	0.9	3.0	8.0	10.1	10.8
[11150] - PSEUDOCLOEON PROPINQUUM	I	7	8.5	37	7.6	8.0	3.0	7.0	9.2	10.0	11.0
[71100] - HEXATOMA SP	MI	15	8.5	429	5.6	7.0	1.0	3.0	9.0	10.0	10.0
[85801] - TANYTARSUS TYPE 1	MI	5	8.4	6	7.3	8.5	1.6	7.0	9.0	9.9	10.0
[78100] - LABRUNDINIA SP		7	8.4	8	7.1	8.0	1.6	5.5	9.5	10.0	10.0
[80204] - BRILLIA FLAVIFRONS GROUP		44	8.4	82	7.0	8.0	2.7	4.0	9.0	10.0	11.0
[48410] - CORYDALUS CORNUTUS	MI	18	8.3	87	5.9	7.0	2.0	3.0	9.0	10.0	11.0
[84700] - STENOCHIRONOMUS SP		28	8.2	122	5.9	7.0	1.0	3.0	9.0	10.0	10.0
[60300] - DINEUTUS SP		6	8.2	74	6.2	8.0	1.0	3.0	9.0	10.0	11.0
[80360] - CORYNONEURA "CELERIPES" (SENSU SIMPSON & BODE, 1980)	I	27	8.2	45	6.6	8.0	3.0	3.0	9.0	10.0	11.0
[06904] - SYNURELLA DENTATA		5	8.2	61	4.6	3.0	1.0	1.0	8.2	10.0	10.4

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Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[93200] - HYDROBIIDAE	MT	12	8.1	38	5.9	8.0	0.3	2.0	8.0	9.7	11.0
[84475] - POLYPEDILUM (P.) OPHIOIDES	MI	8	8.1	36	6.0	7.0	2.0	3.0	9.0	10.0	10.0
[80440] - CRICOTOPUS (C.) TRIFASCIA		7	8.1	78	6.1	7.0	2.3	3.0	9.0	9.7	10.6
[11645] - PROCLOEON SP	MI	5	8.0	6	8.1	9.0	3.5	8.0	9.0	10.8	11.0
[13561] - STENONEMA PULCHELLUM	MI	30	8.0	65	5.7	6.0	0.0	3.0	9.0	10.0	10.2
[83158] - ENDOCHIRONOMUS NIGRICANS		18	8.0	64	6.3	7.5	1.9	3.5	8.0	9.0	11.0
[87510] - CHELIFERA SP	MI	6	8.0	14	6.6	7.0	1.9	4.0	9.0	10.1	10.8
[78450] - NILOTANYPUS FIMBRIATUS	MI	137	7.9	180	6.4	8.0	2.0	3.0	9.0	10.0	10.0
[21300] - HETAERINA SP		26	7.9	86	5.8	7.0	2.0	3.0	9.0	10.0	10.0
[82711] - CHIRONOMUS (C.) SP 1	VT	6	7.9	16	3.6	1.0	0.0	0.5	8.0	8.9	9.7
[14950] - LEPTOPHLEBIA SP OR PARALEPTOPHLEBIA SP	MI	56	7.9	106	5.4	7.0	1.0	2.0	8.0	9.0	10.0
[08200] - ORCONNECTES SP		12	7.8	119	5.2	4.0	1.0	3.0	8.0	9.0	10.0
[85201] - CLADOTANYTARSUS SPECIES GROUP A	MI	8	7.8	23	7.0	8.0	1.8	4.7	9.0	9.2	10.3
[52315] - DIPLECTRONA MODESTA		5	7.8	79	4.2	4.0	0.0	1.2	7.7	9.0	9.0
[08240] - ORCONNECTES (CROKERINUS)		5	7.8	44	5.8	7.5	1.0	3.0	9.0	10.0	11.0
PROPINQUUS											
[48610] - NIGRONIA FASCIATUS	MI	5	7.8	34	4.4	3.5	0.0	0.0	8.0	9.1	10.0
[52200] - CHEUMATOPSYCHE SP		302	7.7	1325	5.1	5.0	1.0	2.0	8.0	9.0	10.0
[85710] - STEPELLINELLA SP	MI	22	7.7	28	6.7	8.0	2.3	3.5	9.0	10.0	10.0
[79100] - THIENEMANNIMYIA GROUP		21	7.7	131	4.4	3.0	1.0	2.0	8.0	9.0	10.0
[77115] - ABLABESMYIA JANTA		8	7.7	16	5.8	7.0	1.0	3.5	8.0	8.9	9.7
[82101] - THIENEMANNIELLA TAUROCAPITA	I	56	7.7	71	6.3	8.0	0.6	3.0	9.0	10.0	10.0
[78101] - LABRUNDINIA BECKI		10	7.7	10	7.4	8.0	4.0	7.0	9.0	9.0	9.0
[01418] - CRASPEDACUSTA SOWERBYI		17	7.7	17	6.4	7.0	3.0	3.0	9.0	10.0	10.0
[84520] - POLYPEDILUM (TRIPODURA)		24	7.6	69	4.8	4.0	1.0	2.0	8.0	9.0	10.0
HALTERALE GROUP											
[71910] - TIPULA ABDOMINALIS	MI	15	7.6	150	5.9	7.0	2.0	3.0	9.0	9.5	10.0
[51600] - POLYCENTROPUS SP	MI	59	7.6	235	5.5	7.0	1.0	2.0	8.0	10.0	10.0
[97601] - CORBICULA FLUMINEA	MI	6	7.6	47	6.1	7.0	1.0	3.0	9.0	9.0	10.0

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Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[84155] - PARALAUTERBORNIELLA NIGROHALTERALIS		6	7.6	22	5.1	5.5	0.0	3.0	9.0	9.0	9.4
[81270] - NANOCLADIUS (N.) SPINIPLenus	MI	49	7.6	73	6.7	8.0	2.0	3.0	9.0	10.0	10.0
[84790] - TRIBELOS FUSCICORNE		13	7.6	24	6.4	8.0	1.9	4.0	8.5	9.0	9.3
[48620] - NIGRONIA SERRICORNIS		40	7.5	211	6.1	7.0	1.0	3.0	9.0	10.0	11.0
[85230] - CLADOTANYTARSUS MANCUS GROUP		12	7.5	65	4.6	3.0	1.0	1.7	8.0	9.0	10.0
[81259] - NANOCLADIUS (N.) "RECTINERVIS" (SENSU SIMPSON AND BODE, 1980)	MI	11	7.4	12	7.5	7.5	4.1	7.0	9.0	10.0	10.0
[86401] - ATHERIX LANTHA	MI	22	7.4	94	6.7	8.0	2.9	4.0	9.0	10.0	10.0
[83000] - DICROTENDIPES SP		9	7.4	19	6.2	8.0	1.0	2.2	9.0	10.0	10.5
[12200] - ISONYCHIA SP	MI	80	7.3	305	6.0	7.0	1.0	3.0	9.0	10.0	10.0
[11430] - DIPHETOR HAGENI	I	40	7.3	122	5.1	4.0	1.0	2.0	8.0	9.0	10.0
[83900] - NILOTHAUMA SP	MI	24	7.3	34	6.0	7.5	1.0	3.0	9.0	9.0	9.8
[52530] - HYDROPSYCHE DEPRAVATA GROUP		159	7.3	926	5.2	5.0	1.0	2.0	8.0	9.0	10.0
[81240] - NANOCLADIUS (N.) DISTINCTUS	MT	36	7.3	50	5.4	4.0	1.0	2.0	9.0	10.0	10.0
[34130] - ACRONEURIA FRISONI	MI	45	7.2	161	5.3	6.0	1.0	2.0	8.0	9.0	10.0
[52450] - CERATOPSYCHE SPARNA	MI	6	7.2	40	6.6	7.0	3.0	3.0	9.0	10.5	11.0
[28705] - PACHYDIPLAX LONGIPENNIS	T	7	7.1	16	4.8	5.5	0.1	1.5	8.0	8.0	8.7
[11400] - CENTROPTILUM SP OR PROCLOEON SP (FORMERLY IN CLOEON)	MI	24	7.1	69	6.8	8.0	2.0	3.7	9.0	10.0	10.0
[85803] - TANYTARSUS TYPE 3		10	7.1	16	6.0	7.5	2.0	3.0	9.0	9.9	10.0
[81690] - PARATRICHOCLADIUS SP	MI	30	7.1	58	6.2	7.0	1.0	3.0	9.0	11.0	11.0
[68601] - ANCYRONYX VARIEGATA	MI	50	7.1	162	6.7	8.0	2.7	4.0	9.0	10.0	10.0
[50804] - LYPE DIVERSA	MI	59	7.1	83	6.6	8.0	2.0	3.0	9.0	10.0	11.0
[08601] - HYDRACARINA		113	7.1	277	5.7	7.0	1.0	3.0	9.0	10.0	10.0
[15000] - PARALEPTOPHLEBIA SP	MI	87	7.0	143	6.0	8.0	1.0	3.0	9.0	10.0	10.0
[13570] - STENONEMA TERMINATUM	MI	13	7.0	31	5.7	8.0	1.2	2.2	8.0	9.0	9.0
[77130] - ABLABESMYIA RHAMPHE GROUP	MT	15	7.0	27	4.7	3.0	1.0	2.0	8.0	9.0	10.1
[86100] - CHRYSOPS SP		17	7.0	393	5.3	5.0	1.0	2.0	8.0	9.0	10.0
[52440] - CERATOPSYCHE SLOSSONAE	MI	42	7.0	163	5.6	6.0	2.0	3.0	8.0	10.0	10.0
[52430] - CERATOPSYCHE MOROSA GROUP	MI	120	6.9	470	5.8	7.0	1.0	3.0	9.0	10.0	10.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[84450] - POLYPEDILUM (URESIPEDILUM) FLAVUM		233	6.9	825	5.4	6.0	1.0	2.7	9.0	9.0	10.0
[68075] - PSEPHENUS HERRICKI	MI	26	6.9	485	5.4	6.0	1.0	3.0	9.0	10.0	10.0
[11100] - BAETIS SP		48	6.9	220	5.3	5.0	1.0	3.0	8.0	9.0	10.0
[16700] - TRICORYTHODES SP	MI	31	6.9	44	5.8	6.5	1.9	3.0	9.0	10.0	11.0
[84750] - STICTOCHIRONOMUS SP		29	6.9	675	4.7	4.0	1.0	2.0	8.0	9.0	10.0
[81825] - RHEOCRICOTOPUS (PSILOCRICOTOPUS) ROBACKI	MI	111	6.9	250	6.1	7.0	2.0	3.0	9.0	10.0	10.0
[59500] - OECETIS SP	MI	11	6.9	48	4.7	3.5	1.0	1.5	8.0	8.0	10.1
[84430] - POLYPEDILUM (P.) ALBICORNE	MI	23	6.9	31	6.0	7.0	1.6	3.2	8.0	9.4	10.0
[58505] - HELICOPSYCHE BOREALIS	MI	35	6.8	258	4.8	4.0	0.3	2.0	8.0	9.0	9.6
[83840] - MICROTENDIPES PEDELLUS GROUP	MI	206	6.8	494	5.2	6.0	1.0	2.0	8.0	10.0	10.0
[84460] - POLYPEDILUM (P.) FALLAX GROUP		336	6.8	440	6.2	8.0	1.0	3.0	9.0	10.0	10.0
[08230] - ORCONNECTES (CROKERINUS) OBSCURUS		5	6.8	62	5.7	6.5	1.0	3.0	9.0	9.0	10.0
[68130] - HELICHUS SP	MI	45	6.8	435	5.5	7.0	1.0	2.0	9.0	9.0	10.0
[56001] - LIMNEPHILIDAE		5	6.8	10	4.9	5.0	1.0	2.0	8.0	8.5	9.0
[82880] - CRYPTOTENDIPES SP	MI	7	6.7	45	6.1	8.0	1.0	3.0	9.0	10.0	10.0
[11200] - CALLIBAETIS SP	MT	35	6.7	369	3.6	2.0	0.0	1.0	7.0	9.0	9.0
[82141] - THIENEMANNIELLA XENA		164	6.7	317	5.9	7.0	2.0	3.0	9.0	10.0	10.0
[87540] - HEMERODROMIA SP		187	6.7	328	5.5	6.0	1.0	2.0	8.0	9.0	10.0
[51400] - NYCTIOPHYLAX SP	MI	48	6.7	135	6.3	8.0	1.0	3.0	9.0	10.0	10.0
[81260] - NANOCLADIUS (N.) "RECTINERVIS" (OLD)		9	6.7	12	5.2	4.5	1.0	3.0	8.5	9.0	9.0
[87501] - EMPIDIDAE		107	6.6	201	6.0	7.0	2.0	3.0	9.0	10.0	10.0
[84540] - POLYPEDILUM (TRIPODURA) SCALAENUM GROUP		191	6.6	417	5.7	7.0	1.0	3.0	9.0	10.0	10.0
[84480] - POLYPEDILUM (P.) LAETUM GROUP	MI	9	6.6	106	5.7	7.0	1.0	3.0	9.0	10.0	11.0
[77355] - CLINOTANYPUS PINGUIS	T	12	6.6	175	3.7	2.0	0.0	1.0	7.0	9.0	9.0
[35001] - PERLODIDAE	MI	6	6.6	18	4.8	4.5	0.0	2.0	8.0	9.0	9.6
[85615] - RHEOTANYTARSUS PELLUCIDUS	MI	101	6.6	174	6.1	7.5	2.0	3.0	9.0	10.0	10.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[05900] - LIRCEUS SP		97	6.6	441	4.2	3.0	0.0	1.0	8.0	9.0	10.0
[84800] - TRIBELOS JUCUNDUM		35	6.6	95	6.0	7.0	1.0	3.0	8.7	9.0	10.0
[85501] - PARATANYTARSUS N.SP 1	MI	65	6.6	98	6.0	7.0	2.0	3.0	9.0	10.0	10.0
[98600] - SPHAERIUM SP		77	6.6	761	4.4	3.0	1.0	1.0	8.0	9.0	10.0
[21200] - CALOPTERYX SP		215	6.6	894	5.6	7.0	1.0	3.0	9.0	10.0	10.0
[80410] - CRICOTOPUS (C.) SP		116	6.6	232	5.7	7.0	1.0	3.0	9.0	10.0	10.0
[11115] - BAETIS TRICAUDATUS	MI	9	6.6	39	5.4	6.0	1.0	2.0	8.7	10.0	11.0
[68901] - MACRONYCHUS GLABRATUS	MI	167	6.6	340	6.1	7.0	2.0	3.0	9.0	10.0	10.0
[79085] - TELOPELOPIA OKOBOJI		10	6.6	15	5.6	6.0	1.0	3.0	9.0	10.0	10.0
[70600] - ANTOCHA SP	MI	39	6.5	79	6.3	7.0	2.0	3.0	9.0	10.0	10.5
[77800] - HELOPELOPIA SP		287	6.5	707	5.6	7.0	1.0	3.0	9.0	10.0	10.0
[05800] - CAECIDOTEA SP	MT	74	6.5	356	5.0	5.0	1.0	2.0	8.0	9.0	10.0
[78400] - NATARSIA SP	MT	5	6.5	31	4.5	3.0	1.0	2.2	8.0	9.4	10.0
[13521] - STENONEMA FEMORATUM		198	6.5	820	4.9	5.0	1.0	2.0	8.0	9.0	10.0
[67800] - TROPISTERNUS SP	MT	9	6.5	496	3.8	3.0	0.0	1.0	8.0	9.0	9.0
[18600] - EPHEMERA SP	MI	18	6.5	151	5.1	5.0	1.0	2.0	8.0	9.0	10.0
[78600] - PENTANEURA INCONSPICUA		7	6.4	27	6.1	7.0	2.0	3.0	9.0	10.0	11.3
[68025] - ECTOPRIA SP	MI	11	6.4	172	5.0	4.0	1.0	2.0	8.0	10.0	10.0
[30000] - PLECOPTERA		16	6.4	25	5.9	7.0	1.0	2.0	9.0	10.0	10.2
[82820] - CRYPTOCHIRONOMUS SP		77	6.4	702	5.1	5.0	1.0	2.0	8.0	9.0	10.0
[82121] - THIENEMANNIELLA LOBAPODEMA	MI	61	6.4	67	6.8	8.0	1.2	4.0	9.0	10.0	10.0
[82730] - CHIRONOMUS (C.) DECORUS GROUP	T	114	6.3	570	4.7	3.0	0.0	2.0	8.0	9.0	10.0
[13580] - STENONEMA TRIPUNCTATUM (OLD)		67	6.3	151	5.8	7.0	1.0	3.0	9.0	10.0	10.0
[11651] - PROCLOEON SP (W/O HINDWING PADS)	MI	61	6.3	144	5.2	6.0	0.9	2.0	8.0	9.0	10.0
[69400] - STENELMIS SP		278	6.3	1241	5.1	5.0	1.0	2.0	8.0	9.0	10.0
[80370] - CORYNONEURA LOBATA	MI	354	6.3	446	5.8	7.0	1.0	3.0	9.0	10.0	10.0
[85814] - TANYTARSUS GLABRESCENS GROUP		294	6.3	437	6.0	7.0	1.0	3.0	9.0	10.0	10.0
[16200] - EURYLOPHELLA SP	MI	51	6.3	72	5.9	7.0	2.0	3.0	9.0	10.0	10.0
[85802] - TANYTARSUS CURTICORNIS GROUP	MI	153	6.3	184	6.2	8.0	1.9	3.0	9.0	10.0	10.0
[83040] - DICROTENDIPES NEOMODESTUS		279	6.2	526	5.3	6.0	1.0	2.0	8.0	9.0	10.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[01900] - NEMERTEA		36	6.2	48	6.2	8.0	2.0	3.0	9.0	10.0	10.1
[03600] - OLIGOCHAETA	T	497	6.2	1340	4.9	4.0	1.0	2.0	8.0	9.0	10.0
[52001] - HYDROPSYCHIDAE		9	6.2	12	4.6	4.5	1.0	1.0	7.5	9.3	9.9
[85500] - PARATANYTARSUS SP		358	6.2	589	5.5	6.0	1.0	2.0	9.0	10.0	10.0
[72160] - PSYCHODA SP	T	5	6.2	11	6.0	7.0	1.2	3.7	8.0	8.8	9.9
[59580] - OECETIS PERSIMILIS	MI	7	6.2	23	6.6	7.0	3.0	4.2	8.7	10.0	10.3
[85400] - MICROPSECTRA SP		30	6.2	82	4.3	3.0	0.7	2.0	8.0	9.0	9.0
[81631] - PARAKIEFFERIELLA N.SP 1		20	6.2	27	6.0	7.0	1.2	3.0	8.7	10.0	10.1
[83002] - DICROTENDIPES MODESTUS		16	6.1	53	5.4	7.0	1.0	2.0	8.0	10.0	11.0
[85840] - TANYTARSUS SEPP	MI	204	6.1	294	6.0	7.0	2.0	3.0	9.0	10.0	10.0
[23909] - BOYERIA VINOSA		64	6.1	663	5.4	6.0	1.0	2.0	9.0	10.0	10.0
[13590] - STENONEMA VICARIUM	MI	129	6.1	329	6.0	7.0	2.0	3.0	9.0	10.0	10.0
[85800] - TANYTARSUS SP	MI	293	6.1	535	5.3	6.0	1.0	2.0	8.0	9.0	10.0
[77740] - HAYESOMYIA SENATA		6	6.1	12	6.0	7.5	1.4	2.0	9.0	10.3	10.9
[50301] - CHIMARRA ATERRIMA	MI	17	6.1	240	5.6	7.0	1.0	3.0	9.0	9.0	10.0
[84300] - PHAENOPSECTRA OBEDIENS GROUP		123	6.1	323	5.8	7.0	1.0	3.0	9.0	10.0	10.3
[13400] - STENACRON SP		290	6.0	952	5.2	5.0	1.0	2.0	8.0	9.0	10.0
[78140] - LABRUNDINIA PILOSELLA	MI	144	6.0	159	6.1	8.0	1.0	3.0	9.0	9.0	10.0
[81231] - NANOCLADIUS (N.) CRASSICORNUS OR N. (N.) "RECTINERVIS"		90	6.0	113	5.8	7.0	1.0	2.0	9.0	10.0	11.0
[04964] - MOOREOBDELLA MICROSTOMA	T	24	6.0	184	4.1	3.0	0.0	1.0	8.0	9.0	10.0
[17200] - CAENIS SP		311	6.0	925	5.1	5.0	1.0	2.0	8.0	9.0	10.0
[78401] - NATARSIA SPECIES A (SENSU ROBACK, 1978)	T	38	6.0	331	5.1	5.0	1.0	2.0	8.0	9.0	10.0
[78350] - MEROPELOPIA SP		57	6.0	172	5.6	7.0	1.0	3.0	9.0	9.3	10.0
[67500] - LACCOBIUS SP		6	6.0	196	4.8	5.0	0.0	1.0	8.0	9.0	10.0
[83820] - MICROTENDIPES "CAELUM" (SENSU SIMPSON & BODE, 1980)	MI	63	5.9	208	5.2	5.0	1.0	2.0	9.0	10.0	11.0
[53800] - HYDROPTILA SP		99	5.9	365	4.9	4.0	1.0	2.0	8.0	9.0	10.0
[77750] - HAYESOMYIA SENATA OR THIENEMANNIMYIA NORENA		151	5.9	312	5.2	6.0	1.0	2.0	8.0	9.0	10.0

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Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[57900] - PYCNOPSYCHE SP	MI	19	5.9	215	6.0	7.0	1.0	3.0	9.0	10.0	10.7
[84960] - PSEUDOCHIRONOMUS SP		11	5.9	41	3.6	2.0	0.6	1.0	7.2	8.4	9.0
[77120] - ABLABESMYIA MALLOCHI		218	5.8	537	5.4	7.0	1.0	2.0	9.0	9.0	10.0
[14900] - LEPTOPHLEBIA SP	I	6	5.8	14	4.4	5.0	-0.2	1.0	8.0	8.2	9.6
[77500] - CONCHAPELOPIA SP		357	5.8	1053	5.0	5.0	1.0	2.0	8.0	9.0	10.0
[11250] - CENTROPTILUM SP (W/O HINDWING PADS)	MI	9	5.8	183	5.0	6.0	0.0	2.0	8.0	9.0	10.0
[81230] - NANOCLADIUS (N.) CRASSICORNUS (OLD)		18	5.8	25	5.3	6.0	1.0	2.7	8.0	9.0	9.0
[81465] - ORTHOCLADIUS (O.) CARLATUS	MI	12	5.8	15	6.0	7.0	2.0	3.0	9.0	10.0	10.7
[74650] - ATRICHOPOGON SP		12	5.8	19	4.3	3.0	1.0	3.0	7.5	8.6	9.0
[04685] - PLACOBDELLA ORNATA		8	5.8	120	4.3	3.0	1.0	2.0	8.0	9.0	10.0
[71900] - TIPULA SP		46	5.8	615	5.1	5.0	1.0	2.0	8.0	9.0	10.0
[68708] - DUBIRAPHIA VITTATA GROUP		127	5.8	764	5.1	5.0	1.0	2.0	8.0	9.0	10.0
[85720] - STEPELLINELLA N.SP NR. FLAVIDULA	I	61	5.8	90	5.9	7.0	2.0	3.0	9.0	10.0	10.0
[96900] - FERRISSIA SP		309	5.7	638	5.6	7.0	1.0	3.0	9.0	10.0	10.0
[83051] - DICROTENDIPES SIMPSONI	T	98	5.7	157	4.9	5.0	1.0	2.0	8.0	9.0	9.0
[84440] - POLYPEDILUM (URESIPEDILUM) AVICEPS	MI	28	5.7	139	5.7	7.0	1.0	3.0	9.0	10.0	10.5
[80570] - DONCRICOTOPUS BICAUDATUS		9	5.7	18	4.0	3.0	1.3	2.0	7.0	9.0	9.0
[79400] - ZAVRELIMYIA SP		82	5.7	154	5.1	6.0	0.0	1.0	8.0	9.0	10.0
[03360] - PLUMATELLA SP		90	5.7	364	5.0	4.5	1.0	2.0	8.0	9.0	10.0
[78402] - NATARSIA BALTIMOREUS		7	5.7	32	6.0	7.5	1.0	3.0	9.0	10.0	10.0
[78655] - PROCLADIUS (HOLOTANYPUS) SP	MT	15	5.7	194	4.0	3.0	0.0	1.0	8.0	9.0	10.0
[81650] - PARAMETRIOCNEMUS SP	MI	121	5.7	432	5.6	7.0	1.0	3.0	9.0	10.0	10.0
[84210] - PARATENDIPES ALBIMANUS OR P. DUPLICATUS	MI	283	5.7	666	5.1	5.0	1.0	2.0	8.0	10.0	10.0
[69225] - OPTIOSERVUS FASTIDITUS	MI	14	5.6	121	5.5	6.0	1.0	3.0	8.2	9.0	10.0
[11130] - BAETIS INTERCALARIS		119	5.6	490	5.5	6.0	1.0	3.0	9.0	10.0	10.0
[07701] - CAMBARIDAE		7	5.6	50	4.6	3.0	1.0	2.0	8.0	9.0	10.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[01801] - TURBELLARIA		278	5.6	884	5.0	4.5	1.0	2.0	8.0	9.0	10.0
[59001] - LEPTOCERIDAE	MI	6	5.6	11	6.0	7.0	0.6	2.2	9.0	10.0	10.0
[98001] - SPHAERIIDAE		10	5.5	20	5.1	7.0	0.5	1.5	8.0	9.0	9.5
[82770] - CHIRONOMUS (C.) RIPARIUS GROUP	VT	54	5.5	198	4.9	4.5	1.0	2.0	8.0	9.0	10.0
[22300] - ARGIA SP		164	5.5	674	5.2	5.0	1.0	2.0	8.0	9.0	10.0
[78500] - PARAMERINA FRAGILIS		24	5.4	37	5.3	7.0	1.0	1.7	8.0	9.8	10.0
[82200] - TVETENIA BAVARICA GROUP	MI	35	5.4	124	6.0	7.0	1.9	3.0	9.0	10.0	10.0
[80420] - CRICOTOPUS (C.) BICINCTUS	MT	153	5.4	592	5.3	5.0	1.0	2.0	9.0	10.0	10.0
[11120] - BAETIS FLAVISTRIGA		148	5.4	532	5.3	6.0	1.0	2.0	9.0	10.0	10.0
[84315] - PHAENOPSECTRA FLAVIPES		111	5.4	237	5.5	7.0	1.0	2.0	8.0	9.0	10.0
[08260] - ORCONNECTES (CROKERINUS) SANBORNII SANBORNII		35	5.4	464	5.1	6.0	1.0	2.0	8.0	9.0	10.0
[81250] - NANOCLADIUS (N.) MINIMUS		30	5.3	32	5.0	3.0	2.0	2.0	8.5	9.3	10.0
[80351] - CORYNONEURA N.SP 1	MI	31	5.3	78	5.8	7.0	1.0	3.0	9.0	9.7	10.0
[82220] - TVETENIA DISCOLORIPES GROUP	I	11	5.2	29	5.7	6.0	2.0	3.0	9.0	10.0	10.0
[80430] - CRICOTOPUS (C.) TREMULUS GROUP		101	5.1	378	5.2	4.0	1.0	2.0	8.0	10.0	10.0
[74501] - CERATOPOGONIDAE		168	5.1	581	4.6	4.0	0.0	1.0	8.0	9.0	10.0
[78200] - LARSIA SP		34	5.1	65	3.9	3.0	0.0	1.7	8.0	9.0	9.2
[83050] - DICROTENDIPES LUCIFER	MT	24	5.1	31	4.7	4.0	1.0	2.0	8.0	9.0	9.9
[95100] - PHYSELLA SP	T	323	5.1	1435	4.5	3.0	0.0	1.2	8.0	9.0	10.0
[85821] - TANYTARSUS GLABRESCENS GROUP SP 7	MI	107	5.1	214	4.9	4.5	1.0	2.0	8.0	9.0	9.0
[11018] - ACERPENNA MACDUNNOUGHII	I	24	4.9	51	5.7	7.0	1.0	3.0	8.0	9.0	10.0
[13000] - LEUCROCUTA SP	I	39	4.9	170	5.5	6.0	1.0	3.0	9.0	9.5	10.0
[06201] - HYALELLA AZTECA		66	4.8	506	4.6	4.0	1.0	2.0	8.0	9.0	10.0
[95501] - PLANORBIDAE	MT	18	4.7	26	4.4	3.0	1.0	1.0	8.0	8.0	9.2
[96264] - PLANORBELLA (PIEROSOMA) PILSBRYI	T	31	4.7	164	3.4	2.0	0.0	1.0	7.0	8.0	9.0
[01320] - HYDRA SP		234	4.7	258	5.5	6.0	1.0	3.0	8.0	9.7	10.0
[08250] - ORCONNECTES (PROCERICAMBARUS) RUSTICUS		43	4.7	439	4.7	4.0	1.0	2.0	8.0	9.0	10.0
[47600] - SIALIS SP		111	4.7	960	4.9	5.0	0.0	2.0	8.0	9.0	10.0

Appendix Table 2 Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[68700] - DUBIRAPHIA SP		71	4.7	141	4.7	3.0	1.0	2.0	8.0	9.0	10.0
[06700] - CRANGONYX SP	MT	60	4.6	355	5.2	5.0	1.0	2.0	8.0	9.0	10.0
[84020] - PARACHIRONOMUS CARINATUS		5	4.6	7	5.7	7.0	1.2	2.2	9.0	9.0	9.0
[93900] - ELIMIA SP	MI	77	4.6	281	5.5	6.0	1.0	3.0	9.0	9.0	10.0
[53501] - HYDROPTILIDAE		18	4.6	109	4.5	3.0	0.0	2.0	8.0	9.0	10.0
[96002] - HELISOMA ANCEPS ANCEPS	MT	30	4.5	202	4.5	4.0	0.0	2.0	8.0	9.0	9.0
[82710] - CHIRONOMUS (C.) SP	T	40	4.5	107	5.2	6.0	1.0	2.0	8.0	10.0	10.0
[95907] - GYRAULUS (TORQUIS) PARVUS	MT	28	4.5	93	4.3	3.0	0.8	1.7	8.0	9.0	9.0
[85752] - SUBLETTEA COFFMANI	I	20	4.5	22	6.4	8.0	2.7	3.0	9.0	10.0	10.4
[96120] - MENETUS (MICROMENETUS) DILATATUS	T	23	4.4	43	5.7	7.0	1.0	3.0	8.0	9.2	10.3
[83300] - GLYPTOTENDIPES (G.) SP	MT	125	4.4	215	5.1	6.0	1.0	2.0	8.0	9.0	10.0
[11650] - PROCLOEON SP (W/ HINDWING PADS)	MI	14	4.3	69	5.0	6.0	0.4	2.0	8.0	9.0	9.0
[22001] - COENAGRIONIDAE	MT	153	4.3	1126	4.6	4.0	0.0	2.0	8.0	9.0	10.0
[94400] - FOSSARIA SP		39	4.3	199	3.9	3.0	0.0	1.0	7.0	9.0	9.5
[15501] - EPHEMERELLIDAE	MI	10	4.2	15	5.8	7.0	2.0	3.2	8.7	9.0	10.5
[81632] - PARAKIEFFERIELLA N.SP 2	MI	33	4.2	64	5.3	4.5	1.9	3.0	9.0	9.0	10.0
[78650] - PROCLADIUS SP	MT	60	4.2	289	4.7	4.0	1.0	2.0	8.0	9.0	10.0
[83003] - DICROTENDIPES FUMIDUS		32	4.1	135	5.1	6.0	0.0	2.0	8.0	9.0	10.0
[04664] - HELOBDELLA STAGNALIS	T	47	4.1	287	3.4	2.0	0.0	1.0	7.0	9.0	9.0
[85818] - TANYTARSUS GLABRESCENS GROUP SP 4	MI	6	4.0	23	5.5	6.0	0.8	3.0	7.7	9.2	10.3
[98200] - PISIDIUM SP		66	4.0	374	4.0	3.0	0.0	1.0	7.0	9.0	9.0
[81201] - NANOCLADIUS (N.) SP		5	4.0	19	5.0	4.0	1.2	3.0	7.7	9.0	9.5
[11001] - BAETIDAE		8	3.9	13	4.2	4.0	-0.4	1.0	8.0	8.0	8.0
[78130] - LABRUNDINIA NEOPILOSELLA		6	3.9	6	3.3	3.0	0.2	2.0	4.0	7.6	8.0
[77250] - ALOTANYPUS VENUSTUS	VT	5	3.7	22	3.5	2.5	-0.3	2.0	7.0	8.3	9.0
[04666] - HELOBDELLA TRISERIALIS	T	37	3.7	197	3.6	2.0	0.0	1.0	7.0	9.0	9.0
[54300] - OXYETHIRA SP		8	3.7	10	5.8	5.0	1.5	3.0	9.0	10.5	11.0
[11020] - ACERPENNA PYGMAEA	I	21	3.6	42	4.8	4.5	1.0	2.0	8.0	9.0	9.0
[77140] - ABLABESMYIA PELEENSIS		5	3.6	14	4.5	4.0	-0.2	1.0	8.0	9.1	9.8

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[60900] - PELTODYTES SP	MT	8	3.4	824	4.1	3.0	0.0	1.0	8.0	9.0	10.0
[68702] - DUBIRAPHIA BIVITTATA		13	3.4	82	4.8	4.0	1.0	2.0	8.0	9.0	10.0
[68707] - DUBIRAPHIA QUADRINOTATA		18	3.3	240	4.5	3.0	1.0	2.0	8.0	9.0	10.0
[04935] - ERPOBDELLA PUNCTATA PUNCTATA	T	57	3.3	394	4.0	3.0	0.0	1.0	8.0	9.0	10.0
[13560] - STENONEMA PULCHELLUM GROUP	MI	5	3.3	29	5.2	3.0	3.0	3.0	8.0	9.0	10.0
[78702] - PSECTROTANYPUS DYARI	VT	8	3.2	101	2.9	2.0	0.0	0.0	5.2	8.4	9.0
[27500] - SOMATOCHLORA SP	T	6	3.2	224	4.4	3.0	0.0	1.0	8.0	9.0	10.0
[71300] - LIMONIA SP		5	3.2	88	4.4	3.0	0.3	1.0	8.0	9.0	10.0
[66500] - ENOCHRUS SP		5	3.1	229	3.9	3.0	0.0	1.0	8.0	9.0	9.0
[28001] - LIBELLULIDAE	T	5	3.0	21	4.0	3.0	1.0	1.7	6.2	8.0	8.4
[84410] - POLYPEDILUM (PENTAPEDILUM) TRITUM VAR. I	VT	5	2.8	17	6.0	7.0	0.2	3.7	9.0	9.0	10.3
[80510] - CRICOTOPUS (ISOCLADIUS) SYLVESTRIS GROUP	VT	17	2.7	91	4.5	3.0	1.0	2.0	8.0	9.0	9.0
[83600] - KIEFFERULUS (K.) DUX		16	2.6	25	4.2	3.0	0.0	1.7	7.0	9.0	10.0
[94201] - LYMNAEIDAE		5	2.5	17	4.2	3.0	0.2	2.0	8.0	9.0	9.6
[65800] - BEROSUS SP	MT	102	2.4	455	3.8	3.0	0.0	1.0	8.0	9.0	10.0
[96280] - PLANORBELLA (PIEROSOMA) TRIVOLVIS	VT	7	1.8	33	3.5	2.0	0.8	1.0	7.0	8.0	8.0
[11300] - PROCLOEON SP (FORMERLY IN CENTROPTILUM)	MI	5	1.5	26	7.1	9.0	3.0	5.0	9.0	9.9	10.0
[04686] - PLACOBDELLA PAPILLIFERA		7	1.3	67	4.3	3.0	0.2	1.0	8.0	9.0	9.0
[63300] - HYDROPORUS SP		9	1.3	728	4.4	3.0	0.0	1.0	8.0	9.0	10.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
			Headwater	- DEPTH							
[43014] - TONGUETIED MINNOW	S	6	11.7	6	10.0	9.0	8.0	8.0	13.0	13.0	13.0
[43007] - BIGEYE CHUB	I	22	9.6	22	9.2	10.0	8.4	9.0	10.0	10.3	11.0
[43031] - STEELCOLOR SHINER	MT	13	9.3	13	9.3	9.0	8.6	9.0	10.0	11.0	11.0
[43018] - ROSYSIDE DACE	S	5	8.9	5	8.6	9.0	7.0	8.5	9.0	9.0	9.0
[85001] - FRESHWATER DRUM	MT	19	8.8	19	8.4	9.0	7.0	8.0	9.0	10.0	10.5
[43035] - MIMIC SHINER	I	21	8.3	21	7.9	9.0	2.0	6.7	10.0	11.0	11.0
[47012] - BRINDLED MADTOM	I	18	8.3	18	8.0	8.0	4.9	8.0	9.0	10.7	11.0
[40009] - BLACK REDHORSE	I	76	8.1	76	7.5	9.0	3.0	7.0	9.0	10.0	10.7
[43020] - EMERALD SHINER		73	8.0	73	6.8	8.0	2.0	4.0	9.0	10.2	11.0
[10004] - LONGNOSE GAR		5	7.9	5	8.0	8.0	7.0	7.0	8.5	10.0	10.0
[43012] - LONGNOSE DACE	R	7	7.8	7	7.0	8.0	4.0	4.7	8.7	9.0	9.0
[25001] - BROWN TROUT		25	7.7	25	7.0	8.0	2.0	3.0	9.0	11.0	13.0
[80003] - YELLOW PERCH		31	7.6	31	6.8	8.0	2.0	5.2	8.0	10.0	10.9
[40018] - SPOTTED SUCKER		81	7.5	81	7.3	8.0	3.0	7.0	9.0	10.0	10.4
[80017] - VARIEGATE DARTER	I	10	7.5	10	8.2	8.5	6.0	7.0	9.0	10.5	11.0
[77005] - SPOTTED BASS		144	7.5	144	7.0	8.0	2.9	6.0	9.0	10.0	10.0
[40010] - GOLDEN REDHORSE	MI	322	7.4	322	7.1	8.0	3.0	6.0	9.0	10.0	10.0
[01002] - NORTHERN BROOK LAMPREY	R	5	7.4	5	7.8	9.0	6.0	6.0	9.0	9.0	9.0
[47002] - CHANNEL CATFISH		43	7.3	43	6.4	8.0	0.8	3.0	9.0	10.0	10.0
[77007] - WARMOUTH SUNFISH		124	7.3	124	6.8	8.0	2.0	6.0	9.0	9.0	10.0
[43021] - SILVER SHINER	I	188	7.3	188	7.2	8.0	2.0	6.0	9.0	10.0	11.0
[80004] - DUSKY DARTER	MI	5	7.2	5	7.6	7.0	7.0	7.0	8.2	9.0	9.0
[43022] - ROSYFACE SHINER	I	113	7.2	113	7.0	8.0	2.0	4.0	9.0	11.0	11.0
[37003] - NORTHERN PIKE		15	7.1	15	6.2	8.0	2.0	3.0	9.7	10.0	10.7
[80016] - BANDED DARTER	I	167	7.1	167	6.8	8.0	3.0	4.0	9.0	10.0	10.0
[25002] - RAINBOW TROUT		19	7.1	19	6.8	8.0	2.0	4.0	9.0	9.6	10.5
[77004] - SMALLMOUTH BASS	MI	396	7.1	396	6.6	8.0	2.0	3.5	9.0	10.0	10.0
[40015] - NORTHERN HOG SUCKER	MI	1021	7.1	1021	6.7	8.0	2.0	4.0	9.0	10.0	10.0
[77012] - REDEAR SUNFISH		18	7.0	18	7.6	8.0	6.3	7.0	9.0	10.0	10.0
[01006] - LEAST BROOK LAMPREY		186	6.9	186	6.8	8.0	3.0	6.0	9.0	9.9	10.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[63001] - TROUT-PERCH		104	6.9	104	7.3	8.0	2.0	7.0	9.0	10.0	10.0
[77011] - LONGEAR SUNFISH	MI	621	6.8	621	6.3	7.0	2.0	3.0	9.0	10.0	10.0
[77003] - ROCK BASS		680	6.8	680	6.8	8.0	2.0	4.0	9.0	10.0	10.0
[70001] - BROOK SILVERSIDE	MI	28	6.8	28	6.3	8.0	1.0	3.5	9.0	9.7	10.1
[80011] - LOGPERCH	MI	240	6.8	240	6.8	8.0	2.0	4.0	9.0	10.0	10.0
[77013] - PUMPKINSEED SUNFISH	MT	322	6.7	322	5.9	7.0	1.0	3.0	9.0	10.0	10.0
[43032] - SPOTFIN SHINER		464	6.7	464	6.1	7.0	1.0	3.0	9.0	10.0	10.0
[80015] - GREENSIDE DARTER	MI	1004	6.7	1004	6.2	7.0	2.0	3.0	9.0	10.0	10.0
[01007] - AMER BROOK LAMPREY	R	37	6.6	37	6.9	8.0	3.0	3.0	9.0	10.8	12.3
[80022] - RAINBOW DARTER	MI	1255	6.4	1255	5.9	7.0	1.0	3.0	9.0	10.0	10.0
[43017] - REDSIDE DACE	I	216	6.3	216	6.2	7.0	2.0	3.0	9.0	9.9	10.0
[43025] - STRIPED SHINER		1755	6.2	1755	5.9	7.0	1.0	3.0	9.0	9.0	10.0
[40008] - SILVER REDHORSE	MI	26	6.2	26	7.3	8.5	3.0	7.0	9.0	10.0	10.0
[80005] - BLACKSIDE DARTER		397	6.1	397	6.2	7.0	1.0	3.0	9.0	10.0	10.0
[77002] - BLACK CRAPPIE		41	6.1	41	6.8	8.0	2.0	4.0	9.0	10.0	10.4
[37001] - GRASS PICKEREL	MT	449	6.0	449	6.0	7.0	1.0	3.0	9.0	9.0	10.0
[43003] - GOLDEN SHINER	T	376	6.0	376	5.5	7.0	1.0	3.0	8.0	9.0	10.0
[77009] - BLUEGILL SUNFISH	MT	1842	6.0	1842	5.7	7.0	1.0	3.0	9.0	9.0	10.0
[43024] - SCARLET SHINER	MI	275	6.0	275	6.3	8.0	1.0	3.0	9.0	10.0	10.7
[43005] - RIVER CHUB	I	84	5.9	84	6.7	8.0	2.9	4.0	9.0	10.1	11.0
[43026] - COMMON SHINER		504	5.8	504	5.6	7.0	1.0	2.0	9.0	10.0	10.0
[77010] - ORANGESPOTTED SUNFISH		71	5.8	71	5.7	7.0	1.0	2.0	9.0	9.0	9.0
[43045] - COMMON CARP X GOLDFISH	T	20	5.7	20	5.6	5.5	1.5	2.5	8.0	10.0	10.5
[43034] - SAND SHINER	MI	492	5.6	492	6.2	8.0	1.0	3.0	9.0	10.0	10.0
[90002] - MOTTLED SCULPIN		705	5.6	705	5.9	7.0	1.0	3.0	9.0	10.0	10.0
[80024] - FANTAIL DARTER		1483	5.5	1483	5.7	7.0	1.0	3.0	9.0	10.0	10.0
[43044] - CENTRAL STONEROLLER		2841	5.5	2841	5.2	5.0	1.0	2.0	8.0	9.0	10.0
[40016] - WHITE SUCKER	T	3129	5.4	3129	5.2	5.0	1.0	2.0	8.0	9.0	10.0
[43015] - SUCKERMOUTH MINNOW		193	5.3	193	5.3	6.0	1.0	2.0	8.2	9.2	10.0
[20003] - GIZZARD SHAD		147	5.3	147	6.0	7.0	1.0	3.0	9.0	10.0	10.0
[47008] - STONECAT MADTOM	I	55	5.2	55	7.1	8.0	3.0	4.0	9.0	10.0	10.7

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[77001] - WHITE CRAPPIE		123	5.2	123	5.7	7.0	2.0	3.0	8.0	9.2	10.0
[77008] - GREEN SUNFISH	T	2827	5.2	2827	5.2	6.0	1.0	2.0	8.0	9.0	10.0
[47004] - YELLOW BULLHEAD	T	1449	5.0	1449	5.5	6.0	1.0	2.0	8.0	9.0	10.0
[77006] - LARGEMOUTH BASS		1360	5.0	1360	5.5	7.0	1.0	3.0	8.0	9.0	10.0
[34001] - CENTRAL MUDMINNOW	T	223	4.8	223	5.3	4.0	1.8	3.0	8.0	10.0	10.0
[43011] - WESTERN BLACKNOSE DACE	T	2206	4.8	2206	5.1	5.0	1.0	2.0	8.0	9.0	10.0
[43013] - CREEK CHUB	T	3634	4.8	3634	4.9	4.0	1.0	2.0	8.0	9.0	10.0
[80014] - JOHNNY DARTER		2265	4.6	2265	5.2	6.0	1.0	2.0	8.0	9.0	10.0
[47006] - BLACK BULLHEAD	MT	387	4.6	387	5.4	6.0	1.0	2.0	8.0	9.0	10.0
[43039] - SILVERJAW MINNOW		1249	4.6	1249	5.5	7.0	1.0	3.0	9.0	9.0	10.0
[43023] - REDFIN SHINER		274	4.5	274	5.1	6.0	1.0	2.0	8.0	9.0	9.0
[43043] - BLUNTNOSE MINNOW	T	2895	4.4	2895	5.1	5.0	1.0	2.0	8.0	9.0	10.0
[43016] - SOUTH. REDBELLY DACE		721	4.4	721	5.0	5.0	1.0	2.0	8.0	9.0	10.0
[40005] - QUILLBACK CARPSUCKER		89	4.4	89	4.9	3.0	1.0	2.0	8.0	9.0	10.0
[47005] - BROWN BULLHEAD	T	122	4.3	122	5.4	6.0	1.0	3.0	8.0	9.0	10.0
[80023] - ORANGETHROAT DARTER		669	4.2	669	5.0	5.0	1.0	2.0	8.0	9.0	10.0
[43004] - HORNYHEAD CHUB	I	136	4.1	136	5.6	6.5	1.0	3.0	8.5	10.0	10.0
[43001] - COMMON CARP	T	759	4.0	759	5.0	4.0	1.0	2.0	8.0	9.0	10.0
[43033] - BIGMOUTH SHINER		47	4.0	47	5.1	4.0	1.0	2.0	8.0	9.0	10.1
[95001] - BROOK STICKLEBACK		194	3.6	194	4.2	3.0	1.0	2.0	7.0	9.0	10.0
[43002] - GOLDFISH	T	111	3.6	111	4.2	3.0	0.0	1.2	7.7	9.0	9.9
[47013] - TADPOLE MADTOM		67	3.3	67	3.4	2.0	0.0	1.0	7.0	8.0	9.0
[40002] - BIGMOUTH BUFFALO		5	3.1	5	3.8	3.0	-1.0	0.5	8.0	8.0	8.0
[43042] - FATHEAD MINNOW	T	1046	3.0	1046	4.2	3.0	1.0	1.0	8.0	9.0	10.0
[40020] - CREEK CHUBSUCKER		62	2.9	62	4.4	3.0	0.7	1.0	8.0	9.0	10.0
[80025] - LEAST DARTER		48	2.3	48	3.7	3.0	0.0	1.0	6.5	8.0	9.1
[54002] - BLACKSTRIPE TOPMINNOW		432	1.6	432	3.4	2.0	0.0	1.0	7.0	8.0	9.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
		Headwater		- HYD_QHEI							
[50315] - CHIMARRA OBSCURA	MI	26	22.8	226	10.2	10.0	4.0	6.0	13.0	16.0	18.0
[74673] - ATRICHOPOGON WEBSTERI		10	17.9	16	10.7	9.5	2.1	6.0	16.5	18.8	19.7
[13540] - STENONEMA MEDIOPUNCTATUM	I	12	17.0	20	12.4	14.0	2.5	5.5	16.0	20.0	21.5
[84302] - PHAENOPSECTRA PUNCTIPES		6	16.3	9	11.2	12.0	4.4	8.0	14.0	17.0	17.0
[85625] - RHEOTANYTARSUS SP	MI	293	15.8	727	8.9	9.0	2.0	5.0	12.0	16.0	17.0
[74100] - SIMULIUM SP		95	15.5	751	9.5	9.0	3.0	6.0	13.0	17.0	18.0
[84469] - POLYPEDILUM (P.) ILLINOENSE GROUP		6	15.3	10	8.2	8.5	1.0	2.0	13.0	16.0	16.0
[34500] - PERLESTA PLACIDA COMPLEX		5	15.3	46	10.0	10.0	2.0	7.0	13.0	16.9	18.2
[33100] - LEUCTRA SP	I	11	15.3	83	9.5	10.0	2.0	5.2	14.0	17.0	17.7
[84470] - POLYPEDILUM (P.) ILLINOENSE	T	193	15.1	846	8.3	8.0	2.0	4.0	12.0	15.0	17.0
[52540] - HYDROPSYCHE DICANTHA	MI	6	14.8	43	10.5	11.0	4.0	6.2	14.0	17.2	19.3
[48410] - CORYDALUS CORNUTUS	MI	18	14.7	87	10.2	11.0	4.2	6.0	14.0	16.8	19.0
[06904] - SYNURELLA DENTATA		5	14.4	61	8.1	7.0	2.0	4.0	12.0	16.4	17.4
[85815] - TANYTARSUS GLABRESCENS GROUP SP 1		5	14.3	7	13.0	14.0	5.8	9.5	16.7	18.6	19.0
[78450] - NILOTANYPUS FIMBRIATUS	MI	137	14.3	180	10.8	11.0	4.0	7.0	14.0	17.0	19.0
[11115] - BAETIS TRICAUDATUS	MI	9	14.1	39	9.3	9.0	3.0	5.0	13.5	17.0	17.0
[84700] - STENOCHIRONOMUS SP		28	14.0	122	9.4	9.0	2.7	6.0	12.0	17.0	17.4
[11150] - PSEUDOCLOEON PROPINQUUM	I	7	14.0	37	11.7	12.0	5.2	8.0	16.2	18.6	19.0
[13510] - STENONEMA EXIGUUM	I	10	13.9	15	12.3	12.0	5.0	9.0	16.7	18.0	18.7
[71100] - HEXATOMA SP	MI	15	13.9	429	9.1	9.0	2.0	6.0	12.0	16.0	17.0
[85261] - CLADOTANYTARSUS VANDERWULPI GROUP TYPE 1	I	43	13.8	72	11.6	12.0	5.0	8.0	15.5	17.0	19.0
[03045] - FREDERICELLA INDICA	MI	5	13.6	14	9.2	10.0	1.9	4.0	11.0	17.3	19.4
[80204] - BRILLIA FLAVIFRONS GROUP		44	13.5	82	11.6	12.0	4.7	7.0	16.0	17.3	19.0
[11430] - DIPHETOR HAGENI	I	40	13.4	122	8.8	9.0	2.0	5.0	12.0	15.0	16.4
[52200] - CHEUMATOPSYCHE SP		302	13.2	1325	8.4	8.0	2.0	5.0	12.0	16.0	17.0
[80360] - CORYNONEURA "CELERIPES" (SENSU SIMPSON & BODE, 1980)	I	27	13.2	45	11.0	11.0	5.0	6.0	14.0	18.0	19.2
[13561] - STENONEMA PULCHELLUM	MI	30	13.0	65	9.7	11.0	3.0	6.0	13.2	17.0	19.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[52440] - CERATOPSYCHE SLOSSONAE	MI	42	12.7	163	9.8	10.0	5.0	6.0	13.0	16.0	17.0
[81270] - NANOCLADIUS (N.) SPINIPLIENUS	MI	49	12.7	73	11.1	11.0	4.8	8.0	15.0	17.0	18.8
[87510] - CHELIFERA SP	MI	6	12.7	14	11.5	11.0	4.9	9.0	14.0	17.0	17.0
[52530] - HYDROPSYCHE DEPRAVATA GROUP		159	12.6	926	8.8	9.0	2.0	5.0	12.0	16.0	17.0
[84155] - PARALAUTERBORNIELLA NIGROHALTERALIS		6	12.6	22	8.8	10.0	2.4	4.0	13.0	16.3	17.0
[48620] - NIGRONIA SERRICORNIS		40	12.6	211	9.9	10.0	3.0	6.0	14.0	17.0	17.0
[48610] - NIGRONIA FASCIATUS	MI	5	12.6	34	8.0	7.5	2.8	3.0	12.0	14.1	16.6
[81240] - NANOCLADIUS (N.) DISTINCTUS	MT	36	12.5	50	9.2	9.5	2.5	5.0	13.0	17.0	18.0
[21300] - HETAERINA SP		26	12.5	86	10.1	11.0	5.0	6.0	14.0	17.0	18.2
[11100] - BAETIS SP		48	12.5	220	9.3	9.0	4.0	6.0	13.0	16.0	17.0
[80440] - CRICOTOPUS (C.) TRIFASCIA		7	12.5	78	11.2	11.5	5.3	8.0	14.0	17.0	18.0
[85200] - CLADOTANYTARSUS SP		5	12.4	14	9.3	10.5	2.0	4.0	14.0	17.0	17.0
[52450] - CERATOPSYCHE SPARNA	MI	6	12.4	40	11.9	11.0	6.0	9.5	14.5	17.0	20.0
[34130] - ACRONEURIA FRISONI	MI	45	12.4	161	8.4	8.0	1.6	4.7	12.0	16.0	17.0
[52430] - CERATOPSYCHE MOROSA GROUP	MI	120	12.3	470	9.9	10.0	3.0	6.0	14.0	17.0	19.0
[71910] - TIPULA ABDOMINALIS	MI	15	12.3	150	9.8	10.0	4.0	6.0	13.0	16.0	17.0
[08601] - HYDRACARINA		113	12.3	277	9.5	9.0	3.0	6.0	13.0	16.0	17.0
[93200] - HYDROBIIDAE	MT	12	12.3	38	9.0	9.0	2.0	5.0	13.0	15.7	18.8
[84430] - POLYPEDILUM (P.) ALBICORNE	MI	23	12.3	31	10.6	11.0	4.2	7.2	14.0	16.4	17.0
[87501] - EMPIDIDAE		107	12.3	201	10.6	11.0	4.0	6.0	14.0	17.0	18.4
[78600] - PENTANEURA INCONSPICUA		7	12.3	27	10.7	11.0	4.2	5.0	15.7	16.8	19.9
[52315] - DIPLECTRONA MODESTA		5	12.3	79	7.7	7.0	3.0	4.0	11.0	13.0	15.5
[82101] - THIENEMANNIELLA TAUROCAPITA	I	56	12.2	71	10.5	11.0	3.0	7.0	13.7	16.4	18.9
[60300] - DINEUTUS SP		6	12.2	74	10.2	11.0	2.0	5.0	15.0	17.0	19.8
[50804] - LYPE DIVERSA	MI	59	12.2	83	11.1	11.0	4.8	7.0	14.0	17.0	19.3
[84475] - POLYPEDILUM (P.) OPHIOIDES	MI	8	12.2	36	10.8	10.5	5.0	6.0	14.5	17.0	18.4
[51600] - POLYCENTROPUS SP	MI	59	12.1	235	8.8	9.0	2.0	5.0	12.0	16.0	17.0
[85710] - STEPELLINELLA SP	MI	22	12.1	28	11.1	12.0	5.3	6.5	14.5	19.0	19.0
[84450] - POLYPEDILUM (URESIPEDILUM) FLAVUM		233	12.1	825	9.0	9.0	2.0	5.0	12.0	16.0	17.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[86401] - ATHERIX LANTHA	MI	22	12.1	94	11.4	11.0	5.0	8.0	15.0	17.2	19.0
[12200] - ISONYCHIA SP	MI	80	12.0	305	10.1	10.0	3.0	6.0	14.0	17.0	19.0
[67500] - LACCOBIUS SP		6	12.0	196	7.8	8.0	1.0	3.0	12.0	15.0	16.7
[69200] - OPTIOSERVUS SP	MI	6	12.0	74	10.4	11.0	3.0	6.0	14.0	17.0	18.6
[79100] - THIENEMANNIMYIA GROUP		21	11.9	131	7.7	6.0	3.0	5.0	11.0	14.0	16.9
[78100] - LABRUNDINIA SP		7	11.9	8	11.3	10.5	4.6	7.5	16.0	18.4	19.0
[82121] - THIENEMANNIELLA LOBAPODEMA	MI	61	11.9	67	11.2	12.0	4.2	8.2	15.0	17.0	19.0
[81825] - RHEOCRICOTOPUS (PSILOCRICOTOPUS) ROBACKI	MI	111	11.8	250	10.4	11.0	4.0	6.0	14.0	17.0	19.0
[86100] - CHRYSOPS SP		17	11.8	393	8.6	9.0	2.0	5.0	12.0	15.2	17.0
[68601] - ANCYRONYX VARIEGATA	MI	50	11.8	162	10.7	11.0	5.0	7.0	14.0	17.0	18.0
[85803] - TANYTARSUS TYPE 3		10	11.8	16	9.7	8.0	6.0	6.5	13.5	16.8	18.4
[82141] - THIENEMANNIELLA XENA		164	11.7	317	10.2	11.0	4.0	6.0	14.0	17.0	18.0
[56001] - LIMNEPHILIDAE		5	11.7	10	8.8	9.0	3.5	6.0	11.0	14.0	15.0
[01418] - CRASPEDACUSTA SOWERBYI		17	11.7	17	10.4	10.0	6.0	6.0	14.0	16.8	17.0
[08200] - ORCONNECTES SP		12	11.5	119	8.9	8.0	3.0	5.2	13.0	16.0	17.0
[77115] - ABLABESMYIA JANTA		8	11.5	16	8.7	9.0	2.1	6.0	11.5	14.0	16.1
[57900] - PYCNOPSYCHE SP	MI	19	11.5	215	9.7	10.0	3.0	6.0	13.0	17.0	17.7
[85615] - RHEOTANYTARSUS PELLUCIDUS	MI	101	11.5	174	10.4	11.0	4.0	6.0	14.0	17.0	19.0
[84460] - POLYPEDILUM (P.) FALLAX GROUP		336	11.4	440	10.1	11.0	3.0	6.0	14.0	17.0	18.5
[85230] - CLADOTANYTARSUS MANCUS GROUP		12	11.3	65	7.4	6.0	2.0	3.7	11.0	14.0	16.2
[01900] - NEMERTEA		36	11.3	48	10.3	11.0	3.6	6.0	15.0	16.7	17.0
[79085] - TELOPELOPIA OKOBOJI		10	11.3	15	9.7	9.0	3.0	4.5	15.2	18.0	18.7
[85201] - CLADOTANYTARSUS SPECIES GROUP A	MI	8	11.3	23	10.3	10.0	3.6	9.0	12.7	15.0	15.7
[14900] - LEPTOPHLEBIA SP	I	6	11.2	14	7.9	7.0	2.8	4.0	11.0	15.2	16.6
[59580] - OECETIS PERSIMILIS	MI	7	11.2	23	11.4	12.0	6.0	6.5	14.0	17.4	20.0
[16700] - TRICORYTHODES SP	MI	31	11.2	44	10.2	10.0	4.9	6.0	14.0	16.1	17.3
[13590] - STENONEMA VICARIUM	MI	129	11.2	329	10.0	10.0	4.0	6.0	14.0	17.0	19.0
[80410] - CRICOTOPUS (C.) SP		116	11.2	232	9.8	10.0	3.0	6.0	14.0	17.0	18.0
[83158] - ENDOCHIRONOMUS NIGRICANS		18	11.2	64	8.6	9.0	3.0	6.0	11.0	15.0	15.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[13570] - STENONEMA TERMINATUM	MI	13	11.1	31	9.0	11.0	2.2	5.0	12.7	14.4	15.0
[87540] - HEMERODROMIA SP		187	11.1	328	9.0	9.0	2.0	5.0	12.0	15.0	17.0
[84480] - POLYPEDILUM (P.) LAETUM GROUP	MI	9	11.0	106	9.4	10.0	2.0	5.0	12.0	17.0	19.0
[30000] - PLECOPTERA		16	11.0	25	9.8	10.0	2.0	5.7	13.2	19.0	19.2
[81259] - NANOCLADIUS (N.) "RECTINERVIS" (SENSU SIMPSON AND BODE, 1980)	MI	11	11.0	12	11.8	12.5	6.5	10.0	14.5	16.3	16.9
[77740] - HAYESOMYIA SENATA		6	11.0	12	9.4	8.5	3.8	5.0	13.0	17.8	21.4
[68901] - MACRONYCHUS GLABRATUS	MI	167	10.9	340	9.9	10.0	3.0	6.0	13.5	17.0	17.0
[16200] - EURYLOPHELLA SP	MI	51	10.9	72	10.1	11.0	5.0	7.0	13.0	15.0	16.9
[11130] - BAETIS INTERCALARIS		119	10.9	490	9.1	9.0	2.5	5.0	12.0	16.0	18.0
[85501] - PARATANYTARSUS N.SP 1	MI	65	10.9	98	10.0	10.0	5.0	6.0	13.0	17.0	17.0
[85500] - PARATANYTARSUS SP		358	10.8	589	9.0	9.0	2.0	5.0	12.0	16.0	17.0
[78350] - MEROPELOPIA SP		57	10.8	172	9.3	10.0	3.0	5.0	13.0	15.0	17.0
[85801] - TANYTARSUS TYPE 1	MI	5	10.7	6	11.0	11.0	4.5	9.0	12.0	18.3	19.0
[84540] - POLYPEDILUM (TRIPODURA) SCALAENUM GROUP		191	10.7	417	9.3	9.0	3.0	5.0	12.0	16.0	17.0
[51400] - NYCTIOPHYLAX SP	MI	48	10.7	135	10.0	10.0	3.0	6.0	13.0	17.0	19.0
[77800] - HELOPELOPIA SP		287	10.7	707	9.3	9.0	2.0	5.0	13.0	16.0	17.0
[80370] - CORYNONEURA LOBATA	MI	354	10.7	446	9.7	10.0	2.1	6.0	13.0	16.0	17.0
[81690] - PARATRICHOCLADIUS SP	MI	30	10.7	58	10.6	11.0	3.3	6.0	15.0	17.7	20.0
[35001] - PERLODIDAE	MI	6	10.7	18	8.6	8.5	3.0	6.0	12.0	13.7	17.0
[11400] - CENTROPTILUM SP OR PROCLOEON SP (FORMERLY IN CLOEON)	MI	24	10.7	69	10.9	11.0	5.0	7.0	14.2	17.0	17.0
[21200] - CALOPTERYX SP		215	10.6	894	9.2	9.0	3.0	5.0	12.0	16.0	17.0
[80351] - CORYNONEURA N.SP 1	MI	31	10.6	78	10.1	10.5	2.3	6.0	14.0	16.7	19.0
[83900] - NILOTHAUMA SP	MI	24	10.6	34	9.1	9.5	2.9	6.0	12.0	14.1	15.0
[84300] - PHAENOPSECTRA OBEDIENS GROUP		123	10.6	323	9.6	9.0	3.0	6.0	13.7	17.0	17.0
[68075] - PSEPHENUS HERRICKI	MI	26	10.6	485	9.2	9.0	2.0	5.0	13.0	16.0	18.0
[84440] - POLYPEDILUM (URESIPEDILUM) AVICEPS	MI	28	10.6	139	9.6	10.0	2.4	6.0	13.0	17.0	18.5
[68130] - HELICHUS SP	MI	45	10.6	435	8.7	9.0	2.0	5.0	12.0	16.0	17.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[81650] - PARAMETRIOCNEMUS SP	MI	121	10.6	432	9.5	10.0	2.0	6.0	13.0	16.3	17.0
[14950] - LEPTOPHLEBIA SP OR PARALEPTOPHLEBIA SP	MI	56	10.6	106	8.2	9.0	2.0	4.0	11.0	13.9	15.0
[98600] - SPHAERIUM SP		77	10.5	761	7.4	6.0	1.0	3.0	11.0	15.0	17.0
[85818] - TANYTARSUS GLABRESCENS GROUP SP 4	MI	6	10.5	23	9.4	9.0	2.8	7.2	12.5	15.0	16.4
[85840] - TANYTARSUS SEPP	MI	204	10.5	294	10.0	10.0	3.9	6.0	14.0	17.0	17.0
[85814] - TANYTARSUS GLABRESCENS GROUP		294	10.5	437	9.8	10.0	3.0	6.0	13.2	17.0	18.0
[69225] - OPTIOSERVUS FASTIDITUS	MI	14	10.4	121	9.4	10.0	3.0	5.7	12.0	17.0	18.0
[50301] - CHIMARRA ATERRIMA	MI	17	10.4	240	8.9	9.0	3.0	6.0	12.0	15.0	17.0
[97601] - CORBICULA FLUMINEA	MI	6	10.4	47	9.1	10.0	4.0	6.0	11.0	14.6	19.0
[70600] - ANTOCHA SP	MI	39	10.4	79	11.0	11.0	5.4	7.0	14.7	17.0	19.0
[15000] - PARALEPTOPHLEBIA SP	MI	87	10.4	143	10.0	11.0	2.0	6.0	14.0	17.0	19.0
[68025] - ECTOPRIA SP	MI	11	10.4	172	9.0	9.0	2.0	5.0	12.0	17.0	19.0
[83840] - MICROTENDIPES PEDELLUS GROUP	MI	206	10.3	494	8.5	9.0	1.9	4.0	12.0	16.0	17.0
[13580] - STENONEMA TRIPUNCTATUM (OLD)		67	10.3	151	9.8	10.0	3.6	6.0	13.0	17.0	18.9
[77355] - CLINOTANYPUS PINGUIS	T	12	10.3	175	6.1	5.0	1.0	2.0	9.0	13.0	15.0
[80420] - CRICOTOPUS (C.) BICINCTUS	MT	153	10.3	592	9.2	9.0	3.0	5.0	13.0	17.0	18.0
[80430] - CRICOTOPUS (C.) TREMULUS GROUP		101	10.3	378	9.1	9.0	3.0	5.0	13.0	16.0	17.0
[13521] - STENONEMA FEMORATUM		198	10.3	820	7.8	8.0	1.0	4.0	11.0	15.0	17.0
[83000] - DICROTENDIPES SP		9	10.2	19	10.0	10.0	3.0	5.2	15.0	17.2	18.5
[77500] - CONCHAPELOPIA SP		357	10.2	1053	8.3	8.0	2.0	4.0	12.0	15.0	17.0
[84520] - POLYPEDILUM (TRIPODURA) HALTERALE GROUP		24	10.2	69	7.0	6.0	2.0	3.0	11.0	12.6	17.0
[11120] - BAETIS FLAVISTRIGA		148	10.2	532	9.2	9.0	2.0	5.0	13.0	16.0	17.0
[05900] - LIRCEUS SP		97	10.2	441	7.0	6.0	1.0	3.0	11.0	15.0	17.0
[53800] - HYDROPTILA SP		99	10.2	365	8.5	8.0	2.0	5.0	12.0	16.0	17.0
[82820] - CRYPTOCHIRONOMUS SP		77	10.2	702	8.6	8.0	2.0	5.0	12.0	16.0	17.0
[74650] - ATRICHOPOGON SP		12	10.1	19	7.6	6.0	2.4	4.2	11.0	13.0	13.0
[82220] - TVETENIA DISCOLORIPES GROUP	I	11	10.1	29	9.8	11.0	4.4	6.0	12.5	16.0	17.1
[84750] - STICTOCHIRONOMUS SP		29	10.1	675	7.6	7.0	1.0	3.0	11.0	14.0	17.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[78400] - NATARSIA SP	MT	5	10.1	31	7.6	6.0	2.6	4.2	12.2	14.4	15.9
[18600] - EPHEMERA SP	MI	18	10.1	151	8.3	8.0	2.0	5.0	12.0	15.0	17.0
[11250] - CENTROPTILUM SP (W/O HINDWING PADS)	MI	9	10.1	183	7.9	8.0	1.0	4.2	11.0	15.0	17.0
[85802] - TANYTARSUS CURTICORNIS GROUP	MI	153	10.1	184	10.3	10.0	3.0	7.0	14.0	17.0	19.0
[78401] - NATARSIA SPECIES A (SENSU ROBACK, 1978)	T	38	10.0	331	8.3	8.0	2.0	4.0	12.0	15.4	17.0
[13400] - STENACRON SP		290	10.0	952	8.5	8.0	2.0	5.0	12.0	15.0	17.0
[71900] - TIPULA SP		46	10.0	615	8.6	8.0	2.0	5.0	12.0	16.0	17.0
[17200] - CAENIS SP		311	10.0	925	8.2	8.0	2.0	4.0	12.0	15.0	17.0
[11651] - PROCLOEON SP (W/O HINDWING PADS)	MI	61	9.9	144	7.9	8.0	1.0	4.5	12.0	14.0	15.3
[23909] - BOYERIA VINOSA		64	9.9	663	8.8	9.0	2.0	5.0	12.0	16.0	17.0
[77750] - HAYESOMYIA SENATA OR THIENEMANNIMYIA NORENA		151	9.9	312	8.7	9.0	2.0	5.0	12.0	15.0	17.0
[96900] - FERRISSIA SP		309	9.9	638	9.0	9.0	2.0	5.0	12.0	16.0	17.0
[85720] - STEPELLINELLA N.SP NR. FLAVIDULA	I	61	9.9	90	9.7	10.0	3.5	6.0	13.0	15.5	17.0
[81230] - NANOCLADIUS (N.) CRASSICORNUS (OLD)		18	9.9	25	9.1	9.0	2.0	5.7	12.2	15.0	16.2
[08240] - ORCONNECTES (CROKERINUS) PROPINQUUS		5	9.9	44	9.6	10.0	3.0	5.5	13.5	17.0	17.0
[78140] - LABRUNDINIA PILOSELLA	MI	144	9.9	159	9.8	10.0	3.0	6.0	13.0	16.0	17.0
[69400] - STENELMIS SP		278	9.8	1241	8.5	8.0	2.0	5.0	12.0	15.4	17.0
[04964] - MOOREOBDELLA MICROSTOMA	T	24	9.8	184	6.9	6.0	1.0	2.5	11.0	14.0	17.0
[77130] - ABLABESMYIA RHAMPHE GROUP	MT	15	9.8	27	7.1	6.0	1.2	4.0	10.0	14.6	18.1
[08230] - ORCONNECTES (CROKERINUS) OBSCURUS		5	9.8	62	9.5	10.0	4.0	6.0	12.0	15.3	16.0
[81231] - NANOCLADIUS (N.) CRASSICORNUS OR N. (N.) "RECTINERVIS"		90	9.8	113	9.6	10.0	3.0	5.0	14.0	17.0	17.8
[85800] - TANYTARSUS SP	MI	293	9.7	535	8.6	9.0	2.0	5.0	12.0	15.0	17.0
[85400] - MICROPSECTRA SP		30	9.7	82	7.9	8.0	2.0	4.0	11.0	15.3	16.4

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[11645] - PROCLOEON SP	MI	5	9.7	6	11.8	10.5	6.4	10.0	14.0	19.4	20.0
[58505] - HELICOPSYCHE BOREALIS	MI	35	9.7	258	8.0	8.0	1.3	4.0	11.0	14.7	16.6
[81631] - PARAKIEFFERIELLA N.SP 1		20	9.7	27	10.6	10.0	3.4	9.0	14.0	16.8	19.1
[83820] - MICROTENDIPES "CAELUM" (SENSU SIMPSON & BODE, 1980)	MI	63	9.6	208	8.7	8.0	2.0	5.0	12.0	16.0	17.0
[83040] - DICROTENDIPES NEOMODESTUS		279	9.6	526	8.6	9.0	2.0	5.0	12.0	16.0	17.0
[84800] - TRIBELOS JUCUNDUM		35	9.5	95	8.8	9.0	3.0	6.0	11.7	14.0	16.7
[59500] - OECETIS SP	MI	11	9.5	48	7.7	7.0	2.0	3.5	11.0	16.0	17.1
[01801] - TURBELLARIA		278	9.5	884	8.3	8.0	2.0	5.0	12.0	15.0	17.0
[77120] - ABLABESMYIA MALLOCHI		218	9.5	537	8.7	9.0	2.0	5.0	12.0	15.0	17.0
[07701] - CAMBARIDAE		7	9.5	50	7.6	6.0	2.0	4.0	11.0	14.5	17.0
[78101] - LABRUNDINIA BECKI		10	9.5	10	9.4	10.0	5.0	9.0	11.0	12.0	12.0
[59001] - LEPTOCERIDAE	MI	6	9.5	11	10.0	12.0	2.8	5.2	13.0	17.8	18.9
[84790] - TRIBELOS FUSCICORNE		13	9.4	24	9.1	9.5	2.0	8.5	11.0	14.1	15.6
[05800] - CAECIDOTEA SP	MT	74	9.4	356	8.2	8.0	2.0	4.5	12.0	14.9	17.0
[82730] - CHIRONOMUS (C.) DECORUS GROUP	T	114	9.4	570	7.5	7.0	1.0	3.0	11.0	15.0	17.0
[81260] - NANOCLADIUS (N.) "RECTINERVIS" (OLD)		9	9.3	12	8.7	10.0	1.4	5.0	12.0	14.6	15.8
[81465] - ORTHOCLADIUS (O.) CARLATUS	MI	12	9.3	15	9.8	11.0	3.0	6.2	12.0	15.0	16.5
[78500] - PARAMERINA FRAGILIS		24	9.3	37	8.4	9.0	2.0	2.7	11.2	16.6	18.3
[68708] - DUBIRAPHIA VITTATA GROUP		127	9.2	764	8.3	8.0	2.0	4.5	12.0	15.0	17.0
[03360] - PLUMATELLA SP		90	9.2	364	8.4	8.0	2.0	4.0	12.0	16.0	17.0
[82880] - CRYPTOTENDIPES SP	MI	7	9.1	45	9.6	10.0	4.0	6.0	13.0	15.0	16.2
[72160] - PSYCHODA SP	T	5	9.1	11	9.0	9.0	2.2	7.2	11.0	14.2	18.6
[82200] - TVETENIA BAVARICA GROUP	MI	35	9.0	124	10.5	11.0	4.0	6.0	14.0	17.0	19.0
[03600] - OLIGOCHAETA	T	497	9.0	1340	8.2	8.0	2.0	4.0	12.0	16.0	17.0
[82711] - CHIRONOMUS (C.) SP 1	VT	6	9.0	16	5.4	3.5	0.1	1.0	10.0	11.9	16.9
[80570] - DONCRICOTOPUS BICAUDATUS		9	9.0	18	7.2	7.0	3.0	3.0	11.0	12.0	12.6
[81632] - PARAKIEFFERIELLA N.SP 2	MI	33	8.9	64	9.1	9.5	3.0	5.5	13.0	16.0	17.0
[84315] - PHAENOPSECTRA FLAVIPES		111	8.9	237	8.7	9.0	2.0	5.0	12.0	15.8	17.0
[06700] - CRANGONYX SP	MT	60	8.8	355	8.7	9.0	2.0	5.0	12.0	15.0	17.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[98001] - SPHAERIIDAE		10	8.8	20	7.8	8.5	1.5	3.5	12.0	14.0	15.0
[79400] - ZAVRELIMYIA SP		82	8.8	154	7.9	7.5	1.0	3.0	12.0	16.0	17.0
[84210] - PARATENDIPES ALBIMANUS OR P. DUPLICATUS	MI	283	8.8	666	8.3	8.0	2.0	4.0	12.0	15.9	17.0
[85821] - TANYTARSUS GLABRESCENS GROUP SP 7	MI	107	8.7	214	8.2	8.0	2.0	4.0	12.0	15.0	16.0
[52001] - HYDROPSYCHIDAE		9	8.7	12	6.5	6.0	1.4	2.5	10.5	12.6	13.8
[22300] - ARGIA SP		164	8.6	674	8.5	8.0	2.0	5.0	12.0	15.1	17.0
[06201] - HYALELLA AZTECA		66	8.6	506	7.4	7.0	1.0	3.0	11.0	14.9	17.0
[93900] - ELIMIA SP	MI	77	8.6	281	9.5	9.0	2.0	5.0	14.0	17.0	18.0
[11018] - ACERPENNA MACDUNNOUGHII	I	24	8.5	51	9.5	10.0	3.0	6.0	12.0	16.4	18.9
[53501] - HYDROPTILIDAE		18	8.4	109	8.2	8.0	1.0	4.0	12.0	15.6	18.0
[85752] - SUBLETTEA COFFMANI	I	20	8.4	22	11.0	11.5	5.0	8.0	15.0	17.0	18.2
[83002] - DICROTENDIPES MODESTUS		16	8.3	53	7.7	8.0	1.8	4.0	10.0	14.0	15.0
[78402] - NATARSIA BALTIMOREUS		7	8.3	32	9.4	11.0	2.7	6.0	12.5	15.0	16.8
[11650] - PROCLOEON SP (W/ HINDWING PADS)	MI	14	8.3	69	8.3	9.0	2.0	4.7	12.0	14.0	15.0
[01320] - HYDRA SP		234	8.3	258	9.1	9.0	2.0	5.0	13.0	16.0	17.0
[13000] - LEUCROCUTA SP	I	39	8.3	170	9.0	9.0	2.0	6.0	12.0	15.5	17.0
[78655] - PROCLADIUS (HOLOTANYPUS) SP	MT	15	8.3	194	6.6	6.0	1.0	2.0	11.0	14.0	15.0
[28705] - PACHYDIPLAX LONGIPENNIS	T	7	8.3	16	6.4	7.0	1.1	3.5	9.0	10.8	11.7
[81250] - NANOCLADIUS (N.) MINIMUS		30	8.2	32	8.1	6.0	3.0	5.0	10.5	15.6	17.0
[68700] - DUBIRAPHIA SP		71	8.2	141	8.2	8.0	2.0	4.0	12.0	16.0	17.0
[04685] - PLACOBDELLA ORNATA		8	8.1	120	7.0	6.0	2.0	3.5	9.0	14.0	15.5
[11200] - CALLIBAETIS SP	MT	35	8.1	369	5.9	5.0	1.0	2.0	9.0	12.0	15.0
[83051] - DICROTENDIPES SIMPSONI	T	98	8.1	157	7.1	7.0	2.0	3.0	11.0	13.8	15.0
[84960] - PSEUDOCIRONOMUS SP		11	8.0	41	5.5	5.0	1.0	2.0	9.2	11.0	12.0
[74501] - CERATOPOGONIDAE		168	8.0	581	7.4	7.0	1.0	3.0	11.0	15.0	16.0
[78200] - LARSIA SP		34	7.9	65	6.3	5.0	1.0	3.0	9.0	13.0	15.0
[08260] - ORCONNECTES (CROKERINUS) SANBORNII SANBORNII		35	7.8	464	8.1	8.0	2.0	4.0	12.0	15.0	17.0
[67800] - TROIPISTERNUS SP	MT	9	7.7	496	6.4	5.0	1.0	2.0	10.0	14.0	17.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[08250] - ORCONECTES (PROCERICAMBARUS) RUSTICUS		43	7.6	439	7.9	8.0	2.0	4.0	12.0	15.0	17.0
[95907] - GYRAULUS (TORQUIS) PARVUS	MT	28	7.6	93	7.4	6.0	1.8	3.0	11.0	15.0	17.0
[83050] - DICROTENDIPES LUCIFER	MT	24	7.5	31	7.4	8.0	2.0	4.0	9.7	14.4	15.0
[15501] - EPHEMERELLIDAE	MI	10	7.5	15	9.8	10.0	5.0	6.5	11.7	15.0	18.7
[82710] - CHIRONOMUS (C.) SP	T	40	7.4	107	8.6	8.0	2.0	4.2	13.7	16.8	19.0
[82770] - CHIRONOMUS (C.) RIPARIUS GROUP	VT	54	7.3	198	7.9	8.0	2.0	4.0	12.0	15.7	17.0
[83003] - DICROTENDIPES FUMIDUS		32	7.3	135	8.7	9.0	2.0	5.0	12.0	16.0	17.7
[95100] - PHYSELLA SP	T	323	7.3	1435	7.5	7.0	1.0	3.0	11.0	15.0	17.0
[96120] - MENETUS (MICROMENETUS) DILATATUS	T	23	7.2	43	9.1	9.0	3.0	6.0	12.0	16.2	17.0
[94201] - LYMNAEIDAE		5	7.2	17	8.3	8.0	2.2	4.5	11.2	15.0	17.6
[11020] - ACERPENNA PYGMAEA	I	21	7.1	42	8.1	7.0	2.0	4.0	11.0	15.0	15.4
[47600] - SIALIS SP		111	7.1	960	7.9	8.0	1.0	4.0	11.0	15.0	17.0
[13560] - STENONEMA PULCHELLUM GROUP	MI	5	6.9	29	8.8	7.0	5.4	6.0	11.0	15.2	16.0
[81201] - NANOCLADIUS (N.) SP		5	6.9	19	8.5	9.0	3.0	6.0	10.7	14.2	16.1
[04666] - HELOBDELLA TRISERIALIS	T	37	6.8	197	6.1	5.0	1.0	2.0	9.2	12.0	15.0
[83300] - GLYPTOTENDIPES (G.) SP	MT	125	6.8	215	7.5	8.0	2.0	3.0	11.0	15.0	16.7
[94400] - FOSSARIA SP		39	6.6	199	6.4	6.0	1.0	2.0	9.0	13.0	16.5
[96264] - PLANORBELLA (PIEROSOMA) PILSBRYI	T	31	6.5	164	5.5	5.0	1.0	2.0	9.0	12.0	14.0
[78650] - PROCLADIUS SP	MT	60	6.5	289	7.5	7.0	2.0	4.0	11.0	14.0	17.0
[22001] - COENAGRIONIDAE	MT	153	6.5	1126	7.5	7.0	1.0	3.0	11.0	15.0	17.0
[54300] - OXYETHIRA SP		8	6.4	10	9.8	9.0	4.5	5.0	15.0	17.0	17.0
[84020] - PARACHIRONOMUS CARINATUS		5	6.4	7	7.7	8.0	2.2	4.0	10.0	13.2	14.0
[95501] - PLANORBIDAE	MT	18	6.3	26	6.8	7.0	2.0	2.0	10.0	11.0	13.8
[98200] - PISIDIUM SP		66	6.2	374	6.8	6.0	1.0	2.0	10.0	13.0	16.0
[96002] - HELISOMA ANCEPS ANCEPS	MT	30	6.1	202	7.4	7.0	1.0	4.0	11.0	13.0	15.0
[04935] - ERPOBDELLA PUNCTATA PUNCTATA	T	57	5.9	394	6.9	6.0	1.0	3.0	11.0	14.0	16.8
[78702] - PSECTROTANYPUS DYARI	VT	8	5.9	101	5.2	4.0	1.0	1.7	8.0	12.0	15.3
[60900] - PELTODYTES SP	MT	8	5.9	824	7.0	6.0	1.0	3.0	11.0	15.0	17.0
[66500] - ENOCHRUS SP		5	5.8	229	6.7	6.0	1.0	2.7	11.0	14.0	16.0

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Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[04664] - HELOBDELLA STAGNALIS	T	47	5.7	287	5.9	5.0	1.0	2.0	9.0	13.0	15.1
[71300] - LIMONIA SP		5	5.5	88	7.5	7.0	2.0	4.0	11.0	14.0	15.1
[84410] - POLYPEDILUM (PENTAPEDILUM) TRITUM VAR. I	VT	5	5.5	17	9.4	10.0	3.2	7.7	11.2	15.8	16.6
[27500] - SOMATOCHLORA SP	T	6	5.4	224	6.7	6.0	1.0	2.0	11.0	14.0	16.3
[65800] - BEROSUS SP	MT	102	5.3	455	6.6	6.0	1.0	2.0	10.0	14.0	17.0
[11001] - BAETIDAE		8	5.3	13	5.9	5.0	0.0	1.7	9.0	14.4	15.7
[11300] - PROCLOEON SP (FORMERLY IN CENTROPTILUM)	MI	5	5.1	26	11.3	12.0	3.3	8.0	15.0	17.0	17.0
[78130] - LABRUNDINIA NEOPILOSELLA		6	5.1	6	4.5	5.0	0.3	3.0	5.0	8.6	9.0
[80510] - CRICOTOPUS (ISOCLADIUS) SYLVESTRIS GROUP	VT	17	5.0	91	7.4	6.0	2.0	4.0	11.0	13.0	17.0
[68707] - DUBIRAPHIA QUADRINOTATA		18	4.9	240	7.6	7.0	2.0	4.0	11.0	15.0	16.0
[68702] - DUBIRAPHIA BIVITTATA		13	4.9	82	7.5	7.0	2.0	4.0	11.0	13.3	16.4
[77250] - ALOTANYPUS VENUSTUS	VT	5	4.7	22	5.4	4.5	0.7	3.0	8.0	12.0	12.8
[77140] - ABLABESMYIA PELEENSIS		5	4.6	14	5.7	5.0	-0.2	2.0	10.0	12.0	12.0
[63300] - HYDROPORUS SP		9	4.4	728	7.3	7.0	1.0	3.0	11.0	15.0	17.0
[96280] - PLANORBELLA (PIEROSOMA) TRIVOLVIS	VT	7	4.0	33	6.2	5.0	2.0	3.0	9.0	11.4	13.0
[83600] - KIEFFERULUS (K.) DUX		16	4.0	25	6.0	6.0	1.0	2.0	9.2	12.0	14.7
[04686] - PLACOBDELLA PAPILLIFERA		7	3.5	67	7.2	6.0	1.0	4.0	10.7	15.0	16.1
[28001] - LIBELLULIDAE	T	5	3.1	21	6.1	5.0	1.6	3.7	9.0	12.8	14.4
[79020] - TANYPUS NEOPUNCTIPENNIS	VT	8	0.8	69	5.4	4.0	0.4	2.0	8.2	12.2	15.1

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
		Headwater		- HYD_QHEI							
[43014] - TONGUETIED MINNOW	S	6	21.1	6	15.6	11.0	11.0	11.0	25.0	25.0	25.0
[43007] - BIGEYE CHUB	I	22	16.2	22	15.7	16.5	12.7	15.0	17.0	19.3	20.0
[43031] - STEELCOLOR SHINER	MT	13	14.9	13	15.0	15.0	10.0	12.0	17.2	19.2	19.8
[43035] - MIMIC SHINER	I	21	14.7	21	13.5	15.0	7.0	8.7	17.0	19.4	20.0
[85001] - FRESHWATER DRUM	MT	19	14.3	19	13.1	13.0	8.0	11.0	15.7	18.6	19.5
[80017] - VARIEGATE DARTER	I	10	14.1	10	14.6	14.5	11.0	12.0	17.0	18.5	20.0
[43012] - LONGNOSE DACE	R	7	13.8	7	13.0	14.0	10.0	10.7	14.7	15.0	15.0
[47012] - BRINDLED MADTOM	I	18	13.7	18	13.0	13.5	11.0	11.0	15.0	17.8	19.0
[40009] - BLACK REDHORSE	I	76	13.0	76	12.3	12.0	7.0	9.5	16.0	17.0	19.0
[80016] - BANDED DARTER	I	167	12.9	167	11.8	12.0	6.0	9.0	16.0	17.0	19.0
[47002] - CHANNEL CATFISH		43	12.7	43	10.5	11.0	2.6	6.0	16.0	18.0	19.0
[43022] - ROSYFACE SHINER	I	113	12.5	113	12.1	12.0	5.0	9.7	16.0	19.0	20.0
[43005] - RIVER CHUB	I	84	12.5	84	12.4	12.0	6.0	11.0	15.0	19.1	20.0
[25001] - BROWN TROUT		25	12.3	25	11.0	11.0	5.0	6.7	11.7	17.0	25.0
[77005] - SPOTTED BASS		144	12.0	144	11.1	11.0	5.0	8.0	15.0	17.0	17.0
[40015] - NORTHERN HOG SUCKER	MI	1021	12.0	1021	11.0	11.0	5.0	7.0	15.0	17.0	19.0
[43018] - ROSYSIDE DACE	S	5	11.9	5	11.6	12.0	10.0	11.5	12.0	12.0	12.0
[47008] - STONECAT MADTOM	I	55	11.7	55	12.9	13.0	6.0	11.0	17.0	17.0	19.0
[80015] - GREENSIDE DARTER	MI	1004	11.7	1004	10.5	11.0	4.0	6.0	14.0	17.0	19.0
[77004] - SMALLMOUTH BASS	MI	396	11.6	396	10.8	11.0	4.1	7.0	15.0	17.0	18.0
[43021] - SILVER SHINER	I	188	11.6	188	11.7	12.0	5.0	9.0	15.0	17.0	19.0
[37003] - NORTHERN PIKE		15	11.5	15	9.8	9.0	4.0	5.2	15.0	17.0	17.0
[40010] - GOLDEN REDHORSE	MI	322	11.4	322	10.9	11.0	5.0	8.0	14.0	17.0	17.4
[43032] - SPOTFIN SHINER		464	11.2	464	10.2	11.0	3.0	6.0	15.0	17.0	19.0
[10004] - LONGNOSE GAR		5	11.2	5	11.6	11.0	6.0	7.5	15.2	19.0	19.0
[01007] - AMER BROOK LAMPREY	R	37	11.0	37	11.6	11.0	6.0	8.0	14.5	17.0	22.2
[80011] - LOGPERCH	MI	240	11.0	240	10.8	11.0	4.0	8.0	14.0	18.0	19.0
[77003] - ROCK BASS		680	11.0	680	10.8	11.0	5.0	7.0	14.0	17.0	18.0
[80022] - RAINBOW DARTER	MI	1255	10.9	1255	9.9	10.0	3.0	6.0	14.0	17.0	18.0
[63001] - TROUT-PERCH		104	10.9	104	11.6	12.0	4.9	9.0	15.0	17.0	19.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[40018] - SPOTTED SUCKER		81	10.8	81	10.4	9.0	6.0	8.0	13.0	17.0	17.4
[43017] - REDSIDE DACE	I	216	10.6	216	10.4	11.0	5.0	6.0	14.0	16.9	17.0
[40008] - SILVER REDHORSE	MI	26	10.6	26	12.1	12.0	5.1	10.0	17.0	18.9	19.0
[43020] - EMERALD SHINER		73	10.6	73	10.7	11.0	3.8	8.0	14.0	18.0	18.8
[01006] - LEAST BROOK LAMPREY		186	10.5	186	10.6	11.0	6.0	8.0	13.0	17.0	19.0
[25002] - RAINBOW TROUT		19	10.3	19	10.5	11.0	5.0	7.2	13.5	16.2	17.0
[77011] - LONGEAR SUNFISH	MI	621	10.3	621	9.6	10.0	3.0	6.0	13.0	16.0	17.0
[80003] - YELLOW PERCH		31	10.2	31	10.0	9.0	4.0	7.2	12.0	16.4	17.9
[77007] - WARMOUTH SUNFISH		124	10.1	124	9.7	9.5	4.0	7.0	12.0	14.1	16.3
[77013] - PUMPKINSEED SUNFISH	MT	322	10.0	322	9.4	9.0	3.0	6.0	13.0	16.3	17.0
[43025] - STRIPED SHINER		1755	9.9	1755	9.5	9.0	3.0	6.0	13.0	16.0	17.0
[43034] - SAND SHINER	MI	492	9.8	492	10.4	11.0	4.0	6.0	14.0	17.0	18.0
[01002] - NORTHERN BROOK LAMPREY	R	5	9.8	5	10.6	13.0	7.0	7.0	13.0	13.0	13.0
[90002] - MOTTLED SCULPIN		705	9.7	705	10.0	11.0	3.0	6.0	14.0	17.0	18.0
[43024] - SCARLET SHINER	MI	275	9.7	275	10.2	11.0	3.0	6.0	14.0	17.0	18.0
[77002] - BLACK CRAPPIE		41	9.6	41	10.0	9.0	4.6	7.5	13.0	17.0	18.3
[43026] - COMMON SHINER		504	9.6	504	9.3	9.0	2.0	5.0	13.0	16.0	19.0
[43044] - CENTRAL STONEROLLER		2841	9.4	2841	8.7	8.0	2.0	5.0	12.0	16.0	17.0
[80005] - BLACKSIDE DARTER		397	9.3	397	9.6	10.0	3.0	6.0	13.0	16.8	17.0
[80024] - FANTAIL DARTER		1483	9.2	1483	9.4	10.0	3.0	6.0	13.0	16.0	17.0
[77009] - BLUEGILL SUNFISH	MT	1842	9.0	1842	9.0	9.0	3.0	5.0	12.0	16.0	17.0
[43015] - SUCKERMOUTH MINNOW		193	9.0	193	8.7	9.0	1.8	4.0	14.0	16.0	17.0
[40016] - WHITE SUCKER	T	3129	8.8	3129	8.6	8.0	2.0	5.0	12.0	16.0	17.0
[43011] - WESTERN BLACKNOSE DACE	T	2206	8.8	2206	8.7	8.0	2.0	5.0	12.0	16.0	17.0
[43003] - GOLDEN SHINER	T	376	8.7	376	8.0	8.0	2.0	5.0	11.0	14.9	17.0
[37001] - GRASS PICKEREL	MT	449	8.6	449	8.9	9.0	3.0	6.0	12.0	15.0	17.0
[43045] - COMMON CARP X GOLDFISH	T	20	8.5	20	8.4	7.5	3.5	5.0	11.0	17.0	18.5
[70001] - BROOK SILVERSIDE	MI	28	8.5	28	9.5	9.5	2.3	8.0	13.0	14.7	18.0
[77012] - REDEAR SUNFISH		18	8.5	18	9.8	10.0	5.3	8.0	12.0	15.7	16.6
[77008] - GREEN SUNFISH	T	2827	8.3	2827	8.5	8.0	2.0	4.2	12.0	15.0	17.0
[47004] - YELLOW BULLHEAD	T	1449	8.2	1449	8.6	9.0	2.0	5.0	12.0	16.0	17.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[77006] - LARGEMOUTH BASS		1360	8.1	1360	8.9	9.0	2.5	5.0	12.0	16.0	17.0
[43013] - CREEK CHUB	T	3634	8.0	3634	8.1	8.0	2.0	4.0	12.0	15.0	17.0
[80004] - DUSKY DARTER	MI	5	8.0	5	8.2	8.0	6.0	7.5	9.2	10.0	10.0
[43033] - BIGMOUTH SHINER		47	8.0	47	9.2	9.0	2.0	5.0	14.0	15.0	15.6
[20003] - GIZZARD SHAD		147	7.9	147	9.4	9.0	2.2	6.0	12.7	17.0	19.0
[43039] - SILVERJAW MINNOW		1249	7.9	1249	9.1	9.0	2.0	5.0	13.0	16.0	17.0
[77001] - WHITE CRAPPIE		123	7.8	123	8.2	8.0	3.0	5.0	11.0	14.0	17.0
[43004] - HORNYHEAD CHUB	I	136	7.7	136	9.4	9.0	2.0	6.0	13.0	17.0	18.4
[80014] - JOHNNY DARTER		2265	7.7	2265	8.6	8.0	2.0	5.0	12.0	16.0	17.0
[77010] - ORANGESPOTTED SUNFISH		71	7.6	71	7.9	8.0	2.0	5.0	10.0	15.0	16.9
[43043] - BLUNTNOSE MINNOW	T	2895	7.5	2895	8.5	8.0	2.0	5.0	12.0	15.0	17.0
[34001] - CENTRAL MUDMINNOW	T	223	7.4	223	8.7	8.0	3.0	6.0	12.0	15.0	17.0
[80023] - ORANGETHROAT DARTER		669	7.3	669	8.4	8.0	2.0	4.0	12.0	16.0	17.0
[43016] - SOUTH. REDBELLY DACE		721	7.2	721	8.5	8.0	2.0	5.0	12.0	15.0	17.0
[47005] - BROWN BULLHEAD	T	122	7.1	122	8.6	9.0	2.7	5.0	12.0	14.0	17.0
[47006] - BLACK BULLHEAD	MT	387	6.9	387	8.0	8.0	2.0	5.0	11.0	14.0	15.0
[95001] - BROOK STICKLEBACK		194	6.8	194	7.2	6.0	2.0	5.0	10.0	14.0	15.0
[43001] - COMMON CARP	T	759	6.7	759	7.8	8.0	2.0	4.0	11.0	15.0	17.0
[40005] - QUILLBACK CARPSUCKER		89	6.5	89	7.5	6.0	2.0	3.0	11.2	15.0	16.0
[43023] - REDFIN SHINER		274	6.4	274	7.5	8.0	2.0	4.0	10.0	14.0	15.0
[43002] - GOLDFISH	T	111	6.1	111	6.8	6.0	1.0	3.0	9.0	13.4	17.0
[47013] - TADPOLE MADTOM		67	5.7	67	5.6	4.0	2.0	3.0	8.0	11.0	13.0
[40020] - CREEK CHUBSUCKER		62	5.5	62	7.3	6.0	1.7	3.0	11.0	15.6	17.4
[80025] - LEAST DARTER		48	4.9	48	6.9	6.0	1.0	3.5	11.0	12.7	17.1
[43042] - FATHEAD MINNOW	T	1046	4.7	1046	6.9	6.0	1.0	3.0	11.0	14.0	16.2
[40002] - BIGMOUTH BUFFALO		5	4.1	5	4.8	4.0	0.0	1.5	9.0	9.0	9.0
[54002] - BLACKSTRIPE TOPMINNOW		432	3.2	432	5.3	5.0	1.0	2.0	8.0	11.0	12.9

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
			Headwater	- P10max							
[77740] - HAYESOMYIA SENATA		5	28.1	9	24.2	24.4	18.4	21.4	26.9	30.4	31.7
[53800] - HYDROPTILA SP		56	27.4	220	22.9	23.0	19.0	21.2	24.8	27.0	28.1
[80510] - CRICOTOPUS (ISOCLADIUS) SYLVESTRIS GROUP	VT	10	27.3	62	23.2	22.5	19.2	20.5	25.3	28.9	30.0
[96264] - PLANORBELLA (PIEROSOMA) PILSBRYI	T	15	26.4	71	23.1	23.5	19.3	21.6	24.9	25.8	28.1
[81250] - NANOCLADIUS (N.) MINIMUS		17	26.2	20	24.1	22.8	20.0	22.0	27.7	29.4	31.0
[82711] - CHIRONOMUS (C.) SP 1	VT	6	26.0	9	23.6	24.0	20.0	21.6	26.0	26.0	26.1
[65800] - Berosus SP	MT	70	25.9	275	23.9	24.0	20.6	22.0	25.2	27.6	29.3
[78200] - LARSIA SP		28	25.9	49	24.4	24.5	19.7	22.5	27.0	29.8	31.3
[98600] - SPHAERIUM SP		58	25.9	462	22.7	22.8	19.2	21.0	24.2	26.0	27.3
[95100] - PHYSELLA SP	T	214	25.9	837	22.7	22.6	19.0	20.9	24.5	26.1	27.6
[80420] - CRICOTOPUS (C.) BICINCTUS	MT	98	25.8	410	22.4	22.2	19.0	20.3	24.0	27.0	28.5
[83300] - GLYPTOTENDIPES (G.) SP	MT	95	25.7	130	23.9	24.0	20.1	22.0	25.3	27.7	28.3
[82880] - CRYPTOTENDIPES SP	MI	5	25.6	31	22.8	22.5	19.0	21.0	24.6	27.3	28.2
[11650] - PROCLOEON SP (W/ HINDWING PADS)	MI	8	25.1	22	24.8	24.7	22.3	23.6	26.0	27.8	28.9
[84960] - PSEUDOCHIRONOMUS SP		7	25.1	26	24.6	24.4	21.1	23.0	26.0	29.2	30.0
[77355] - CLINOTANYPUS PINGUIS	T	10	25.1	88	23.7	23.5	19.6	22.0	25.3	28.0	28.5
[68702] - DUBIRAPHIA BIVITTATA		8	25.0	50	22.9	22.5	19.4	21.0	24.9	27.7	28.9
[82730] - CHIRONOMUS (C.) DECORUS GROUP	T	100	25.0	356	23.0	23.0	19.2	21.5	24.8	26.4	27.7
[82770] - CHIRONOMUS (C.) RIPARIUS GROUP	VT	39	25.0	152	22.2	22.0	18.7	20.4	24.0	26.1	27.0
[21300] - HETAERINA SP		19	25.0	65	23.6	24.0	19.7	21.0	25.9	28.0	29.0
[28001] - LIBELLULIDAE	T	5	24.9	23	22.5	23.0	17.7	21.0	24.5	27.0	27.5
[01801] - TURBELLARIA		203	24.8	554	22.7	22.7	19.1	21.0	24.5	26.0	27.6
[78101] - LABRUNDINIA BECKI		10	24.8	10	25.0	24.5	22.9	24.0	26.0	27.7	28.8
[84790] - TRIBELOS FUSCICORNE		11	24.7	16	23.7	24.6	22.0	22.7	25.0	25.2	25.3
[04664] - HELOBDELLA STAGNALIS	T	42	24.7	196	22.8	22.6	19.5	21.1	24.5	26.1	27.6
[82820] - CRYPTOCHIRONOMUS SP		64	24.5	467	22.6	22.6	19.0	21.0	24.2	26.0	27.0
[22300] - ARGIA SP		104	24.5	360	23.2	23.0	20.0	21.6	25.0	26.7	28.0
[60900] - PELTODYTES SP	MT	6	24.4	475	22.8	23.0	19.0	21.0	24.8	26.0	27.4
[84410] - POLYPEDILUM (PENTAPEDILUM)	VT	7	24.4	9	23.0	23.5	19.4	21.7	24.3	26.1	26.8

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
TRITUM VAR. I											
[83158] - ENDOCHIRONOMUS NIGRICANS		11	24.4	40	23.5	23.2	20.0	22.0	25.0	27.5	28.2
[80360] - CORYNONEURA "CELERIPES" (SENSU SIMPSON & BODE, 1980)	I	20	24.4	28	22.2	22.1	19.5	20.0	24.3	25.4	26.8
[81231] - NANOCLADIUS (N.) CRASSICORNUS OR N. (N.) "RECTINERVIS"		50	24.4	63	23.3	23.0	20.3	22.0	24.6	26.4	28.3
[03360] - PLUMATELLA SP		61	24.3	191	23.4	23.4	19.7	21.9	25.0	27.0	28.4
[69400] - STENELMIS SP		193	24.3	700	22.5	22.5	19.0	20.9	24.1	26.0	27.1
[68707] - DUBIRAPHIA QUADRINOTATA		13	24.3	134	21.9	22.0	18.5	20.0	23.5	25.5	26.0
[59500] - OECETIS SP	MI	11	24.2	29	22.9	22.2	18.8	20.8	24.7	28.2	29.5
[11150] - PSEUDOCLOEON PROPINQUUM	I	6	24.2	16	23.9	23.4	21.9	22.4	25.1	27.3	28.5
[11001] - BAETIDAE		7	24.2	11	25.1	25.5	21.3	24.0	27.0	28.2	28.4
[77130] - ABLABESMYIA RHAMPHE GROUP	MT	11	24.1	18	24.1	23.5	21.1	23.0	25.5	28.0	29.3
[06201] - HYALELLA AZTECA		47	24.1	299	22.4	22.6	18.7	20.6	24.1	25.8	27.0
[22001] - COENAGRIONIDAE	MT	112	24.1	675	23.0	23.0	19.5	21.4	24.8	26.4	28.0
[74501] - CERATOPOGONIDAE		108	24.1	306	22.7	22.6	19.0	20.9	25.0	26.4	27.6
[01320] - HYDRA SP		155	24.1	170	22.6	22.8	19.5	21.0	24.2	26.0	27.2
[13000] - LEUCROCUTA SP	I	24	24.0	83	23.0	23.0	19.6	21.5	24.5	26.0	27.6
[11020] - ACERPENNA PYGMAEA	I	17	24.0	27	23.3	24.0	19.2	22.0	24.7	25.9	26.5
[03600] - OLIGOCHAETA	T	350	23.9	842	22.5	22.5	19.0	20.9	24.3	26.1	27.5
[96002] - HELISOMA ANCEPS ANCEPS	MT	16	23.9	109	22.1	22.0	18.5	19.5	23.9	26.2	27.4
[17200] - CAENIS SP		204	23.9	500	22.9	23.0	19.5	21.0	24.6	26.1	27.5
[01418] - CRASPEDACUSTA SOWERBYI		7	23.9	7	22.0	23.0	18.4	20.0	24.4	24.9	25.0
[71900] - TIPULA SP		24	23.8	315	22.2	22.3	19.0	20.5	24.0	25.5	26.3
[50315] - CHIMARRA OBSCURA	MI	9	23.8	101	23.5	23.3	20.4	22.0	25.1	26.8	27.9
[78130] - LABRUNDINIA NEOPILOSELLA		5	23.8	5	23.0	24.5	18.0	21.7	24.7	25.3	25.3
[78401] - NATARSIA SPECIES A (SENSU ROBACK, 1978)	T	26	23.8	196	22.4	22.4	19.0	20.6	24.1	26.2	27.4
[12200] - ISONYCHIA SP	MI	43	23.8	150	22.5	22.5	19.0	20.5	24.0	25.8	27.0
[13510] - STENONEMA EXIGUUM	I	9	23.8	11	23.9	23.7	21.3	22.5	24.9	27.4	28.6
[11651] - PROCLOEON SP (W/O HINDWING)	MI	24	23.8	48	23.9	23.6	21.6	22.6	25.2	27.1	27.8

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Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
PADS)											
[96900] - FERRISSIA SP		204	23.7	379	22.5	22.5	19.3	20.9	24.0	25.8	27.0
[18600] - EPHEMERA SP	MI	11	23.7	57	22.4	21.8	18.5	20.1	24.5	26.9	27.7
[79085] - TELOPELOPIA OKOBOJI		6	23.7	8	23.8	23.5	22.7	22.8	24.6	25.5	25.8
[80350] - CORYNONEURA SP	MI	6	23.7	9	22.4	22.5	20.5	21.3	23.3	24.8	25.0
[78600] - PENTANEURA INCONSPICUA		7	23.6	21	23.2	23.1	19.6	22.0	24.6	27.0	27.9
[08601] - HYDRACARINA		79	23.6	181	22.6	22.7	19.0	20.4	24.5	26.4	27.4
[98200] - PISIDIUM SP		57	23.6	215	22.7	22.8	19.0	21.0	24.2	26.0	27.2
[13540] - STENONEMA MEDIOPUNCTATUM	I	5	23.6	10	23.0	23.6	20.4	21.9	24.0	25.0	26.0
[13400] - STENACRON SP		206	23.6	536	22.6	22.5	19.3	21.0	24.1	26.0	27.0
[16700] - TRICORYTHODES SP	MI	21	23.6	28	23.6	23.0	19.3	20.9	26.2	28.4	30.5
[04964] - MOOREOBDELLA MICROSTOMA	T	18	23.5	127	22.9	23.0	19.7	21.0	24.6	26.0	27.0
[85200] - CLADOTANYTARSUS SP		9	23.5	23	21.3	21.0	17.4	19.6	23.7	24.6	25.3
[83900] - NILOTHAUMA SP	MI	8	23.5	12	23.5	23.0	20.8	22.2	24.6	27.9	29.7
[68601] - ANCYRONYX VARIEGATA	MI	43	23.4	82	22.3	22.0	19.3	20.8	24.0	25.0	27.0
[93200] - HYDROBIIDAE	MT	15	23.4	31	22.7	22.6	20.0	21.4	23.9	25.3	25.9
[77750] - HAYESOMYIA SENATA OR THIENEMANNIMYIA NORENA		102	23.4	193	23.4	23.0	20.1	21.7	25.0	27.0	28.0
[81259] - NANOCLADIUS (N.) "RECTINERVIS" (SENSU SIMPSON AND BODE, 1980	MI	11	23.4	11	23.9	24.0	20.9	22.8	25.6	26.8	27.3
[84470] - POLYPEDILUM (P.) ILLINOENSE	T	135	23.4	542	22.6	22.5	19.0	21.0	24.5	26.1	27.5
[87540] - HEMERODROMIA SP		96	23.4	175	23.3	23.0	20.3	21.9	24.8	26.6	28.0
[84540] - POLYPEDILUM (TRIPODURA) SCALAENUM GROUP		151	23.3	302	22.8	22.8	19.5	21.1	24.5	26.1	27.6
[84700] - STENOCHIRONOMUS SP		17	23.3	70	23.1	22.7	20.9	22.0	24.5	25.7	27.0
[77120] - ABLABESMYIA MALLOCHI		143	23.3	308	23.0	22.9	20.0	21.0	24.7	26.4	27.8
[13561] - STENONEMA PULCHELLUM	MI	16	23.3	38	22.9	23.0	17.9	21.5	24.8	26.7	28.0
[81240] - NANOCLADIUS (N.) DISTINCTUS	MT	30	23.2	39	23.0	23.0	19.5	21.1	25.0	26.3	27.2
[96120] - MENETUS (MICROMENETUS) DILATATUS	T	16	23.2	23	23.1	23.0	20.5	21.8	24.6	25.0	25.3
[04935] - ERPOBDELLA PUNCTATA PUNCTATA	T	43	23.2	265	22.9	22.7	19.5	21.0	24.7	26.3	28.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[83600] - KIEFFERULUS (K.) DUX		14	23.2	18	23.5	22.9	21.1	21.5	25.0	27.9	28.9
[81631] - PARAKIEFFERIELLA N.SP 1		14	23.2	18	21.7	21.1	19.1	20.0	23.5	25.5	26.4
[83002] - DICROTENDIPES MODESTUS		9	23.2	26	23.2	23.2	20.0	21.8	25.0	25.4	27.1
[78450] - NILOTANYPUS FIMBRIATUS	MI	87	23.2	113	22.6	22.5	19.9	20.8	23.9	26.0	27.3
[83040] - DICROTENDIPES NEOMODESTUS		188	23.2	317	23.0	23.0	20.0	21.1	24.8	26.4	28.0
[83051] - DICROTENDIPES SIMPSONI	T	72	23.1	100	23.3	23.2	20.0	21.5	25.0	26.9	28.0
[14950] - LEPTOPHLEBIA SP OR PARALEPTOPHLEBIA SP	MI	31	23.1	40	22.9	22.7	19.9	21.8	24.1	26.2	27.7
[85625] - RHEOTANYTARSUS SP	MI	192	23.1	391	22.5	22.5	19.0	20.6	24.0	26.0	27.2
[84800] - TRIBELOS JUCUNDUM		26	23.1	50	22.8	22.6	20.1	21.5	24.0	25.5	26.0
[23909] - BOYERIA VINOSA		37	23.1	363	22.2	22.1	18.7	20.4	24.0	25.9	26.8
[13521] - STENONEMA FEMORATUM		106	23.1	337	22.8	23.0	19.2	21.1	24.5	26.0	27.0
[77800] - HELOPELOPIA SP		175	23.0	392	22.6	22.5	19.0	20.5	24.3	26.0	27.3
[08250] - ORCONNECTES (PROCERICAMBARUS) RUSTICUS		39	23.0	260	23.2	23.5	19.9	21.4	25.0	26.3	27.7
[47600] - SIALIS SP		83	23.0	445	22.3	22.3	19.0	20.5	24.0	25.8	26.6
[85230] - CLADOTANYTARSUS MANCUS GROUP		10	23.0	42	23.2	22.8	19.9	21.0	25.3	27.0	28.9
[04666] - HELOBDELLA TRISERIALIS	T	29	23.0	100	23.1	23.0	20.2	21.8	24.5	26.0	27.8
[48620] - NIGRONIA SERRICORNIS		22	23.0	83	22.1	22.0	18.5	20.0	23.5	26.0	27.6
[11130] - BAETIS INTERCALARIS		76	22.9	266	23.0	23.0	20.0	21.1	24.7	26.2	28.0
[84520] - POLYPEDILUM (TRIPODURA) HALTERALE GROUP		16	22.9	33	23.3	23.0	19.8	21.5	25.3	26.5	28.3
[85261] - CLADOTANYTARSUS VANDERWULPI GROUP TYPE 1	I	31	22.9	48	21.9	21.9	18.0	19.2	24.2	25.8	27.3
[85814] - TANYTARSUS GLABRESCENS GROUP		224	22.8	316	22.5	22.5	19.3	20.5	24.0	26.0	27.3
[84300] - PHAENOPSECTRA OBEDIENS GROUP		87	22.8	212	22.4	22.5	19.0	20.5	24.2	26.0	27.0
[77500] - CONCHAPELOPIA SP		229	22.8	603	22.5	22.5	19.0	20.7	24.3	26.0	27.3
[67800] - TROPISTERNUS SP	MT	6	22.8	310	23.2	23.0	19.5	21.7	25.0	27.0	28.2
[52430] - CERATOPSYCHE MOROSA GROUP	MI	83	22.8	301	22.1	22.0	18.5	20.1	24.0	25.8	27.0
[85840] - TANYTARSUS SEPP	MI	136	22.8	192	22.4	22.6	19.0	20.5	24.0	25.8	26.9
[68075] - PSEPHENUS HERRICKI	MI	17	22.8	249	22.5	22.7	19.5	21.0	24.0	25.5	26.1

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[58505] - HELICOPSYCHE BOREALIS	MI	16	22.8	137	22.8	23.0	19.5	21.0	24.6	26.0	26.8
[81690] - PARATRICHOCLADIUS SP	MI	18	22.7	33	20.8	20.5	17.5	19.4	22.3	24.4	25.2
[68708] - DUBIRAPHIA VITTATA GROUP		93	22.7	448	22.7	22.5	19.5	21.0	24.5	26.0	27.2
[95501] - PLANORBIDAE	MT	11	22.7	16	23.6	24.0	20.5	22.1	25.5	26.0	26.9
[08240] - ORCONNECTES (CROKERINUS) PROPINQUUS		5	22.7	28	22.3	22.3	20.0	20.5	23.8	24.8	25.2
[82121] - THIENEMANNIELLA LOBAPODEMA	MI	29	22.7	35	22.3	22.5	19.2	20.6	24.0	25.7	26.0
[67500] - LACCOBIUS SP		5	22.7	98	22.7	22.9	19.0	21.1	24.7	25.7	26.8
[78650] - PROCLADIUS SP	MT	49	22.7	236	22.2	22.0	19.0	20.2	24.0	26.0	27.1
[80410] - CRICOTOPUS (C.) SP		80	22.6	152	22.1	22.0	18.7	20.2	23.5	25.5	26.8
[52200] - CHEUMATOPSYCHE SP		196	22.6	738	22.6	22.5	19.0	21.0	24.3	26.0	27.2
[85500] - PARATANYTARSUS SP		240	22.6	360	22.3	22.2	19.0	20.4	24.2	25.9	27.0
[95907] - GYRAULUS (TORQUIS) PARVUS	MT	20	22.6	53	22.5	22.6	19.0	20.4	24.5	26.0	26.6
[13570] - STENONEMA TERMINATUM	MI	9	22.6	20	21.9	21.9	19.2	20.4	22.9	24.7	25.6
[60300] - DINEUTUS SP		8	22.6	37	23.5	23.0	21.2	22.1	24.6	26.3	28.5
[04685] - PLACOBDELLA ORNATA		8	22.6	69	22.3	22.3	19.2	20.8	24.0	25.0	25.5
[78140] - LABRUNDINIA PILOSELLA	MI	93	22.6	103	22.9	23.0	19.4	21.0	24.7	26.7	27.8
[13590] - STENONEMA VICARIUM	MI	76	22.6	155	21.7	21.5	18.5	20.0	23.5	25.3	26.3
[11200] - CALLIBAETIS SP	MT	20	22.6	239	23.3	23.2	19.3	21.6	25.0	27.5	28.5
[84450] - POLYPEDILUM (URESIPEDILUM) FLAVUM		153	22.5	483	22.7	22.7	19.3	21.0	24.4	26.0	27.3
[83050] - DICROTENDIPES LUCIFER	MT	22	22.5	31	22.6	22.9	18.5	20.6	24.8	25.5	27.6
[11400] - CENTROPTILUM SP OR PROCLOEON SP (FORMERLY IN CLOEON)	MI	29	22.5	63	21.9	22.0	19.2	20.3	23.0	25.3	26.8
[52530] - HYDROPSYCHE DEPRAVATA GROUP		99	22.5	560	22.3	22.3	19.0	20.5	24.0	25.8	27.0
[87501] - EMPIDIDAE		106	22.5	191	21.7	21.3	18.5	20.0	23.2	26.0	27.2
[68130] - HELICHUS SP	MI	22	22.5	160	22.0	22.1	18.4	20.4	23.9	25.5	26.0
[68901] - MACRONYCHUS GLABRATUS	MI	114	22.4	189	22.4	22.5	19.3	20.8	24.0	25.5	26.4
[84315] - PHAENOPSECTRA FLAVIPES		72	22.4	140	22.2	22.0	19.0	20.4	24.0	25.4	27.1
[68700] - DUBIRAPHIA SP		58	22.4	103	22.4	22.3	18.9	20.3	24.5	26.0	26.8
[84210] - PARATENDIPES ALBIMANUS OR P.	MI	201	22.4	394	22.4	22.3	19.0	20.5	24.0	25.8	26.9

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
DUPLICATUS											
[52001] - HYDROPSYCHIDAE		9	22.4	10	23.1	23.0	20.3	21.0	25.3	26.5	27.5
[78500] - PARAMERINA FRAGILIS		13	22.4	21	22.1	21.9	19.8	20.0	24.0	24.8	25.4
[81270] - NANOCLADIUS (N.) SPINIPLenus	MI	34	22.3	48	22.7	23.0	19.5	20.9	24.0	25.5	26.1
[11120] - BAETIS FLAVISTRIGA		97	22.3	292	22.4	22.5	19.0	20.5	24.0	25.5	26.6
[78100] - LABRUNDINIA SP		12	22.3	13	23.1	23.0	21.0	22.0	24.1	25.1	25.4
[93900] - ELIMIA SP	MI	55	22.3	150	22.5	22.9	19.2	20.8	24.0	25.6	26.1
[81230] - NANOCLADIUS (N.) CRASSICORNUS (OLD)		22	22.3	27	22.3	22.0	20.0	21.0	23.8	25.0	25.2
[85821] - TANYTARSUS GLABRESCENS GROUP SP 7	MI	35	22.2	72	23.4	23.3	20.4	21.9	24.7	26.1	27.9
[21200] - CALOPTERYX SP		147	22.2	536	22.2	22.2	19.0	20.5	24.0	25.6	26.6
[30000] - PLECOPTERA		16	22.2	19	21.9	21.5	19.2	20.0	24.0	25.3	25.6
[08260] - ORCONNECTES (CROKERINUS) SANBORNII SANBORNII		33	22.2	200	22.1	22.2	18.7	20.3	23.6	25.8	26.6
[79400] - ZAVRELIMYIA SP		59	22.2	82	22.2	21.9	18.4	20.4	24.0	26.3	27.8
[08200] - ORCONNECTES SP		11	22.2	95	22.4	22.0	18.5	21.0	24.3	27.0	28.5
[82101] - THIENEMANNIELLA TAUROCAPITA	I	27	22.2	36	22.9	23.0	20.0	20.8	24.5	27.0	28.9
[80351] - CORYNONEURA N.SP 1	MI	16	22.2	39	22.0	22.5	18.5	19.5	24.0	25.4	26.3
[80430] - CRICOTOPUS (C.) TREMULUS GROUP		76	22.1	265	22.1	22.0	18.5	20.0	24.0	25.7	27.7
[13580] - STENONEMA TRIPUNCTATUM (OLD)		64	22.1	125	21.9	21.7	19.3	20.2	23.6	25.5	26.0
[85752] - SUBLETTEA COFFMANI	I	10	22.1	12	22.1	22.0	19.9	20.9	23.4	24.6	24.9
[54300] - OXYETHIRA SP		6	22.1	8	23.1	23.9	20.1	20.4	24.7	26.4	27.1
[71910] - TIPULA ABDOMINALIS	MI	7	22.1	78	21.4	21.6	18.2	20.0	23.0	24.1	25.8
[80370] - CORYNONEURA LOBATA	MI	217	22.0	258	22.2	22.0	19.0	20.3	24.0	25.8	26.7
[85800] - TANYTARSUS SP	MI	176	21.9	281	22.3	22.0	19.0	20.2	24.0	26.0	27.0
[82141] - THIENEMANNIELLA XENA		109	21.8	186	22.1	22.0	19.0	20.0	24.0	25.9	27.0
[85710] - STEPELLINELLA SP	MI	17	21.8	21	21.5	21.0	18.7	19.8	23.1	24.6	26.5
[81825] - RHEOCRICOTOPUS (PSILOCRICOTOPUS) ROBACKI	MI	77	21.8	154	22.2	22.1	19.2	20.6	23.7	25.4	26.3
[96280] - PLANORBELLA (PIEROSOMA)	VT	7	21.8	22	20.5	20.2	14.8	19.0	23.0	24.1	27.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
TRIVOLVIS											
[84750] - STICTOCHIRONOMUS SP		16	21.8	365	22.3	22.4	19.0	20.3	24.4	26.0	27.0
[84460] - POLYPEDILUM (P.) FALLAX GROUP		245	21.7	314	22.1	22.0	19.0	20.4	23.6	25.5	26.5
[83840] - MICROTENDIPES PEDELLUS GROUP	MI	143	21.7	261	22.3	22.5	19.0	20.3	24.0	25.8	26.6
[71100] - HEXATOMA SP	MI	9	21.6	164	22.2	22.0	19.0	20.2	23.9	26.0	27.0
[57900] - PYCNOPSYCHE SP	MI	15	21.6	106	21.8	22.0	18.8	20.0	23.5	24.4	26.1
[79100] - THIENEMANNIMYIA GROUP		34	21.6	174	22.1	22.0	18.5	20.6	24.0	25.5	26.5
[07701] - CAMBARIDAE		6	21.6	46	21.6	22.3	17.6	20.0	23.2	24.9	25.7
[70600] - ANTOCHA SP	MI	23	21.6	49	20.9	21.0	18.5	19.4	22.5	24.1	25.0
[82220] - TVETENIA DISCOLORIPES GROUP	I	10	21.6	23	20.6	20.8	17.2	18.5	22.3	23.6	24.8
[11100] - BAETIS SP		46	21.5	212	21.7	21.8	18.5	20.0	23.4	25.3	26.4
[81632] - PARAKIEFFERIELLA N.SP 2	MI	17	21.5	35	21.8	21.0	18.8	20.0	23.1	27.0	28.4
[83820] - MICROTENDIPES "CAELUM" (SENSU SIMPSON & BODE, 1980)	MI	36	21.5	125	22.5	22.5	19.0	21.0	24.1	25.9	26.7
[85615] - RHEOTANYTARSUS PELLUCIDUS	MI	67	21.5	107	21.7	21.5	19.0	20.0	23.2	24.6	26.5
[78350] - MEROPELOPIA SP		37	21.4	113	21.3	21.0	18.2	19.4	22.9	25.4	26.9
[85802] - TANYTARSUS CURTICORNIS GROUP	MI	98	21.4	107	22.0	21.9	18.6	20.0	24.0	26.0	27.0
[06700] - CRANGONYX SP	MT	49	21.3	224	22.0	22.0	19.0	20.5	23.6	25.0	26.0
[85803] - TANYTARSUS TYPE 3		9	21.3	12	23.9	21.9	20.2	20.7	28.6	29.9	30.3
[51400] - NYCTIOPHYLAX SP	MI	35	21.2	60	21.5	21.0	19.2	20.0	22.7	25.0	26.0
[53501] - HYDROPTILIDAE		14	21.2	62	23.0	23.4	20.0	21.0	25.0	26.0	26.6
[86401] - ATHERIX LANTHA	MI	11	21.2	56	21.5	21.5	18.5	20.0	23.0	24.1	25.9
[50301] - CHIMARRA ATERRIMA	MI	8	21.2	112	22.1	22.0	19.0	20.6	23.5	25.0	26.1
[68025] - ECTOPRIA SP	MI	8	21.2	78	21.8	22.0	18.5	19.6	23.5	25.1	25.8
[94400] - FOSSARIA SP		24	21.1	94	22.4	22.0	18.9	20.5	24.8	26.1	27.9
[85720] - STEMPELLINELLA N.SP NR.	I	35	21.0	41	22.4	22.8	19.3	20.5	24.0	25.8	26.2
FLAVIDULA											
[84155] - PARALAUTERBORNIELLA		9	21.0	17	22.2	21.5	18.9	20.2	23.5	27.8	28.9
NIGROHALTERALIS											
[86100] - CHRYSOPS SP		14	21.0	235	22.2	22.1	18.8	20.5	24.0	26.0	27.0
[69200] - OPTIOSERVUS SP	MI	6	21.0	57	21.1	20.8	17.6	19.0	23.0	24.8	26.2

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[85400] - MICROPSECTRA SP		25	20.9	51	21.0	20.6	17.0	19.2	22.9	24.7	28.1
[84480] - POLYPEDILUM (P.) LAETUM GROUP	MI	7	20.9	79	21.3	21.5	17.0	19.2	23.6	25.5	26.0
[05800] - CAECIDOTEA SP	MT	52	20.9	194	21.8	22.0	18.6	20.3	23.5	25.0	26.0
[34130] - ACRONEURIA FRISONI	MI	29	20.9	43	21.6	21.9	19.2	20.3	22.5	24.1	24.9
[81260] - NANOCLADIUS (N.) "RECTINERVIS" (OLD)		8	20.9	9	22.1	22.0	18.4	19.9	24.6	25.3	25.5
[74100] - SIMULIUM SP		67	20.8	489	22.0	22.0	19.0	20.2	23.6	25.3	26.6
[80204] - BRILLIA FLAVIFRONS GROUP		34	20.8	60	20.9	20.5	18.0	19.5	22.6	23.9	25.0
[05900] - LIRCEUS SP		68	20.7	297	22.6	22.7	19.0	21.0	24.3	26.1	27.4
[84440] - POLYPEDILUM (URESIPEDILUM) AVICEPS	MI	17	20.7	73	20.7	20.5	17.2	19.0	22.6	24.5	25.4
[82710] - CHIRONOMUS (C.) SP	T	28	20.7	64	22.3	22.5	18.2	20.5	24.5	25.9	26.7
[80570] - DONCRICOTOPUS BICAUDATUS		6	20.6	13	20.2	20.0	18.4	19.0	21.6	22.6	23.2
[50804] - LYPE DIVERSA	MI	35	20.5	46	21.1	20.9	18.5	19.3	22.6	23.8	24.6
[82200] - TVETENIA BAVARICA GROUP	MI	23	20.5	67	21.1	21.0	18.3	19.7	22.9	23.9	25.0
[81650] - PARAMETRIOCNEMUS SP	MI	77	20.4	244	21.7	21.8	18.5	20.0	23.4	25.2	26.0
[16200] - EURYLOPHELLA SP	MI	32	20.4	36	21.5	21.0	18.8	20.0	22.4	25.7	26.6
[78400] - NATARSIA SP	MT	7	20.4	32	22.0	22.5	18.8	20.6	23.7	24.1	24.8
[11300] - PROCLOEON SP (FORMERLY IN CENTROPTILUM)	MI	5	20.2	30	22.2	22.0	18.5	20.0	24.5	26.5	27.1
[52540] - HYDROPSYCHE DICANTHA	MI	7	20.2	32	23.1	22.9	17.7	21.3	26.2	27.2	29.7
[69225] - OPTIOSERVUS FASTIDITUS	MI	12	20.2	77	21.8	22.0	17.8	20.0	23.5	25.8	26.3
[15000] - PARALEPTOPHLEBIA SP	MI	72	20.1	94	20.8	20.5	18.0	19.3	22.0	23.5	25.0
[84430] - POLYPEDILUM (P.) ALBICORNE	MI	14	20.1	18	21.2	21.1	18.1	20.0	22.5	24.7	27.5
[28955] - PLATHEMIS LYDIA	T	5	20.0	129	24.3	24.0	21.0	22.5	25.8	27.8	30.0
[11430] - DIPHETOR HAGENI	I	27	19.9	63	21.3	20.8	17.7	20.0	23.0	25.0	26.5
[87510] - CHELIFERA SP	MI	5	19.8	8	19.6	20.0	16.6	18.3	20.5	22.4	23.0
[51600] - POLYCENTROPUS SP	MI	35	19.8	85	21.6	22.0	18.6	20.0	23.4	25.0	26.0
[85501] - PARATANYTARSUS N.SP 1	MI	44	19.5	56	20.7	20.2	17.3	19.0	22.4	24.0	24.8
[83003] - DICROTENDIPES FUMIDUS		16	19.5	63	22.0	22.0	18.7	20.1	23.5	25.1	28.0
[52440] - CERATOPSYCHE SLOSSONAE	MI	30	19.5	114	20.7	20.5	17.0	18.5	22.5	24.3	25.3

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Toler- ance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[11115] - BAETIS TRICAUDATUS	MI	5	19.0	21	18.8	18.5	15.0	16.8	20.6	22.5	24.0
[11018] - ACERPENNA MACDUNNOUGHI	I	18	18.3	27	21.8	21.0	18.8	20.0	23.7	26.5	27.6

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
			Headwater								
				- P10max							
[43015] - SUCKERMOUTH MINNOW		108	25.0	108	23.9	23.5	20.6	22.0	25.2	28.0	28.6
[70001] - BROOK SILVERSIDE	MI	11	25.0	11	24.3	24.3	22.3	23.4	25.3	26.0	26.0
[47013] - TADPOLE MADTOM		36	24.7	36	24.7	24.9	21.3	24.0	26.0	26.8	28.0
[43045] - COMMON CARP X GOLDFISH	T	20	24.3	20	24.1	23.0	21.9	22.0	26.3	28.5	28.9
[77012] - REDEAR SUNFISH		10	24.3	10	24.3	24.0	20.7	23.4	26.0	27.7	28.8
[43032] - SPOTFIN SHINER		219	24.3	219	22.9	23.0	19.1	21.0	24.5	27.0	28.5
[40005] - QUILLBACK CARPSUCKER		60	24.3	60	24.2	24.3	21.5	23.0	26.0	27.0	27.8
[77010] - ORANGESPOTTED SUNFISH		40	24.2	40	23.3	23.2	20.0	20.7	25.4	26.2	27.6
[43034] - SAND SHINER	MI	248	24.1	248	23.5	23.1	20.0	22.0	25.3	27.4	28.5
[77011] - LONGEAR SUNFISH	MI	274	24.1	274	23.8	23.5	20.0	22.0	25.5	28.0	28.8
[54002] - BLACKSTRIPE TOPMINNOW		219	24.0	219	23.7	23.7	20.5	21.9	25.6	26.9	29.2
[20003] - GIZZARD SHAD		64	24.0	64	23.2	23.0	19.5	21.5	25.0	26.9	28.0
[43039] - SILVERJAW MINNOW		567	23.8	567	23.0	23.0	20.0	21.5	24.8	26.5	27.5
[80003] - YELLOW PERCH		23	23.8	23	22.8	22.0	20.3	21.5	24.8	26.0	26.4
[43023] - REDFIN SHINER		124	23.7	124	23.5	23.6	20.0	21.9	25.0	27.4	28.5
[43001] - COMMON CARP	T	443	23.5	443	23.1	23.0	19.2	21.1	25.0	26.6	28.1
[43024] - SCARLET SHINER	MI	150	23.4	150	22.9	23.2	19.1	22.0	24.5	26.0	27.0
[40018] - SPOTTED SUCKER		41	23.4	41	23.5	22.5	21.3	22.0	25.1	26.7	27.9
[47006] - BLACK BULLHEAD	MT	229	23.4	229	22.7	22.6	19.0	20.5	25.0	26.1	27.4
[47002] - CHANNEL CATFISH		12	23.3	12	24.6	25.2	19.1	24.3	26.5	27.3	27.9
[43043] - BLUNTNOSE MINNOW	T	1474	23.3	1474	22.7	22.6	19.0	21.0	24.5	26.0	27.4
[43003] - GOLDEN SHINER	T	205	23.3	205	22.6	22.6	19.5	21.0	24.5	25.8	26.0
[47004] - YELLOW BULLHEAD	T	767	23.2	767	23.0	23.0	19.6	21.4	24.9	26.4	28.0
[47012] - BRINDLED MADTOM	I	11	23.2	11	23.1	22.4	21.0	22.0	25.2	26.0	26.0
[43002] - GOLDFISH	T	66	23.1	66	24.0	24.0	19.0	22.0	26.6	28.9	29.5
[43026] - COMMON SHINER		298	23.1	298	22.5	22.5	19.3	20.9	24.4	25.8	26.5
[40010] - GOLDEN REDHORSE	MI	110	23.0	110	23.0	23.0	20.0	21.9	24.0	26.2	27.5
[77006] - LARGEMOUTH BASS		732	23.0	732	22.7	22.9	19.0	21.0	24.3	26.1	27.4
[77001] - WHITE CRAPPIE		82	23.0	82	22.4	22.0	19.0	20.5	24.0	26.0	27.1
[80023] - ORANGETHROAT DARTER		283	22.8	283	22.9	23.0	20.0	21.0	25.0	26.5	28.1

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[43035] - MIMIC SHINER	I	7	22.8	7	23.4	23.0	22.2	22.6	23.5	26.3	27.0
[77008] - GREEN SUNFISH	T	1452	22.8	1452	22.5	22.5	19.0	20.8	24.3	26.0	27.8
[43044] - CENTRAL STONEROLLER		1454	22.7	1454	22.5	22.5	19.0	21.0	24.2	26.0	27.4
[80005] - BLACKSIDE DARTER		174	22.7	174	22.8	22.8	20.0	21.5	24.5	26.0	26.7
[43025] - STRIPED SHINER		851	22.7	851	22.6	22.5	19.0	21.0	24.2	26.0	27.4
[80011] - LOGPERCH	MI	100	22.7	100	22.7	22.5	19.6	21.0	24.4	26.0	27.9
[47005] - BROWN BULLHEAD	T	106	22.6	106	22.4	22.0	19.5	21.0	24.0	25.5	26.0
[77009] - BLUEGILL SUNFISH	MT	927	22.6	927	22.3	22.0	19.0	20.5	24.0	26.0	27.1
[77003] - ROCK BASS		363	22.6	363	22.5	22.5	19.3	21.0	24.0	26.0	26.6
[47008] - STONECAT MADTOM	I	30	22.6	30	22.5	23.0	18.6	21.5	24.2	25.2	27.8
[80015] - GREENSIDE DARTER	MI	497	22.5	497	22.6	22.7	19.5	21.0	24.0	25.9	26.7
[43020] - EMERALD SHINER		15	22.5	15	22.6	23.0	19.0	21.9	23.5	24.0	25.8
[77005] - SPOTTED BASS		39	22.5	39	23.0	23.0	18.0	21.1	23.5	26.7	27.6
[77013] - PUMPKINSEED SUNFISH	MT	227	22.5	227	22.2	22.0	19.3	20.4	23.6	25.6	26.4
[77004] - SMALLMOUTH BASS	MI	153	22.5	153	22.7	23.0	19.4	21.5	24.0	25.7	26.5
[01006] - LEAST BROOK LAMPREY		77	22.5	77	22.5	22.3	18.7	21.2	23.6	26.6	27.6
[77002] - BLACK CRAPPIE		38	22.5	38	22.4	22.4	20.4	21.9	23.0	24.3	26.0
[77007] - WARMOUTH SUNFISH		86	22.5	86	22.6	23.0	19.5	20.9	23.8	26.0	26.4
[40020] - CREEK CHUBSUCKER		38	22.5	38	22.7	22.0	19.2	21.0	24.3	26.2	27.5
[80014] - JOHNNY DARTER		1036	22.4	1036	22.4	22.3	19.0	20.5	24.0	26.0	27.0
[80024] - FANTAIL DARTER		642	22.4	642	22.4	22.5	19.3	20.8	24.0	25.5	26.8
[43007] - BIGEYE CHUB	I	9	22.3	9	22.5	22.2	21.2	22.0	23.6	24.0	24.0
[37003] - NORTHERN PIKE		16	22.3	16	21.7	22.2	20.0	21.2	22.5	23.0	23.0
[43013] - CREEK CHUB	T	1885	22.2	1885	22.4	22.3	19.0	20.5	24.0	26.0	27.3
[43021] - SILVER SHINER	I	83	22.2	83	22.4	22.7	18.8	20.6	24.5	25.5	26.5
[43004] - HORNYHEAD CHUB	I	89	22.2	89	22.2	22.3	19.6	20.9	23.5	24.5	25.5
[40015] - NORTHERN HOG SUCKER	MI	504	22.2	504	22.2	22.2	19.0	20.5	24.0	26.0	26.8
[40016] - WHITE SUCKER	T	1680	22.1	1680	22.3	22.3	19.0	20.5	24.0	26.0	27.0
[80022] - RAINBOW DARTER	MI	566	22.1	566	22.2	22.2	18.8	20.3	24.0	25.5	26.7
[37001] - GRASS PICKEREL	MT	217	22.1	217	22.4	22.2	19.5	21.0	23.5	25.5	26.6
[63001] - TROUT-PERCH		32	22.0	32	22.0	22.3	20.0	20.7	23.5	24.0	24.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[43022] - ROSYFACE SHINER	I	53	22.0	53	22.9	23.0	19.5	21.0	24.0	27.8	29.0
[34001] - CENTRAL MUDMINNOW	T	198	22.0	198	21.1	21.2	18.0	20.0	23.0	24.2	25.0
[43042] - FATHEAD MINNOW	T	628	22.0	628	22.8	23.0	19.0	21.0	25.0	26.7	28.5
[80016] - BANDED DARTER	I	82	21.9	82	22.1	22.0	19.0	20.8	23.6	25.5	27.6
[43005] - RIVER CHUB	I	49	21.9	49	21.9	22.3	18.8	20.7	23.6	24.3	24.5
[43017] - REDSIDE DACE	I	91	21.8	91	21.6	21.8	18.3	20.0	23.0	25.1	26.6
[25002] - RAINBOW TROUT		13	21.5	13	21.4	21.5	19.8	20.0	21.7	23.0	26.4
[43016] - SOUTH. REDBELLY DACE		271	21.4	271	21.6	21.9	18.5	20.0	23.0	25.0	26.0
[40008] - SILVER REDHORSE	MI	10	21.4	10	21.5	21.4	18.8	19.3	23.0	25.0	26.7
[80025] - LEAST DARTER		31	21.4	31	22.1	21.8	20.0	20.6	23.3	23.9	27.8
[43011] - WESTERN BLACKNOSE DACE	T	1132	21.4	1132	22.1	22.0	18.5	20.0	23.9	25.8	27.0
[40009] - BLACK REDHORSE	I	31	20.9	31	21.9	22.0	17.5	20.2	23.4	25.9	26.9
[01002] - NORTHERN BROOK LAMPREY	R	5	20.8	5	20.5	19.5	19.5	19.5	22.0	22.0	22.0
[43033] - BIGMOUTH SHINER		19	20.8	19	20.1	20.3	17.4	18.0	21.7	23.4	24.3
[90002] - MOTTLED SCULPIN		317	20.7	317	21.3	21.3	18.0	19.5	23.0	24.5	26.3
[01007] - AMER BROOK LAMPREY	R	25	20.2	25	20.8	21.5	16.5	18.6	23.0	24.6	25.0
[25001] - BROWN TROUT		14	19.5	14	19.1	19.0	16.3	16.5	21.5	22.3	23.0
[95001] - BROOK STICKLEBACK		144	19.4	144	20.5	20.2	16.5	18.5	22.9	24.0	25.5

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
		Wadeable		- CURRENT							
[52620] - MACROSTEMUM ZEBRATUM	I	21	9.8	42	5.2	6.0	0.0	1.0	9.0	11.0	11.4
[59520] - OECETIS CINERASCENS		9	9.0	17	2.8	1.0	0.0	0.0	6.0	8.8	10.3
[34140] - ACRONEURIA INTERNATA	MI	7	8.1	12	5.7	7.5	0.0	0.5	9.0	11.3	11.9
[13120] - NIXE PERFIDA	MI	6	7.6	27	2.2	0.0	0.0	0.0	4.0	8.8	9.0
[18100] - ANTHOPOTAMUS SP	MI	23	7.4	124	3.6	1.0	0.0	0.0	7.0	9.0	11.0
[52520] - HYDROPSYCHE BIDENS	MI	16	7.1	19	3.0	1.0	0.0	0.0	6.2	9.0	10.1
[89501] - EPHYDRIDAE		10	6.6	62	3.0	3.0	0.0	0.0	6.0	9.0	9.0
[14501] - LEPTOPHLEBIIDAE	MI	16	6.5	17	4.6	7.0	0.0	0.7	7.0	7.0	8.3
[11118] - PLAUDITUS DUBIUS	MI	5	6.4	13	6.1	7.0	0.0	3.0	9.0	11.2	11.8
[85265] - CLADOTANYTARSUS VANDERWULPI	MI	9	6.1	33	4.3	4.0	0.0	1.0	7.5	11.0	11.8
GROUP TYPE 5											
[59001] - LEPTOCERIDAE	MI	43	6.0	61	3.3	3.0	0.0	0.0	6.2	9.0	11.0
[59100] - CERACLEA SP	MI	19	6.0	66	3.2	3.0	0.0	0.0	6.0	9.0	11.0
[51300] - NEURECLIPSIS SP	MI	123	5.8	172	3.5	3.0	0.0	0.0	7.0	9.0	11.0
[30800] - PTERONARCYS SP	I	8	5.8	17	3.5	0.0	0.0	0.0	7.0	8.8	9.0
[31800] - TAENIOPTERYX SP	MI	15	5.8	19	2.6	1.0	0.0	0.0	5.2	8.0	8.5
[53600] - AGRAYLEA SP		5	5.7	5	2.8	0.0	0.0	0.0	7.0	7.0	7.0
[50906] - PSYCHOMYIA FLAVIDA	I	23	5.7	69	3.7	0.0	0.0	0.0	9.0	10.6	11.0
[59700] - TRIAENODES SP	MI	5	5.7	72	2.7	0.0	0.0	0.0	5.0	9.0	9.0
[72101] - PSYCHODIDAE		6	5.6	9	2.0	0.0	0.0	0.0	4.0	7.0	7.0
[11700] - ACENTRELLA SP OR PLAUDITUS SP (FORMERLY IN PSEUDOCLOEON)	I	20	5.5	46	3.5	4.0	0.0	0.0	7.0	9.0	9.0
[87510] - CHELIFERA SP	MI	13	5.5	21	3.7	0.0	0.0	0.0	9.0	9.0	9.9
[52431] - CERATOPSYCHE MOROSA	MI	27	5.5	37	4.1	4.0	0.0	0.0	8.0	9.0	9.0
[83860] - MICROTENDIPES RYDALENSIS	MI	22	5.4	27	4.3	3.0	0.0	0.0	9.0	10.6	11.1
[96801] - ANCYLIDAE		6	5.4	8	4.1	3.5	0.9	3.0	5.5	8.4	9.0
[82130] - THIENEMANNIELLA SIMILIS	I	32	5.3	43	3.6	3.0	0.0	0.0	6.0	11.0	11.0
[13550] - STENONEMA MEXICANUM INTEGRUM	MI	50	5.2	59	3.4	3.0	0.0	0.0	6.7	7.0	9.0
[71900] - TIPULA SP		143	5.2	692	2.8	1.0	0.0	0.0	6.0	9.0	9.0
[48610] - NIGRONIA FASCIATUS	MI	9	5.2	19	4.5	4.0	0.0	1.2	8.7	9.0	9.0

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Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[16324] - SERRATELLA DEFICIENS	I	42	5.2	53	3.2	0.0	0.0	0.0	7.0	9.0	9.8
[21001] - CALOPTERYGIDAE		20	5.2	32	2.6	0.0	0.0	0.0	5.0	9.0	10.8
[52540] - HYDROPSYCHE DICANTHA	MI	282	5.1	558	3.7	3.0	0.0	0.0	7.0	9.0	11.0
[52590] - HYDROPSYCHE VENULARIS	MI	42	5.0	82	3.4	3.0	0.0	0.0	7.0	9.0	9.0
[52550] - HYDROPSYCHE FRISONI	I	84	5.0	111	3.5	3.0	0.0	0.0	6.7	9.0	9.0
[59110] - CERACLEA ANCYLUS	I	6	5.0	103	3.1	1.0	0.0	0.0	6.0	9.0	11.0
[13100] - NIXE SP	I	10	4.8	139	3.7	3.0	0.0	0.0	7.0	9.0	11.0
[11155] - PLAUDITUS PUNCTIVENTRIS	MI	27	4.8	43	3.7	3.0	0.0	0.0	7.0	11.2	12.0
[80310] - CARDIOCLADIUS OBSCURUS	MI	41	4.8	252	3.9	3.0	0.0	0.0	8.0	9.0	11.0
[86401] - ATHERIX LANTHA	MI	112	4.8	403	3.1	0.0	0.0	0.0	7.0	9.0	9.0
[60400] - GYRINUS SP		17	4.8	179	2.5	0.0	0.0	0.0	5.7	9.0	9.0
[18501] - EPHEMERIDAE	MI	8	4.8	9	3.4	3.0	0.0	0.7	7.0	8.2	9.0
[07840] - CAMBARUS (CAMBARUS) SCIOTENSIS		8	4.8	36	4.2	4.5	0.0	0.0	7.0	8.9	9.0
[34100] - ACRONEURIA SP	MI	8	4.8	18	3.2	2.0	0.0	0.0	7.0	7.0	8.2
[30000] - PLECOPTERA		57	4.7	72	3.4	3.0	0.0	0.0	7.0	9.0	9.0
[81465] - ORTHOCLADIUS (O.) CARLATUS	MI	36	4.6	44	3.5	0.5	0.0	0.0	7.0	9.0	11.3
[13510] - STENONEMA EXIGUUM	I	302	4.6	360	3.4	3.0	0.0	0.0	7.0	9.0	9.0
[87501] - EMPIDIDAE		585	4.6	732	3.3	3.0	0.0	0.0	7.0	9.0	9.0
[13540] - STENONEMA MEDIOPUNCTATUM	I	220	4.6	285	2.9	0.0	0.0	0.0	7.0	9.0	9.0
[34120] - ACRONEURIA CAROLINENSIS	I	20	4.6	32	2.4	0.0	0.0	0.0	4.5	9.0	9.0
[18600] - EPHEMERA SP	MI	127	4.5	475	3.3	3.0	0.0	0.0	7.0	9.0	10.0
[59510] - OECETIS AVARA	I	15	4.5	19	1.8	0.0	0.0	0.0	3.0	7.8	9.0
[11110] - ACENTRELLA PARVULA	I	8	4.5	9	2.7	0.0	0.0	0.0	5.2	9.0	9.0
[52570] - HYDROPSYCHE SIMULANS	MI	126	4.4	201	2.9	2.0	0.0	0.0	6.0	9.0	9.0
[74100] - SIMULIUM SP		584	4.4	1560	3.1	1.0	0.0	0.0	6.0	9.0	9.0
[28208] - ERYTHEMIS SIMPLICICOLLIS	MT	7	4.4	33	2.4	1.0	0.0	0.0	3.7	7.4	9.0
[11300] - PROCLOEON SP (FORMERLY IN CENTROPTILUM)	MI	72	4.4	217	3.2	3.0	0.0	0.0	7.0	9.0	9.0
[06800] - GAMMARUS SP		12	4.4	17	2.8	0.0	0.0	0.0	7.0	8.6	9.6
[78750] - RHEOPELOPIA PARAMACULIPENNIS	MI	36	4.3	54	3.7	3.5	0.0	0.0	7.0	9.0	9.0
[24900] - GOMPHUS SP		14	4.3	419	2.9	1.0	0.0	0.0	6.0	9.0	9.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[48410] - CORYDALUS CORNUTUS	MI	267	4.3	603	3.1	1.0	0.0	0.0	7.0	9.0	11.0
[08601] - HYDRACARINA		697	4.3	1040	3.1	1.0	0.0	0.0	6.0	9.0	9.0
[78402] - NATARSIA BALTIMOREUS		6	4.2	32	3.7	2.5	0.0	0.0	7.0	9.6	11.0
[12200] - ISONYCHIA SP	MI	846	4.2	1461	3.2	2.0	0.0	0.0	7.0	9.0	9.0
[21300] - HETAERINA SP		150	4.2	396	3.7	3.0	0.0	0.0	7.0	9.0	11.0
[85625] - RHEOTANYTARSUS SP	MI	1652	4.2	2111	3.0	1.0	0.0	0.0	6.0	9.0	9.0
[81229] - NANOCLADIUS (N.) CRASSICORNUS		42	4.2	46	4.2	4.0	0.0	0.0	7.0	10.8	11.0
[52430] - CERATOPSYCHE MOROSA GROUP	MI	1057	4.2	1723	3.1	1.0	0.0	0.0	6.0	9.0	9.0
[81690] - PARATRICHOCLADIUS SP	MI	67	4.2	106	3.5	1.0	0.0	0.0	7.0	9.0	10.2
[11670] - PROCLOEON IRRUBRUM	MI	11	4.2	258	3.1	1.0	0.0	0.0	6.0	9.0	11.0
[85501] - PARATANYTARSUS N.SP 1	MI	84	4.2	97	2.4	0.0	0.0	0.0	6.0	8.6	9.0
[59500] - OECETIS SP	MI	117	4.2	192	2.5	0.5	0.0	0.0	4.0	9.0	9.0
[03000] - ECTOPROCTA		5	4.2	30	2.6	0.0	0.0	0.0	4.0	8.0	9.0
[52530] - HYDROPSYCHE DEPRAVATA GROUP		863	4.1	1744	2.9	1.0	0.0	0.0	6.0	9.0	9.0
[85814] - TANYTARSUS GLABRESCENS GROUP		1046	4.1	1203	3.4	3.0	0.0	0.0	7.0	9.0	9.0
[81280] - NANOCLADIUS (PLECOPTERACOLUTHUS) DOWNESI	I	14	4.1	55	2.7	0.0	0.0	0.0	6.0	9.0	9.0
[79210] - THIENEMANNIMYIA NORENA		9	4.1	15	3.6	4.0	0.0	0.0	6.0	7.0	8.5
[34410] - PARAGNETINA MEDIA	I	38	4.1	55	3.8	0.0	0.0	0.0	9.0	9.0	11.0
[34150] - ACRONEURIA LYCORIAS	I	7	4.1	8	4.7	5.5	0.0	0.0	9.0	9.0	9.0
[16200] - EURYLOPHELLA SP	MI	87	4.0	101	3.3	3.0	0.0	0.0	6.0	9.0	9.0
[01418] - CRASPEDACUSTA SOWERBYI		54	4.0	54	4.1	4.0	0.0	0.0	7.0	9.2	11.0
[85710] - TEMPELLINELLA SP	MI	50	4.0	65	4.1	5.0	0.0	0.0	7.0	9.0	9.5
[13560] - STENONEMA PULCHELLUM GROUP	MI	70	4.0	154	2.6	1.0	0.0	0.0	7.0	7.0	7.0
[59570] - OECETIS NOCTURNA		13	4.0	66	2.2	1.0	0.0	0.0	4.0	6.9	9.0
[83900] - NILOTHAUMA SP	MI	109	4.0	125	3.0	1.0	0.0	0.0	6.0	9.0	9.0
[12912] - HEPTAGENIA DIABASIA	MI	11	4.0	19	2.6	3.0	0.0	1.0	4.0	5.2	7.1
[12501] - HEPTAGENIIDAE		11	4.0	15	2.5	3.0	0.0	0.0	4.0	6.0	6.7
[72700] - ANOPHELES SP		5	4.0	332	2.8	1.0	0.0	0.0	6.0	8.0	9.0
[11100] - BAETIS SP		397	3.9	741	2.5	0.0	0.0	0.0	4.0	7.0	9.0
[07800] - CAMBARUS SP		17	3.9	62	2.8	0.5	0.0	0.0	6.0	9.0	9.8

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[81270] - NANOCLADIUS (N.) SPINIPLUS	MI	197	3.9	263	3.2	3.0	0.0	0.0	6.7	9.0	9.0
[80430] - CRICOTOPUS (C.) TREMULUS GROUP		625	3.9	987	3.3	3.0	0.0	0.0	7.0	9.0	9.0
[77750] - HAYESOMYIA SENATA OR THIENEMANNIMYIA NORENA		1027	3.9	1310	2.9	1.0	0.0	0.0	6.0	9.0	9.0
[11018] - ACERPENNA MACDUNNOUGHI	I	38	3.9	48	2.4	0.0	0.0	0.0	4.0	9.0	11.1
[85802] - TANYTARSUS CURTICORNIS GROUP	MI	416	3.8	442	3.0	1.0	0.0	0.0	6.0	9.0	9.0
[98001] - SPHAERIIDAE		43	3.8	76	2.1	0.0	0.0	0.0	3.5	8.8	9.0
[13561] - STENONEMA PULCHELLUM	MI	834	3.8	1062	3.2	1.0	0.0	0.0	7.0	9.0	9.0
[11120] - BAETIS FLAVISTRIGA		620	3.8	1000	3.1	2.0	0.0	0.0	6.0	9.0	9.0
[77001] - TANYPODINAE		7	3.8	19	2.2	1.0	0.0	0.0	4.0	5.8	8.1
[70501] - TIPULIDAE		10	3.8	31	2.0	0.0	0.0	0.0	3.5	8.4	9.0
[83820] - MICROTENDIPES "CAELUM" (SENSU SIMPSON & BODE, 1980)	MI	247	3.8	611	3.2	3.0	0.0	0.0	6.0	9.0	9.0
[50301] - CHIMARRA ATERRIMA	MI	34	3.8	170	2.7	0.5	0.0	0.0	6.0	9.0	9.0
[71300] - LIMONIA SP		12	3.8	105	2.3	0.0	0.0	0.0	4.0	9.0	9.0
[81260] - NANOCLADIUS (N.) "RECTINERVIS" (OLD)		39	3.7	44	2.9	1.5	0.0	0.0	6.0	9.0	9.0
[93900] - ELIMIA SP	MI	455	3.7	936	3.0	1.0	0.0	0.0	6.0	9.0	9.0
[13570] - STENONEMA TERMINATUM	MI	299	3.7	418	3.4	3.0	0.0	0.0	7.0	9.0	11.0
[84450] - POLYPEDILUM (URESIPEDILUM) FLAVUM		1385	3.7	2157	2.9	1.0	0.0	0.0	6.0	9.0	9.0
[01320] - HYDRA SP		1228	3.7	1250	2.8	1.0	0.0	0.0	6.0	9.0	9.0
[13000] - LEUCROCUTA SP	I	488	3.6	912	3.2	3.0	0.0	0.0	6.5	9.0	9.0
[77800] - HELOPELOPIA SP		951	3.6	1444	3.2	3.0	0.0	0.0	6.0	9.0	9.0
[80360] - CORYNONEURA "CELERIPES" (SENSU SIMPSON & BODE, 1980)	I	203	3.6	247	3.6	3.0	0.0	0.0	7.0	9.0	11.0
[85840] - TANYTARSUS SEPP	MI	1016	3.6	1194	2.8	1.0	0.0	0.0	6.0	9.0	9.0
[11130] - BAETIS INTERCALARIS		1003	3.6	1517	3.0	1.0	0.0	0.0	6.0	9.0	9.0
[80410] - CRICOTOPUS (C.) SP		726	3.6	960	3.2	3.0	0.0	0.0	6.0	9.0	9.0
[59310] - MYSTACIDES SEPULCHRALIS	MI	11	3.6	82	2.1	0.0	0.0	0.0	4.0	7.0	7.4
[68601] - ANCYRONYX VARIEGATA	MI	597	3.6	1007	2.9	1.0	0.0	0.0	6.0	9.0	9.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[69200] - OPTIOSERVUS SP	MI	34	3.6	152	3.0	2.0	0.0	0.0	6.0	9.0	9.0
[82220] - TVETENIA DISCOLORIPES GROUP	I	121	3.6	230	3.5	0.0	0.0	0.0	7.0	9.0	11.0
[84520] - POLYPEDILUM (TRIPODURA) HALTERALE GROUP		71	3.6	181	2.6	1.0	0.0	0.0	4.0	8.0	9.0
[96900] - FERRISSIA SP		1507	3.6	1988	2.8	1.0	0.0	0.0	6.0	9.0	9.0
[78450] - NILOTANYPUS FIMBRIATUS	MI	888	3.6	986	3.1	2.0	0.0	0.0	6.0	9.0	9.0
[81460] - ORTHOCLADIUS (O.) SP		33	3.6	100	2.7	1.0	0.0	0.0	6.0	8.0	9.0
[77500] - CONCHAPELOPIA SP		1318	3.5	1863	3.0	1.0	0.0	0.0	6.0	9.0	9.0
[13580] - STENONEMA TRIPUNCTATUM (OLD)		239	3.5	380	3.0	1.0	0.0	0.0	6.0	9.0	9.0
[85615] - RHEOTANYTARSUS PELLUCIDUS	MI	400	3.5	527	2.9	1.0	0.0	0.0	6.0	9.0	9.0
[04687] - PLACOBDELLA PARASITICA		8	3.5	44	1.8	1.0	0.0	0.0	3.5	4.2	7.0
[03121] - PALUDICELLA ARTICULATA	MI	40	3.5	77	3.6	3.0	0.0	0.0	7.0	9.0	11.0
[98600] - SPHAERIUM SP		263	3.5	1418	2.7	1.0	0.0	0.0	5.0	8.0	9.0
[14900] - LEPTOPHLEBIA SP	I	23	3.5	48	1.0	0.0	0.0	0.0	0.5	3.7	8.0
[15600] - EPHEMERELLA SP	MI	11	3.5	19	2.9	0.0	0.0	0.0	6.7	8.2	9.0
[82141] - THIENEMANNIELLA XENA		847	3.4	1039	3.0	1.0	0.0	0.0	6.0	9.0	9.0
[80470] - CRICOTOPUS (C.) OR ORTHOCLADIUS (O.) SP		9	3.4	15	3.0	1.0	0.0	0.0	5.5	9.0	10.5
[81230] - NANOCLADIUS (N.) CRASSICORNUS (OLD)		165	3.4	195	3.0	1.0	0.0	0.0	6.0	9.0	9.0
[11020] - ACERPENNA PYGMAEA	I	366	3.4	432	2.8	1.0	0.0	0.0	6.0	8.3	9.0
[85264] - CLADOTANYTARSUS VANDERWULPI GROUP TYPE 4	MI	15	3.4	46	2.6	1.0	0.0	0.0	4.0	7.9	9.0
[94201] - LYMNAEIDAE		13	3.4	21	4.2	4.0	0.0	1.7	7.0	7.8	9.9
[85500] - PARATANYTARSUS SP		999	3.4	1217	2.7	1.0	0.0	0.0	5.0	7.8	9.0
[60300] - DINEUTUS SP		89	3.4	400	2.5	1.0	0.0	0.0	4.0	8.0	9.0
[04686] - PLACOBDELLA PAPILLIFERA		5	3.4	63	3.4	3.0	0.0	0.0	7.0	9.0	9.0
[53800] - HYDROPTILA SP		649	3.3	1023	3.0	1.0	0.0	0.0	6.0	9.0	9.0
[81632] - PARAKIEFFERIELLA N.SP 2	MI	117	3.3	197	2.8	1.0	0.0	0.0	6.0	7.8	9.0
[52200] - CHEUMATOPSYCHE SP		1846	3.3	2778	2.7	1.0	0.0	0.0	6.0	8.0	9.0
[34700] - AGNETINA CAPITATA COMPLEX	I	48	3.3	121	2.9	0.0	0.0	0.0	6.0	9.0	9.0

Appendix Table 2 Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[81231] - NANOCLADIUS (N.) CRASSICORNUS OR N. (N.) "RECTINERVIS"		408	3.3	457	2.8	1.0	0.0	0.0	4.0	7.0	9.0
[94400] - FOSSARIA SP		54	3.3	238	2.6	1.0	0.0	0.0	4.0	9.0	9.0
[84700] - STENOCHIRONOMUS SP		145	3.3	408	2.9	1.0	0.0	0.0	6.0	9.0	9.0
[77110] - ABLABESMYIA ANNULATA		7	3.3	18	2.3	1.0	0.0	0.0	6.0	6.7	7.0
[51400] - NYCTIOPHYLAX SP	MI	143	3.3	314	2.4	0.0	0.0	0.0	4.0	7.1	9.0
[82880] - CRYPTOTENDIPES SP	MI	15	3.3	94	2.9	1.0	0.0	0.0	5.0	9.0	9.0
[11150] - PSEUDOCLOEON PROPINQUUM	I	16	3.3	118	2.9	1.0	0.0	0.0	6.0	9.0	9.0
[80204] - BRILLIA FLAVIFRONS GROUP		105	3.3	188	3.1	3.0	0.0	0.0	6.0	9.0	9.0
[85800] - TANYTARSUS SP	MI	912	3.3	1229	2.7	1.0	0.0	0.0	6.0	8.0	9.0
[84200] - PARATENDIPES SP		13	3.3	14	2.5	2.0	0.0	0.0	4.0	6.3	8.4
[13590] - STENONEMA VICARIUM	MI	447	3.3	615	2.9	1.0	0.0	0.0	6.0	9.0	9.0
[82070] - SYNORTHOCLADIUS SEMIVIRENS	I	17	3.2	20	4.2	4.0	0.0	0.0	8.5	9.0	9.0
[11125] - PSEUDOCLOEON FRONDALE	I	8	3.2	60	3.1	0.5	0.0	0.0	6.0	9.0	11.0
[84460] - POLYPEDILUM (P.) FALLAX GROUP		1540	3.2	1726	2.8	1.0	0.0	0.0	6.0	9.0	9.0
[48600] - NIGRONIA SP		6	3.2	23	1.8	0.0	0.0	0.0	1.7	7.4	9.0
[68901] - MACRONYCHUS GLABRATUS	MI	1365	3.2	1744	2.8	1.0	0.0	0.0	6.0	9.0	9.0
[84300] - PHAENOPSECTRA OBEDIENS GROUP		562	3.2	914	3.1	3.0	0.0	0.0	6.0	9.0	9.0
[85230] - CLADOTANYTARSUS MANCUS GROUP		68	3.2	206	2.7	1.0	0.0	0.0	4.0	7.0	9.0
[80370] - CORYNONEURA LOBATA	MI	1390	3.2	1471	2.8	1.0	0.0	0.0	6.0	9.0	9.0
[59400] - NECTOPSYCHE SP	MI	20	3.2	54	3.0	3.0	0.0	0.0	6.0	9.0	9.0
[16700] - TRICORYTHODES SP	MI	661	3.2	852	3.1	2.0	0.0	0.0	6.0	9.0	9.0
[82121] - THIENEMANNIELLA LOBAPODEMA	MI	416	3.1	443	2.7	1.0	0.0	0.0	6.0	7.2	9.0
[69400] - STENELMIS SP		1382	3.1	2639	2.7	1.0	0.0	0.0	6.0	8.0	9.0
[63300] - HYDROPORUS SP		6	3.1	535	2.6	1.0	0.0	0.0	4.0	8.0	9.0
[17200] - CAENIS SP		1531	3.1	2286	2.6	1.0	0.0	0.0	5.0	8.0	9.0
[78600] - PENTANEURA INCONSPICUA		69	3.1	99	2.7	1.0	0.0	0.0	4.0	7.0	9.0
[80440] - CRICOTOPUS (C.) TRIFASCIA		35	3.1	230	3.4	3.0	0.0	0.0	7.0	9.0	9.0
[84750] - STICTOCHIRONOMUS SP		57	3.1	870	2.6	1.0	0.0	0.0	4.0	8.0	9.0
[13400] - STENACRON SP		1666	3.1	2535	2.7	1.0	0.0	0.0	5.0	8.0	9.0
[59140] - CERACLEA MACULATA	MI	7	3.1	13	3.6	4.0	0.0	0.0	6.5	11.0	11.0

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Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[13521] - STENONEMA FEMORATUM		728	3.1	1281	2.6	1.0	0.0	0.0	4.2	8.0	9.0
[84490] - POLYPEDILUM (CEROBREGMA)	MI	31	3.1	51	2.2	1.0	0.0	0.0	3.0	6.4	8.9
ONTARIO											
[59970] - PETROPHILA SP	I	70	3.0	492	3.1	1.0	0.0	0.0	7.0	9.0	9.0
[70600] - ANTOCHA SP	MI	212	3.0	327	3.3	0.0	0.0	0.0	7.0	9.0	11.0
[06700] - CRANGONYX SP	MT	229	3.0	810	3.1	1.0	0.0	0.0	6.0	9.0	9.0
[84470] - POLYPEDILUM (P.) ILLINOENSE	T	739	3.0	1898	2.7	1.0	0.0	0.0	5.0	8.0	9.0
[78140] - LABRUNDINIA PILOSELLA	MI	389	3.0	440	2.8	1.0	0.0	0.0	6.0	8.0	9.0
[85720] - STEMPELLINELLA N.SP NR.	I	246	3.0	317	2.8	1.0	0.0	0.0	6.0	9.0	9.0
FLAVIDULA											
[77120] - ABLABESMYIA MALLOCHI		850	3.0	1471	2.8	1.0	0.0	0.0	6.0	9.0	9.0
[85200] - CLADOTANYTARSUS SP		58	3.0	112	1.6	0.0	0.0	0.0	3.0	7.0	7.0
[80420] - CRICOTOPUS (C.) BICINCTUS	MT	799	3.0	1394	2.9	1.0	0.0	0.0	6.0	9.0	9.0
[80570] - DONCRICOTOPUS BICAUDATUS		8	3.0	23	2.6	1.0	0.0	0.0	4.0	9.0	9.0
[00401] - SPONGILLIDAE	MI	7	3.0	241	2.9	1.0	0.0	0.0	6.0	9.0	9.0
[84540] - POLYPEDILUM (TRIPODURA)		1202	2.9	1728	2.8	1.0	0.0	0.0	6.0	9.0	9.0
SCALAENUM GROUP											
[87540] - HEMERODROMIA SP		909	2.9	1040	2.9	1.0	0.0	0.0	6.0	9.0	9.0
[81040] - LIMNOPHYES SP	MT	8	2.9	12	2.0	0.5	0.0	0.0	3.5	7.6	8.8
[97601] - CORBICULA FLUMINEA	MI	183	2.9	569	2.4	0.0	0.0	0.0	4.0	9.0	9.0
[68702] - DUBIRAPHIA BIVITTATA		30	2.9	209	2.8	1.0	0.0	0.0	6.0	8.0	9.0
[06201] - HYALELLA AZTECA		218	2.9	1170	2.6	1.0	0.0	0.0	4.0	9.0	9.0
[85752] - SUBLETTEA COFFMANI	I	117	2.9	133	3.2	0.0	0.0	0.0	7.0	9.0	9.0
[85803] - TANYTARSUS TYPE 3		48	2.9	55	2.5	1.0	0.0	0.0	4.0	7.0	7.7
[78500] - PARAMERINA FRAGILIS		12	2.9	20	3.4	3.0	0.0	0.0	7.0	8.0	10.0
[84430] - POLYPEDILUM (P.) ALBICORNE	MI	14	2.9	21	2.9	0.0	0.0	0.0	6.2	9.0	9.0
[48620] - NIGRONIA SERRICORNIS		176	2.9	440	2.9	0.0	0.0	0.0	6.0	9.0	9.0
[15000] - PARALEPTOPHLEBIA SP	MI	237	2.9	284	2.8	1.0	0.0	0.0	6.0	9.0	9.0
[84315] - PHAENOPSECTRA FLAVIPES		210	2.8	369	3.0	3.0	0.0	0.0	6.0	9.0	9.0
[11650] - PROCLOEON SP (W/ HINDWING PADS)	MI	78	2.8	232	3.2	1.0	0.0	0.0	7.0	9.0	11.0
[03045] - FREDERICELLA INDICA	MI	10	2.8	24	3.2	0.0	0.0	0.0	7.0	9.0	9.6

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[83040] - DICROTENDIPES NEOMODESTUS		1184	2.8	1637	2.6	1.0	0.0	0.0	4.0	8.0	9.0
[84302] - PHAENOPSECTRA PUNCTIPES		32	2.8	44	2.5	1.0	0.0	0.0	4.0	7.1	8.3
[03451] - URNATELLA GRACILIS		105	2.8	136	2.6	1.0	0.0	0.0	4.0	9.0	10.4
[52440] - CERATOPSYCHE SLOSSONAE	MI	117	2.8	186	3.0	0.0	0.0	0.0	7.0	9.0	9.0
[54100] - NEOTRICHIA SP		30	2.8	30	1.8	0.0	0.0	0.0	4.0	5.5	8.0
[78350] - MEROPELOPIA SP		76	2.7	133	2.9	1.0	0.0	0.0	6.0	9.0	9.0
[78101] - LABRUNDINIA BECKI		22	2.7	24	2.5	1.0	0.0	0.0	5.0	7.1	8.3
[83003] - DICROTENDIPES FUMIDUS		61	2.7	132	3.3	3.0	0.0	0.0	7.0	9.0	9.0
[60900] - PELTODYTES SP	MT	9	2.7	1008	2.4	1.0	0.0	0.0	4.0	7.0	9.0
[84050] - PARACHIRONOMUS "HIRTALATUS" (SENSU SIMPSON & BODE, 1980)	VT	13	2.7	30	1.1	0.0	0.0	0.0	1.0	3.0	4.0
[79085] - TELOPELOPIA OKOBOJI		33	2.7	62	2.4	1.0	0.0	0.0	4.0	7.0	7.8
[77740] - HAYESOMYIA SENATA		86	2.7	114	2.9	1.0	0.0	0.0	6.0	7.0	9.0
[53400] - PROTOPTILA SP	I	5	2.7	62	2.3	0.0	0.0	0.0	3.0	9.0	9.0
[82101] - THIENEMANNIELLA TAUROCAPITA	I	300	2.7	361	3.1	1.0	0.0	0.0	7.0	9.0	9.0
[34300] - NEOPERLA CLYMENE COMPLEX	I	8	2.7	54	2.7	0.0	0.0	0.0	7.0	9.0	9.0
[81240] - NANOCLADIUS (N.) DISTINCTUS	MT	434	2.7	481	2.5	1.0	0.0	0.0	4.0	7.0	9.0
[59580] - OECETIS PERSIMILIS	MI	76	2.7	110	2.5	0.0	0.0	0.0	4.0	9.0	11.0
[81250] - NANOCLADIUS (N.) MINIMUS		164	2.7	176	3.3	3.0	0.0	0.0	6.0	9.0	9.0
[03360] - PLUMATELLA SP		664	2.7	1197	2.7	1.0	0.0	0.0	5.2	8.0	9.0
[01801] - TURBELLARIA		1308	2.6	2020	2.6	1.0	0.0	0.0	4.0	8.0	9.0
[03040] - FREDERICELLA SP	MI	34	2.6	112	3.0	0.5	0.0	0.0	7.0	9.0	10.8
[11645] - PROCLOEON SP	MI	12	2.6	14	2.5	3.0	0.0	0.0	4.0	6.1	6.8
[81825] - RHEOCRICOTOPUS (PSILOCRICOTOPUS) ROBACKI	MI	718	2.6	879	2.8	1.0	0.0	0.0	6.0	9.0	9.0
[15501] - EPHEMERELLIDAE	MI	54	2.6	55	2.7	0.0	0.0	0.0	7.0	9.0	9.0
[83410] - HARNISCHIA CURTILAMELLATA		9	2.6	39	3.1	1.0	0.0	0.0	6.0	9.0	10.1
[02600] - NEMATOMORPHA		14	2.6	97	2.4	1.0	0.0	0.0	3.0	7.0	9.0
[86100] - CHRYSOPS SP		36	2.6	649	2.7	1.0	0.0	0.0	4.0	8.6	9.0
[11430] - DIPHETOR HAGENI	I	78	2.6	98	2.9	0.0	0.0	0.0	6.0	9.0	9.0
[04685] - PLACOBDELLA ORNATA		15	2.6	138	2.8	1.0	0.0	0.0	6.0	9.0	9.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[81631] - PARAKIEFFERIELLA N.SP 1		96	2.5	132	3.1	3.0	0.0	0.0	6.5	8.3	9.0
[01900] - NEMERTEA		114	2.5	137	2.0	0.0	0.0	0.0	4.0	8.8	9.0
[68708] - DUBIRAPHIA VITTATA GROUP		680	2.5	1745	2.7	1.0	0.0	0.0	5.0	8.0	9.0
[21200] - CALOPTERYX SP		578	2.5	1765	2.8	1.0	0.0	0.0	6.0	9.0	9.0
[84790] - TRIBELOS FUSCICORNE		171	2.5	232	2.4	1.0	0.0	0.0	4.0	8.0	9.0
[81630] - PARAKIEFFERIELLA SP		37	2.5	46	1.5	0.0	0.0	0.0	3.0	6.7	9.0
[52580] - HYDROPSYCHE VALANIS		15	2.5	25	3.9	4.0	0.0	1.0	6.2	9.0	9.0
[84010] - PARACHIRONOMUS "ABORTIVUS" (SENSU SIMPSON & BODE, 1980)	T	37	2.5	54	2.1	0.5	0.0	0.0	3.0	8.0	9.0
[23909] - BOYERIA VINOSA		214	2.5	1361	2.8	1.0	0.0	0.0	6.0	9.0	9.0
[95907] - GYRAULUS (TORQUIS) PARVUS	MT	28	2.5	82	2.5	0.0	0.0	0.0	6.0	7.6	9.0
[71100] - HEXATOMA SP	MI	56	2.4	765	2.9	2.0	0.0	0.0	6.0	9.0	9.0
[22300] - ARGIA SP		1260	2.4	2154	2.7	1.0	0.0	0.0	5.0	8.0	9.0
[35001] - PERLODIDAE	MI	13	2.4	17	3.4	1.0	0.0	0.0	7.0	9.0	10.3
[82820] - CRYPTOCHIRONOMUS SP		301	2.4	1609	2.8	1.0	0.0	0.0	6.0	8.0	9.0
[95100] - PHYSELLA SP	T	912	2.4	2042	2.5	1.0	0.0	0.0	4.0	7.0	9.0
[98200] - PISIDIUM SP		120	2.4	398	2.5	1.0	0.0	0.0	4.0	7.0	9.0
[04901] - ERPOBDELLIDAE	T	8	2.4	47	2.7	1.0	0.0	0.0	6.7	7.8	9.0
[68700] - DUBIRAPHIA SP		245	2.4	377	2.4	0.0	0.0	0.0	4.0	7.0	9.0
[50804] - LYPE DIVERSA	MI	181	2.4	226	2.6	0.0	0.0	0.0	6.0	9.0	9.0
[84155] - PARALAUTERBORNIELLA NIGROHALTERALIS		56	2.4	131	2.6	1.0	0.0	0.0	5.5	7.4	9.0
[83840] - MICROTENDIPES PEDELLUS GROUP	MI	718	2.4	1051	2.4	1.0	0.0	0.0	4.0	7.0	9.0
[13010] - LEUCROCUTA HEBE	MI	11	2.4	58	1.4	0.0	0.0	0.0	3.0	4.7	8.0
[81650] - PARAMETRIOCNEMUS SP	MI	315	2.3	549	2.9	1.0	0.0	0.0	6.0	9.0	9.0
[68130] - HELICHUS SP	MI	226	2.3	852	2.7	1.0	0.0	0.0	6.0	8.3	9.0
[58505] - HELICOPSYCHE BOREALIS	MI	104	2.3	616	2.7	1.0	0.0	0.0	6.0	9.0	9.0
[69250] - OPTIOSERVUS OVALIS	MI	5	2.3	16	2.3	1.0	0.0	0.0	3.5	7.8	8.7
[65800] - BEROSUS SP	MT	370	2.3	1011	2.7	1.0	0.0	0.0	5.0	9.0	9.0
[95501] - PLANORBIDAE	MT	31	2.3	39	2.9	3.0	0.0	0.0	4.0	7.0	9.0
[85818] - TANYTARSUS GLABRESCENS GROUP	MI	21	2.3	33	2.6	1.0	0.0	0.0	4.5	7.0	7.0

Appendix Table 2 Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
SP 4											
[05900] - LIRCEUS SP		239	2.3	646	2.6	1.0	0.0	0.0	4.0	8.0	9.0
[93200] - HYDROBIIDAE	MT	59	2.3	162	2.9	1.0	0.0	0.0	6.0	9.0	9.4
[85400] - MICROPSECTRA SP		56	2.3	81	2.0	0.0	0.0	0.0	3.0	7.0	8.0
[68707] - DUBIRAPHIA QUADRINOTATA		17	2.2	158	3.0	1.0	0.0	0.0	6.0	9.0	10.2
[84210] - PARATENDIPES ALBIMANUS OR P. DUPLICATUS	MI	611	2.2	918	2.7	1.0	0.0	0.0	4.0	8.0	9.0
[79400] - ZAVRELIMYIA SP		39	2.2	61	1.7	0.0	0.0	0.0	3.0	7.0	7.0
[83310] - GLYPTOTENDIPES (TRICHOTENDIPES)	MI	32	2.2	46	3.3	3.0	0.0	0.0	6.0	9.0	9.0
AMPLUS											
[85821] - TANYTARSUS GLABRESCENS GROUP	MI	727	2.2	814	1.7	0.0	0.0	0.0	3.0	7.0	9.0
SP 7											
[11651] - PROCLOEON SP (W/O HINDWING PADS)	MI	157	2.2	309	2.5	1.0	0.0	0.0	4.0	7.6	9.0
[55300] - PTILOSTOMIS SP		5	2.2	83	1.8	0.0	0.0	0.0	3.0	7.0	9.0
[54160] - OCHROTRICHIA SP	MI	13	2.2	23	1.0	0.0	0.0	0.0	0.0	3.8	7.7
[85201] - CLADOTANYTARSUS SPECIES GROUP	MI	39	2.2	76	2.4	1.0	0.0	0.0	4.0	7.0	7.0
A											
[84020] - PARACHIRONOMUS CARINATUS		89	2.1	105	1.9	1.0	0.0	0.0	3.0	6.0	7.0
[84960] - PSEUDOCHIRONOMUS SP		65	2.1	154	1.8	0.0	0.0	0.0	3.0	7.0	8.0
[83000] - DICROTENDIPES SP		43	2.1	62	2.8	2.5	0.0	0.0	6.0	9.0	9.0
[84060] - PARACHIRONOMUS PECTINATELLAE		53	2.1	85	3.1	3.0	0.0	0.0	6.0	8.0	11.0
[52001] - HYDROPSYCHIDAE		17	2.1	20	1.6	0.0	0.0	0.0	1.0	8.0	9.0
[67700] - PARACYMUS SP		5	2.1	223	3.2	3.0	0.0	0.0	6.0	9.0	9.0
[08230] - ORCONECTES (CROKERINUS)		13	2.1	122	3.1	3.0	0.0	0.0	6.0	9.0	9.0
OBSCURUS											
[72420] - CHAEBORUS SP	T	5	2.1	13	0.9	0.0	-1.0	0.0	1.0	6.0	6.0
[85263] - CLADOTANYTARSUS VANDERWULPI	MI	6	2.1	13	2.6	0.0	0.0	0.0	4.5	9.4	10.7
GROUP TYPE 3											
[08250] - ORCONECTES (PROCERICAMBARUS)		197	2.1	1347	2.7	1.0	0.0	0.0	6.0	9.0	9.0
RUSTICUS											
[08260] - ORCONECTES (CROKERINUS)		65	2.1	522	2.8	1.0	0.0	0.0	5.0	9.0	9.0

Appendix Table 22. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
SANBORNII SANBORNII											
[34130] - ACRONEURIA FRISONI	MI	208	2.1	366	2.2	0.0	0.0	0.0	4.0	7.9	9.0
[83600] - KIEFFERULUS (K.) DUX		19	2.1	21	1.7	1.0	0.0	0.0	3.0	6.8	8.4
[68075] - PSEPHENUS HERRICKI	MI	178	2.0	1335	3.0	1.0	0.0	0.0	6.0	9.0	9.0
[82200] - TVETENIA BAVARICA GROUP	MI	125	2.0	175	2.4	0.0	0.0	0.0	6.0	9.0	9.0
[82730] - CHIRONOMUS (C.) DECORUS GROUP	T	370	2.0	1029	2.6	1.0	0.0	0.0	4.0	8.0	9.0
[85261] - CLADOTANYTARSUS VANDERWULPI GROUP TYPE 1	I	109	2.0	200	3.3	1.5	0.0	0.0	7.0	9.0	9.0
[79020] - TANYPUS NEOPUNCTIPENNIS	VT	13	2.0	88	2.2	1.0	0.0	0.0	3.0	7.0	8.1
[78650] - PROCLADIUS SP	MT	182	2.0	587	2.8	1.0	0.0	0.0	6.0	8.0	9.0
[77115] - ABLABESMYIA JANTA		65	2.0	100	2.2	1.0	0.0	0.0	3.5	7.0	9.0
[84800] - TRIBELOS JUCUNDUM		191	2.0	305	2.2	1.0	0.0	0.0	3.0	7.0	9.0
[81259] - NANOCLADIUS (N.) "RECTINERVIS" (SENSU SIMPSON AND BODE, 1980)	MI	9	2.0	9	2.6	1.0	0.0	0.0	4.7	8.2	9.0
[84410] - POLYPEDILUM (PENTAPEDILUM) TRITUM VAR. I	VT	15	2.0	17	2.8	2.0	0.0	0.0	4.5	8.0	8.6
[14950] - LEPTOPHLEBIA SP OR PARALEPTOPHLEBIA SP	MI	213	2.0	246	2.1	1.0	0.0	0.0	4.0	7.0	9.0
[77130] - ABLABESMYIA RHAMPHE GROUP	MT	134	2.0	187	2.0	1.0	0.0	0.0	3.0	7.0	8.1
[47600] - SIALIS SP		350	1.9	1563	2.8	1.0	0.0	0.0	5.0	9.0	9.0
[50315] - CHIMARRA OBSCURA	MI	403	1.9	1105	2.7	0.0	0.0	0.0	6.0	9.0	9.0
[71910] - TIPULA ABDOMINALIS	MI	51	1.9	190	2.6	0.5	0.0	0.0	4.0	8.0	9.0
[52450] - CERATOPSYCHE SPARNA	MI	94	1.9	152	2.6	0.0	0.0	0.0	6.0	9.0	9.0
[11001] - BAETIDAE		21	1.9	24	1.7	1.0	0.0	0.0	3.5	6.0	6.3
[78100] - LABRUNDINIA SP		85	1.9	91	1.8	1.0	0.0	0.0	3.0	6.4	7.0
[57900] - PYCNOPSYCHE SP	MI	65	1.9	562	2.7	1.0	0.0	0.0	6.0	9.0	9.0
[14600] - CHOROTERPES SP	MI	10	1.9	22	2.6	2.0	0.0	0.0	4.0	6.3	8.6
[84040] - PARACHIRONOMUS FREQUENS		59	1.8	102	2.7	1.0	0.0	0.0	6.0	7.6	9.0
[51001] - POLYCENTROPODIDAE		20	1.8	27	2.1	1.0	0.0	0.0	3.7	6.8	9.0
[51600] - POLYCENTROPUS SP	MI	290	1.8	643	2.2	0.0	0.0	0.0	3.0	7.0	9.0
[96002] - HELISOMA ANCEPS ANCEPS	MT	34	1.8	116	2.5	0.0	0.0	0.0	4.0	7.9	9.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[80350] - CORYNONEURA SP	MI	94	1.8	102	1.9	0.0	0.0	0.0	4.0	7.0	7.0
[84421] - POLYPEDILUM (P.) SP 2	VT	5	1.8	5	1.2	2.0	0.0	0.0	2.0	2.0	2.0
[68201] - SCIRTIDAE		18	1.8	162	2.4	0.0	0.0	0.0	4.0	9.0	9.0
[74501] - CERATOPOGONIDAE		539	1.7	948	2.3	1.0	0.0	0.0	4.0	7.0	9.0
[82710] - CHIRONOMUS (C.) SP	T	114	1.7	196	1.9	0.0	0.0	0.0	3.0	7.0	8.0
[83050] - DICROTENDIPES LUCIFER	MT	169	1.7	188	1.3	0.0	0.0	0.0	1.0	5.7	7.0
[78401] - NATARSIA SPECIES A (SENSU ROBACK, 1978)	T	67	1.7	383	2.8	1.0	0.0	0.0	4.0	8.0	9.0
[79100] - THIENEMANNIMYIA GROUP		299	1.7	481	1.4	0.0	0.0	0.0	3.0	6.0	7.0
[22001] - COENAGRIONIDAE	MT	437	1.7	2088	2.6	1.0	0.0	0.0	4.0	8.0	9.0
[53501] - HYDROPTILIDAE		79	1.7	226	2.7	1.0	0.0	0.0	4.0	9.0	9.0
[01200] - CORDYLOPHORA LACUSTRIS		46	1.7	50	1.9	0.0	0.0	0.0	3.0	7.0	9.0
[85801] - TANYTARSUS TYPE 1	MI	8	1.6	8	1.8	1.5	0.0	0.0	4.0	4.0	4.0
[68025] - ECTOPRIA SP	MI	20	1.6	196	2.6	0.0	0.0	0.0	6.0	8.0	9.0
[66500] - ENOCHRUS SP		15	1.6	248	2.8	1.0	0.0	0.0	6.0	9.0	9.0
[67500] - LACCOBIUS SP		11	1.6	252	2.6	1.0	0.0	0.0	4.0	8.3	9.0
[18750] - HEXAGENIA LIMBATA	MI	21	1.6	165	2.7	1.0	0.0	0.0	4.2	7.0	9.0
[77355] - CLINOTANYPUS PINGUIS	T	18	1.6	156	1.8	1.0	0.0	0.0	3.0	6.0	7.0
[83158] - ENDOCHIRONOMUS NIGRICANS		88	1.6	161	1.9	1.0	0.0	0.0	3.0	7.0	8.4
[11200] - CALLIBAETIS SP	MT	42	1.6	459	2.5	1.0	0.0	0.0	4.0	7.0	9.0
[54300] - OXYETHIRA SP		21	1.6	24	1.6	1.0	0.0	0.0	3.0	4.0	4.6
[72160] - PSYCHODA SP	T	11	1.5	15	1.8	0.0	0.0	0.0	3.2	7.0	8.5
[80510] - CRICOTOPUS (ISOCLADIUS) SYLVESTRIS GROUP	VT	55	1.5	150	1.6	0.0	0.0	0.0	3.0	6.0	7.0
[84440] - POLYPEDILUM (URESIPEDILUM) AVICEPS	MI	51	1.5	89	2.5	0.0	0.0	0.0	6.0	9.0	9.0
[59410] - NECTOPSYCHE DIARINA	MI	23	1.5	96	2.2	1.0	0.0	0.0	3.0	7.0	9.0
[96120] - MENETUS (MICROMENETUS) DILATATUS	T	143	1.4	214	2.6	1.0	0.0	0.0	4.0	9.0	9.0
[84612] - SAETHERIA TYLUS	MI	6	1.4	69	3.1	3.0	0.0	0.0	6.0	7.0	9.0
[11400] - CENTROPTILUM SP OR PROCLOEON SP	MI	156	1.4	241	2.4	1.0	0.0	0.0	4.0	8.0	9.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
(FORMERLY IN CLOEON)											
[80427] - CRICOTOPUS (C.) POLITUS	MI	12	1.4	16	2.3	0.0	0.0	0.0	4.0	9.0	10.4
[83300] - GLYPTOTENDIPES (G.) SP	MT	658	1.4	860	2.3	1.0	0.0	0.0	3.0	7.0	9.0
[80351] - CORYNONEURA N.SP 1	MI	109	1.4	152	2.1	0.0	0.0	0.0	3.5	9.0	9.0
[04964] - MOOREOBDELLA MICROSTOMA	T	65	1.4	363	2.7	1.0	0.0	0.0	4.0	9.0	9.0
[44501] - CORIXIDAE		15	1.3	262	2.1	0.0	0.0	0.0	3.0	7.0	9.0
[18700] - HEXAGENIA SP	MI	25	1.3	166	1.7	0.0	0.0	0.0	3.0	6.0	9.0
[84030] - PARACHIRONOMUS DIRECTUS	T	20	1.3	23	1.0	1.0	0.0	0.0	1.0	3.0	4.0
[81400] - ORTHOCLADIUS SP		15	1.3	32	1.4	0.0	0.0	0.0	0.5	7.0	8.8
[08200] - ORCONECTES SP		57	1.3	296	2.0	0.0	0.0	0.0	4.0	7.0	7.0
[84888] - XENOCHIRONOMUS XENOLABIS	MI	8	1.3	143	3.2	1.0	0.0	0.0	6.7	9.0	9.3
[83051] - DICROTENDIPES SIMPSONI	T	358	1.3	406	1.9	1.0	0.0	0.0	3.0	6.0	8.0
[78200] - LARSIA SP		56	1.2	93	1.8	0.0	0.0	0.0	3.0	7.0	8.7
[67800] - TROIPISTERNUS SP	MT	6	1.2	649	2.7	1.0	0.0	0.0	4.0	9.0	9.0
[85711] - STEMPELLINELLA POSS.	I	6	1.2	6	1.8	0.5	0.0	0.0	1.0	8.2	9.0
LEPTOCELLOIDES											
[83002] - DICROTENDIPES MODESTUS		51	1.2	91	1.9	1.0	0.0	0.0	3.0	7.0	7.0
[74650] - ATRICHOPOGON SP		27	1.1	43	2.2	0.0	0.0	0.0	3.7	7.2	9.0
[04666] - HELOBDELLA TRISERIALIS	T	71	1.1	182	1.8	1.0	0.0	0.0	3.0	6.0	7.0
[78601] - PENTANEURA TYPE 1		9	1.1	11	2.7	3.0	0.0	0.0	4.0	6.4	6.9
[51206] - CYRNELLUS FRATERNUS		129	1.1	152	1.8	0.5	0.0	0.0	3.0	6.0	8.8
[05800] - CAECIDOTEA SP	MT	333	1.1	810	2.7	1.0	0.0	0.0	6.0	9.0	9.0
[03221] - PECTINATELLA MAGNIFICA		7	1.1	10	2.2	0.0	0.0	0.0	4.0	8.5	11.0
[03600] - OLIGOCHAETA	T	1931	1.1	2722	2.6	1.0	0.0	0.0	4.0	8.0	9.0
[84469] - POLYPEDILUM (P.) ILLINOENSE GROUP		17	1.1	33	0.5	0.0	0.0	0.0	0.0	1.4	5.5
[85815] - TANYTARSUS GLABRESCENS GROUP		11	1.1	15	1.4	0.0	0.0	0.0	3.0	6.0	6.0
SP 1											
[04935] - ERPOBDELLA PUNCTATA PUNCTATA	T	52	1.0	263	2.6	1.0	0.0	0.0	6.0	8.0	9.0
[84480] - POLYPEDILUM (P.) LAETUM GROUP	MI	7	1.0	124	2.8	2.5	0.0	0.0	4.0	8.1	9.0
[81700] - PSECTROCLADIUS SP		9	1.0	15	0.4	0.0	0.0	0.0	0.7	2.0	2.7
[96930] - LAEVAPEX FUSCUS		40	1.0	74	1.4	0.0	0.0	0.0	3.0	3.3	8.6

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[34110] - ACRONEURIA ABNORMIS	I	5	1.0	6	1.1	0.5	0.0	0.0	2.0	3.8	4.0
[06810] - GAMMARUS FASCIATUS		61	0.9	77	1.1	0.0	0.0	0.0	1.0	5.8	7.6
[77100] - ABLABESMYIA SP		13	0.9	26	2.9	3.0	0.0	0.0	6.0	6.9	8.0
[80700] - EUKIEFFERIELLA SP		6	0.9	18	3.0	1.0	0.0	0.0	7.0	7.0	7.6
[84475] - POLYPEDILUM (P.) OPHIOIDES	MI	18	0.9	68	4.0	4.0	0.0	0.0	7.0	9.0	11.0
[82770] - CHIRONOMUS (C.) RIPARIUS GROUP	VT	80	0.9	233	2.5	1.0	0.0	0.0	4.0	7.0	9.0
[83590] - KIEFFERULUS SP		5	0.9	10	0.9	0.0	0.0	0.0	3.0	3.0	3.0
[74673] - ATRICHOPOGON WEBSTERI		28	0.9	39	3.2	1.0	0.0	0.0	7.0	9.0	9.0
[78130] - LABRUNDINIA NEOPILOSELLA		10	0.9	10	1.9	1.0	0.0	0.0	3.0	6.0	8.0
[07860] - CAMBARUS (PUNCTICAMBARUS) ROBUSTUS		6	0.9	85	2.6	0.0	0.0	0.0	4.0	9.0	9.0
[82100] - THIENEMANNIELLA SP		29	0.8	38	0.8	0.0	0.0	0.0	0.0	5.1	6.6
[80490] - CRICOTOPUS (ISOCLADIUS) INTERSECTUS GROUP	MT	11	0.8	18	0.8	0.0	0.0	0.0	1.0	3.0	4.8
[84000] - PARACHIRONOMUS SP		41	0.8	53	1.7	0.0	0.0	0.0	3.0	6.6	9.0
[78655] - PROCLADIUS (HOLOTANYPUS) SP	MT	53	0.8	341	2.1	0.0	0.0	0.0	3.2	7.0	9.0
[13500] - STENONEMA SP		16	0.8	28	1.7	0.0	0.0	0.0	3.0	6.7	7.2
[04637] - BATRACOBDELLA PHALERA	T	11	0.8	21	1.6	0.0	0.0	0.0	3.0	6.8	8.4
[16300] - SERRATELLA SP	I	5	0.8	5	1.6	0.0	0.0	0.0	4.0	4.0	4.0
[96264] - PLANORBELLA (PIEROSOMA) PILSBRYI	T	23	0.7	69	1.9	0.0	0.0	0.0	3.0	7.0	8.0
[81200] - NANOCLADIUS SP		12	0.7	22	1.8	0.0	0.0	0.0	3.0	6.3	7.8
[07701] - CAMBARIDAE		19	0.7	72	1.8	0.0	0.0	0.0	4.0	7.0	7.0
[81201] - NANOCLADIUS (N.) SP		73	0.6	102	0.9	0.0	0.0	0.0	1.0	3.3	6.0
[69225] - OPTIOSERVUS FASTIDITUS	MI	27	0.6	136	2.6	0.0	0.0	0.0	6.0	9.0	9.0
[78400] - NATARSIA SP	MT	25	0.6	61	1.5	0.0	0.0	0.0	3.0	6.4	7.0
[11250] - CENTROPTILUM SP (W/O HINDWING PADS)	MI	10	0.6	146	2.6	1.0	0.0	0.0	5.0	7.9	9.0
[87601] - DOLICHOPODIDAE		5	0.6	21	1.3	0.0	0.0	0.0	1.5	4.8	6.9
[28001] - LIBELLULIDAE	T	5	0.5	18	2.6	0.5	0.0	0.0	3.0	10.4	11.0
[54200] - ORTHOTRICHIA SP		27	0.5	32	1.2	0.0	0.0	0.0	1.0	4.6	6.0
[59300] - MYSTACIDES SP	MI	18	0.5	103	2.1	0.0	0.0	0.0	3.0	8.2	11.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[82700] - CHIRONOMUS SP	T	14	0.5	28	1.0	0.0	0.0	0.0	1.0	3.0	7.4
[80500] - CRICOTOPUS (ISOCLADIUS) REVERSUS GROUP	VT	20	0.4	24	1.5	1.0	0.0	0.0	1.0	4.2	7.5
[83330] - GLYPTOTENDIPES (G.) BARBIPES	VT	5	0.4	9	1.8	1.0	0.0	0.0	2.2	6.6	7.0
[69420] - STENELMIS SEXLINEATA		34	0.4	79	2.8	1.0	0.0	0.0	5.7	9.0	11.0
[11101] - PLAUDITUS SP	MI	6	0.4	11	2.0	0.0	0.0	0.0	5.2	6.4	6.9
[52315] - DIPLECTRONA MODESTA		8	0.4	14	2.0	0.0	0.0	0.0	3.0	7.2	8.6
[04660] - HELOBDELLA SP	T	7	0.4	15	1.9	0.0	0.0	0.0	2.7	7.0	10.0
[04962] - MOOREOBDELLA FERVIDA	T	11	0.4	69	2.3	0.0	0.0	0.0	4.5	8.0	9.0
[12900] - HEPTAGENIA SP		6	0.3	11	1.0	0.0	0.0	0.0	1.7	4.2	5.8
[26700] - MACROMIA SP		6	0.3	144	2.5	1.0	0.0	0.0	4.0	7.0	9.0
[69410] - STENELMIS CRENATA		9	0.3	14	0.7	0.0	0.0	0.0	0.0	3.4	6.2
[85700] - STEPELLINA SP	MI	10	0.2	15	0.8	0.0	0.0	0.0	0.0	3.0	6.7
[63900] - LACCOPHILUS SP	T	10	0.2	389	2.2	1.0	0.0	0.0	3.0	7.0	9.0
[04664] - HELOBDELLA STAGNALIS	T	37	0.2	141	2.1	0.0	0.0	0.0	3.0	7.0	9.0
[80400] - CRICOTOPUS SP		24	0.2	32	0.6	0.0	0.0	0.0	0.0	2.3	6.6
[97710] - DREISSENA POLYMORPHA		27	0.1	51	2.0	1.0	0.0	0.0	3.0	7.0	9.0
[80870] - HYDROBAENUS SP	T	6	0.1	15	1.4	0.0	0.0	0.0	2.7	4.0	6.2
[80450] - CRICOTOPUS (C.) VIERRIENSIS		6	0.1	9	0.3	0.0	0.0	0.0	0.2	1.6	2.0
[33100] - LEUCTRA SP	I	6	0.1	29	2.1	0.0	0.0	0.0	4.0	8.6	11.0
[52560] - HYDROPSYCHE ORRIS	MI	13	0.1	17	1.4	0.0	0.0	0.0	1.5	7.8	9.0
[81810] - RHEOCRICOTOPUS SP		8	0.1	11	1.5	0.0	0.0	0.0	2.7	5.2	6.8
[69210] - OPTIOSERVUS AMPLIATUS	MI	7	0.1	37	1.0	0.0	0.0	0.0	1.0	3.0	6.6
[11115] - BAETIS TRICAUDATUS	MI	18	0.1	44	1.6	0.0	0.0	0.0	0.0	7.2	9.9
[52500] - HYDROPSYCHE SP		9	0.0	15	0.2	0.0	0.0	0.0	0.0	1.0	1.7
[11014] - ACENTRELLA TURBIDA	I	9	0.0	49	0.4	0.0	0.0	0.0	0.0	0.0	3.3
[95900] - GYRAULUS SP	MT	16	0.0	22	0.6	0.0	0.0	0.0	0.0	4.0	4.8

Appendix Table 22. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
		Wadeable		- CURRENT							
[43014] - TONGUETIED MINNOW	S	17	10.1	17	9.0	9.0	6.0	6.7	11.2	12.0	12.0
[43008] - STREAMLINE CHUB	R	12	9.8	12	9.0	10.0	6.0	6.5	11.0	11.0	11.0
[80020] - TIPPECANOE DARTER	R	6	9.4	6	8.5	10.0	3.3	6.0	11.0	11.0	11.0
[25001] - BROWN TROUT		25	9.4	25	8.5	9.0	6.0	7.0	9.7	12.0	12.0
[43012] - LONGNOSE DACE	R	9	8.7	9	8.1	9.0	5.0	8.0	9.0	9.0	9.0
[80017] - VARIEGATE DARTER	I	142	7.8	142	7.1	7.0	4.0	6.0	9.0	11.0	11.0
[01007] - AMER BROOK LAMPREY	R	44	7.6	44	7.2	8.0	4.0	6.0	9.0	9.3	12.0
[80019] - BLUEBREAST DARTER	R	6	7.5	6	8.1	8.5	3.4	7.0	11.0	11.0	11.0
[43022] - ROSYFACE SHINER	I	588	7.1	588	6.7	7.0	3.0	4.0	9.0	11.0	11.0
[43005] - RIVER CHUB	I	426	6.9	426	6.8	7.0	3.0	4.0	9.0	10.9	11.0
[80013] - EASTERN SAND DARTER	R	11	6.8	11	7.0	7.0	4.8	6.0	8.7	9.0	9.0
[40009] - BLACK REDHORSE	I	597	6.7	597	6.4	7.0	3.0	4.0	9.0	11.0	11.0
[80016] - BANDED DARTER	I	1038	6.7	1038	6.3	7.0	3.0	4.0	9.0	9.0	11.0
[43031] - STEELCOLOR SHINER	MT	60	6.6	60	5.6	6.0	2.0	3.0	8.0	9.0	11.0
[40011] - SHORTHEAD REDHORSE	MI	117	6.5	117	6.2	6.0	3.0	4.0	9.0	11.0	11.0
[77012] - REDEAR SUNFISH		26	6.4	26	5.5	7.0	1.2	3.0	8.0	9.0	9.0
[43017] - REDSIDE DACE	I	74	6.3	74	5.6	6.0	3.0	3.0	7.0	9.0	11.4
[80025] - LEAST DARTER		11	6.3	11	5.3	6.0	1.0	3.0	8.5	9.8	10.9
[43004] - HORNYHEAD CHUB	I	206	6.2	206	6.5	7.0	3.0	4.0	9.0	11.0	11.0
[43033] - BIGMOUTH SHINER		44	6.2	44	5.7	7.0	3.0	4.0	7.0	8.1	9.0
[43021] - SILVER SHINER	I	870	6.2	870	6.2	7.0	3.0	4.0	9.0	9.0	11.0
[40015] - NORTHERN HOG SUCKER	MI	2512	6.2	2512	5.6	6.0	2.7	3.0	8.0	9.0	11.0
[90002] - MOTTLED SCULPIN		756	6.2	756	5.8	6.0	3.0	3.0	8.0	9.0	11.0
[70001] - BROOK SILVERSIDE	MI	165	6.2	165	5.2	4.0	1.0	3.0	7.0	11.0	11.0
[80015] - GREENSIDE DARTER	MI	2519	6.0	2519	5.4	6.0	1.0	3.0	7.0	9.0	11.0
[80022] - RAINBOW DARTER	MI	1968	6.0	1968	5.6	6.0	2.0	3.0	8.0	9.0	11.0
[47008] - STONECAT MADTOM	I	609	5.9	609	6.0	6.0	3.0	3.0	9.0	9.0	11.0
[25002] - RAINBOW TROUT		15	5.8	15	6.0	6.0	3.0	3.0	8.5	9.0	11.2
[85001] - FRESHWATER DRUM	MT	177	5.8	177	5.2	6.0	1.0	3.0	7.0	9.0	9.0
[77004] - SMALLMOUTH BASS	MI	1719	5.8	1719	5.7	6.0	2.0	3.0	8.0	9.0	11.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[43020] - EMERALD SHINER		247	5.7	247	4.9	4.0	1.0	3.0	7.0	9.0	9.0
[43016] - SOUTH. REDBELLY DACE		71	5.7	71	4.5	4.0	1.0	3.0	6.7	7.4	9.0
[80011] - LOGPERCH	MI	1171	5.7	1171	5.3	5.0	1.0	3.0	8.0	9.0	11.0
[77003] - ROCK BASS		2371	5.7	2371	5.4	6.0	1.0	3.0	7.0	9.0	11.0
[95001] - BROOK STICKLEBACK		45	5.6	45	6.0	6.0	3.0	3.7	7.0	9.0	11.0
[80004] - DUSKY DARTER	MI	53	5.6	53	5.4	4.0	3.0	3.0	9.0	9.4	11.0
[43025] - STRIPED SHINER		2475	5.6	2475	5.2	5.0	1.0	3.0	7.0	9.0	11.0
[80001] - SAUGER		66	5.4	66	5.8	6.0	3.0	3.0	9.0	9.0	9.4
[43044] - CENTRAL STONEROLLER		2967	5.4	2967	5.3	6.0	1.0	3.0	7.0	9.0	11.0
[80024] - FANTAIL DARTER		1745	5.4	1745	5.3	5.0	1.0	3.0	7.0	9.0	11.0
[43011] - WESTERN BLACKNOSE DACE	T	1094	5.4	1094	5.6	6.0	3.0	3.0	7.0	9.0	9.0
[40008] - SILVER REDHORSE	MI	286	5.4	286	5.4	6.0	2.0	3.0	7.0	9.0	9.0
[40010] - GOLDEN REDHORSE	MI	1659	5.3	1659	5.3	6.0	1.0	3.0	7.0	9.0	11.0
[47012] - BRINDLED MADTOM	I	205	5.3	205	5.4	5.0	1.0	3.0	8.0	9.0	11.0
[43007] - BIGEYE CHUB	I	105	5.3	105	6.1	6.0	3.0	3.0	9.0	9.0	11.0
[43034] - SAND SHINER	MI	1650	5.3	1650	5.4	6.0	1.0	3.0	7.0	9.0	11.0
[10004] - LONGNOSE GAR		55	5.3	55	5.6	5.0	1.0	3.0	9.0	9.0	11.0
[43041] - BULLHEAD MINNOW		8	5.2	8	4.2	4.0	3.3	4.0	4.0	6.1	7.0
[01006] - LEAST BROOK LAMPREY		95	5.2	95	5.2	4.0	2.0	3.0	8.0	9.0	9.0
[43032] - SPOTFIN SHINER		1702	5.2	1702	5.3	6.0	1.0	3.0	7.0	9.0	11.0
[47002] - CHANNEL CATFISH		393	5.2	393	4.8	4.0	1.0	3.0	7.0	9.0	10.8
[77005] - SPOTTED BASS		394	5.1	394	5.1	4.0	1.0	3.0	7.0	9.0	9.0
[43026] - COMMON SHINER		554	5.1	554	4.9	4.0	1.0	3.0	7.0	9.0	9.0
[43035] - MIMIC SHINER	I	189	5.1	189	6.0	6.0	3.0	4.0	9.0	9.0	11.0
[20003] - GIZZARD SHAD		734	5.0	734	4.5	4.0	1.0	3.0	7.0	9.0	9.0
[77009] - BLUEGILL SUNFISH	MT	2368	5.0	2368	5.2	4.0	1.0	3.0	7.0	9.0	11.0
[43024] - SCARLET SHINER	MI	644	5.0	644	5.6	6.0	1.0	3.0	8.0	11.0	11.0
[80002] - WALLEYE		14	4.9	14	4.4	4.0	1.0	1.0	7.0	7.2	8.6
[40006] - RIVER CARPSUCKER		5	4.9	5	5.2	7.0	-1.0	2.7	7.5	9.0	9.0
[47007] - FLATHEAD CATFISH		31	4.9	31	5.2	5.0	1.0	3.2	7.0	9.8	11.0
[77011] - LONGEAR SUNFISH	MI	1416	4.8	1416	5.1	4.0	1.0	3.0	7.0	9.0	11.0

Appendix Table 2. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[80023] - ORANGETHROAT DARTER		305	4.7	305	4.8	4.0	1.0	3.0	7.0	9.0	11.0
[77006] - LARGEMOUTH BASS		1842	4.6	1842	5.0	4.0	1.0	3.0	7.0	9.0	11.0
[77007] - WARMOUTH SUNFISH		193	4.6	193	4.6	4.0	1.0	3.0	7.0	9.0	11.0
[77002] - BLACK CRAPPIE		223	4.6	223	4.5	4.0	1.0	2.0	7.0	9.0	11.0
[80007] - SLENDERHEAD DARTER	R	10	4.5	10	6.1	5.5	1.0	4.0	9.0	11.0	11.0
[40016] - WHITE SUCKER	T	3114	4.4	3114	5.0	4.0	1.0	3.0	7.0	9.0	9.0
[34001] - CENTRAL MUDMINNOW	T	170	4.4	170	4.6	4.0	1.0	3.0	7.0	9.0	9.0
[77013] - PUMPKINSEED SUNFISH	MT	511	4.4	511	5.1	4.0	1.0	3.0	7.0	9.0	11.0
[43013] - CREEK CHUB	T	3020	4.4	3020	4.9	4.0	1.0	3.0	7.0	9.0	9.0
[40007] - HIGHFIN CARPSUCKER		6	4.3	6	4.5	3.0	3.0	3.0	4.0	10.3	11.0
[37001] - GRASS PICKEREL	MT	643	4.3	643	4.6	4.0	1.0	3.0	7.0	9.0	11.0
[63001] - TROUT-PERCH		170	4.2	170	4.5	3.0	1.0	3.0	7.0	9.0	9.0
[43043] - BLUNTNOSE MINNOW	T	3427	4.1	3427	4.9	4.0	1.0	3.0	7.0	9.0	9.0
[47004] - YELLOW BULLHEAD	T	2275	4.1	2275	4.7	4.0	1.0	3.0	7.0	9.0	9.0
[77008] - GREEN SUNFISH	T	3187	4.0	3187	4.8	4.0	1.0	3.0	7.0	9.0	9.0
[43003] - GOLDEN SHINER	T	314	4.0	314	3.6	3.0	1.0	1.0	6.0	7.0	9.0
[80014] - JOHNNY DARTER		2398	4.0	2398	4.8	4.0	1.0	3.0	7.0	9.0	9.0
[43039] - SILVERJAW MINNOW		1374	4.0	1374	4.8	4.0	1.0	3.0	7.0	9.0	9.0
[43015] - SUCKERMOUTH MINNOW		588	3.8	588	4.5	4.0	1.0	3.0	7.0	9.0	9.0
[40018] - SPOTTED SUCKER		344	3.8	344	4.4	4.0	1.0	2.0	7.0	9.0	10.3
[80003] - YELLOW PERCH		122	3.7	122	4.4	4.0	1.0	2.0	7.0	9.0	9.0
[43001] - COMMON CARP	T	1842	3.7	1842	4.8	4.0	1.0	3.0	7.0	9.0	9.0
[15001] - BOWFIN		8	3.6	8	4.1	4.5	1.0	1.0	7.0	7.0	7.0
[37003] - NORTHERN PIKE		55	3.5	55	4.1	4.0	1.0	1.0	7.0	8.0	9.0
[77001] - WHITE CRAPPIE		534	3.5	534	4.2	3.0	1.0	2.0	7.0	8.0	9.0
[80005] - BLACKSIDE DARTER		1070	3.5	1070	4.3	3.0	1.0	2.0	7.0	9.0	9.0
[47005] - BROWN BULLHEAD	T	165	3.3	165	4.0	3.0	1.0	2.0	6.0	8.0	9.2
[43045] - COMMON CARP X GOLDFISH	T	41	3.1	41	3.6	3.0	1.0	1.0	6.0	7.0	7.4
[40005] - QUILLBACK CARPSUCKER		328	2.9	328	4.1	3.0	1.0	2.0	6.5	8.0	9.0
[40012] - GREATER REDHORSE	R	7	2.9	7	2.8	3.0	1.4	3.0	3.0	3.8	4.0
[47013] - TADPOLE MADTOM		195	2.8	195	3.2	3.0	1.0	1.0	4.0	8.0	9.0

Appendix Table 2 Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[43023] - REDFIN SHINER		585	2.6	585	3.4	3.0	1.0	1.0	4.0	8.0	9.0
[43002] - GOLDFISH	T	152	2.6	152	3.9	3.0	1.0	1.0	6.5	8.0	9.0
[74001] - WHITE BASS		29	2.5	29	3.4	3.0	1.0	1.0	6.2	8.6	9.0
[77010] - ORANGESPOTTED SUNFISH		315	2.4	315	3.4	3.0	1.0	1.0	4.0	9.0	9.0
[47006] - BLACK BULLHEAD	MT	339	2.4	339	3.4	3.0	1.0	1.0	4.7	7.0	9.0
[43036] - GHOST SHINER		6	2.4	6	1.8	1.0	1.0	1.0	3.0	3.9	4.0
[40020] - CREEK CHUBSUCKER		38	2.3	38	3.9	3.0	1.0	3.0	6.0	8.7	9.0
[54002] - BLACKSTRIPE TOPMINNOW		547	2.2	547	3.3	3.0	1.0	1.0	4.0	7.0	9.0
[43042] - FATHEAD MINNOW	T	644	2.0	644	3.7	3.0	1.0	1.0	6.0	8.0	9.0
[43030] - BIGEYE SHINER	R	11	1.9	11	3.0	3.0	1.0	1.0	5.2	7.0	7.0
[40002] - BIGMOUTH BUFFALO		5	1.2	5	1.4	1.0	1.0	1.0	1.5	3.0	3.0
[74003] - WHITE PERCH		9	1.0	9	1.2	1.0	1.0	1.0	1.0	2.2	3.0
[43028] - SPOTTAIL SHINER	MT	7	1.0	7	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
			Wadeable	- DEPTH							
[52620] - MACROSTEMUM ZEBRATUM	I	21	11.3	42	7.2	10.0	0.0	2.0	10.0	11.0	11.8
[34140] - ACRONEURIA INTERNATA	MI	7	9.1	12	7.0	10.0	0.0	1.0	10.0	11.6	12.8
[96801] - ANCYLIDAE		6	8.9	8	6.2	8.5	0.0	1.5	10.0	10.0	10.0
[89501] - EPHYDRIDAE		10	8.8	62	5.1	4.5	0.0	0.0	10.0	11.0	11.0
[11700] - ACENTRELLA SP OR PLAUDITUS SP (FORMERLY IN PSEUDOCLOEON)	I	20	8.6	46	4.7	2.5	0.0	0.0	10.0	10.0	11.0
[50906] - PSYCHOMYIA FLAVIDA	I	23	8.5	69	4.7	0.0	0.0	0.0	10.0	11.0	11.0
[18100] - ANTHOPOTAMUS SP	MI	23	8.4	124	4.6	3.0	0.0	0.0	10.0	11.0	11.0
[13120] - NIXE PERFIDA	MI	6	8.4	27	3.0	0.0	0.0	0.0	8.0	10.0	11.0
[83860] - MICROTENDIPES RYDALENSIS	MI	22	8.3	27	6.4	9.0	0.0	0.0	11.0	11.0	11.3
[11118] - PLAUDITUS DUBIUS	MI	5	8.2	13	7.6	9.0	0.0	6.0	10.0	11.4	12.7
[59100] - CERACLEA SP	MI	19	8.1	66	4.8	4.0	0.0	0.0	9.0	10.9	11.0
[69250] - OPTIOSERVUS OVALIS	MI	5	7.8	16	4.5	5.0	0.0	0.0	9.0	9.0	9.7
[84302] - PHAENOPSECTRA PUNCTIPES		32	7.8	44	5.9	8.0	0.0	0.0	10.0	11.0	11.0
[21001] - CALOPTERYGIDAE		20	7.6	32	4.0	0.0	0.0	0.0	9.5	10.0	10.9
[59001] - LEPTOCERIDAE	MI	43	7.5	61	5.1	7.0	0.0	0.0	10.0	11.0	11.0
[52520] - HYDROPSYCHE BIDENS	MI	16	7.5	19	4.5	2.0	0.0	0.0	9.7	10.0	10.5
[07840] - CAMBARUS (CAMBARUS) SCIOTENSIS		8	7.5	36	5.9	8.0	0.0	0.0	10.0	10.0	10.7
[30800] - PTERONARCYS SP	I	8	7.5	17	4.7	0.0	0.0	0.0	10.0	10.0	10.6
[84200] - PARATENDIPES SP		13	7.4	14	4.7	4.5	0.0	0.0	9.0	11.0	11.0
[48610] - NIGRONIA FASCIATUS	MI	9	7.4	19	6.6	8.0	0.0	3.2	10.0	10.0	10.5
[81460] - ORTHOCLADIUS (O.) SP		33	7.4	100	4.5	4.0	0.0	0.0	9.0	10.0	11.0
[18501] - EPHEMERIDAE	MI	8	7.4	9	5.2	3.0	0.0	1.5	10.0	10.0	10.0
[63300] - HYDROPORUS SP		6	7.3	535	4.3	3.0	0.0	0.0	9.0	10.0	11.0
[52580] - HYDROPSYCHE VALANIS		15	7.2	25	6.8	9.0	0.0	3.5	10.0	11.0	11.5
[77110] - ABLABESMYIA ANNULATA		7	7.2	18	5.3	7.5	0.0	0.0	10.0	10.0	10.0
[14501] - LEPTOPHLEBIIDAE	MI	16	7.2	17	5.3	5.0	0.0	1.5	10.0	10.0	10.0
[31800] - TAENIOPTERYX SP	MI	15	7.1	19	4.2	1.0	0.0	0.0	8.7	11.0	11.0
[78402] - NATARSIA BALTIMOREUS		6	7.1	32	4.5	3.0	0.0	0.0	9.5	10.0	10.9
[59140] - CERACLEA MACULATA	MI	7	7.0	13	5.0	6.0	0.0	0.0	10.0	11.0	11.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[72101] - PSYCHODIDAE		6	7.0	9	3.7	1.0	0.0	0.0	7.2	9.8	11.0
[11155] - PLAUDITUS PUNCTIVENTRIS	MI	27	6.9	43	4.6	4.0	0.0	0.0	9.7	11.4	13.0
[81465] - ORTHOCLADIUS (O.) CARLATUS	MI	36	6.9	44	4.8	1.5	0.0	0.0	10.0	11.0	11.6
[59110] - CERACLEA ANCYLUS	I	6	6.8	103	4.3	2.0	0.0	0.0	9.0	11.0	11.0
[13510] - STENONEMA EXIGUUM	I	302	6.7	360	5.2	8.0	0.0	0.0	10.0	11.0	11.0
[95501] - PLANORBIDAE	MT	31	6.7	39	5.3	8.0	0.0	0.0	9.0	10.0	10.0
[84520] - POLYPEDILUM (TRIPODURA)		71	6.6	181	4.7	4.0	0.0	0.0	9.0	10.0	11.0
HALTERALE GROUP											
[82130] - THIENEMANNIELLA SIMILIS	I	32	6.6	43	5.0	6.0	0.0	0.0	9.0	11.0	11.0
[51300] - NEURECLIPSIS SP	MI	123	6.6	172	5.4	8.0	0.0	0.0	10.0	11.0	11.0
[81229] - NANOCLADIUS (N.) CRASSICORNUS		42	6.5	46	5.8	8.0	0.0	0.0	10.0	11.0	11.0
[13540] - STENONEMA MEDIOPUNCTATUM	I	220	6.5	285	4.1	0.0	0.0	0.0	10.0	11.0	11.0
[52431] - CERATOPSYCHE MOROSA	MI	27	6.5	37	5.5	9.0	0.0	0.0	10.0	10.0	10.6
[11300] - PROCLOEON SP (FORMERLY IN CENTROPTILUM)	MI	72	6.5	217	4.8	4.0	0.0	0.0	9.0	10.0	10.0
[06800] - GAMMARUS SP		12	6.5	17	4.3	0.0	0.0	0.0	10.0	10.0	10.6
[52550] - HYDROPSYCHE FRISONI	I	84	6.4	111	5.4	7.0	0.0	0.0	10.0	11.0	11.0
[14900] - LEPTOPHLEBIA SP	I	23	6.4	48	1.6	0.0	0.0	0.0	0.5	7.0	10.0
[83820] - MICROTENDIPES "CAELUM" (SENSU SIMPSON & BODE, 1980)	MI	247	6.4	611	4.9	5.0	0.0	0.0	9.7	10.0	11.0
[85265] - CLADOTANYTARSUS VANDERWULPI	MI	9	6.3	33	6.6	9.0	0.0	1.7	10.0	11.0	12.7
GROUP TYPE 5											
[52590] - HYDROPSYCHE VENULARIS	MI	42	6.3	82	4.5	4.0	0.0	0.0	9.0	10.0	11.0
[70501] - TIPULIDAE		10	6.3	31	3.2	0.0	0.0	0.0	9.0	10.4	11.0
[71900] - TIPULA SP		143	6.3	692	4.3	2.0	0.0	0.0	9.0	10.0	11.0
[01418] - CRASPEDACUSTA SOWERBYI		54	6.3	54	5.7	7.5	0.0	0.0	10.0	11.0	11.0
[85814] - TANYTARSUS GLABRESCENS GROUP		1046	6.3	1203	5.5	8.0	0.0	0.0	10.0	10.0	11.0
[80310] - CARDIOCLADIUS OBSCURUS	MI	41	6.2	252	5.0	5.5	0.0	0.0	10.0	10.0	11.0
[82070] - SYNORTHOCLADIUS SEMIVIRENS	I	17	6.2	20	6.1	9.0	0.0	0.0	10.0	11.0	11.0
[13560] - STENONEMA PULCHELLUM GROUP	MI	70	6.2	154	4.3	3.5	0.0	0.0	9.0	10.0	10.0
[16324] - SERRATELLA DEFICIENS	I	42	6.1	53	4.4	0.0	0.0	0.0	10.0	10.0	11.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[60400] - GYRINUS SP		17	6.1	179	4.0	2.0	0.0	0.0	9.0	10.0	11.0
[34100] - ACRONEURIA SP	MI	8	6.1	18	4.4	2.5	0.0	0.0	9.0	10.4	11.0
[87501] - EMPIDIDAE		585	6.0	732	5.0	6.0	0.0	0.0	9.0	10.0	10.9
[83310] - GLYPTOTENDIPES (TRICHOTENDIPES) AMPLUS	MI	32	6.0	46	6.4	8.0	0.0	0.0	10.0	10.9	11.0
[52570] - HYDROPSYCHE SIMULANS	MI	126	6.0	201	4.8	5.0	0.0	0.0	9.0	10.0	11.0
[11150] - PSEUDOCLOEON PROPINQUUM	I	16	6.0	118	4.7	2.5	0.0	0.0	10.0	11.0	11.0
[77750] - HAYESOMYIA SENATA OR THIENEMANNIMYIA NORENA		1027	6.0	1310	4.8	4.0	0.0	0.0	9.0	10.0	11.0
[01320] - HYDRA SP		1228	6.0	1250	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[54100] - NEOTRICHIA SP		30	6.0	30	3.8	0.0	0.0	0.0	9.0	10.5	11.0
[84410] - POLYPEDILUM (PENTAPEDILUM) TRITUM VAR. I	VT	15	6.0	17	5.7	7.0	0.0	0.0	10.2	11.0	12.3
[94201] - LYMNAEIDAE		13	6.0	21	7.3	9.0	0.0	5.7	10.0	10.0	10.4
[30000] - PLECOPTERA		57	6.0	72	4.8	4.0	0.0	0.0	9.0	10.0	11.0
[28208] - ERYTHEMIS SIMPLICICOLLIS	MT	7	6.0	33	3.3	2.0	0.0	0.0	8.0	10.0	10.0
[18600] - EPHEMERA SP	MI	127	5.9	475	4.7	4.0	0.0	0.0	10.0	11.0	11.0
[80490] - CRICOTOPUS (ISOCLADIUS) INTERSECTUS GROUP	MT	11	5.9	18	2.8	0.0	0.0	0.0	8.0	8.7	10.2
[59570] - OECETIS NOCTURNA		13	5.9	66	3.5	1.5	0.0	0.0	8.0	10.0	11.0
[78600] - PENTANEURA INCONSPICUA		69	5.9	99	4.5	4.0	0.0	0.0	9.0	10.0	11.0
[52540] - HYDROPSYCHE DICANTHA	MI	282	5.9	558	5.1	6.0	0.0	0.0	10.0	11.0	11.0
[11645] - PROCLOEON SP	MI	12	5.9	14	5.4	7.5	0.0	0.0	9.0	10.1	10.8
[85625] - RHEOTANYTARSUS SP	MI	1652	5.9	2111	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[24900] - GOMPHUS SP		14	5.9	419	4.6	3.0	0.0	0.0	9.0	10.6	11.0
[85615] - RHEOTANYTARSUS PELLUCIDUS	MI	400	5.8	527	4.4	2.0	0.0	0.0	9.0	10.0	11.0
[87510] - CHELIFERA SP	MI	13	5.8	21	4.1	0.0	0.0	0.0	9.2	10.4	11.0
[13550] - STENONEMA MEXICANUM INTEGRUM	MI	50	5.8	59	4.9	4.0	0.0	0.0	9.0	10.0	11.0
[84421] - POLYPEDILUM (P.) SP 2	VT	5	5.8	5	4.6	6.0	0.0	0.0	8.2	9.0	9.0
[85802] - TANYTARSUS CURTICORNIS GROUP	MI	416	5.8	442	4.9	4.5	0.0	0.0	9.0	11.0	11.0
[85803] - TANYTARSUS TYPE 3		48	5.8	55	4.9	4.0	0.0	0.0	9.0	10.0	10.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[81231] - NANOCLADIUS (N.) CRASSICORNUS OR N. (N.) "RECTINERVIS"		408	5.8	457	4.9	5.0	0.0	0.0	9.0	10.0	11.0
[72420] - CHAOBORUS SP	T	5	5.8	13	4.1	6.0	0.0	0.0	8.0	8.0	8.0
[48410] - CORYDALUS CORNUTUS	MI	267	5.8	603	4.6	4.0	0.0	0.0	10.0	11.0	11.0
[83600] - KIEFFERULUS (K.) DUX		19	5.8	21	4.1	3.0	0.0	0.0	8.0	8.8	10.0
[83900] - NILOTHAUMA SP	MI	109	5.7	125	4.9	7.0	0.0	0.0	9.0	11.0	11.0
[81270] - NANOCLADIUS (N.) SPINIPLenus	MI	197	5.7	263	4.8	5.0	0.0	0.0	10.0	10.0	11.0
[06700] - CRANGONYX SP	MT	229	5.7	810	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[08601] - HYDRACARINA		697	5.7	1040	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[83003] - DICROTENDIPES FUMIDUS		61	5.6	132	4.6	4.0	0.0	0.0	9.5	10.0	11.0
[06201] - HYALELLA AZTECA		218	5.6	1170	4.3	3.0	0.0	0.0	9.0	10.0	11.0
[12912] - HEPTAGENIA DIABASIA	MI	11	5.6	19	5.6	7.0	0.0	2.0	9.0	9.6	10.5
[08230] - ORCONNECTES (CROKERINUS) OBSCURUS		13	5.6	122	5.5	8.0	0.0	0.0	10.0	11.0	11.0
[59310] - MYSTACIDES SEPULCHRALIS	MI	11	5.6	82	3.4	0.0	0.0	0.0	9.0	10.0	11.0
[12200] - ISONYCHIA SP	MI	846	5.6	1461	4.8	4.0	0.0	0.0	10.0	10.0	11.0
[77800] - HELOPELOPIA SP		951	5.6	1444	5.0	5.0	0.0	0.0	9.0	10.0	11.0
[03000] - ECTOPROCTA		5	5.6	30	4.2	1.0	0.0	0.0	9.0	10.5	11.0
[13100] - NIXE SP	I	10	5.6	139	5.2	7.0	0.0	0.0	10.0	11.0	11.0
[15000] - PARALEPTOPHLEBIA SP	MI	237	5.5	284	4.5	3.0	0.0	0.0	9.0	10.0	10.3
[77001] - TANYPODINAE		7	5.5	19	4.1	2.0	0.0	0.0	9.5	10.6	11.0
[52530] - HYDROPSYCHE DEPRAVATA GROUP		863	5.5	1744	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[84750] - STICTOCHIRONOMUS SP		57	5.5	870	4.2	3.0	0.0	0.0	9.0	10.0	10.0
[11110] - ACENTRELLA PARVULA	I	8	5.5	9	3.5	0.0	0.0	0.0	8.5	10.0	10.0
[84490] - POLYPEDILUM (CEROBREGMA) ONTARIO	MI	31	5.5	51	5.2	7.0	0.0	0.0	9.0	10.0	10.9
[67700] - PARACYMUS SP		5	5.5	223	4.8	5.0	0.0	0.0	9.0	10.0	11.0
[11130] - BAETIS INTERCALARIS		1003	5.5	1517	4.7	4.0	0.0	0.0	9.0	10.0	11.0
[85263] - CLADOTANYTARSUS VANDERWULPI GROUP TYPE 3	MI	6	5.5	13	3.3	0.0	0.0	0.0	8.2	10.2	10.8
[21300] - HETAERINA SP		150	5.5	396	5.4	7.0	0.0	0.0	10.0	11.0	11.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[11018] - ACERPENNA MACDUNNOUGHI	I	38	5.4	48	3.4	0.0	0.0	0.0	8.5	10.0	11.2
[54300] - OXYETHIRA SP		21	5.4	24	5.2	8.0	0.0	0.0	8.0	9.0	9.0
[82880] - CRYPTOTENDIPES SP	MI	15	5.4	94	5.0	6.0	0.0	0.0	9.0	10.0	11.0
[12501] - HEPTAGENIIDAE		11	5.4	15	3.5	1.0	0.0	0.0	9.0	10.0	10.0
[84010] - PARACHIRONOMUS "ABORTIVUS" (SENSU SIMPSON & BODE, 1980)	T	37	5.4	54	4.1	2.0	0.0	0.0	8.0	10.0	10.8
[52430] - CERATOPSYCHE MOROSA GROUP	MI	1057	5.4	1723	4.5	3.0	0.0	0.0	9.0	10.0	11.0
[86401] - ATHERIX LANTHA	MI	112	5.4	403	4.1	0.0	0.0	0.0	10.0	10.0	11.0
[78750] - RHEOPELOPIA PARAMACULIPENNIS	MI	36	5.4	54	4.8	4.0	0.0	0.0	9.0	10.1	11.0
[93900] - ELIMIA SP	MI	455	5.4	936	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[13580] - STENONEMA TRIPUNCTATUM (OLD)		239	5.4	380	4.4	4.0	0.0	0.0	9.0	10.0	10.0
[72700] - ANOPHELES SP		5	5.4	332	4.3	3.0	0.0	0.0	9.0	10.0	11.0
[74100] - SIMULIUM SP		584	5.3	1560	4.5	4.0	0.0	0.0	9.0	10.0	11.0
[85264] - CLADOTANYTARSUS VANDERWULPI GROUP TYPE 4	MI	15	5.3	46	4.7	4.0	0.0	0.0	9.0	10.0	11.0
[85500] - PARATANYTARSUS SP		999	5.3	1217	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[11120] - BAETIS FLAVISTRIGA		620	5.3	1000	4.7	4.0	0.0	0.0	9.0	10.0	11.0
[78450] - NILOTANYPUS FIMBRIATUS	MI	888	5.3	986	4.7	4.0	0.0	0.0	10.0	10.0	11.0
[85840] - TANYTARSUS SEPP	MI	1016	5.3	1194	4.5	3.0	0.0	0.0	9.0	10.0	11.0
[68601] - ANCYRONYX VARIEGATA	MI	597	5.3	1007	4.7	4.0	0.0	0.0	9.0	10.0	11.0
[80410] - CRICOTOPUS (C.) SP		726	5.3	960	4.9	5.0	0.0	0.0	9.0	10.0	11.0
[13000] - LEUCROCUTA SP	I	488	5.3	912	4.9	5.0	0.0	0.0	9.0	10.0	11.0
[77500] - CONCHAPELOPIA SP		1318	5.3	1863	4.7	4.0	0.0	0.0	9.0	10.0	11.0
[98001] - SPHAERIIDAE		43	5.3	76	3.4	0.0	0.0	0.0	9.0	11.0	11.0
[13570] - STENONEMA TERMINATUM	MI	299	5.2	418	5.2	6.5	0.0	0.0	10.0	11.0	11.0
[15600] - EPHEMERELLA SP	MI	11	5.2	19	4.1	0.0	0.0	0.0	9.7	10.0	10.0
[77120] - ABLABESMYIA MALLOCHI		850	5.2	1471	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[81280] - NANOCLADIUS (PLECOPTERACOLUTHUS) DOWNESI	I	14	5.2	55	3.5	0.0	0.0	0.0	9.0	10.0	11.0
[59520] - OECETIS CINERASCENS		9	5.2	17	4.4	4.0	0.0	0.0	8.0	9.8	10.0
[81690] - PARATRICHOCLADIUS SP	MI	67	5.2	106	4.5	3.0	0.0	0.0	9.0	10.0	11.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[59400] - NECTOPSYCHE SP	MI	20	5.2	54	4.6	5.0	0.0	0.0	9.0	10.0	10.0
[16200] - EURYLOPHELLA SP	MI	87	5.2	101	4.9	6.0	0.0	0.0	9.0	10.0	11.0
[96900] - FERRISSIA SP		1507	5.2	1988	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[79210] - THIENEMANNIMYIA NORENA		9	5.2	15	5.2	5.0	0.0	0.0	10.0	10.0	10.0
[80430] - CRICOTOPUS (C.) TREMULUS GROUP		625	5.2	987	4.8	4.0	0.0	0.0	10.0	10.0	11.0
[11670] - PROCLOEON IRRUBRUM	MI	11	5.2	258	4.8	4.0	0.0	0.0	10.0	11.0	11.0
[84790] - TRIBELOS FUSCICORNE		171	5.2	232	4.5	4.0	0.0	0.0	9.0	10.0	10.9
[84700] - STENOCHIRONOMUS SP		145	5.2	408	4.6	3.5	0.0	0.0	9.0	10.0	11.0
[81260] - NANOCLADIUS (N.) "RECTINERVIS" (OLD)		39	5.2	44	4.3	4.0	0.0	0.0	8.0	9.0	10.0
[82121] - THIENEMANNIELLA LOBAPODEMA	MI	416	5.2	443	4.6	4.0	0.0	0.0	9.0	10.2	11.0
[84300] - PHAENOPSECTRA OBEDIENS GROUP		562	5.1	914	4.9	5.5	0.0	0.0	9.0	10.0	11.0
[84460] - POLYPEDILUM (P.) FALLAX GROUP		1540	5.1	1726	4.5	3.0	0.0	0.0	9.0	10.0	11.0
[78101] - LABRUNDINIA BECKI		22	5.1	24	5.3	7.5	0.0	0.0	9.0	10.0	10.0
[48620] - NIGRONIA SERRICORNIS		176	5.1	440	4.5	0.5	0.0	0.0	9.0	10.0	11.0
[85261] - CLADOTANYTARSUS VANDERWULPI GROUP TYPE 1	I	109	5.1	200	4.8	4.0	0.0	0.0	10.0	10.0	11.0
[83410] - HARNISCHIA CURTILAMELLATA		9	5.1	39	5.2	8.0	0.0	0.0	10.0	11.0	11.0
[51400] - NYCTIOPHYLAX SP	MI	143	5.1	314	4.2	1.5	0.0	0.0	9.0	10.0	11.0
[71300] - LIMONIA SP		12	5.1	105	3.7	0.0	0.0	0.0	9.0	10.0	11.0
[11020] - ACERPENNA PYGMAEA	I	366	5.1	432	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[80360] - CORYNONEURA "CELERIPES" (SENSU SIMPSON & BODE, 1980)	I	203	5.1	247	5.0	6.0	0.0	0.0	9.0	11.0	11.0
[02600] - NEMATOMORPHA		14	5.1	97	4.0	3.0	0.0	0.0	8.2	10.0	10.6
[77115] - ABLABESMYIA JANTA		65	5.1	100	4.5	4.0	0.0	0.0	9.0	10.0	10.5
[34150] - ACRONEURIA LYCORIAS	I	7	5.1	8	6.2	10.0	0.0	0.0	10.0	10.0	10.0
[82141] - THIENEMANNIELLA XENA		847	5.1	1039	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[53800] - HYDROPTILA SP		649	5.1	1023	4.5	3.0	0.0	0.0	9.0	10.0	11.0
[13521] - STENONEMA FEMORATUM		728	5.1	1281	4.3	3.0	0.0	0.0	9.0	10.0	11.0
[85800] - TANYTARSUS SP	MI	912	5.0	1229	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[85230] - CLADOTANYTARSUS MANCUS GROUP		68	5.0	206	4.6	4.0	0.0	0.0	9.0	10.0	11.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[59970] - PETROPHILA SP	I	70	5.0	492	4.4	3.0	0.0	0.0	9.5	10.0	11.0
[97601] - CORBICULA FLUMINEA	MI	183	5.0	569	3.9	0.0	0.0	0.0	9.0	10.0	11.0
[59500] - OECETIS SP	MI	117	5.0	192	3.9	0.0	0.0	0.0	9.0	10.0	11.0
[85710] - TEMPELLINELLA SP	MI	50	5.0	65	5.5	8.0	0.0	0.0	10.0	10.0	11.0
[13561] - STENONEMA PULCHELLUM	MI	834	5.0	1062	4.6	3.0	0.0	0.0	10.0	11.0	11.0
[80204] - BRILLIA FLAVIFRONS GROUP		105	5.0	188	4.8	5.5	0.0	0.0	10.0	10.0	11.0
[84450] - POLYPEDILUM (URESIPEDILUM) FLAVUM		1385	5.0	2157	4.5	3.0	0.0	0.0	9.0	10.0	11.0
[04685] - PLACOBDELLA ORNATA		15	5.0	138	4.3	3.0	0.0	0.0	9.0	10.7	11.0
[07800] - CAMBARUS SP		17	5.0	62	3.9	1.0	0.0	0.0	9.0	10.0	11.0
[03451] - URNATELLA GRACILIS		105	4.9	136	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[84540] - POLYPEDILUM (TRIPODURA) SCALAENUM GROUP		1202	4.9	1728	4.5	4.0	0.0	0.0	9.0	10.0	11.0
[60300] - DINEUTUS SP		89	4.9	400	4.3	2.0	0.0	0.0	9.0	10.0	11.0
[81632] - PARAKIEFFERIELLA N.SP 2	MI	117	4.9	197	4.7	4.0	0.0	0.0	9.0	10.0	11.0
[11100] - BAETIS SP		397	4.9	741	3.7	0.0	0.0	0.0	9.0	10.0	10.0
[85200] - CLADOTANYTARSUS SP		58	4.9	112	3.1	0.0	0.0	0.0	7.5	10.0	10.0
[59510] - OECETIS AVARA	I	15	4.8	19	2.3	0.0	0.0	0.0	3.7	9.6	10.0
[80370] - CORYNONEURA LOBATA	MI	1390	4.8	1471	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[04687] - PLACOBDELLA PARASITICA		8	4.8	44	3.4	2.0	0.0	0.0	8.0	10.0	10.0
[68901] - MACRONYCHUS GLABRATUS	MI	1365	4.8	1744	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[13400] - STENACRON SP		1666	4.8	2535	4.2	3.0	0.0	0.0	9.0	10.0	11.0
[84800] - TRIBELOS JUCUNDUM		191	4.8	305	4.7	5.0	0.0	0.0	9.0	10.0	11.0
[52200] - CHEUMATOPSYCHE SP		1846	4.8	2778	4.3	3.0	0.0	0.0	9.0	10.0	11.0
[03221] - PECTINATELLA MAGNIFICA		7	4.8	10	4.2	3.0	0.0	0.0	8.0	10.0	10.0
[77740] - HAYESOMYIA SENATA		86	4.7	114	4.9	5.0	0.0	0.0	9.0	10.0	11.0
[81240] - NANOCLADIUS (N.) DISTINCTUS	MT	434	4.7	481	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[78140] - LABRUNDINIA PILOSELLA	MI	389	4.7	440	4.8	5.0	0.0	0.0	9.0	10.0	11.0
[98600] - SPHAERIUM SP		263	4.7	1418	4.2	3.0	0.0	0.0	9.0	10.0	11.0
[81631] - PARAKIEFFERIELLA N.SP 1		96	4.7	132	4.9	6.5	0.0	0.0	9.0	10.0	11.0
[13590] - STENONEMA VICARIUM	MI	447	4.7	615	4.4	3.0	0.0	0.0	9.0	10.0	11.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[03360] - PLUMATELLA SP		664	4.7	1197	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[84060] - PARACHIRONOMUS PECTINATELLAE		53	4.7	85	5.8	8.0	0.0	0.0	9.0	11.0	11.0
[78401] - NATARSIA SPECIES A (SENSU ROBACK, 1978)	T	67	4.7	383	4.7	4.0	0.0	0.0	9.0	10.0	11.0
[85801] - TANYTARSUS TYPE 1	MI	8	4.7	8	5.1	4.5	0.0	0.0	10.5	11.0	11.0
[34410] - PARAGNETINA MEDIA	I	38	4.7	55	4.1	0.0	0.0	0.0	10.0	10.0	11.0
[18700] - HEXAGENIA SP	MI	25	4.6	166	3.1	0.0	0.0	0.0	8.0	10.0	10.2
[06810] - GAMMARUS FASCIATUS		61	4.6	77	2.2	0.0	0.0	0.0	3.2	9.8	10.0
[81230] - NANOCLADIUS (N.) CRASSICORNUS (OLD)		165	4.6	195	4.6	4.0	0.0	0.0	9.0	10.0	10.0
[23909] - BOYERIA VINOSA		214	4.6	1361	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[87540] - HEMERODROMIA SP		909	4.6	1040	4.6	3.0	0.0	0.0	9.0	11.0	11.0
[84030] - PARACHIRONOMUS DIRECTUS	T	20	4.6	23	4.1	3.0	0.0	0.0	8.0	8.2	9.0
[80420] - CRICOTOPUS (C.) BICINCTUS	MT	799	4.6	1394	4.5	3.0	0.0	0.0	9.0	10.0	11.0
[50301] - CHIMARRA ATERRIMA	MI	34	4.6	170	4.1	0.0	0.0	0.0	9.0	10.0	10.0
[01200] - CORDYLOPHORA LACUSTRIS		46	4.6	50	3.9	0.0	0.0	0.0	8.0	10.0	11.0
[83040] - DICROTENDIPES NEOMODESTUS		1184	4.6	1637	4.3	3.0	0.0	0.0	9.0	10.0	11.0
[34700] - AGNETINA CAPITATA COMPLEX	I	48	4.5	121	4.1	0.0	0.0	0.0	9.0	10.0	10.4
[03121] - PALUDICELLA ARTICULATA	MI	40	4.5	77	4.9	4.0	0.0	0.0	10.0	11.0	11.0
[84315] - PHAENOPSECTRA FLAVIPES		210	4.5	369	4.9	5.0	0.0	0.0	9.0	10.0	11.0
[71100] - HEXATOMA SP	MI	56	4.5	765	4.7	4.0	0.0	0.0	9.0	10.0	11.0
[08260] - ORCONNECTES (CROKERINUS) SANBORNII SANBORNII		65	4.5	522	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[69200] - OPTIOSERVUS SP	MI	34	4.5	152	4.5	3.0	0.0	0.0	9.0	10.0	11.0
[83000] - DICROTENDIPES SP		43	4.5	62	5.2	7.0	0.0	0.0	9.0	10.0	11.0
[80440] - CRICOTOPUS (C.) TRIFASCIA		35	4.5	230	4.9	5.0	0.0	0.0	10.0	10.0	11.0
[82730] - CHIRONOMUS (C.) DECORUS GROUP	T	370	4.4	1029	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[82220] - TVETENIA DISCOLORIPES GROUP	I	121	4.4	230	4.6	0.0	0.0	0.0	10.0	11.0	11.0
[34120] - ACRONEURIA CAROLINENSIS	I	20	4.4	32	3.5	0.0	0.0	0.0	9.0	10.0	10.0
[87601] - DOLICHOPODIDAE		5	4.4	21	3.0	0.0	0.0	0.0	8.0	9.0	9.4
[69400] - STENELMIS SP		1382	4.4	2639	4.3	3.0	0.0	0.0	9.0	10.0	11.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[16700] - TRICORYTHODES SP	MI	661	4.4	852	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[11125] - PSEUDOCLOEON FRONDALE	I	8	4.4	60	4.1	0.0	0.0	0.0	10.0	11.0	11.0
[85720] - STEPELLINELLA N.SP NR. FLAVIDULA	I	246	4.4	317	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[84470] - POLYPEDILUM (P.) ILLINOENSE	T	739	4.4	1898	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[17200] - CAENIS SP		1531	4.4	2286	4.3	3.0	0.0	0.0	9.0	10.0	11.0
[84050] - PARACHIRONOMUS "HIRTALATUS" (SENSU SIMPSON & BODE, 1980)	VT	13	4.4	30	3.4	0.0	0.0	0.0	8.0	8.0	10.0
[21200] - CALOPTERYX SP		578	4.3	1765	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[84960] - PSEUDOCHIRONOMUS SP		65	4.3	154	3.0	0.0	0.0	0.0	7.0	9.1	10.0
[77130] - ABLABESMYIA RHAMPHE GROUP	MT	134	4.3	187	4.4	3.0	0.0	0.0	8.0	10.0	11.0
[22300] - ARGIA SP		1260	4.3	2154	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[34300] - NEOPERLA CLYMENE COMPLEX	I	8	4.3	54	3.5	0.0	0.0	0.0	9.0	10.0	11.0
[94400] - FOSSARIA SP		54	4.3	238	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[83840] - MICROTENDIPES PEDELLUS GROUP	MI	718	4.3	1051	4.0	1.0	0.0	0.0	9.0	10.0	11.0
[04901] - ERPOBDELLIDAE	T	8	4.2	47	4.2	2.0	0.0	0.0	9.0	10.0	10.1
[81250] - NANOCLADIUS (N.) MINIMUS		164	4.2	176	5.0	5.0	0.0	0.0	9.0	10.0	11.0
[68708] - DUBIRAPHIA VITTATA GROUP		680	4.2	1745	4.5	3.0	0.0	0.0	9.0	10.0	11.0
[84020] - PARACHIRONOMUS CARINATUS		89	4.2	105	3.9	2.0	0.0	0.0	8.0	10.0	10.2
[60900] - PELTODYTES SP	MT	9	4.2	1008	4.0	2.0	0.0	0.0	9.0	10.0	11.0
[68130] - HELICHUS SP	MI	226	4.2	852	4.4	3.0	0.0	0.0	9.0	10.0	11.0
[78500] - PARAMERINA FRAGILIS		12	4.1	20	5.0	7.0	0.0	0.0	9.0	10.5	11.0
[14950] - LEPTOPHLEBIA SP OR PARALEPTOPHLEBIA SP	MI	213	4.1	246	4.0	0.0	0.0	0.0	9.0	10.0	11.0
[03040] - FREDERICELLA SP	MI	34	4.1	112	4.2	0.0	0.0	0.0	9.0	10.3	11.0
[78650] - PROCLADIUS SP	MT	182	4.1	587	4.6	4.0	0.0	0.0	9.0	10.0	10.0
[70600] - ANTOCHA SP	MI	212	4.1	327	4.4	0.0	0.0	0.0	10.0	11.0	11.0
[54200] - ORTHOTRICHIA SP		27	4.1	32	3.7	0.0	0.0	0.0	8.0	10.0	10.0
[00401] - SPONGILLIDAE	MI	7	4.1	241	4.3	2.0	0.0	0.0	9.0	10.0	11.0
[59700] - TRIAENODES SP	MI	5	4.1	72	4.1	0.0	0.0	0.0	10.0	10.3	11.0
[81825] - RHEOCRICOTOPUS	MI	718	4.1	879	4.5	3.0	0.0	0.0	9.0	10.0	11.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
(PSILOCRICOTOPUS) ROBACKI											
[85501] - PARATANYTARSUS N.SP 1	MI	84	4.1	97	3.2	0.0	0.0	0.0	8.0	10.0	10.6
[85201] - CLADOTANYTARSUS SPECIES GROUP A	MI	39	4.1	76	4.9	5.0	0.0	0.0	9.0	10.0	11.0
[11650] - PROCLOEON SP (W/ HINDWING PADS)	MI	78	4.1	232	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[03045] - FREDERICELLA INDICA	MI	10	4.0	24	4.4	0.0	0.0	0.0	10.0	10.0	10.3
[18750] - HEXAGENIA LIMBATA	MI	21	4.0	165	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[81259] - NANOCLADIUS (N.) "RECTINERVIS"	MI	9	4.0	9	4.3	3.0	0.0	0.0	8.5	10.0	10.0
(SENSU SIMPSON AND BODE, 1980											
[82820] - CRYPTOCHIRONOMUS SP		301	4.0	1609	4.5	3.0	0.0	0.0	9.0	10.0	11.0
[96002] - HELISOMA ANCEPS ANCEPS	MT	34	4.0	116	3.9	0.0	0.0	0.0	9.0	10.0	11.0
[53600] - AGRAYLEA SP		5	4.0	5	1.8	0.0	0.0	0.0	4.2	5.0	5.0
[47600] - SIALIS SP		350	4.0	1563	4.5	4.0	0.0	0.0	9.0	10.0	11.0
[71910] - TIPULA ABDOMINALIS	MI	51	3.9	190	4.3	1.0	0.0	0.0	9.0	10.0	11.0
[85400] - MICROPSECTRA SP		56	3.9	81	3.2	0.0	0.0	0.0	8.0	9.4	10.0
[86100] - CHRYSOPS SP		36	3.9	649	4.5	3.0	0.0	0.0	9.0	10.0	11.0
[83158] - ENDOCHIRONOMUS NIGRICANS		88	3.9	161	4.1	3.0	0.0	0.0	8.0	10.0	11.0
[44501] - CORIXIDAE		15	3.9	262	3.7	0.0	0.0	0.0	9.0	10.0	10.0
[11001] - BAETIDAE		21	3.9	24	4.1	2.0	0.0	0.0	8.0	9.0	9.6
[59580] - OECETIS PERSIMILIS	MI	76	3.8	110	3.8	0.0	0.0	0.0	9.0	11.0	11.0
[68702] - DUBIRAPHIA BIVITTATA		30	3.8	209	4.5	3.0	0.0	0.0	9.0	10.0	11.0
[80570] - DONCRICOTOPUS BICAUDATUS		8	3.8	23	3.8	1.0	0.0	0.0	8.7	11.0	11.0
[01801] - TURBELLARIA		1308	3.8	2020	4.1	2.0	0.0	0.0	9.0	10.0	11.0
[01900] - NEMERTEA		114	3.8	137	2.8	0.0	0.0	0.0	8.2	10.0	11.0
[04686] - PLACOBDELLA PAPILLIFERA		5	3.8	63	5.1	7.0	0.0	0.0	9.0	10.0	11.0
[80470] - CRICOTOPUS (C.) OR ORTHOCLADIUS (O.) SP		9	3.7	15	4.2	3.0	0.0	0.0	9.7	10.0	10.7
[35001] - PERLODIDAE	MI	13	3.7	17	4.7	4.0	0.0	0.0	10.0	10.8	11.0
[68201] - SCIRTIDAE		18	3.7	162	4.0	2.0	0.0	0.0	9.0	10.0	11.0
[95100] - PHYSELLA SP	T	912	3.7	2042	4.1	2.0	0.0	0.0	9.0	10.0	11.0
[55300] - PTILOSTOMIS SP		5	3.7	83	3.2	0.0	0.0	0.0	9.0	10.0	11.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[51600] - POLYCENTROPUS SP	MI	290	3.7	643	3.9	0.0	0.0	0.0	9.0	10.0	11.0
[84612] - SAETHERIA TYLUS	MI	6	3.7	69	5.2	7.0	0.0	0.0	10.0	10.6	11.0
[84210] - PARATENDIPES ALBIMANUS OR P. DUPLICATUS	MI	611	3.7	918	4.3	3.0	0.0	0.0	9.0	10.0	11.0
[82101] - THIENEMANNIELLA TAUROCAPITA	I	300	3.6	361	4.4	2.0	0.0	0.0	9.0	10.0	11.0
[84155] - PARALAUTERBORNIELLA NIGROHALTERALIS		56	3.6	131	4.0	3.0	0.0	0.0	8.0	10.0	10.0
[85752] - SUBLETTEA COFFMANI	I	117	3.6	133	4.2	0.0	0.0	0.0	10.0	11.0	11.0
[08250] - ORCONNECTES (PROCERICAMBARUS) RUSTICUS		197	3.6	1347	4.3	3.0	0.0	0.0	9.0	10.0	11.0
[79400] - ZAVRELIMYIA SP		39	3.6	61	3.0	0.0	0.0	0.0	8.0	9.0	10.0
[98200] - PISIDIUM SP		120	3.5	398	4.2	2.5	0.0	0.0	9.0	10.0	10.0
[83300] - GLYPTOTENDIPES (G.) SP	MT	658	3.5	860	4.3	3.0	0.0	0.0	9.0	10.0	11.0
[50804] - LYPE DIVERSA	MI	181	3.5	226	3.8	0.0	0.0	0.0	9.0	10.0	11.0
[51001] - POLYCENTROPODIDAE		20	3.5	27	3.4	0.0	0.0	0.0	7.7	10.0	10.1
[78350] - MEROPELOPIA SP		76	3.5	133	4.1	1.0	0.0	0.0	9.0	10.0	10.0
[83051] - DICROTENDIPES SIMPSONI	T	358	3.5	406	4.2	3.0	0.0	0.0	8.0	10.0	10.0
[83002] - DICROTENDIPES MODESTUS		51	3.5	91	4.0	2.0	0.0	0.0	8.0	10.0	10.0
[15501] - EPHEMERELLIDAE	MI	54	3.5	55	3.5	0.0	0.0	0.0	9.0	10.0	10.0
[11430] - DIPHETOR HAGENI	I	78	3.5	98	4.1	0.0	0.0	0.0	9.0	10.0	11.0
[11651] - PROCLOEON SP (W/O HINDWING PADS)	MI	157	3.5	309	4.2	3.0	0.0	0.0	9.0	10.0	11.0
[68707] - DUBIRAPHIA QUADRINOTATA		17	3.5	158	4.8	4.0	0.0	0.0	9.0	10.0	11.0
[85821] - TANYTARSUS GLABRESCENS GROUP SP 7	MI	727	3.5	814	2.9	0.0	0.0	0.0	8.0	10.0	11.0
[84040] - PARACHIRONOMUS FREQUENS		59	3.4	102	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[22001] - COENAGRIONIDAE	MT	437	3.4	2088	4.2	3.0	0.0	0.0	9.0	10.0	11.0
[68700] - DUBIRAPHIA SP		245	3.4	377	3.8	0.0	0.0	0.0	9.0	10.0	10.0
[85818] - TANYTARSUS GLABRESCENS GROUP SP 4	MI	21	3.4	33	5.1	6.0	0.0	0.0	9.2	10.0	10.8
[57900] - PYCNOPSYCHE SP	MI	65	3.4	562	4.3	2.0	0.0	0.0	9.0	10.0	11.0
[79085] - TELOPELOPIA OKOBOJI		33	3.4	62	3.9	2.0	0.0	0.0	9.0	10.3	11.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[80427] - CRICOTOPUS (C.) POLITUS	MI	12	3.4	16	3.3	0.0	0.0	0.0	10.0	11.0	11.0
[93200] - HYDROBIIDAE	MT	59	3.3	162	4.5	4.0	0.0	0.0	9.0	10.0	11.0
[81650] - PARAMETRIOCNEMUS SP	MI	315	3.3	549	4.4	2.0	0.0	0.0	9.0	10.0	11.0
[65800] - BEROSUS SP	MT	370	3.3	1011	4.2	3.0	0.0	0.0	9.0	10.0	11.0
[34130] - ACRONEURIA FRISONI	MI	208	3.3	366	3.6	0.0	0.0	0.0	9.0	10.0	10.0
[05900] - LIRCEUS SP		239	3.3	646	4.1	3.0	0.0	0.0	9.0	10.0	11.0
[82710] - CHIRONOMUS (C.) SP	T	114	3.3	196	3.1	0.0	0.0	0.0	8.0	10.0	10.7
[52440] - CERATOPSYCHE SLOSSONAE	MI	117	3.2	186	4.0	0.0	0.0	0.0	9.0	10.0	11.0
[34110] - ACRONEURIA ABNORMIS	I	5	3.2	6	4.0	3.0	0.0	0.0	7.0	10.6	11.0
[58505] - HELICOPSYCHE BOREALIS	MI	104	3.2	616	4.2	2.0	0.0	0.0	9.0	10.0	11.0
[96120] - MENETUS (MICROMENETUS) DILATATUS	T	143	3.2	214	4.5	3.5	0.0	0.0	9.0	10.0	11.0
[81700] - PSECTROCLADIUS SP		9	3.2	15	2.0	0.0	0.0	0.0	5.2	8.0	8.0
[82770] - CHIRONOMUS (C.) RIPARIUS GROUP	VT	80	3.2	233	4.2	3.0	0.0	0.0	9.0	10.0	10.8
[83050] - DICROTENDIPES LUCIFER	MT	169	3.1	188	3.4	0.0	0.0	0.0	8.0	9.0	10.0
[51206] - CYRNELLUS FRATERNUS		129	3.1	152	4.1	2.0	0.0	0.0	8.0	10.0	10.0
[80350] - CORYNONEURA SP	MI	94	3.1	102	3.1	0.0	0.0	0.0	8.0	10.0	10.0
[95907] - GYRAULUS (TORQUIS) PARVUS	MT	28	3.0	82	3.9	0.5	0.0	0.0	9.0	10.0	10.0
[81630] - PARAKIEFFERIELLA SP		37	3.0	46	2.2	0.0	0.0	0.0	3.0	9.0	10.2
[72160] - PSYCHODA SP	T	11	3.0	15	3.2	0.0	0.0	0.0	8.0	10.0	10.0
[80510] - CRICOTOPUS (ISOCLADIUS) SYLVESTRIS GROUP	VT	55	3.0	150	2.9	0.0	0.0	0.0	8.0	10.0	10.0
[78100] - LABRUNDINIA SP		85	3.0	91	3.4	0.0	0.0	0.0	8.0	10.0	10.0
[74501] - CERATOPOGONIDAE		539	3.0	948	4.0	2.0	0.0	0.0	9.0	10.0	10.0
[68075] - PSEPHENUS HERRICKI	MI	178	3.0	1335	4.5	3.0	0.0	0.0	9.0	10.0	11.0
[48600] - NIGRONIA SP		6	3.0	23	2.5	0.0	0.0	0.0	4.0	10.2	11.0
[78130] - LABRUNDINIA NEOPILOSELLA		10	2.9	10	3.9	3.0	0.0	0.0	8.0	8.5	9.0
[85815] - TANYTARSUS GLABRESCENS GROUP SP 1		11	2.9	15	2.8	0.0	0.0	0.0	8.0	9.0	9.0
[80500] - CRICOTOPUS (ISOCLADIUS) REVERSUS GROUP	VT	20	2.9	24	4.5	7.0	0.0	0.0	8.0	9.0	9.0

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Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[53400] - PROTOPTILA SP	I	5	2.9	62	3.7	0.0	0.0	0.0	9.0	10.3	11.0
[79100] - THIENEMANNIMYIA GROUP		299	2.9	481	2.7	0.0	0.0	0.0	6.2	10.0	10.0
[83590] - KIEFFERULUS SP		5	2.9	10	2.6	0.0	0.0	0.0	8.0	9.0	9.0
[79020] - TANYPUS NEOPUNCTIPENNIS	VT	13	2.8	88	3.0	1.0	0.0	0.0	7.0	9.7	10.0
[11400] - CENTROPTILUM SP OR PROCLOEON SP (FORMERLY IN CLOEON)	MI	156	2.8	241	4.2	3.0	0.0	0.0	9.0	10.0	10.0
[50315] - CHIMARRA OBSCURA	MI	403	2.8	1105	4.2	0.0	0.0	0.0	9.0	10.0	11.0
[84430] - POLYPEDILUM (P.) ALBICORNE	MI	14	2.8	21	3.4	0.0	0.0	0.0	7.2	9.4	10.0
[53501] - HYDROPTILIDAE		79	2.6	226	4.2	3.0	0.0	0.0	9.0	10.0	11.0
[84480] - POLYPEDILUM (P.) LAETUM GROUP	MI	7	2.6	124	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[52001] - HYDROPSYCHIDAE		17	2.6	20	2.3	0.0	0.0	0.0	2.0	10.5	11.0
[66500] - ENOCHRUS SP		15	2.6	248	4.5	4.0	0.0	0.0	9.0	10.0	11.0
[82200] - TVETENIA BAVARICA GROUP	MI	125	2.6	175	3.5	0.0	0.0	0.0	9.0	10.0	11.0
[84888] - XENOCHIRONOMUS XENOLABIS	MI	8	2.5	143	4.6	4.0	0.0	0.0	9.0	10.0	11.0
[11200] - CALLIBAETIS SP	MT	42	2.4	459	4.2	3.0	0.0	0.0	9.0	10.0	10.0
[59410] - NECTOPSYCHE DIARINA	MI	23	2.4	96	3.4	0.0	0.0	0.0	8.0	11.0	11.0
[77355] - CLINOTANYPUS PINGUIS	T	18	2.4	156	3.3	2.0	0.0	0.0	8.0	9.0	10.0
[68025] - ECTOPRIA SP	MI	20	2.4	196	3.7	0.0	0.0	0.0	9.0	10.0	10.0
[14600] - CHOROTERPES SP	MI	10	2.4	22	4.2	1.0	0.0	0.0	9.0	10.0	10.4
[67500] - LACCOBIUS SP		11	2.4	252	4.2	2.5	0.0	0.0	9.0	10.0	11.0
[54160] - OCHROTRICHIA SP	MI	13	2.3	23	1.5	0.0	0.0	0.0	0.0	9.0	9.3
[81040] - LIMNOPHYES SP	MT	8	2.3	12	2.8	0.0	0.0	0.0	6.0	8.6	9.8
[78655] - PROCLADIUS (HOLOTANYPUS) SP	MT	53	2.3	341	3.6	0.0	0.0	0.0	8.0	10.0	11.0
[04964] - MOOREOBDELLA MICROSTOMA	T	65	2.3	363	4.3	3.0	0.0	0.0	9.0	10.0	11.0
[84440] - POLYPEDILUM (URESIPEDILUM) AVICEPS	MI	51	2.3	89	3.4	0.0	0.0	0.0	9.0	10.0	10.0
[74650] - ATRICHOPOGON SP		27	2.2	43	3.9	1.0	0.0	0.0	8.7	10.0	11.0
[81200] - NANOCLADIUS SP		12	2.2	22	3.5	0.0	0.0	0.0	7.0	9.0	9.8
[08200] - ORCONNECTES SP		57	2.2	296	3.1	0.0	0.0	0.0	8.0	10.0	10.0
[84000] - PARACHIRONOMUS SP		41	2.1	53	3.0	0.0	0.0	0.0	7.2	9.0	10.0
[16300] - SERRATELLA SP	I	5	2.0	5	4.2	0.0	0.0	0.0	10.2	11.0	11.0

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Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[67800] - TROIPISTERNUS SP	MT	6	2.0	649	4.5	3.0	0.0	0.0	9.0	10.0	11.0
[82700] - CHIRONOMUS SP	T	14	2.0	28	2.3	0.0	0.0	0.0	6.5	8.7	10.1
[52450] - CERATOPSYCHE SPARNA	MI	94	2.0	152	3.4	0.0	0.0	0.0	9.0	10.0	11.0
[80351] - CORYNONEURA N.SP 1	MI	109	1.9	152	3.4	0.0	0.0	0.0	9.0	10.0	11.0
[04637] - BATRACOBDELLA PHALERA	T	11	1.9	21	3.1	0.0	0.0	0.0	8.2	10.4	11.0
[05800] - CAECIDOTEA SP	MT	333	1.9	810	4.2	2.0	0.0	0.0	9.0	10.0	11.0
[12900] - HEPTAGENIA SP		6	1.9	11	1.5	0.0	0.0	0.0	1.5	7.4	7.9
[78400] - NATARSIA SP	MT	25	1.9	61	2.5	0.0	0.0	0.0	4.2	10.0	10.0
[78200] - LARSIA SP		56	1.9	93	2.9	0.0	0.0	0.0	7.0	10.0	10.0
[96930] - LAEVAPEX FUSCUS		40	1.8	74	3.0	0.0	0.0	0.0	8.0	9.0	10.0
[11250] - CENTROPTILUM SP (W/O HINDWING PADS)	MI	10	1.8	146	4.3	2.0	0.0	0.0	9.0	10.0	11.0
[03600] - OLIGOCHAETA	T	1931	1.7	2722	4.3	3.0	0.0	0.0	9.0	10.0	11.0
[78601] - PENTANEURA TYPE 1		9	1.7	11	4.9	3.0	0.0	0.0	10.0	10.0	10.0
[77100] - ABLABESMYIA SP		13	1.6	26	5.0	6.5	0.0	0.0	9.0	9.9	10.6
[13010] - LEUCROCUTA HEBE	MI	11	1.6	58	2.2	0.0	0.0	0.0	3.0	9.0	10.0
[81201] - NANOCLADIUS (N.) SP		73	1.5	102	2.0	0.0	0.0	0.0	3.0	8.3	10.0
[81400] - ORTHOCLADIUS SP		15	1.5	32	1.9	0.0	0.0	0.0	1.5	8.6	10.0
[04935] - ERPOBDELLA PUNCTATA PUNCTATA	T	52	1.5	263	3.5	1.0	0.0	0.0	8.0	10.0	11.0
[84475] - POLYPEDILUM (P.) OPHIOIDES	MI	18	1.5	68	5.5	8.0	0.0	0.0	10.0	10.0	11.0
[97710] - DREISSENA POLYMORPHA		27	1.5	51	4.2	0.0	0.0	0.0	8.7	11.0	11.0
[84469] - POLYPEDILUM (P.) ILLINOENSE GROUP		17	1.4	33	1.0	0.0	0.0	0.0	0.0	7.0	9.5
[80870] - HYDROBAENUS SP	T	6	1.4	15	3.9	0.0	0.0	0.0	8.0	10.0	10.7
[04666] - HELOBDELLA TRISERIALIS	T	71	1.3	182	3.3	0.0	0.0	0.0	8.0	10.0	10.0
[85711] - STEMPELLINELLA POSS. LEPTOCELLOIDES	I	6	1.3	6	1.8	0.5	0.0	0.0	2.0	7.4	8.0
[07701] - CAMBARIDAE		19	1.2	72	3.0	0.0	0.0	0.0	7.5	10.0	10.0
[96264] - PLANORBELLA (PIEROSOMA) PILSBRYI	T	23	1.2	69	3.1	0.0	0.0	0.0	8.0	9.6	10.0
[59300] - MYSTACIDES SP	MI	18	1.2	103	3.4	0.0	0.0	0.0	9.0	10.0	11.0
[13500] - STENONEMA SP		16	1.1	28	3.1	0.0	0.0	0.0	8.0	9.0	10.1
[74673] - ATRICHOPOGON WEBSTERI		28	1.1	39	4.1	2.0	0.0	0.0	9.7	10.0	10.5

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[07860] - CAMBARUS (PUNCTICAMBARUS) ROBUSTUS		6	1.0	85	3.9	0.0	0.0	0.0	9.0	10.0	11.0
[28001] - LIBELLULIDAE	T	5	1.0	18	4.3	3.0	0.0	0.0	8.0	10.7	12.2
[69420] - STENELMIS SEXLINEATA		34	1.0	79	4.5	3.0	0.0	0.0	9.0	10.0	11.0
[82100] - THIENEMANNIELLA SP		29	1.0	38	1.2	0.0	0.0	0.0	0.0	7.7	9.0
[80700] - EUKIEFFERIELLA SP		6	0.9	18	4.5	4.0	0.0	0.0	9.0	10.0	10.0
[80450] - CRICOTOPUS (C.) VIERRIENSIS		6	0.9	9	1.5	0.0	0.0	0.0	1.0	7.6	10.0
[69225] - OPTIOSERVUS FASTIDITUS	MI	27	0.9	136	3.6	0.0	0.0	0.0	9.0	10.0	10.0
[83330] - GLYPTOTENDIPES (G.) BARBIPES	VT	5	0.6	9	2.8	1.0	0.0	0.0	5.0	9.2	10.0
[11101] - PLAUDITUS SP	MI	6	0.6	11	2.8	0.0	0.0	0.0	7.0	9.4	9.9
[52500] - HYDROPSYCHE SP		9	0.6	15	1.3	0.0	0.0	0.0	0.0	7.0	7.0
[69410] - STENELMIS CRENATA		9	0.6	14	1.9	0.0	0.0	0.0	0.0	9.1	9.8
[04962] - MOOREOBDELLA FERVIDA	T	11	0.5	69	3.0	0.0	0.0	0.0	8.0	10.0	10.0
[26700] - MACROMIA SP		6	0.5	144	4.5	4.0	0.0	0.0	9.0	10.0	11.0
[04664] - HELOBDELLA STAGNALIS	T	37	0.4	141	3.7	0.0	0.0	0.0	9.0	10.0	10.4
[80400] - CRICOTOPUS SP		24	0.4	32	1.1	0.0	0.0	0.0	0.0	6.3	9.7
[52315] - DIPLECTRONA MODESTA		8	0.4	14	2.3	0.0	0.0	0.0	4.0	9.2	10.6
[04660] - HELOBDELLA SP	T	7	0.3	15	2.2	0.0	0.0	0.0	4.5	9.0	10.5
[63900] - LACCOPHILUS SP	T	10	0.3	389	3.7	2.0	0.0	0.0	8.0	10.0	10.0
[11115] - BAETIS TRICAUDATUS	MI	18	0.3	44	1.9	0.0	0.0	0.0	0.0	9.1	10.9
[33100] - LEUCTRA SP	I	6	0.3	29	3.0	0.0	0.0	0.0	8.2	11.0	11.0
[69210] - OPTIOSERVUS AMPLIATUS	MI	7	0.3	37	2.8	0.0	0.0	0.0	8.2	9.0	9.6
[81810] - RHEOCRICOTOPUS SP		8	0.2	11	3.5	0.0	0.0	0.0	7.7	8.8	9.9
[52560] - HYDROPSYCHE ORRIS	MI	13	0.2	17	2.5	0.0	0.0	0.0	8.0	9.6	10.0
[85700] - TEMPELLINA SP	MI	10	0.1	15	1.3	0.0	0.0	0.0	0.0	7.0	8.5
[95900] - GYRAULUS SP	MT	16	0.1	22	2.0	0.0	0.0	0.0	0.0	10.0	10.0
[11014] - ACENTRELLA TURBIDA	I	9	0.0	49	0.4	0.0	0.0	0.0	0.0	0.0	2.4

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
		Wadeable		- DEPTH							
[43014] - TONGUETIED MINNOW	S	17	10.7	17	9.5	10.0	4.8	8.0	11.5	13.0	13.0
[25001] - BROWN TROUT		25	10.5	25	9.9	10.0	8.0	8.0	11.5	13.0	13.0
[40006] - RIVER CARPSUCKER		5	9.8	5	10.0	10.0	8.0	9.5	11.0	11.0	11.0
[01007] - AMER BROOK LAMPREY	R	44	9.7	44	9.5	10.0	8.0	9.0	10.0	11.2	13.0
[80002] - WALLEYE		14	9.5	14	9.1	9.0	8.0	8.0	10.0	10.1	10.8
[43008] - STREAMLINE CHUB	R	12	9.5	12	8.9	10.5	4.0	6.5	11.0	11.0	11.0
[77012] - REDEAR SUNFISH		26	9.5	26	8.4	9.0	4.0	8.0	10.0	11.0	11.0
[80004] - DUSKY DARTER	MI	53	9.4	53	9.4	10.0	7.8	9.0	11.0	11.0	11.0
[43012] - LONGNOSE DACE	R	9	9.3	9	9.1	9.0	8.0	8.0	10.0	10.0	10.0
[43041] - BULLHEAD MINNOW		8	9.2	8	8.3	9.5	6.0	6.0	10.0	10.0	10.0
[80013] - EASTERN SAND DARTER	R	11	9.2	11	9.1	10.0	7.0	9.0	10.0	10.0	10.0
[80020] - TIPPECANOE DARTER	R	6	9.2	6	8.1	10.0	3.1	4.0	11.0	11.0	11.0
[43031] - STEELCOLOR SHINER	MT	60	9.1	60	8.7	9.0	6.0	8.0	10.0	10.0	11.0
[80001] - SAUGER		66	9.1	66	9.1	9.0	7.0	9.0	10.0	11.0	11.0
[10004] - LONGNOSE GAR		55	9.1	55	9.0	10.0	7.0	8.0	10.0	11.0	11.0
[01006] - LEAST BROOK LAMPREY		95	9.1	95	9.0	9.0	7.0	9.0	10.0	11.0	11.0
[47007] - FLATHEAD CATFISH		31	9.0	31	9.1	9.0	8.0	9.0	10.0	10.4	11.0
[40008] - SILVER REDHORSE	MI	286	9.0	286	8.7	9.0	6.0	8.0	10.0	11.0	11.0
[40009] - BLACK REDHORSE	I	597	8.9	597	9.0	10.0	6.0	9.0	10.0	11.0	11.0
[40011] - SHORTHEAD REDHORSE	MI	117	8.8	117	9.0	10.0	7.0	8.0	10.0	11.0	11.0
[40007] - HIGHFIN CARPSUCKER		6	8.8	6	8.8	9.0	6.2	8.0	10.0	10.9	11.0
[70001] - BROOK SILVERSIDE	MI	165	8.8	165	8.3	9.0	4.0	7.0	10.0	11.0	11.0
[43021] - SILVER SHINER	I	870	8.8	870	8.8	9.0	5.0	8.0	10.0	11.0	11.0
[43022] - ROSYFACE SHINER	I	588	8.7	588	8.9	10.0	4.0	9.0	10.0	11.0	11.0
[80016] - BANDED DARTER	I	1038	8.7	1038	8.7	9.5	4.0	8.0	10.0	11.0	11.0
[90002] - MOTTLED SCULPIN		756	8.7	756	8.8	10.0	4.0	9.0	10.0	11.0	11.0
[77005] - SPOTTED BASS		394	8.7	394	8.6	9.0	5.0	8.0	10.0	11.0	11.0
[80007] - SLENDERHEAD DARTER	R	10	8.7	10	9.0	9.0	8.0	9.0	9.0	10.0	10.0
[40015] - NORTHERN HOG SUCKER	MI	2512	8.6	2512	8.4	9.0	4.0	8.0	10.0	11.0	11.0
[80017] - VARIEGATE DARTER	I	142	8.6	142	8.6	10.0	4.0	8.0	10.0	11.0	11.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[80003] - YELLOW PERCH		122	8.5	122	8.3	9.0	4.0	8.0	10.0	11.0	11.0
[95001] - BROOK STICKLEBACK		45	8.5	45	8.6	9.0	4.0	8.0	10.0	11.0	11.0
[85001] - FRESHWATER DRUM	MT	177	8.5	177	8.3	9.0	4.0	8.0	10.0	11.0	11.0
[77002] - BLACK CRAPPIE		223	8.5	223	8.4	9.0	4.0	8.0	10.0	11.0	11.0
[80011] - LOGPERCH	MI	1171	8.4	1171	8.3	9.0	3.0	8.0	10.0	11.0	11.0
[43030] - BIGEYE SHINER	R	11	8.4	11	7.8	8.0	5.4	7.2	9.0	9.0	9.0
[43005] - RIVER CHUB	I	426	8.4	426	8.9	10.0	4.1	9.0	10.0	11.0	11.0
[40010] - GOLDEN REDHORSE	MI	1659	8.4	1659	8.5	9.0	4.0	8.0	10.0	11.0	11.0
[20003] - GIZZARD SHAD		734	8.4	734	8.0	9.0	3.0	7.0	10.0	11.0	11.0
[77004] - SMALLMOUTH BASS	MI	1719	8.3	1719	8.4	9.0	4.0	8.0	10.0	11.0	11.0
[15001] - BOWFIN		8	8.3	8	8.2	8.5	3.1	8.0	10.5	11.0	11.0
[43017] - REDSIDE DACE	I	74	8.3	74	7.9	9.0	3.0	8.0	10.0	11.0	12.6
[25002] - RAINBOW TROUT		15	8.3	15	9.0	9.0	8.0	8.0	10.7	11.0	12.5
[43035] - MIMIC SHINER	I	189	8.3	189	8.4	9.0	4.0	8.0	10.0	11.0	11.0
[77003] - ROCK BASS		2371	8.2	2371	8.3	9.0	4.0	8.0	10.0	11.0	11.0
[80022] - RAINBOW DARTER	MI	1968	8.2	1968	8.1	9.0	3.0	7.0	10.0	11.0	11.0
[40018] - SPOTTED SUCKER		344	8.2	344	8.1	9.0	3.0	7.0	10.0	11.0	11.0
[43020] - EMERALD SHINER		247	8.2	247	7.9	9.0	3.0	7.0	10.0	10.0	11.0
[63001] - TROUT-PERCH		170	8.2	170	8.5	9.0	6.5	8.0	10.0	10.0	11.0
[77009] - BLUEGILL SUNFISH	MT	2368	8.1	2368	8.2	9.0	4.0	8.0	10.0	11.0	11.0
[43025] - STRIPED SHINER		2475	8.1	2475	8.1	9.0	3.0	7.0	10.0	11.0	11.0
[43016] - SOUTH. REDBELLY DACE		71	8.1	71	7.5	9.0	3.0	7.0	9.0	10.0	10.9
[47002] - CHANNEL CATFISH		393	8.0	393	8.0	9.0	3.0	7.0	10.0	11.0	11.0
[77007] - WARMOUTH SUNFISH		193	8.0	193	8.0	9.0	3.0	8.0	10.0	11.0	11.0
[77001] - WHITE CRAPPIE		534	8.0	534	7.7	9.0	3.0	7.0	10.0	10.1	11.0
[77011] - LONGEAR SUNFISH	MI	1416	7.9	1416	8.0	9.0	3.0	7.0	10.0	11.0	11.0
[37003] - NORTHERN PIKE		55	7.9	55	8.4	8.0	6.0	8.0	10.0	11.0	11.0
[47008] - STONECAT MADTOM	I	609	7.9	609	8.3	9.0	3.0	8.0	10.0	11.0	11.0
[80015] - GREENSIDE DARTER	MI	2519	7.9	2519	8.0	9.0	3.0	7.0	10.0	11.0	11.0
[43024] - SCARLET SHINER	MI	644	7.8	644	8.4	9.0	4.0	8.0	10.0	11.0	11.0
[43028] - SPOTTAIL SHINER	MT	7	7.8	7	7.1	8.0	3.2	8.0	8.0	8.0	8.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[77013] - PUMPKINSEED SUNFISH	MT	511	7.8	511	8.2	9.0	4.0	8.0	10.0	11.0	11.0
[43032] - SPOTFIN SHINER		1702	7.8	1702	7.9	9.0	3.0	7.0	10.0	11.0	11.0
[43011] - WESTERN BLACKNOSE DACE	T	1094	7.7	1094	8.1	9.0	3.0	7.0	10.0	11.0	11.0
[80019] - BLUEBREAST DARTER	R	6	7.7	6	8.1	10.0	3.1	4.0	11.0	11.0	11.0
[77006] - LARGEMOUTH BASS		1842	7.7	1842	7.9	9.0	3.0	7.0	10.0	11.0	11.0
[43007] - BIGEYE CHUB	I	105	7.7	105	8.2	9.0	3.0	8.0	10.0	11.0	11.0
[80024] - FANTAIL DARTER		1745	7.6	1745	8.1	9.0	3.0	8.0	10.0	11.0	11.0
[47012] - BRINDLED MADTOM	I	205	7.6	205	8.1	9.0	4.0	7.7	10.0	10.0	11.0
[74001] - WHITE BASS		29	7.6	29	8.0	8.0	6.0	8.0	9.0	10.0	11.0
[37001] - GRASS PICKEREL	MT	643	7.6	643	7.8	9.0	3.0	7.0	10.0	11.0	11.0
[43026] - COMMON SHINER		554	7.6	554	7.6	9.0	3.0	5.0	10.0	11.0	11.0
[43044] - CENTRAL STONEROLLER		2967	7.5	2967	7.8	9.0	3.0	6.0	10.0	11.0	11.0
[43003] - GOLDEN SHINER	T	314	7.5	314	7.0	8.0	2.0	5.0	9.0	10.0	11.0
[40002] - BIGMOUTH BUFFALO		5	7.4	5	7.0	8.0	3.0	6.7	8.0	8.0	8.0
[40016] - WHITE SUCKER	T	3114	7.4	3114	7.8	9.0	3.0	6.0	10.0	11.0	11.0
[43004] - HORNYHEAD CHUB	I	206	7.3	206	8.4	9.0	4.0	7.0	10.0	11.0	11.0
[34001] - CENTRAL MUDMINNOW	T	170	7.1	170	7.5	9.0	3.0	4.0	10.0	10.5	11.0
[80005] - BLACKSIDE DARTER		1070	7.1	1070	7.6	9.0	3.0	7.0	10.0	11.0	11.0
[43034] - SAND SHINER	MI	1650	7.1	1650	7.8	9.0	3.0	6.0	10.0	11.0	11.0
[43001] - COMMON CARP	T	1842	7.0	1842	7.8	9.0	3.0	7.0	10.0	11.0	11.0
[77008] - GREEN SUNFISH	T	3187	7.0	3187	7.7	9.0	3.0	6.0	10.0	11.0	11.0
[80023] - ORANGETHROAT DARTER		305	6.9	305	7.1	9.0	2.0	4.0	10.0	11.0	11.0
[43013] - CREEK CHUB	T	3020	6.8	3020	7.7	9.0	3.0	6.0	10.0	11.0	11.0
[47004] - YELLOW BULLHEAD	T	2275	6.7	2275	7.6	9.0	3.0	6.0	10.0	10.0	11.0
[74003] - WHITE PERCH		9	6.7	9	7.4	8.0	4.4	8.0	8.0	8.6	9.0
[47005] - BROWN BULLHEAD	T	165	6.5	165	7.3	9.0	2.0	4.0	10.0	10.0	11.0
[43045] - COMMON CARP X GOLDFISH	T	41	6.5	41	6.7	8.0	2.0	3.7	9.0	10.0	11.0
[40012] - GREATER REDHORSE	R	7	6.3	7	6.5	7.0	2.6	5.5	7.7	9.6	10.0
[80014] - JOHNNY DARTER		2398	6.3	2398	7.6	9.0	3.0	6.0	10.0	11.0	11.0
[43043] - BLUNTNOSE MINNOW	T	3427	6.2	3427	7.7	9.0	3.0	6.0	10.0	11.0	11.0
[47006] - BLACK BULLHEAD	MT	339	5.7	339	6.6	8.0	2.0	3.0	9.0	10.0	10.5

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[43039] - SILVERJAW MINNOW		1374	5.5	1374	7.5	9.0	3.0	5.0	10.0	10.0	11.0
[43023] - REDFIN SHINER		585	5.4	585	6.6	8.0	2.0	3.0	9.0	10.0	11.0
[77010] - ORANGESPOTTED SUNFISH		315	5.2	315	6.6	8.0	2.0	3.0	9.0	10.0	10.7
[43015] - SUCKERMOUTH MINNOW		588	5.2	588	7.2	9.0	2.0	4.0	10.0	10.0	11.0
[43002] - GOLDFISH	T	152	5.1	152	6.3	8.0	2.0	3.0	9.0	10.0	10.0
[40005] - QUILLBACK CARPSUCKER		328	4.8	328	7.1	8.0	2.0	4.0	10.0	10.0	11.0
[43033] - BIGMOUTH SHINER		44	4.7	44	6.5	5.0	3.7	4.0	10.0	10.0	10.0
[40020] - CREEK CHUBSUCKER		38	4.2	38	6.1	7.0	2.0	3.0	9.0	9.7	10.0
[80025] - LEAST DARTER		11	4.1	11	4.9	3.0	1.6	2.2	9.2	11.0	11.0
[47013] - TADPOLE MADTOM		195	4.1	195	5.5	6.0	1.0	2.0	8.0	10.0	10.0
[43042] - FATHEAD MINNOW	T	644	3.7	644	6.1	7.0	1.0	3.0	9.0	10.0	11.0
[43036] - GHOST SHINER		6	3.7	6	5.1	5.0	2.0	2.0	8.0	8.9	9.0
[54002] - BLACKSTRIPE TOPMINNOW		547	2.8	547	5.8	6.0	1.0	2.0	9.0	10.0	10.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
		Wadeable		- HYD_QHEI							
[52620] - MACROSTEMUM ZEBRATUM	I	21	21.2	42	12.5	15.0	0.0	3.0	18.0	19.9	23.2
[34140] - ACRONEURIA INTERNATA	MI	7	17.2	12	12.7	17.5	0.0	1.5	19.0	22.9	24.7
[13120] - NIXE PERFIDA	MI	6	16.0	27	5.2	0.0	0.0	0.0	13.2	18.6	19.1
[18100] - ANTHOPOTAMUS SP	MI	23	15.9	124	8.2	7.0	0.0	0.0	16.0	20.0	22.0
[89501] - EPHYDRIDAE		10	15.4	62	8.1	8.5	0.0	0.0	14.0	19.0	20.0
[52520] - HYDROPSYCHE BIDENS	MI	16	14.6	19	7.5	3.0	0.0	0.0	16.2	19.0	20.6
[11118] - PLAUDITUS DUBIUS	MI	5	14.6	13	13.7	16.0	0.0	10.5	19.0	22.6	24.5
[59520] - OECETIS CINERASCENS		9	14.3	17	7.2	9.0	0.0	0.0	12.0	16.8	18.3
[96801] - ANCYLIDAE		6	14.3	8	10.3	12.0	0.9	4.5	15.5	18.4	19.0
[50906] - PSYCHOMYIA FLAVIDA	I	23	14.3	69	8.4	0.0	0.0	0.0	18.0	21.6	22.0
[59100] - CERACLEA SP	MI	19	14.1	66	8.0	8.0	0.0	0.0	15.0	18.9	22.0
[11700] - ACENTRELLA SP OR PLAUDITUS SP (FORMERLY IN PSEUDOCLOEON)	I	20	14.1	46	8.2	7.0	0.0	0.0	16.0	19.0	19.0
[83860] - MICROTENDIPES RYDALENSIS	MI	22	13.8	27	10.7	12.0	0.0	0.0	18.7	21.6	22.4
[14501] - LEPTOPHLEBIIDAE	MI	16	13.8	17	10.0	12.0	0.0	2.2	17.0	17.0	18.3
[59001] - LEPTOCERIDAE	MI	43	13.6	61	8.5	9.0	0.0	0.0	16.0	19.0	22.0
[30800] - PTERONARCYS SP	I	8	13.3	17	8.2	0.0	0.0	0.0	17.0	18.0	19.3
[31800] - TAENIOPTERYX SP	MI	15	12.9	19	6.8	2.0	0.0	0.0	15.2	17.0	18.6
[21001] - CALOPTERYGIDAE		20	12.9	32	6.6	0.0	0.0	0.0	14.0	19.0	21.7
[48610] - NIGRONIA FASCIATUS	MI	9	12.7	19	11.2	12.0	0.0	9.2	16.7	19.0	19.0
[72101] - PSYCHODIDAE		6	12.6	9	5.7	2.0	0.0	0.0	11.2	16.8	18.0
[85265] - CLADOTANYTARSUS VANDERWULPI GROUP TYPE 5	MI	9	12.5	33	11.0	11.0	0.0	4.2	16.5	21.2	24.5
[51300] - NEURECLIPSIS SP	MI	123	12.4	172	9.0	11.0	0.0	0.0	17.0	19.3	21.9
[07840] - CAMBARUS (CAMBARUS) SCIOTENSIS		8	12.3	36	10.2	13.0	0.0	0.0	16.0	17.9	19.0
[18501] - EPHEMERIDAE	MI	8	12.2	9	8.6	6.0	0.0	2.2	17.0	18.2	19.0
[52431] - CERATOPSYCHE MOROSA	MI	27	12.1	37	9.7	14.0	0.0	0.0	17.0	19.0	19.6
[82130] - THIENEMANNIELLA SIMILIS	I	32	12.0	43	8.6	9.0	0.0	0.0	15.0	21.2	22.0
[59110] - CERACLEA ANCYLUS	I	6	11.8	103	7.5	5.0	0.0	0.0	14.7	20.0	22.0
[11155] - PLAUDITUS PUNCTIVENTRIS	MI	27	11.8	43	8.4	8.0	0.0	0.0	15.0	22.6	25.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[71900] - TIPULA SP		143	11.6	692	7.1	4.0	0.0	0.0	14.0	18.0	20.0
[81465] - ORTHOCLADIUS (O.) CARLATUS	MI	36	11.6	44	8.3	4.5	0.0	0.0	17.0	20.0	22.9
[52550] - HYDROPSYCHE FRISONI	I	84	11.4	111	9.0	12.0	0.0	0.0	17.0	19.0	19.0
[52590] - HYDROPSYCHE VENULARIS	MI	42	11.4	82	8.0	9.0	0.0	0.0	16.0	19.0	19.0
[87510] - CHELIFERA SP	MI	13	11.4	21	7.9	0.0	0.0	0.0	18.0	19.4	20.9
[16324] - SERRATELLA DEFICIENS	I	42	11.4	53	7.7	0.0	0.0	0.0	16.2	19.0	20.7
[78402] - NATARSIA BALTIMOREUS		6	11.4	32	8.2	6.0	0.0	0.0	16.0	19.6	21.9
[13510] - STENONEMA EXIGUUM	I	302	11.4	360	8.7	11.0	0.0	0.0	17.0	19.0	20.0
[13540] - STENONEMA MEDIOPUNCTATUM	I	220	11.2	285	7.1	0.0	0.0	0.0	17.0	19.0	20.0
[13550] - STENONEMA MEXICANUM INTEGRUM	MI	50	11.1	59	8.3	9.0	0.0	0.0	13.7	17.0	18.1
[52540] - HYDROPSYCHE DICANTHA	MI	282	11.1	558	8.8	11.0	0.0	0.0	17.0	19.0	21.0
[80310] - CARDIOCLADIUS OBSCURUS	MI	41	11.1	252	9.0	11.0	0.0	0.0	17.0	19.0	22.0
[81460] - ORTHOCLADIUS (O.) SP		33	11.0	100	7.2	8.0	0.0	0.0	14.0	17.0	19.0
[60400] - GYRINUS SP		17	11.0	179	6.6	2.0	0.0	0.0	14.0	17.6	19.0
[11300] - PROCLOEON SP (FORMERLY IN CENTROPTILUM)	MI	72	10.9	217	8.1	8.0	0.0	0.0	16.0	19.0	19.0
[34100] - ACRONEURIA SP	MI	8	10.9	18	7.7	6.5	0.0	0.0	16.0	16.7	18.8
[06800] - GAMMARUS SP		12	10.9	17	7.2	0.0	0.0	0.0	17.0	19.4	20.0
[81229] - NANOCLADIUS (N.) CRASSICORNUS		42	10.8	46	10.0	12.0	0.0	0.0	16.0	21.8	22.0
[84200] - PARATENDIPES SP		13	10.8	14	7.2	7.0	0.0	0.0	15.0	15.5	19.0
[30000] - PLECOPTERA		57	10.7	72	8.3	9.5	0.0	0.0	15.0	19.0	19.0
[87501] - EMPIDIDAE		585	10.7	732	8.4	9.0	0.0	0.0	16.0	19.0	19.0
[84302] - PHAENOPSECTRA PUNCTIPES		32	10.6	44	8.4	9.0	0.0	0.0	14.0	17.1	19.0
[77110] - ABLABESMYIA ANNULATA		7	10.5	18	7.7	8.5	0.0	0.0	14.0	16.7	17.0
[52570] - HYDROPSYCHE SIMULANS	MI	126	10.5	201	7.7	9.0	0.0	0.0	14.0	18.4	20.0
[85814] - TANYTARSUS GLABRESCENS GROUP		1046	10.5	1203	9.0	10.0	0.0	0.0	15.0	19.0	19.0
[18600] - EPHEMERA SP	MI	127	10.5	475	8.1	8.0	0.0	0.0	16.0	19.0	20.7
[63300] - HYDROPORUS SP		6	10.5	535	6.9	6.0	0.0	0.0	13.0	17.0	19.0
[13100] - NIXE SP	I	10	10.4	139	8.9	10.0	0.0	0.0	17.0	20.0	22.0
[01418] - CRASPEDACUSTA SOWERBYI		54	10.4	54	9.8	11.5	0.0	0.0	17.0	20.2	22.0
[28208] - ERYTHEMIS SIMPLICICOLLIS	MT	7	10.4	33	5.7	3.0	0.0	0.0	10.2	17.2	18.8

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[86401] - ATHERIX LANTHA	MI	112	10.3	403	7.3	0.0	0.0	0.0	16.0	19.0	20.0
[24900] - GOMPHUS SP		14	10.2	419	7.6	6.0	0.0	0.0	15.0	19.0	19.0
[13560] - STENONEMA PULCHELLUM GROUP	MI	70	10.2	154	7.0	6.0	0.0	0.0	15.0	17.0	17.0
[69250] - OPTIOSERVUS OVALIS	MI	5	10.2	16	6.8	9.0	0.0	0.0	12.0	14.8	17.8
[84520] - POLYPEDILUM (TRIPODURA) HALTERALE GROUP		71	10.2	181	7.3	8.0	0.0	0.0	13.0	17.4	19.0
[83820] - MICROTENDIPES "CAELUM" (SENSU SIMPSON & BODE, 1980)	MI	247	10.2	611	8.2	9.0	0.0	0.0	15.0	19.0	20.0
[70501] - TIPULIDAE		10	10.2	31	5.2	0.0	0.0	0.0	12.7	18.2	20.0
[59140] - CERACLEA MACULATA	MI	7	10.1	13	8.6	14.0	0.0	0.0	15.5	17.8	20.4
[85625] - RHEOTANYTARSUS SP	MI	1652	10.1	2111	7.6	7.0	0.0	0.0	15.0	19.0	20.0
[48410] - CORYDALUS CORNUTUS	MI	267	10.1	603	7.8	7.0	0.0	0.0	16.0	19.0	21.0
[11110] - ACENTRELLA PARVULA	I	8	10.0	9	6.3	0.0	0.0	0.0	13.0	19.0	19.0
[08601] - HYDRACARINA		697	10.0	1040	7.7	7.0	0.0	0.0	15.0	19.0	20.0
[59570] - OECETIS NOCTURNA		13	10.0	66	5.8	2.5	0.0	0.0	10.0	16.8	19.2
[14900] - LEPTOPHLEBIA SP	I	23	9.9	48	2.6	0.0	0.0	0.0	1.0	10.7	14.4
[77750] - HAYESOMYIA SENATA OR THIENEMANNIMYIA NORENA		1027	9.9	1310	7.7	8.0	0.0	0.0	14.0	18.0	19.0
[12200] - ISONYCHIA SP	MI	846	9.9	1461	8.0	8.0	0.0	0.0	16.0	19.0	20.0
[59700] - TRIAENODES SP	MI	5	9.8	72	6.8	0.0	0.0	0.0	14.0	19.0	20.0
[74100] - SIMULIUM SP		584	9.8	1560	7.7	7.0	0.0	0.0	15.0	19.0	20.0
[78750] - RHEOPELOPIA PARAMACULIPENNIS	MI	36	9.8	54	8.5	8.0	0.0	0.0	16.0	19.0	19.0
[53600] - AGRAYLEA SP		5	9.8	5	4.6	0.0	0.0	0.0	11.2	12.0	12.0
[52580] - HYDROPSYCHE VALANIS		15	9.8	25	10.8	12.0	0.0	6.7	17.0	19.0	20.0
[83900] - NILOTHAUMA SP	MI	109	9.8	125	7.9	9.0	0.0	0.0	15.0	19.0	20.0
[21300] - HETAERINA SP		150	9.8	396	9.2	11.0	0.0	0.0	17.0	19.0	21.0
[03000] - ECTOPROCTA		5	9.8	30	6.8	2.5	0.0	0.0	14.0	17.5	20.0
[85802] - TANYTARSUS CURTICORNIS GROUP	MI	416	9.7	442	7.9	9.0	0.0	0.0	15.0	19.0	20.0
[01320] - HYDRA SP		1228	9.7	1250	7.5	7.0	0.0	0.0	14.0	18.0	19.0
[52530] - HYDROPSYCHE DEPRAVATA GROUP		863	9.7	1744	7.3	6.0	0.0	0.0	14.0	18.0	19.0
[52430] - CERATOPSYCHE MOROSA GROUP	MI	1057	9.7	1723	7.6	6.0	0.0	0.0	15.0	19.0	20.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[12912] - HEPTAGENIA DIABASIA	MI	11	9.6	19	8.2	9.0	0.0	3.5	12.0	14.6	16.1
[81270] - NANOCLADIUS (N.) SPINIPLIENUS	MI	197	9.6	263	8.1	9.0	0.0	0.0	15.0	19.0	20.0
[82070] - SYNORTHOCLADIUS SEMIVIRENS	I	17	9.5	20	10.3	14.0	0.0	0.0	18.0	19.0	19.5
[81690] - PARATRICHOCLADIUS SP	MI	67	9.5	106	8.1	5.0	0.0	0.0	17.0	19.0	20.4
[12501] - HEPTAGENIIDAE		11	9.4	15	6.0	3.0	0.0	0.0	13.5	15.0	15.7
[85615] - RHEOTANYTARSUS PELLUCIDUS	MI	400	9.4	527	7.3	4.0	0.0	0.0	15.0	19.0	20.0
[81280] - NANOCLADIUS (PLECOPTERACOLUTHUS) DOWNESI	I	14	9.4	55	6.3	0.0	0.0	0.0	14.7	18.0	19.7
[11670] - PROCLOEON IRRUBRUM	MI	11	9.4	258	8.0	8.0	0.0	0.0	15.0	19.0	21.6
[94201] - LYMNAEIDAE		13	9.4	21	11.5	12.0	0.0	9.0	16.2	17.4	19.8
[11150] - PSEUDOCLOEON PROPINQUUM	I	16	9.4	118	7.6	5.5	0.0	0.0	15.0	19.0	20.0
[77001] - TANYPODINAE		7	9.4	19	6.4	3.0	0.0	0.0	12.7	16.2	18.6
[11018] - ACERPENNA MACDUNNOUGHII	I	38	9.4	48	5.8	0.0	0.0	0.0	13.0	17.7	22.3
[59510] - OECETIS AVARA	I	15	9.4	19	4.2	0.0	0.0	0.0	9.0	17.4	19.0
[72700] - ANOPHELES SP		5	9.4	332	7.1	6.0	0.0	0.0	14.5	17.0	19.0
[79210] - THIENEMANNIMYIA NORENA		9	9.3	15	8.8	9.0	0.0	0.0	15.5	17.0	18.5
[16200] - EURYLOPHELLA SP	MI	87	9.3	101	8.3	11.0	0.0	0.0	15.0	17.0	19.0
[59500] - OECETIS SP	MI	117	9.2	192	6.4	0.5	0.0	0.0	14.0	18.0	19.0
[77800] - HELOPELOPIA SP		951	9.2	1444	8.3	9.0	0.0	0.0	15.0	19.0	20.0
[59310] - MYSTACIDES SEPULCHRALIS	MI	11	9.2	82	5.5	0.0	0.0	0.0	13.0	16.3	17.4
[34150] - ACRONEURIA LYCORIAS	I	7	9.2	8	11.0	15.5	0.0	0.0	19.0	19.0	19.0
[81231] - NANOCLADIUS (N.) CRASSICORNUS OR N. (N.) "RECTINERVIS"		408	9.2	457	7.7	8.0	0.0	0.0	14.0	17.0	19.6
[98001] - SPHAERIIDAE		43	9.2	76	5.6	0.0	0.0	0.0	13.0	18.0	20.0
[11120] - BAETIS FLAVISTRIGA		620	9.2	1000	7.8	7.5	0.0	0.0	15.0	19.0	20.0
[11130] - BAETIS INTERCALARIS		1003	9.1	1517	7.7	7.0	0.0	0.0	15.0	19.0	20.0
[93900] - ELIMIA SP	MI	455	9.1	936	7.4	5.0	0.0	0.0	15.0	19.0	20.0
[80430] - CRICOTOPUS (C.) TREMULUS GROUP		625	9.1	987	8.2	9.0	0.0	0.0	16.0	19.0	20.0
[85710] - STEPELLINELLA SP	MI	50	9.1	65	9.6	13.0	0.0	0.0	17.0	19.0	20.0
[78600] - PENTANEURA INCONSPICUA		69	9.0	99	7.2	8.0	0.0	0.0	13.0	17.0	18.5
[34120] - ACRONEURIA CAROLINENSIS	I	20	9.0	32	6.0	0.0	0.0	0.0	12.5	18.3	19.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[95501] - PLANORBIDAE	MT	31	9.0	39	8.3	9.0	0.0	0.0	14.0	17.0	17.5
[13570] - STENONEMA TERMINATUM	MI	299	9.0	418	8.6	9.5	0.0	0.0	16.0	19.0	21.6
[13000] - LEUCROCUTA SP	I	488	9.0	912	8.1	9.0	0.0	0.0	15.0	19.0	19.0
[13580] - STENONEMA TRIPUNCTATUM (OLD)		239	9.0	380	7.5	6.0	0.0	0.0	15.0	17.0	19.0
[85840] - TANYTARSUS SEPP	MI	1016	8.9	1194	7.3	6.0	0.0	0.0	14.0	18.0	20.0
[80410] - CRICOTOPUS (C.) SP		726	8.9	960	8.2	9.0	0.0	0.0	15.0	19.0	20.0
[68601] - ANCYRONYX VARIEGATA	MI	597	8.9	1007	7.7	8.0	0.0	0.0	15.0	19.0	20.0
[11100] - BAETIS SP		397	8.9	741	6.2	0.0	0.0	0.0	13.0	17.0	19.0
[81260] - NANOCLADIUS (N.) "RECTINERVIS" (OLD)		39	8.9	44	7.3	8.5	0.0	0.0	11.5	17.0	18.3
[07800] - CAMBARUS SP		17	8.9	62	6.7	1.5	0.0	0.0	13.0	17.6	20.8
[78450] - NILOTANYPUS FIMBRIATUS	MI	888	8.9	986	7.9	8.0	0.0	0.0	15.0	19.0	20.0
[71300] - LIMONIA SP		12	8.9	105	6.0	0.0	0.0	0.0	12.5	19.0	19.2
[13561] - STENONEMA PULCHELLUM	MI	834	8.9	1062	7.8	6.0	0.0	0.0	16.0	19.0	20.0
[77500] - CONCHAPELOPIA SP		1318	8.9	1863	7.7	8.0	0.0	0.0	15.0	19.0	19.0
[54100] - NEOTRICHIA SP		30	8.8	30	5.7	0.0	0.0	0.0	13.0	15.5	17.0
[34410] - PARAGNETINA MEDIA	I	38	8.8	55	7.9	0.0	0.0	0.0	18.0	19.0	22.0
[96900] - FERRISSIA SP		1507	8.8	1988	7.2	6.0	0.0	0.0	14.0	18.0	19.0
[82880] - CRYPTOTENDIPES SP	MI	15	8.8	94	7.9	9.0	0.0	0.0	14.0	18.1	19.0
[85803] - TANYTARSUS TYPE 3		48	8.8	55	7.4	8.0	0.0	0.0	14.0	17.0	17.0
[06700] - CRANGONYX SP	MT	229	8.8	810	7.7	8.0	0.0	0.0	15.0	19.0	20.0
[15600] - EPHEMERELLA SP	MI	11	8.7	19	7.1	0.0	0.0	0.0	15.5	17.6	18.5
[80360] - CORYNONEURA "CELERIPES" (SENSU SIMPSON & BODE, 1980)	I	203	8.7	247	8.6	9.0	0.0	0.0	16.0	19.0	22.0
[85264] - CLADOTANYTARSUS VANDERWULPI GROUP TYPE 4	MI	15	8.7	46	7.4	9.0	0.0	0.0	14.0	17.0	19.0
[85500] - PARATANYTARSUS SP		999	8.7	1217	7.1	6.0	0.0	0.0	14.0	17.0	19.0
[84450] - POLYPEDILUM (URESIPEDILUM) FLAVUM		1385	8.7	2157	7.4	6.0	0.0	0.0	15.0	18.0	19.0
[84750] - STICTOCHIRONOMUS SP		57	8.6	870	6.8	5.0	0.0	0.0	14.0	17.0	19.0
[84490] - POLYPEDILUM (CEROBREGMA)	MI	31	8.6	51	7.5	8.0	0.0	0.0	12.0	17.0	17.9

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
ONTARIO											
[06201] - HYALELLA AZTECA		218	8.6	1170	6.9	5.0	0.0	0.0	13.0	17.0	19.0
[11645] - PROCLOEON SP	MI	12	8.5	14	8.0	10.5	0.0	0.0	14.0	15.1	15.8
[84700] - STENOCHIRONOMUS SP		145	8.5	408	7.5	7.0	0.0	0.0	15.0	19.0	20.0
[82141] - THIENEMANNIELLA XENA		847	8.5	1039	7.7	8.0	0.0	0.0	15.0	19.0	20.0
[11020] - ACERPENNA PYGMAEA	I	366	8.5	432	7.5	8.0	0.0	0.0	14.0	17.0	19.0
[15000] - PARALEPTOPHLEBIA SP	MI	237	8.5	284	7.3	6.0	0.0	0.0	14.0	19.0	19.0
[53800] - HYDROPTILA SP		649	8.4	1023	7.6	6.0	0.0	0.0	15.0	19.0	20.0
[84460] - POLYPEDILUM (P.) FALLAX GROUP		1540	8.4	1726	7.3	6.0	0.0	0.0	14.0	18.0	19.0
[51400] - NYCTIOPHYLAX SP	MI	143	8.4	314	6.6	2.0	0.0	0.0	14.0	17.0	19.0
[59400] - NECTOPSYCHE SP	MI	20	8.4	54	7.7	8.0	0.0	0.0	13.0	17.1	18.8
[83003] - DICROTENDIPES FUMIDUS		61	8.4	132	7.9	7.5	0.0	0.0	16.0	19.0	20.0
[84300] - PHAENOPSECTRA OBEDIENS GROUP		562	8.4	914	8.1	9.0	0.0	0.0	15.0	19.0	20.0
[04687] - PLACOBDELLA PARASITICA		8	8.4	44	5.3	3.5	0.0	0.0	9.0	14.0	17.0
[50301] - CHIMARRA ATERRIMA	MI	34	8.4	170	6.9	1.0	0.0	0.0	15.0	17.0	19.0
[85800] - TANYTARSUS SP	MI	912	8.4	1229	7.2	6.0	0.0	0.0	14.0	18.0	19.0
[60300] - DINEUTUS SP		89	8.4	400	6.8	4.5	0.0	0.0	14.0	18.0	19.0
[82121] - THIENEMANNIELLA LOBAPODEMA	MI	416	8.3	443	7.3	7.0	0.0	0.0	14.0	17.0	19.3
[80204] - BRILLIA FLAVIFRONS GROUP		105	8.3	188	8.0	9.0	0.0	0.0	15.0	17.7	19.1
[81632] - PARAKIEFFERIELLA N.SP 2	MI	117	8.3	197	7.5	7.0	0.0	0.0	14.0	17.0	20.0
[83310] - GLYPTOTENDIPES (TRICHOTENDIPES)	MI	32	8.3	46	9.7	11.0	0.0	0.0	15.0	19.0	19.2
AMPLUS											
[85230] - CLADOTANYTARSUS MANCUS GROUP		68	8.3	206	7.3	7.0	0.0	0.0	14.0	17.0	19.0
[77120] - ABLABESMYIA MALLOCHI		850	8.3	1471	7.5	8.0	0.0	0.0	14.0	18.0	19.0
[85501] - PARATANYTARSUS N.SP 1	MI	84	8.3	97	5.6	0.0	0.0	0.0	12.2	17.0	19.0
[98600] - SPHAERIUM SP		263	8.2	1418	6.9	5.0	0.0	0.0	14.0	17.0	19.0
[52200] - CHEUMATOPSYCHE SP		1846	8.2	2778	7.0	5.0	0.0	0.0	14.0	17.0	19.0
[13521] - STENONEMA FEMORATUM		728	8.2	1281	7.0	6.0	0.0	0.0	14.0	17.0	19.0
[59970] - PETROPHILA SP	I	70	8.1	492	7.6	6.0	0.0	0.0	16.0	19.0	20.0
[69200] - OPTIOSERVUS SP	MI	34	8.1	152	7.5	6.0	0.0	0.0	14.0	18.0	20.0
[68901] - MACRONYCHUS GLABRATUS	MI	1365	8.1	1744	7.3	6.0	0.0	0.0	14.0	18.0	20.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[03121] - PALUDICELLA ARTICULATA	MI	40	8.1	77	8.6	10.0	0.0	0.0	16.2	18.8	22.0
[80370] - CORYNONEURA LOBATA	MI	1390	8.1	1471	7.5	7.0	0.0	0.0	14.0	18.0	19.0
[81230] - NANOCLADIUS (N.) CRASSICORNUS (OLD)		165	8.1	195	7.7	8.0	0.0	0.0	14.0	19.0	19.0
[82220] - TVETENIA DISCOLORIPES GROUP	I	121	8.1	230	8.2	0.0	0.0	0.0	17.0	19.5	22.0
[48620] - NIGRONIA SERRICORNIS		176	8.1	440	7.4	2.5	0.0	0.0	15.0	19.0	19.0
[13590] - STENONEMA VICARIUM	MI	447	8.0	615	7.4	6.0	0.0	0.0	15.0	18.0	19.0
[84410] - POLYPEDILUM (PENTAPEDILUM) TRITUM VAR. I	VT	15	8.0	17	8.5	8.0	0.0	0.0	16.0	19.0	19.0
[97601] - CORBICULA FLUMINEA	MI	183	8.0	569	6.4	0.0	0.0	0.0	13.2	18.0	20.0
[72420] - CHAOBORUS SP	T	5	8.0	13	5.0	5.0	0.0	0.0	8.2	13.2	13.8
[84540] - POLYPEDILUM (TRIPODURA) SCALAENUM GROUP		1202	7.9	1728	7.4	7.0	0.0	0.0	14.0	18.0	19.0
[84010] - PARACHIRONOMUS "ABORTIVUS" (SENSU SIMPSON & BODE, 1980)	T	37	7.9	54	6.2	3.5	0.0	0.0	11.0	17.2	19.0
[78101] - LABRUNDINIA BECKI		22	7.9	24	7.8	8.5	0.0	0.0	13.5	16.0	16.9
[13400] - STENACRON SP		1666	7.9	2535	6.9	5.0	0.0	0.0	14.0	17.0	19.0
[34700] - AGNETINA CAPITATA COMPLEX	I	48	7.9	121	7.0	0.0	0.0	0.0	15.2	19.0	19.0
[85200] - CLADOTANYTARSUS SP		58	7.9	112	4.8	0.0	0.0	0.0	11.0	14.3	17.0
[83600] - KIEFFERULUS (K.) DUX		19	7.9	21	5.8	5.0	0.0	0.0	9.0	16.0	17.3
[78140] - LABRUNDINIA PILOSELLA	MI	389	7.8	440	7.7	8.0	0.0	0.0	14.0	17.0	19.0
[03451] - URNATELLA GRACILIS		105	7.8	136	7.2	5.0	0.0	0.0	14.0	17.9	19.7
[84790] - TRIBELOS FUSCICORNE		171	7.7	232	7.0	7.0	0.0	0.0	12.5	17.0	19.0
[83410] - HARNISCHIA CURTILAMELLATA		9	7.7	39	8.4	9.0	0.0	0.0	16.0	19.0	20.6
[08230] - ORCONNECTES (CROKERINUS) OBSCURUS		13	7.7	122	8.6	9.0	0.0	0.0	16.0	18.0	20.0
[84421] - POLYPEDILUM (P.) SP 2	VT	5	7.7	5	5.8	8.0	0.0	0.0	10.2	11.0	11.0
[11125] - PSEUDOCLOEON FRONDALE	I	8	7.7	60	7.2	1.5	0.0	0.0	15.0	19.5	22.0
[02600] - NEMATOMORPHA		14	7.7	97	6.4	5.0	0.0	0.0	11.2	16.0	19.0
[94400] - FOSSARIA SP		54	7.7	238	7.1	6.0	0.0	0.0	14.0	18.0	19.6
[67700] - PARACYMUS SP		5	7.6	223	8.1	9.0	0.0	0.0	15.0	19.0	20.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[16700] - TRICORYTHODES SP	MI	661	7.6	852	7.8	8.0	0.0	0.0	15.0	19.0	20.0
[80420] - CRICOTOPUS (C.) BICINCTUS	MT	799	7.6	1394	7.4	6.0	0.0	0.0	14.0	18.1	19.8
[80440] - CRICOTOPUS (C.) TRIFASCIA		35	7.6	230	8.4	9.5	0.0	0.0	16.0	19.0	20.0
[85263] - CLADOTANYTARSUS VANDERWULPI	MI	6	7.6	13	6.0	0.0	0.0	0.0	12.7	19.6	21.5
GROUP TYPE 3											
[87540] - HEMERODROMIA SP		909	7.6	1040	7.5	6.0	0.0	0.0	14.0	19.0	20.0
[69400] - STENELMIS SP		1382	7.6	2639	7.1	5.0	0.0	0.0	14.0	17.0	19.0
[04685] - PLACOBDELLA ORNATA		15	7.6	138	7.1	6.0	0.0	0.0	14.0	19.0	20.0
[17200] - CAENIS SP		1531	7.5	2286	7.0	5.0	0.0	0.0	14.0	17.0	19.0
[77740] - HAYESOMYIA SENATA		86	7.5	114	7.8	8.0	0.0	0.0	14.0	17.0	19.8
[81240] - NANOCLADIUS (N.) DISTINCTUS	MT	434	7.5	481	6.9	6.0	0.0	0.0	14.0	17.0	19.0
[84470] - POLYPEDILUM (P.) ILLINOENSE	T	739	7.5	1898	7.1	6.0	0.0	0.0	14.0	17.0	19.0
[85720] - STEPELLINELLA N.SP NR.	I	246	7.5	317	7.3	6.0	0.0	0.0	14.0	18.0	20.0
FLAVIDULA											
[83040] - DICROTENDIPES NEOMODESTUS		1184	7.4	1637	7.0	6.0	0.0	0.0	13.0	17.0	19.0
[03360] - PLUMATELLA SP		664	7.4	1197	7.2	6.0	0.0	0.0	14.0	17.0	19.0
[84315] - PHAENOPSECTRA FLAVIPES		210	7.4	369	8.0	9.0	0.0	0.0	14.0	19.0	19.0
[81631] - PARAKIEFFERIELLA N.SP 1		96	7.3	132	8.1	9.0	0.0	0.0	15.0	18.0	20.0
[70600] - ANTOCHA SP	MI	212	7.2	327	7.7	0.0	0.0	0.0	17.0	19.0	22.0
[80470] - CRICOTOPUS (C.) OR ORTHOCLADIUS (O.) SP		9	7.2	15	7.3	5.0	0.0	0.0	15.5	19.0	21.2
[85261] - CLADOTANYTARSUS VANDERWULPI	I	109	7.2	200	8.1	8.5	0.0	0.0	16.0	19.0	20.0
GROUP TYPE 1											
[84050] - PARACHIRONOMUS "HIRTALATUS" (SENSU SIMPSON & BODE, 1980)	VT	13	7.2	30	4.5	0.0	0.0	0.0	9.0	11.0	14.0
[04686] - PLACOBDELLA PAPILLIFERA		5	7.2	63	8.6	8.0	0.0	0.0	16.7	19.0	20.0
[23909] - BOYERIA VINOSA		214	7.1	1361	7.3	6.0	0.0	0.0	14.0	18.0	20.0
[77115] - ABLABESMYIA JANTA		65	7.1	100	6.8	6.5	0.0	0.0	12.0	17.0	19.0
[00401] - SPONGILLIDAE	MI	7	7.1	241	7.2	3.0	0.0	0.0	15.0	18.4	20.0
[78500] - PARAMERINA FRAGILIS		12	7.1	20	8.4	9.0	0.0	0.0	15.5	18.5	21.0
[34300] - NEOPERLA CLYMENE COMPLEX	I	8	7.1	54	6.2	0.0	0.0	0.0	15.0	19.0	19.8

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[54300] - OXYETHIRA SP		21	7.0	24	6.9	9.0	0.0	0.0	11.0	13.0	13.6
[71100] - HEXATOMA SP	MI	56	7.0	765	7.6	8.0	0.0	0.0	15.0	18.0	19.0
[60900] - PELTODYTES SP	MT	9	7.0	1008	6.5	4.0	0.0	0.0	12.0	17.0	19.0
[21200] - CALOPTERYX SP		578	6.9	1765	7.3	6.0	0.0	0.0	14.0	18.0	20.0
[81250] - NANOCLADIUS (N.) MINIMUS		164	6.9	176	8.3	9.0	0.0	0.0	14.0	18.0	19.0
[11650] - PROCLOEON SP (W/ HINDWING PADS)	MI	78	6.9	232	7.9	8.0	0.0	0.0	15.0	19.0	22.0
[03045] - FREDERICELLA INDICA	MI	10	6.9	24	7.6	0.0	0.0	0.0	17.0	19.0	19.9
[84060] - PARACHIRONOMUS PECTINATELLAE		53	6.8	85	9.0	10.0	0.0	0.0	14.0	18.0	22.0
[84800] - TRIBELOS JUCUNDUM		191	6.8	305	6.9	7.0	0.0	0.0	12.0	17.0	19.0
[80570] - DONCRICOTOPUS BICAUDATUS		8	6.8	23	6.4	4.0	0.0	0.0	12.7	19.0	19.3
[22300] - ARGIA SP		1260	6.8	2154	7.1	6.0	0.0	0.0	14.0	18.0	19.0
[03040] - FREDERICELLA SP	MI	34	6.8	112	7.2	1.0	0.0	0.0	17.0	19.0	20.9
[68708] - DUBIRAPHIA VITTATA GROUP		680	6.8	1745	7.3	6.0	0.0	0.0	14.0	17.0	19.0
[80490] - CRICOTOPUS (ISOCLADIUS) INTERSECTUS GROUP	MT	11	6.8	18	3.7	0.0	0.0	0.0	9.0	11.7	15.0
[68702] - DUBIRAPHIA BIVITTATA		30	6.8	209	7.4	7.0	0.0	0.0	14.0	18.0	19.0
[81825] - RHEOCRICOTOPUS (PSILOCRICOTOPUS) ROBACKI	MI	718	6.7	879	7.3	6.0	0.0	0.0	14.0	18.0	19.0
[04901] - ERPOBDELLIDAE	T	8	6.7	47	7.0	3.0	0.0	0.0	15.7	18.0	19.0
[83840] - MICROTENDIPES PEDELLUS GROUP	MI	718	6.7	1051	6.5	3.0	0.0	0.0	13.0	17.0	19.0
[83000] - DICROTENDIPES SP		43	6.6	62	8.1	9.0	0.0	0.0	14.0	17.6	19.0
[08260] - ORCONNECTES (CROKERINUS) SANBORNII SANBORNII		65	6.6	522	7.4	7.0	0.0	0.0	14.0	18.0	19.0
[85752] - SUBLETTEA COFFMANI	I	117	6.6	133	7.5	0.0	0.0	0.0	17.0	19.0	20.0
[68130] - HELICHUS SP	MI	226	6.5	852	7.1	5.0	0.0	0.0	14.0	17.3	19.0
[59580] - OECETIS PERSIMILIS	MI	76	6.5	110	6.4	0.0	0.0	0.0	12.0	20.0	22.0
[84960] - PSEUDOCHIRONOMUS SP		65	6.5	154	4.8	1.0	0.0	0.0	9.0	15.0	17.0
[86100] - CHRYSOPS SP		36	6.5	649	7.2	6.0	0.0	0.0	14.0	18.0	19.0
[82730] - CHIRONOMUS (C.) DECORUS GROUP	T	370	6.5	1029	7.1	6.0	0.0	0.0	14.0	17.0	19.0
[01801] - TURBELLARIA		1308	6.5	2020	6.8	5.0	0.0	0.0	14.0	17.0	19.0
[82820] - CRYPTOCHIRONOMUS SP		301	6.5	1609	7.3	6.0	0.0	0.0	14.0	17.6	19.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[78401] - NATARSIA SPECIES A (SENSU ROBACK, 1978)	T	67	6.4	383	7.5	8.0	0.0	0.0	14.0	17.0	19.0
[82101] - THIENEMANNIELLA TAUROCAPITA	I	300	6.4	361	7.5	3.0	0.0	0.0	16.0	19.0	20.0
[84020] - PARACHIRONOMUS CARINATUS		89	6.4	105	5.9	3.0	0.0	0.0	11.0	15.0	17.0
[85801] - TANYTARSUS TYPE 1	MI	8	6.4	8	7.0	6.0	0.0	0.0	14.5	15.0	15.0
[01900] - NEMERTEA		114	6.3	137	4.9	0.0	0.0	0.0	12.0	18.0	19.6
[77130] - ABLABESMYIA RHAMPHE GROUP	MT	134	6.3	187	6.5	5.0	0.0	0.0	12.0	16.0	18.1
[78350] - MEROPELOPIA SP		76	6.3	133	7.0	4.0	0.0	0.0	14.0	17.2	19.0
[01200] - CORDYLOPHORA LACUSTRIS		46	6.3	50	5.8	0.0	0.0	0.0	9.0	16.0	20.0
[85201] - CLADOTANYTARSUS SPECIES GROUP A	MI	39	6.3	76	7.4	9.0	0.0	0.0	12.5	15.9	17.0
[48600] - NIGRONIA SP		6	6.2	23	4.3	0.0	0.0	0.0	9.5	17.6	20.0
[85400] - MICROPSECTRA SP		56	6.2	81	5.3	0.0	0.0	0.0	11.0	15.0	17.0
[35001] - PERLODIDAE	MI	13	6.2	17	8.1	9.0	0.0	0.0	17.0	18.6	20.9
[95100] - PHYSELLA SP	T	912	6.2	2042	6.7	4.0	0.0	0.0	13.0	17.0	19.0
[78650] - PROCLADIUS SP	MT	182	6.2	587	7.4	7.0	0.0	0.0	14.0	17.0	19.0
[79085] - TELOPELOPIA OKOBOJI		33	6.1	62	6.4	3.5	0.0	0.0	14.0	17.0	18.0
[14950] - LEPTOPHLEBIA SP OR PARALEPTOPHLEBIA SP	MI	213	6.1	246	6.1	1.0	0.0	0.0	12.0	15.9	17.4
[15501] - EPHEMERELLIDAE	MI	54	6.1	55	6.3	0.0	0.0	0.0	15.7	19.0	19.0
[11430] - DIPHETOR HAGENI	I	78	6.1	98	7.0	0.0	0.0	0.0	15.0	18.7	19.6
[52440] - CERATOPSYCHE SLOSSONAE	MI	117	6.1	186	7.0	0.0	0.0	0.0	15.0	19.0	20.0
[84155] - PARALAUTERBORNIELLA NIGROHALTERALIS		56	6.1	131	6.6	5.0	0.0	0.0	12.7	17.0	19.0
[81259] - NANOCLADIUS (N.) "RECTINERVIS" (SENSU SIMPSON AND BODE, 1980)	MI	9	6.0	9	7.0	6.0	0.0	0.0	14.7	17.0	17.0
[98200] - PISIDIUM SP		120	6.0	398	6.8	5.0	0.0	0.0	13.0	17.0	19.0
[18700] - HEXAGENIA SP	MI	25	6.0	166	4.8	0.0	0.0	0.0	10.0	17.0	18.2
[50804] - LYPE DIVERSA	MI	181	6.0	226	6.4	0.0	0.0	0.0	14.0	19.0	20.0
[84210] - PARATENDIPES ALBIMANUS OR P. DUPLICATUS	MI	611	6.0	918	7.0	6.0	0.0	0.0	14.0	17.0	19.0
[55300] - PTILOSTOMIS SP		5	6.0	83	5.0	0.0	0.0	0.0	12.0	17.0	19.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[47600] - SIALIS SP		350	5.9	1563	7.3	7.0	0.0	0.0	14.0	18.0	19.0
[84030] - PARACHIRONOMUS DIRECTUS	T	20	5.9	23	5.2	5.0	0.0	0.0	9.0	9.6	12.0
[71910] - TIPULA ABDOMINALIS	MI	51	5.9	190	7.0	2.0	0.0	0.0	14.0	17.5	19.0
[96002] - HELISOMA ANCEPS ANCEPS	MT	34	5.9	116	6.4	0.0	0.0	0.0	14.0	16.9	19.0
[03221] - PECTINATELLA MAGNIFICA		7	5.9	10	6.4	4.0	0.0	0.0	14.0	16.5	17.0
[68700] - DUBIRAPHIA SP		245	5.9	377	6.2	0.0	0.0	0.0	13.2	17.0	19.0
[79400] - ZAVRELIMYIA SP		39	5.8	61	4.8	0.0	0.0	0.0	11.0	15.4	16.4
[11001] - BAETIDAE		21	5.8	24	5.9	3.0	0.0	0.0	12.5	15.0	15.0
[68707] - DUBIRAPHIA QUADRINOTATA		17	5.8	158	7.8	8.0	0.0	0.0	14.0	19.0	20.0
[81650] - PARAMETRIOCNEMUS SP	MI	315	5.7	549	7.3	5.0	0.0	0.0	15.0	18.0	19.0
[85821] - TANYTARSUS GLABRESCENS GROUP SP 7	MI	727	5.7	814	4.7	0.0	0.0	0.0	10.0	16.0	19.0
[85818] - TANYTARSUS GLABRESCENS GROUP SP 4	MI	21	5.7	33	7.8	9.0	0.0	0.0	14.0	17.0	17.0
[11651] - PROCLOEON SP (W/O HINDWING PADS)	MI	157	5.7	309	6.7	4.0	0.0	0.0	13.0	17.0	19.0
[18750] - HEXAGENIA LIMBATA	MI	21	5.7	165	7.3	7.0	0.0	0.0	13.2	17.0	19.0
[65800] - BEROSUS SP	MT	370	5.7	1011	7.0	5.0	0.0	0.0	14.0	17.0	19.0
[08250] - ORCONECTES (PROCERICAMBARUS) RUSTICUS		197	5.7	1347	7.0	6.0	0.0	0.0	14.0	17.0	19.0
[84430] - POLYPEDILUM (P.) ALBICORNE	MI	14	5.7	21	6.3	0.0	0.0	0.0	13.0	18.0	18.4
[53400] - PROTOPTILA SP	I	5	5.7	62	6.0	0.0	0.0	0.0	12.0	18.0	20.0
[93200] - HYDROBIIDAE	MT	59	5.7	162	7.4	6.0	0.0	0.0	14.0	18.3	19.4
[06810] - GAMMARUS FASCIATUS		61	5.6	77	3.3	0.0	0.0	0.0	6.7	14.0	17.3
[05900] - LIRCEUS SP		239	5.6	646	6.8	5.0	0.0	0.0	13.0	17.0	19.0
[58505] - HELICOPSYCHE BOREALIS	MI	104	5.6	616	6.9	4.0	0.0	0.0	14.0	18.0	19.0
[51600] - POLYCENTROPUS SP	MI	290	5.6	643	6.1	0.0	0.0	0.0	12.0	17.0	19.0
[81630] - PARAKIEFFERIELLA SP		37	5.6	46	3.7	0.0	0.0	0.0	6.0	16.7	18.4
[95907] - GYRAULUS (TORQUIS) PARVUS	MT	28	5.6	82	6.4	2.5	0.0	0.0	12.0	17.3	19.0
[83158] - ENDOCHIRONOMUS NIGRICANS		88	5.5	161	6.1	6.0	0.0	0.0	10.2	16.0	17.9
[68201] - SCIRTIDAE		18	5.5	162	6.5	3.0	0.0	0.0	13.0	18.3	19.4

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[34130] - ACRONEURIA FRISONI	MI	208	5.4	366	5.8	0.0	0.0	0.0	12.0	17.0	19.0
[51001] - POLYCENTROPODIDAE		20	5.4	27	5.5	1.0	0.0	0.0	9.7	16.6	19.0
[84040] - PARACHIRONOMUS FREQUENS		59	5.3	102	7.3	7.5	0.0	0.0	14.0	17.3	19.4
[81040] - LIMNOPHYTES SP	MT	8	5.3	12	4.9	0.5	0.0	0.0	10.0	14.2	16.6
[57900] - PYCNOPSYCHE SP	MI	65	5.3	562	7.1	3.0	0.0	0.0	14.0	19.0	20.0
[44501] - CORIXIDAE		15	5.3	262	5.8	0.0	0.0	0.0	12.0	17.0	19.0
[22001] - COENAGRIONIDAE	MT	437	5.2	2088	6.9	5.0	0.0	0.0	14.0	17.0	19.0
[84612] - SAETHERIA TYLUS	MI	6	5.2	69	8.4	10.0	0.0	0.0	14.2	17.0	19.0
[82710] - CHIRONOMUS (C.) SP	T	114	5.1	196	5.1	0.0	0.0	0.0	11.0	17.0	17.0
[68075] - PSEPHENUS HERRICKI	MI	178	5.1	1335	7.5	6.0	0.0	0.0	15.0	19.0	19.0
[87601] - DOLICHOPODIDAE		5	5.0	21	4.3	0.0	0.0	0.0	9.2	12.2	14.4
[83300] - GLYPTOTENDIPES (G.) SP	MT	658	5.0	860	6.6	6.0	0.0	0.0	12.0	17.0	19.0
[80350] - CORYNONEURA SP	MI	94	4.9	102	5.0	0.0	0.0	0.0	12.0	16.3	17.0
[78100] - LABRUNDINIA SP		85	4.9	91	5.3	3.0	0.0	0.0	11.0	14.4	16.0
[79020] - TANYPUS NEOPUNCTIPENNIS	VT	13	4.9	88	5.3	3.0	0.0	0.0	9.0	16.4	18.1
[83050] - DICROTENDIPES LUCIFER	MT	169	4.9	188	4.8	0.0	0.0	0.0	9.0	14.0	17.0
[80427] - CRICOTOPUS (C.) POLITUS	MI	12	4.8	16	5.6	0.0	0.0	0.0	14.5	19.9	21.4
[83051] - DICROTENDIPES SIMPSONI	T	358	4.8	406	6.2	6.0	0.0	0.0	11.0	15.0	18.2
[52001] - HYDROPSYCHIDAE		17	4.8	20	3.9	0.0	0.0	0.0	3.0	18.5	19.5
[74501] - CERATOPOGONIDAE		539	4.8	948	6.4	4.0	0.0	0.0	13.0	17.0	19.0
[50315] - CHIMARRA OBSCURA	MI	403	4.7	1105	6.9	1.0	0.0	0.0	14.0	18.0	19.0
[96120] - MENETUS (MICROMENETUS) DILATATUS	T	143	4.7	214	7.1	6.0	0.0	0.0	14.0	18.0	19.0
[83002] - DICROTENDIPES MODESTUS		51	4.7	91	6.0	3.0	0.0	0.0	11.0	16.4	17.0
[54200] - ORTHOTRICHIA SP		27	4.7	32	5.0	0.0	0.0	0.0	9.0	14.0	14.9
[79100] - THIENEMANNIMYIA GROUP		299	4.6	481	4.2	0.0	0.0	0.0	9.0	14.0	17.0
[82200] - TVETENIA BAVARICA GROUP	MI	125	4.6	175	6.0	0.0	0.0	0.0	14.0	18.0	20.0
[72160] - PSYCHODA SP	T	11	4.6	15	5.0	0.0	0.0	0.0	12.0	14.0	16.2
[80510] - CRICOTOPUS (ISOCLADIUS) SYLVESTRIS GROUP	VT	55	4.6	150	4.6	0.0	0.0	0.0	9.0	14.0	17.0
[54160] - OCHROTRICHIA SP	MI	13	4.6	23	2.5	0.0	0.0	0.0	0.0	13.0	17.3

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[53501] - HYDROPTILIDAE		79	4.3	226	6.9	4.5	0.0	0.0	14.0	18.0	20.0
[66500] - ENOCHRUS SP		15	4.3	248	7.4	6.0	0.0	0.0	14.0	17.7	20.0
[14600] - CHOROTERPES SP	MI	10	4.3	22	6.8	4.5	0.0	0.0	14.0	15.3	18.4
[51206] - CYRNELLUS FRATERNUS		129	4.3	152	6.0	2.5	0.0	0.0	11.0	14.3	18.8
[11400] - CENTROPTILUM SP OR PROCLOEON SP (FORMERLY IN CLOEON)	MI	156	4.3	241	6.6	4.0	0.0	0.0	12.0	17.0	19.0
[81700] - PSECTROCLADIUS SP		9	4.2	15	2.5	0.0	0.0	0.0	6.7	10.0	10.0
[34110] - ACRONEURIA ABNORMIS	I	5	4.2	6	5.1	4.0	0.0	0.0	8.0	14.3	15.0
[82770] - CHIRONOMUS (C.) RIPARIUS GROUP	VT	80	4.1	233	6.7	5.0	0.0	0.0	12.0	17.0	19.0
[77355] - CLINOTANYPUS PINGUIS	T	18	4.1	156	5.2	3.5	0.0	0.0	10.0	14.0	15.0
[68025] - ECTOPRIA SP	MI	20	4.1	196	6.3	0.0	0.0	0.0	12.0	18.0	19.0
[11200] - CALLIBAETIS SP	MT	42	4.1	459	6.8	6.0	0.0	0.0	12.0	17.0	19.0
[67500] - LACCOBIUS SP		11	4.1	252	6.8	5.0	0.0	0.0	14.0	17.0	19.0
[85815] - TANYTARSUS GLABRESCENS GROUP SP 1		11	4.0	15	4.2	0.0	0.0	0.0	11.0	15.0	15.0
[59410] - NECTOPSYCHE DIARINA	MI	23	4.0	96	5.7	1.0	0.0	0.0	11.5	17.0	20.0
[13010] - LEUCROCUTA HEBE	MI	11	4.0	58	3.6	0.0	0.0	0.0	7.0	14.0	16.6
[52450] - CERATOPSYCHE SPARNA	MI	94	3.9	152	6.1	0.0	0.0	0.0	14.5	19.0	20.0
[84440] - POLYPEDILUM (URESIPEDILUM) AVICEPS	MI	51	3.9	89	5.9	0.0	0.0	0.0	14.2	18.0	19.0
[78130] - LABRUNDINIA NEOPILOSELLA		10	3.9	10	5.8	7.0	0.0	0.0	9.0	12.5	13.0
[83590] - KIEFFERULUS SP		5	3.8	10	3.5	0.0	0.0	0.0	11.0	12.0	12.0
[84888] - XENOCHIRONOMUS XENOLABIS	MI	8	3.8	143	7.8	8.0	0.0	0.0	15.0	19.0	20.3
[04964] - MOOREOBDELLA MICROSTOMA	T	65	3.8	363	7.0	4.0	0.0	0.0	14.0	18.0	19.0
[84480] - POLYPEDILUM (P.) LAETUM GROUP	MI	7	3.7	124	7.5	7.0	0.0	0.0	14.0	17.0	20.0
[08200] - ORCONNECTES SP		57	3.5	296	5.1	0.0	0.0	0.0	12.0	17.0	17.0
[80500] - CRICOTOPUS (ISOCLADIUS) REVERSUS GROUP	VT	20	3.4	24	6.1	8.0	0.0	0.0	9.0	12.3	16.5
[74650] - ATRICHOPOGON SP		27	3.4	43	6.1	2.0	0.0	0.0	13.5	17.2	18.3
[80351] - CORYNONEURA N.SP 1	MI	109	3.4	152	5.6	0.0	0.0	0.0	12.0	18.0	19.0
[67800] - TROIPISTERNUS SP	MT	6	3.3	649	7.3	7.0	0.0	0.0	14.0	18.0	19.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[78655] - PROCLADIUS (HOLOTANYPUS) SP	MT	53	3.2	341	5.8	1.0	0.0	0.0	11.0	17.0	19.0
[78200] - LARSIA SP		56	3.1	93	4.8	0.0	0.0	0.0	10.0	16.0	18.0
[05800] - CAECIDOTEA SP	MT	333	3.0	810	7.0	5.0	0.0	0.0	14.0	18.0	19.0
[84000] - PARACHIRONOMUS SP		41	3.0	53	4.7	0.0	0.0	0.0	10.2	15.6	18.8
[81200] - NANOCLADIUS SP		12	2.9	22	5.4	0.0	0.0	0.0	10.0	16.3	17.4
[16300] - SERRATELLA SP	I	5	2.9	5	5.8	0.0	0.0	0.0	14.2	15.0	15.0
[78601] - PENTANEURA TYPE 1		9	2.9	11	7.6	6.0	0.0	0.0	14.0	16.4	16.9
[81400] - ORTHOCLADIUS SP		15	2.9	32	3.3	0.0	0.0	0.0	3.0	14.9	18.8
[96930] - LAEVAPEX FUSCUS		40	2.8	74	4.4	0.0	0.0	0.0	9.0	12.3	18.6
[03600] - OLIGOCHAETA	T	1931	2.8	2722	6.9	5.0	0.0	0.0	14.0	17.0	19.0
[04637] - BATRACOBDELLA PHALERA	T	11	2.7	21	4.8	0.0	0.0	0.0	11.2	17.2	19.4
[04935] - ERPOBDELLA PUNCTATA PUNCTATA	T	52	2.6	263	6.2	3.0	0.0	0.0	12.0	17.0	19.0
[77100] - ABLABESMYIA SP		13	2.5	26	7.9	8.5	0.0	0.0	14.0	16.0	17.8
[04666] - HELOBDELLA TRISERIALIS	T	71	2.5	182	5.1	0.5	0.0	0.0	10.0	16.0	17.4
[78400] - NATARSIA SP	MT	25	2.5	61	4.1	0.0	0.0	0.0	9.0	14.0	17.0
[84469] - POLYPEDILUM (P.) ILLINOENSE GROUP		17	2.5	33	1.6	0.0	0.0	0.0	0.0	8.4	15.1
[82700] - CHIRONOMUS SP	T	14	2.5	28	3.4	0.0	0.0	0.0	8.0	11.7	17.5
[85711] - STEPELLINELLA POSS.	I	6	2.5	6	3.6	1.0	0.0	0.0	3.0	15.6	17.0
LEPTOCELLOIDES											
[84475] - POLYPEDILUM (P.) OPHIOIDES	MI	18	2.5	68	9.5	12.0	0.0	0.0	17.0	19.0	22.0
[11250] - CENTROPTILUM SP (W/O HINDWING PADS)	MI	10	2.4	146	6.9	3.0	0.0	0.0	14.0	17.0	20.0
[12900] - HEPTAGENIA SP		6	2.3	11	2.6	0.0	0.0	0.0	5.5	9.4	9.9
[81201] - NANOCLADIUS (N.) SP		73	2.2	102	2.9	0.0	0.0	0.0	5.0	11.3	14.4
[74673] - ATRICHOPOGON WEBSTERI		28	2.0	39	7.4	5.0	0.0	0.0	16.5	19.0	19.5
[96264] - PLANORBELLA (PIEROSOMA) PILSBRYI	T	23	2.0	69	5.1	0.0	0.0	0.0	11.0	15.6	17.0
[07701] - CAMBARIDAE		19	2.0	72	4.8	0.0	0.0	0.0	9.0	17.0	17.0
[07860] - CAMBARUS (PUNCTICAMBARUS)		6	2.0	85	6.5	0.0	0.0	0.0	13.2	19.0	19.0
ROBUSTUS											
[13500] - STENONEMA SP		16	1.9	28	4.9	0.0	0.0	0.0	11.5	15.7	16.2
[80700] - EUKIEFFERIELLA SP		6	1.9	18	7.6	5.5	0.0	0.0	16.0	17.0	17.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[82100] - THIENEMANNIELLA SP		29	1.8	38	2.0	0.0	0.0	0.0	0.0	12.7	15.2
[59300] - MYSTACIDES SP	MI	18	1.7	103	5.6	0.0	0.0	0.0	12.0	18.0	21.3
[97710] - DREISSENA POLYMORPHA		27	1.7	51	6.3	3.0	0.0	0.0	11.7	17.0	18.9
[28001] - LIBELLULIDAE	T	5	1.6	18	7.0	6.0	0.0	0.0	11.0	20.5	22.0
[80870] - HYDROBAENUS SP	T	6	1.6	15	5.3	0.0	0.0	0.0	10.5	15.0	16.5
[69225] - OPTIOSERVUS FASTIDITUS	MI	27	1.5	136	6.2	0.0	0.0	0.0	13.5	17.0	19.0
[69420] - STENELMIS SEXLINEATA		34	1.5	79	7.4	5.0	0.0	0.0	14.0	19.0	22.0
[83330] - GLYPTOTENDIPES (G.) BARBIPES	VT	5	1.1	9	4.7	2.0	0.0	0.0	7.2	15.8	17.0
[80450] - CRICOTOPUS (C.) VIERRIENSIS		6	1.1	9	1.8	0.0	0.0	0.0	1.2	9.2	12.0
[11101] - PLAUDITUS SP	MI	6	1.1	11	4.8	0.0	0.0	0.0	11.5	15.2	16.8
[69410] - STENELMIS CRENATA		9	0.9	14	2.7	0.0	0.0	0.0	0.0	12.5	16.0
[04962] - MOOREOBDELLA FERVIDA	T	11	0.9	69	5.3	0.0	0.0	0.0	11.0	17.0	19.0
[52315] - DIPLECTRONA MODESTA		8	0.8	14	4.3	0.0	0.0	0.0	10.0	13.5	17.0
[26700] - MACROMIA SP		6	0.8	144	7.0	8.0	0.0	0.0	14.0	17.0	19.0
[04660] - HELOBDELLA SP	T	7	0.8	15	4.2	0.0	0.0	0.0	8.0	15.0	20.2
[04664] - HELOBDELLA STAGNALIS	T	37	0.7	141	5.9	0.0	0.0	0.0	12.0	17.0	18.4
[52500] - HYDROPSYCHE SP		9	0.7	15	1.6	0.0	0.0	0.0	0.0	8.0	8.0
[80400] - CRICOTOPUS SP		24	0.6	32	1.7	0.0	0.0	0.0	0.0	8.0	16.1
[63900] - LACCOPHILUS SP	T	10	0.6	389	6.0	4.0	0.0	0.0	11.0	17.0	19.0
[33100] - LEUCTRA SP	I	6	0.5	29	5.1	0.0	0.0	0.0	14.0	18.8	22.0
[69210] - OPTIOSERVUS AMPLIATUS	MI	7	0.4	37	3.9	0.0	0.0	0.0	9.2	12.0	16.3
[81810] - RHEOCRICOTOPUS SP		8	0.4	11	5.0	0.0	0.0	0.0	10.2	14.4	14.9
[11115] - BAETIS TRICAUDATUS	MI	18	0.4	44	3.6	0.0	0.0	0.0	0.0	15.2	20.8
[52560] - HYDROPSYCHE ORRIS	MI	13	0.4	17	4.0	0.0	0.0	0.0	9.5	17.4	19.0
[85700] - STEPELLINA SP	MI	10	0.4	15	2.1	0.0	0.0	0.0	0.0	12.0	12.0
[95900] - GYRAULUS SP	MT	16	0.1	22	2.7	0.0	0.0	0.0	0.0	14.0	14.8
[11014] - ACENTRELLA TURBIDA	I	9	0.0	49	0.8	0.0	0.0	0.0	0.0	0.0	5.7

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
		Wadeable		- HYD_QHEI							
[43014] - TONGUETIED MINNOW	S	17	20.9	17	18.6	17.0	13.2	14.0	22.7	25.0	25.0
[25001] - BROWN TROUT		25	20.0	25	18.4	19.0	12.0	14.7	21.2	25.0	25.0
[43008] - STREAMLINE CHUB	R	12	19.3	12	18.0	20.5	10.0	13.0	22.0	22.0	22.0
[80020] - TIPPECANOE DARTER	R	6	18.7	6	16.6	20.0	6.4	10.0	22.0	22.0	22.0
[43012] - LONGNOSE DACE	R	9	18.0	9	17.2	18.0	13.0	16.0	19.0	19.0	19.0
[01007] - AMER BROOK LAMPREY	R	44	17.3	44	16.8	17.0	13.0	14.0	19.0	20.5	25.0
[80017] - VARIEGATE DARTER	I	142	16.5	142	15.8	17.0	10.0	13.0	19.0	22.0	22.0
[80013] - EASTERN SAND DARTER	R	11	16.1	11	16.2	16.0	12.0	16.0	18.5	19.0	19.0
[77012] - REDEAR SUNFISH		26	16.0	26	14.0	17.0	6.2	11.0	18.0	19.0	19.0
[43022] - ROSYFACE SHINER	I	588	15.9	588	15.6	17.0	10.0	13.0	19.0	22.0	22.0
[43031] - STEELCOLOR SHINER	MT	60	15.8	60	14.4	14.5	8.0	12.0	17.0	19.0	22.0
[40009] - BLACK REDHORSE	I	597	15.6	597	15.4	16.0	9.0	12.0	19.0	22.0	22.0
[80016] - BANDED DARTER	I	1038	15.4	1038	15.0	16.0	9.0	12.0	19.0	20.0	22.0
[43005] - RIVER CHUB	I	426	15.4	426	15.8	17.0	10.0	13.0	19.0	21.0	22.0
[40011] - SHORTHEAD REDHORSE	MI	117	15.3	117	15.3	15.0	9.2	12.0	19.0	21.0	22.0
[80019] - BLUEBREAST DARTER	R	6	15.3	6	16.3	18.5	6.5	11.0	22.0	22.0	22.0
[80004] - DUSKY DARTER	MI	53	15.1	53	14.9	15.0	10.0	12.0	18.2	20.4	22.0
[43021] - SILVER SHINER	I	870	15.0	870	15.1	16.0	9.0	12.0	19.0	20.0	22.0
[70001] - BROOK SILVERSIDE	MI	165	15.0	165	13.5	14.0	8.0	10.0	17.0	21.0	22.0
[90002] - MOTTLED SCULPIN		756	15.0	756	14.7	15.0	9.0	12.0	18.0	20.0	22.0
[40015] - NORTHERN HOG SUCKER	MI	2512	14.9	2512	14.1	14.0	8.0	11.0	17.0	19.0	22.0
[40006] - RIVER CARPSUCKER		5	14.8	5	15.2	17.0	7.0	12.2	18.5	20.0	20.0
[43017] - REDSIDE DACE	I	74	14.7	74	13.5	14.0	6.0	11.0	17.0	20.0	24.0
[80001] - SAUGER		66	14.6	66	14.9	15.0	10.0	12.0	19.0	20.0	20.4
[43041] - BULLHEAD MINNOW		8	14.5	8	12.6	13.0	10.0	10.0	14.0	16.1	17.0
[80002] - WALLEYE		14	14.5	14	13.5	14.5	9.0	9.0	16.0	17.2	18.6
[10004] - LONGNOSE GAR		55	14.4	55	14.6	15.0	8.0	11.0	19.0	20.0	21.0
[40008] - SILVER REDHORSE	MI	286	14.4	286	14.2	14.5	9.0	11.0	17.0	19.0	20.0
[01006] - LEAST BROOK LAMPREY		95	14.4	95	14.2	14.0	10.0	11.2	17.7	19.0	19.0
[85001] - FRESHWATER DRUM	MT	177	14.3	177	13.5	14.0	7.0	10.0	17.0	19.0	20.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[80022] - RAINBOW DARTER	MI	1968	14.3	1968	13.8	14.0	6.0	11.0	17.0	20.0	22.0
[77004] - SMALLMOUTH BASS	MI	1719	14.2	1719	14.1	15.0	8.0	11.0	17.0	20.0	22.0
[95001] - BROOK STICKLEBACK		45	14.2	45	14.6	15.0	10.0	11.7	17.0	20.0	22.0
[25002] - RAINBOW TROUT		15	14.2	15	15.1	14.0	11.0	12.0	19.0	20.0	23.7
[80011] - LOGPERCH	MI	1171	14.1	1171	13.7	14.0	7.0	11.0	17.0	20.0	22.0
[77003] - ROCK BASS		2371	14.0	2371	13.7	14.0	7.0	11.0	17.0	19.0	22.0
[80015] - GREENSIDE DARTER	MI	2519	13.9	2519	13.5	14.0	6.0	10.0	17.0	19.0	22.0
[43020] - EMERALD SHINER		247	13.9	247	12.8	13.0	6.0	9.0	17.0	19.0	19.1
[47007] - FLATHEAD CATFISH		31	13.9	31	14.3	14.0	8.6	12.2	16.7	20.4	21.9
[77005] - SPOTTED BASS		394	13.9	394	13.7	14.0	8.0	11.0	17.0	19.0	20.0
[47008] - STONECAT MADTOM	I	609	13.9	609	14.3	15.0	6.0	11.0	18.0	20.0	22.0
[43016] - SOUTH. REDBELLY DACE		71	13.8	71	12.1	12.0	6.0	9.0	15.0	17.0	17.9
[40010] - GOLDEN REDHORSE	MI	1659	13.8	1659	13.9	14.0	8.0	11.0	17.0	19.0	22.0
[43025] - STRIPED SHINER		2475	13.7	2475	13.3	14.0	6.0	10.0	17.0	19.0	21.0
[43004] - HORNYHEAD CHUB	I	206	13.6	206	15.0	16.0	8.0	11.0	19.0	22.0	22.0
[20003] - GIZZARD SHAD		734	13.5	734	12.5	12.5	6.0	9.0	17.0	19.0	20.0
[43035] - MIMIC SHINER	I	189	13.4	189	14.5	15.0	8.0	11.0	18.0	19.6	22.0
[47002] - CHANNEL CATFISH		393	13.3	393	12.9	13.0	6.0	9.0	17.0	19.0	21.0
[77009] - BLUEGILL SUNFISH	MT	2368	13.2	2368	13.4	14.0	7.0	10.0	17.0	19.0	20.0
[80007] - SLENDERHEAD DARTER	R	10	13.2	10	15.1	14.5	9.0	13.0	18.0	21.0	21.0
[40007] - HIGHFIN CARPSUCKER		6	13.2	6	13.3	12.0	9.2	11.0	14.0	21.2	22.0
[43011] - WESTERN BLACKNOSE DACE	T	1094	13.2	1094	13.7	14.0	7.0	11.0	17.0	19.0	20.0
[77002] - BLACK CRAPPIE		223	13.1	223	13.0	12.0	7.0	9.0	17.0	19.0	22.0
[43032] - SPOTFIN SHINER		1702	13.1	1702	13.3	14.0	6.0	10.0	17.0	19.0	22.0
[80024] - FANTAIL DARTER		1745	13.1	1745	13.5	14.0	6.0	11.0	17.0	19.0	21.0
[43007] - BIGEYE CHUB	I	105	13.0	105	14.3	15.0	6.0	11.0	19.0	20.0	22.0
[43044] - CENTRAL STONEROLLER		2967	13.0	2967	13.2	14.0	6.0	10.0	17.0	19.0	21.0
[47012] - BRINDLED MADTOM	I	205	13.0	205	13.6	14.0	8.0	10.0	17.2	19.0	21.0
[43024] - SCARLET SHINER	MI	644	12.9	644	14.0	14.0	7.0	11.0	17.0	21.0	22.0
[77011] - LONGEAR SUNFISH	MI	1416	12.8	1416	13.2	14.0	6.0	10.0	17.0	19.0	22.0
[43026] - COMMON SHINER		554	12.7	554	12.6	12.0	5.0	9.0	17.0	19.0	20.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[77007] - WARMOUTH SUNFISH		193	12.7	193	12.7	13.0	6.0	9.0	17.0	19.0	22.0
[43034] - SAND SHINER	MI	1650	12.4	1650	13.3	14.0	6.0	10.0	17.0	19.0	22.0
[63001] - TROUT-PERCH		170	12.4	170	13.1	12.0	8.5	10.0	17.0	19.0	19.0
[77006] - LARGEMOUTH BASS		1842	12.3	1842	13.0	13.0	6.0	9.0	17.0	19.0	21.0
[80003] - YELLOW PERCH		122	12.3	122	12.7	12.0	6.0	9.0	16.0	18.0	20.0
[77013] - PUMPKINSEED SUNFISH	MT	511	12.3	511	13.4	14.0	7.0	10.0	17.0	19.0	20.9
[40018] - SPOTTED SUCKER		344	12.0	344	12.5	12.0	6.0	9.0	17.0	19.0	20.3
[15001] - BOWFIN		8	12.0	8	12.3	13.0	4.1	9.0	17.5	18.0	18.0
[40016] - WHITE SUCKER	T	3114	11.9	3114	12.8	13.0	6.0	9.0	17.0	19.0	20.0
[37001] - GRASS PICKEREL	MT	643	11.9	643	12.5	12.0	5.0	9.0	17.0	19.0	22.0
[80023] - ORANGETHROAT DARTER		305	11.6	305	11.9	12.0	4.0	8.0	17.0	19.0	21.2
[43003] - GOLDEN SHINER	T	314	11.6	314	10.7	10.0	4.0	8.0	14.0	17.0	18.8
[34001] - CENTRAL MUDMINNOW	T	170	11.6	170	12.2	12.0	5.0	9.0	17.0	19.0	20.0
[77001] - WHITE CRAPPIE		534	11.5	534	12.0	12.0	6.0	9.0	16.0	18.0	19.8
[37003] - NORTHERN PIKE		55	11.5	55	12.5	12.0	8.0	9.0	17.0	17.0	19.0
[43013] - CREEK CHUB	T	3020	11.2	3020	12.7	13.0	5.0	9.0	17.0	19.0	20.0
[77008] - GREEN SUNFISH	T	3187	11.1	3187	12.6	13.0	5.0	9.0	17.0	19.0	20.0
[43033] - BIGMOUTH SHINER		44	11.0	44	12.2	12.0	6.6	9.5	16.5	18.0	18.3
[47004] - YELLOW BULLHEAD	T	2275	10.8	2275	12.3	12.0	5.0	9.0	17.0	19.0	20.0
[43001] - COMMON CARP	T	1842	10.8	1842	12.6	13.0	5.0	9.0	17.0	19.0	20.0
[80005] - BLACKSIDE DARTER		1070	10.6	1070	11.9	12.0	4.0	9.0	16.0	19.0	20.0
[80025] - LEAST DARTER		11	10.4	11	10.2	9.0	2.6	5.2	17.7	20.8	21.9
[80014] - JOHNNY DARTER		2398	10.4	2398	12.5	13.0	5.0	9.0	17.0	19.0	20.0
[43043] - BLUNTNOSE MINNOW	T	3427	10.4	3427	12.7	13.0	5.0	9.0	17.0	19.0	20.0
[43030] - BIGEYE SHINER	R	11	10.3	11	10.9	10.0	7.8	9.0	13.7	16.0	16.0
[74001] - WHITE BASS		29	10.1	29	11.4	9.0	9.0	9.0	15.2	19.0	19.0
[47005] - BROWN BULLHEAD	T	165	9.9	165	11.4	11.0	5.0	8.0	15.0	18.0	20.5
[43045] - COMMON CARP X GOLDFISH	T	41	9.6	41	10.3	11.0	3.0	6.0	14.0	17.0	17.4
[43039] - SILVERJAW MINNOW		1374	9.5	1374	12.3	13.0	5.0	9.0	16.0	19.0	19.0
[40012] - GREATER REDHORSE	R	7	9.3	7	9.4	10.0	4.0	8.5	10.7	13.4	14.0
[43015] - SUCKERMOUTH MINNOW		588	9.0	588	11.7	12.0	4.0	8.0	16.0	19.0	20.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[43028] - SPOTTAIL SHINER	MT	7	8.8	7	8.1	9.0	4.2	9.0	9.0	9.0	9.0
[40002] - BIGMOUTH BUFFALO		5	8.6	5	8.4	9.0	4.0	7.7	9.5	11.0	11.0
[47006] - BLACK BULLHEAD	MT	339	8.1	339	10.1	10.0	3.0	6.0	14.0	17.0	18.5
[43023] - REDFIN SHINER		585	8.1	585	10.0	10.0	3.0	6.0	14.0	17.0	19.0
[40005] - QUILLBACK CARPSUCKER		328	7.7	328	11.2	11.0	3.0	8.0	15.0	18.0	19.1
[77010] - ORANGESPOTTED SUNFISH		315	7.7	315	10.0	9.0	3.0	6.0	14.0	18.0	19.0
[74003] - WHITE PERCH		9	7.7	9	8.6	9.0	5.4	9.0	9.0	10.8	12.0
[43002] - GOLDFISH	T	152	7.7	152	10.2	9.0	3.0	6.0	15.0	17.3	19.0
[47013] - TADPOLE MADTOM		195	6.9	195	8.8	8.0	3.0	4.0	13.0	17.0	19.0
[40020] - CREEK CHUBSUCKER		38	6.5	38	10.0	10.0	5.0	6.0	12.0	17.7	19.0
[43036] - GHOST SHINER		6	6.1	6	7.0	7.0	3.0	3.0	9.0	12.6	13.0
[43042] - FATHEAD MINNOW	T	644	5.7	644	9.8	10.0	2.0	5.0	15.0	17.0	19.0
[54002] - BLACKSTRIPE TOPMINNOW		547	5.0	547	9.1	9.0	3.0	4.0	13.0	17.0	19.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
		Wadeable		- P10max							
[77110] - ABLABESMYIA ANNULATA		5	29.3	12	24.6	24.0	20.8	23.2	26.3	28.5	30.6
[79020] - TANYPUS NEOPUNCTIPENNIS	VT	8	27.3	59	25.7	25.8	22.1	23.5	27.6	30.1	31.1
[18100] - ANTHOPOTAMUS SP	MI	13	27.2	68	25.0	25.0	22.1	23.5	26.4	27.7	28.6
[96930] - LAEVAPEX FUSCUS		14	27.0	28	24.9	25.3	22.2	23.5	26.0	26.5	28.3
[84050] - PARACHIRONOMUS "HIRTALATUS" (SENSU SIMPSON & BODE, 1980)	VT	10	27.0	18	26.0	25.7	23.3	24.2	27.5	28.9	30.3
[84410] - POLYPEDILUM (PENTAPEDILUM) TRITUM VAR. I	VT	5	26.5	5	26.6	27.0	25.0	25.6	27.4	28.0	28.0
[84960] - PSEUDOCHIRONOMUS SP		37	26.4	68	25.2	25.4	21.9	23.2	26.7	29.0	30.5
[83300] - GLYPTOTENDIPES (G.) SP	MT	352	26.4	450	24.2	24.1	21.0	22.5	26.0	27.0	28.2
[66500] - ENOCHRUS SP		7	26.3	120	24.3	24.0	21.5	22.5	25.9	27.5	28.9
[11001] - BAETIDAE		7	26.2	8	24.2	24.0	20.3	22.2	25.6	29.1	30.5
[44501] - CORIXIDAE		9	26.1	149	23.5	24.0	19.7	21.5	25.5	27.0	28.5
[81250] - NANOCLADIUS (N.) MINIMUS		85	25.9	92	25.0	25.0	21.8	23.6	26.6	28.0	29.4
[78655] - PROCLADIUS (HOLOTANYPUS) SP	MT	13	25.8	107	24.6	24.8	21.9	23.3	25.9	27.0	28.1
[78200] - LARSIA SP		41	25.7	64	24.8	24.0	21.9	23.0	26.8	29.1	31.0
[65800] - BEROSUS SP	MT	188	25.7	483	24.2	24.1	21.0	22.6	25.8	27.3	28.8
[52580] - HYDROPSYCHE VALANIS		10	25.6	15	24.3	24.5	21.0	23.5	25.6	26.5	27.7
[83002] - DICROTENDIPES MODESTUS		15	25.6	28	24.0	24.2	21.0	22.2	25.4	26.8	27.8
[80510] - CRICOTOPUS (ISOCLADIUS) SYLVESTRIS GROUP	VT	26	25.6	72	24.3	24.2	21.0	22.6	26.0	27.9	29.4
[78130] - LABRUNDINIA NEOPILOSELLA		6	25.5	6	25.1	25.2	23.1	23.5	26.5	27.4	27.5
[83600] - KIEFFERULUS (K.) DUX		14	25.5	15	24.4	25.7	20.5	23.5	26.0	26.1	26.4
[59100] - CERACLEA SP	MI	9	25.5	38	24.0	24.0	20.9	23.0	25.7	26.3	26.9
[18750] - HEXAGENIA LIMBATA	MI	14	25.4	83	23.9	24.5	20.2	22.0	25.9	27.5	28.0
[84040] - PARACHIRONOMUS FREQUENS		29	25.3	51	24.4	24.3	21.5	23.0	25.9	27.0	27.7
[84030] - PARACHIRONOMUS DIRECTUS	T	12	25.3	13	25.1	25.6	23.2	23.8	26.0	27.0	27.3
[22001] - COENAGRIONIDAE	MT	247	25.3	1039	23.7	23.8	20.8	22.2	25.3	26.8	28.0
[52590] - HYDROPSYCHE VENULARIS	MI	18	25.2	41	24.2	24.0	22.0	23.2	25.8	27.0	27.2
[11200] - CALLIBAETIS SP	MT	29	25.2	261	23.9	24.0	20.6	22.2	25.5	27.4	28.1

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[11651] - PROCLOEON SP (W/O HINDWING PADS)	MI	68	25.2	105	24.7	25.0	22.0	23.3	26.0	27.1	27.8
[11650] - PROCLOEON SP (W/ HINDWING PADS)	MI	27	25.2	69	24.8	25.1	21.6	23.9	26.0	27.5	28.3
[83050] - DICROTENDIPES LUCIFER	MT	87	25.2	99	24.3	24.1	21.6	23.0	26.0	27.0	27.5
[78101] - LABRUNDINIA BECKI		15	25.2	16	25.1	25.5	22.6	24.3	26.4	26.6	26.9
[04666] - HELOBDELLA TRISERIALIS	T	43	25.1	93	24.3	24.0	21.5	22.8	25.5	27.8	29.0
[77355] - CLINOTANYPUS PINGUIS	T	14	25.1	91	24.4	24.0	21.5	22.7	26.0	27.5	28.1
[24900] - GOMPHUS SP		5	25.1	173	23.5	23.5	20.9	22.0	25.2	27.0	27.7
[59970] - PETROPHILA SP	I	38	25.1	211	24.3	24.1	21.5	23.0	25.7	27.0	27.9
[84010] - PARACHIRONOMUS "ABORTIVUS" (SENSU SIMPSON & BODE, 1980)	T	23	25.1	35	24.9	25.0	22.0	23.5	26.0	27.8	28.7
[80420] - CRICOTOPUS (C.) BICINCTUS	MT	403	25.0	725	23.3	23.2	20.0	22.0	24.9	26.5	28.0
[51206] - CYRNELLUS FRATERNUS		54	25.0	67	24.7	25.0	22.0	23.0	26.5	27.4	28.1
[13570] - STENONEMA TERMINATUM	MI	189	25.0	239	23.4	23.7	19.7	22.0	25.1	26.4	27.5
[81240] - NANOCLADIUS (N.) DISTINCTUS	MT	269	24.9	295	23.8	23.9	21.0	22.5	25.4	27.0	28.0
[78750] - RHEOPELOPIA PARAMACULIPENNIS	MI	13	24.9	23	24.4	24.9	21.6	24.0	25.4	26.6	27.0
[11670] - PROCLOEON IRRUBRUM	MI	5	24.9	101	24.6	24.9	21.9	22.8	26.1	27.5	28.1
[04687] - PLACOBDELLA PARASITICA		6	24.9	20	25.2	25.2	23.0	23.7	26.6	27.8	29.0
[95100] - PHYSELLA SP	T	465	24.9	1013	23.5	23.5	20.5	22.0	25.2	26.8	27.7
[01320] - HYDRA SP		619	24.8	629	23.7	23.8	20.9	22.2	25.3	26.5	27.5
[82070] - SYNORTHOCLADIUS SEMIVIRENS	I	9	24.8	10	24.0	23.8	22.2	22.7	25.7	26.3	26.7
[82130] - THIENEMANNIELLA SIMILIS	I	13	24.8	16	24.1	24.0	21.5	23.1	25.2	27.5	28.0
[13010] - LEUCROCUTA HEBE	MI	11	24.8	50	23.5	23.7	19.3	22.0	25.5	26.9	28.0
[11250] - CENTROPTILUM SP (W/O HINDWING PADS)	MI	5	24.7	38	24.0	24.1	20.2	22.4	25.4	27.4	28.4
[96120] - MENETUS (MICROMENETUS) DILATATUS	T	56	24.7	91	23.8	24.0	20.9	22.1	25.2	26.0	27.4
[03600] - OLIGOCHAETA	T	959	24.7	1364	23.5	23.5	20.3	22.0	25.0	26.6	27.7
[22300] - ARGIA SP		615	24.7	1001	24.0	24.0	21.0	22.5	25.6	27.0	28.0
[84060] - PARACHIRONOMUS PECTINATELLAE		18	24.7	35	24.1	24.0	21.0	22.6	25.9	27.1	27.7
[85201] - CLADOTANYTARSUS SPECIES GROUP	MI	18	24.7	32	23.9	24.2	20.2	21.2	26.4	27.8	28.4

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
A											
[83310] - GLYPTOTENDIPES (TRICHOTENDIPES) AMPLUS	MI	16	24.7	24	25.0	24.3	21.8	23.5	27.3	29.0	29.8
[03360] - PLUMATELLA SP		340	24.7	612	24.1	24.0	21.1	22.5	25.8	27.0	28.0
[77115] - ABLABESMYIA JANTA		29	24.7	42	24.6	25.0	21.6	23.5	26.0	27.1	27.9
[84790] - TRIBELOS FUSCICORNE		97	24.6	120	24.1	24.1	21.4	23.0	25.6	26.7	27.1
[85818] - TANYTARSUS GLABRESCENS GROUP SP 4	MI	5	24.6	5	24.0	25.0	20.2	22.2	26.0	26.0	26.0
[01801] - TURBELLARIA		633	24.6	973	23.6	23.5	20.5	22.0	25.2	26.8	27.7
[74501] - CERATOPOGONIDAE		257	24.6	432	24.0	24.0	20.9	22.1	25.6	27.0	28.4
[59001] - LEPTOCERIDAE	MI	16	24.6	20	24.5	24.9	21.3	23.4	26.2	27.1	27.6
[15600] - EPHEMERELLA SP	MI	6	24.5	10	23.3	23.2	21.2	22.5	24.0	25.2	25.5
[48410] - CORYDALUS CORNUTUS	MI	108	24.5	263	24.0	24.0	21.4	22.5	25.5	27.0	27.9
[60900] - PELTODYTES SP	MT	5	24.5	490	23.6	23.8	20.0	22.0	25.5	27.1	28.3
[85821] - TANYTARSUS GLABRESCENS GROUP SP 7	MI	125	24.5	142	24.3	24.8	21.8	22.7	25.7	26.5	27.5
[84020] - PARACHIRONOMUS CARINATUS		44	24.5	49	24.6	24.3	22.0	23.5	26.0	27.1	27.7
[83051] - DICROTENDIPES SIMPSONI	T	194	24.5	218	24.5	24.8	21.6	23.0	26.0	27.4	29.0
[77740] - HAYESOMYIA SENATA		45	24.5	61	24.0	24.1	21.1	22.7	25.8	27.2	27.9
[98001] - SPHAERIIDAE		17	24.4	31	23.4	23.0	20.7	21.7	24.9	27.2	28.1
[77130] - ABLABESMYIA RHAMPHE GROUP	MT	89	24.4	111	24.3	24.4	22.0	23.0	26.0	27.0	27.1
[83900] - NILOTHAUMA SP	MI	36	24.4	40	24.8	24.5	22.2	23.5	26.6	27.9	28.2
[81231] - NANOCLADIUS (N.) CRASSICORNUS OR N. (N.) "RECTINERVIS"		174	24.4	188	24.0	24.1	21.2	22.5	25.6	26.5	27.4
[01200] - CORDYLOPHORA LACUSTRIS		8	24.4	9	24.6	25.1	19.9	23.5	27.0	27.3	27.4
[80360] - CORYNONEURA "CELERIPES" (SENSU SIMPSON & BODE, 1980)	I	76	24.4	96	23.8	24.0	21.0	22.0	25.5	26.8	27.5
[52001] - HYDROPSYCHIDAE		5	24.3	8	25.3	25.1	20.7	22.7	28.1	30.1	31.0
[84520] - POLYPEDILUM (TRIPODURA) HALTERALE GROUP		33	24.3	84	24.5	24.7	21.7	23.0	26.1	27.5	28.1
[13000] - LEUCROCUTA SP	I	241	24.3	471	23.5	23.5	20.5	22.0	25.1	26.5	27.3
[53800] - HYDROPTILA SP		304	24.3	489	23.6	23.5	20.3	22.0	25.2	26.5	28.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[79000] - TANYPUS SP	VT	5	24.3	12	25.5	25.5	22.8	23.8	26.9	29.3	29.9
[16700] - TRICORYTHODES SP	MI	311	24.3	388	23.5	23.5	20.0	22.0	25.0	26.9	28.2
[14950] - LEPTOPHLEBIA SP OR PARALEPTOPHLEBIA SP	MI	65	24.3	74	24.6	24.9	21.7	23.5	25.8	26.7	27.6
[79100] - THIENEMANNIMYIA GROUP		221	24.2	356	23.5	23.5	20.0	22.0	25.2	27.0	28.0
[50315] - CHIMARRA OBSCURA	MI	108	24.2	415	24.0	24.0	21.0	22.5	25.5	27.1	28.0
[84000] - PARACHIRONOMUS SP		13	24.2	20	23.9	23.6	22.5	23.0	25.0	25.7	26.0
[71100] - HEXATOMA SP	MI	27	24.2	329	23.3	23.5	20.0	22.0	25.0	26.5	27.1
[78650] - PROCLADIUS SP	MT	140	24.2	418	23.7	23.6	20.9	22.0	25.5	27.0	28.0
[02600] - NEMATOMORPHA		5	24.2	51	23.2	23.1	19.2	21.1	25.3	26.6	27.4
[06201] - HYALELLA AZTECA		124	24.2	594	23.4	23.5	20.3	22.0	25.0	26.1	27.1
[83040] - DICROTENDIPES NEOMODESTUS		588	24.2	794	23.8	23.8	20.9	22.0	25.5	27.0	28.0
[93200] - HYDROBIIDAE	MT	32	24.1	81	23.5	23.5	21.5	22.1	24.7	26.0	26.1
[79085] - TELOPELOPIA OKOBOJI		14	24.1	24	24.1	23.9	20.2	21.2	26.9	28.5	29.6
[95501] - PLANORBIDAE	MT	14	24.1	17	23.3	23.0	20.2	21.3	25.0	26.9	28.3
[81229] - NANOCLADIUS (N.) CRASSICORNUS		18	24.1	18	23.8	24.3	19.6	22.2	25.7	26.3	27.1
[13561] - STENONEMA PULCHELLUM	MI	373	24.1	483	23.2	23.2	20.0	22.0	24.9	26.1	27.1
[83158] - ENDOCHIRONOMUS NIGRICANS		39	24.1	78	24.2	24.2	21.6	22.5	26.0	27.0	27.7
[13580] - STENONEMA TRIPUNCTATUM (OLD)		179	24.1	283	23.2	23.0	19.9	21.5	25.0	27.0	28.0
[84155] - PARALAUTERBORNIELLA NIGROHALTERALIS		33	24.1	72	23.3	23.3	20.0	22.0	25.4	26.8	27.7
[18700] - HEXAGENIA SP	MI	16	24.1	68	23.6	23.5	21.1	22.0	24.8	27.0	27.5
[51300] - NEURECLIPSIS SP	MI	51	24.1	73	23.9	24.0	21.8	22.5	25.5	27.0	28.0
[78600] - PENTANEURA INCONSPICUA		39	24.1	56	23.4	23.1	21.1	22.0	24.3	26.3	26.8
[58505] - HELICOPSYCHE BOREALIS	MI	36	24.0	238	23.6	24.0	20.2	22.0	25.1	26.9	27.4
[11130] - BAETIS INTERCALARIS		373	24.0	574	23.7	24.0	21.0	22.1	25.3	26.5	27.3
[68025] - ECTOPRIA SP	MI	12	24.0	87	23.4	23.5	21.0	22.0	24.9	26.4	27.5
[85615] - RHEOTANYTARSUS PELLUCIDUS	MI	149	24.0	196	23.0	23.1	20.0	21.6	24.5	26.5	27.0
[68075] - PSEPHENUS HERRICKI	MI	58	24.0	591	23.6	23.6	21.0	22.0	25.3	26.7	27.5
[34130] - ACRONEURIA FRISONI	MI	56	24.0	121	23.8	24.0	21.0	22.5	25.4	26.3	27.0
[82710] - CHIRONOMUS (C.) SP	T	61	24.0	91	23.2	23.2	20.2	22.0	24.8	26.2	27.1

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[13521] - STENONEMA FEMORATUM		291	24.0	511	23.8	24.0	21.0	22.4	25.5	26.5	27.5
[82730] - CHIRONOMUS (C.) DECORUS GROUP	T	217	24.0	557	23.7	23.9	20.8	22.0	25.5	26.9	28.0
[80310] - CARDIOCLADIUS OBSCURUS	MI	20	24.0	131	22.9	23.0	20.1	21.5	24.0	25.9	26.5
[13550] - STENONEMA MEXICANUM INTEGRUM	MI	28	23.9	31	24.3	24.3	21.5	23.5	25.3	26.6	27.6
[77750] - HAYESOMYIA SENATA OR THIENEMANNIMYIA NORENA		520	23.9	627	23.5	23.5	20.5	22.0	25.0	26.3	27.4
[80350] - CORYNONEURA SP	MI	54	23.9	59	24.0	23.5	21.0	23.0	25.7	27.7	28.4
[83000] - DICROTENDIPES SP		27	23.9	37	24.2	24.0	21.0	22.7	25.4	28.8	29.7
[51400] - NYCTIOPHYLAX SP	MI	66	23.9	116	23.7	24.0	20.0	22.0	25.5	26.6	27.8
[11700] - ACENTRELLA SP OR PLAUDITUS SP (FORMERLY IN PSEUDOCLOEON)	I	17	23.9	36	22.2	22.2	19.0	21.0	24.0	25.4	25.9
[74673] - ATRICHOPOGON WEBSTERI		9	23.9	14	23.3	23.1	20.6	21.5	25.8	26.3	26.8
[81230] - NANOCLADIUS (N.) CRASSICORNUS (OLD)		135	23.9	157	23.7	23.5	21.0	22.4	25.0	27.0	28.3
[98200] - PISIDIUM SP		49	23.9	177	23.5	23.5	20.4	22.0	25.4	26.5	27.7
[84470] - POLYPEDILUM (P.) ILLINOENSE	T	371	23.8	965	23.5	23.5	20.5	22.0	25.0	26.5	27.7
[14501] - LEPTOPHLEBIIDAE	MI	9	23.8	10	23.0	23.7	21.2	21.5	24.0	24.5	25.0
[94400] - FOSSARIA SP		19	23.8	96	23.6	23.9	20.0	22.0	25.2	26.6	28.5
[11300] - PROCLOEON SP (FORMERLY IN CENTROPTILUM)	MI	51	23.8	163	23.1	23.0	19.5	21.7	24.5	26.3	28.1
[60300] - DINEUTUS SP		36	23.8	151	24.0	24.0	21.2	22.5	25.5	26.5	27.4
[52520] - HYDROPSYCHE BIDENS	MI	10	23.8	12	24.9	25.2	22.0	23.1	26.7	27.3	28.0
[69400] - STENELMIS SP		651	23.8	1270	23.5	23.5	20.3	22.0	25.2	26.7	27.7
[03040] - FREDERICELLA SP	MI	11	23.8	33	23.5	24.5	21.4	22.3	25.0	25.8	26.0
[77120] - ABLABESMYIA MALLOCHI		469	23.8	764	23.7	23.8	20.8	22.3	25.4	26.8	27.9
[80351] - CORYNONEURA N.SP 1	MI	24	23.8	38	23.1	23.8	20.0	21.9	24.9	26.0	26.8
[84210] - PARATENDIPES ALBIMANUS OR P. DUPLICATUS	MI	311	23.8	452	23.4	23.5	20.1	21.9	25.3	26.6	27.5
[84700] - STENOCHIRONOMUS SP		66	23.8	161	23.4	23.5	20.6	22.2	24.9	25.9	26.7
[52570] - HYDROPSYCHE SIMULANS	MI	64	23.8	93	23.5	24.0	21.4	22.5	24.9	25.5	26.4
[13400] - STENACRON SP		807	23.8	1220	23.4	23.5	20.2	22.0	25.0	26.5	27.4

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[17200] - CAENIS SP		774	23.8	1099	23.6	23.6	20.5	22.0	25.3	26.9	27.9
[82880] - CRYPTOTENDIPES SP	MI	9	23.8	61	22.8	23.0	19.8	22.0	24.0	26.0	26.7
[84750] - STICTOCHIRONOMUS SP		29	23.8	427	23.2	23.5	20.0	21.8	25.3	26.5	27.3
[13540] - STENONEMA MEDIOPUNCTATUM	I	76	23.7	95	22.7	22.5	20.0	21.5	24.0	25.7	26.4
[81201] - NANOCLADIUS (N.) SP		42	23.7	63	24.2	23.8	21.5	23.0	25.9	26.8	27.6
[84540] - POLYPEDILUM (TRIPODURA) SCALAENUM GROUP		676	23.7	926	23.5	23.5	20.5	22.0	25.0	26.5	27.5
[59580] - OECETIS PERSIMILIS	MI	12	23.7	17	23.7	23.8	21.8	23.4	24.7	25.5	26.1
[07840] - CAMBARUS (CAMBARUS) SCIOTENSIS		5	23.7	18	23.8	23.7	21.7	23.0	25.5	26.0	26.0
[11400] - CENTROPTILUM SP OR PROCLOEON SP (FORMERLY IN CLOEON)	MI	116	23.7	175	23.7	23.5	20.3	22.0	25.5	27.3	28.2
[84800] - TRIBELOS JUCUNDUM		94	23.7	143	23.4	24.0	19.9	21.8	25.3	26.5	27.1
[06810] - GAMMARUS FASCIATUS		10	23.7	15	24.0	24.0	22.1	23.2	24.9	26.2	27.1
[83860] - MICROTENDIPES RYDALENSIS	MI	13	23.7	13	23.2	23.1	20.9	22.3	24.0	26.0	26.0
[78450] - NILOTANYPUS FIMBRIATUS	MI	400	23.7	446	23.5	23.5	20.2	22.0	25.0	26.3	27.1
[84302] - PHAENOPSECTRA PUNCTIPES		19	23.7	21	23.9	24.2	19.3	22.8	26.0	26.7	27.7
[85803] - TANYTARSUS TYPE 3		33	23.7	36	23.9	23.5	20.4	23.0	25.3	27.4	29.0
[21300] - HETAERINA SP		72	23.7	192	23.7	23.5	21.0	22.5	25.0	27.0	28.2
[83003] - DICROTENDIPES FUMIDUS		20	23.7	45	23.1	23.3	19.5	22.0	24.7	25.9	26.5
[84450] - POLYPEDILUM (URESIPEDILUM) FLAVUM		618	23.7	1031	23.5	23.5	20.5	22.0	25.0	26.5	27.5
[21001] - CALOPTERYGIDAE		10	23.7	16	22.5	22.5	17.5	20.5	25.2	26.9	27.0
[51600] - POLYCENTROPUS SP	MI	127	23.6	249	23.7	24.0	20.8	22.0	25.5	26.5	27.1
[77100] - ABLABESMYIA SP		8	23.6	16	22.2	22.2	19.7	20.3	23.7	25.9	27.0
[47600] - SIALIS SP		179	23.6	721	23.5	23.7	20.5	22.0	25.4	26.5	27.4
[48620] - NIGRONIA SERRICORNIS		58	23.6	158	23.6	24.0	20.0	22.0	25.4	27.0	27.8
[82770] - CHIRONOMUS (C.) RIPARIUS GROUP	VT	56	23.6	144	23.2	23.2	19.5	22.0	24.9	26.1	26.7
[52540] - HYDROPSYCHE DICANTHA	MI	144	23.6	290	23.8	24.0	21.0	22.1	25.5	26.8	27.2
[59500] - OECETIS SP	MI	38	23.6	69	23.5	23.6	20.7	22.1	25.0	26.3	27.0
[52620] - MACROSTEMUM ZEBRATUM	I	7	23.6	18	23.9	23.9	22.1	23.1	24.5	25.7	26.3
[68702] - DUBIRAPHIA BIVITTATA		16	23.6	107	22.6	23.0	19.1	21.2	24.0	25.5	26.5

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[59570] - OECETIS NOCTURNA		6	23.5	17	24.8	24.9	22.1	23.1	26.0	27.2	27.8
[78140] - LABRUNDINIA PILOSELLA	MI	172	23.5	190	24.0	24.0	21.3	22.5	25.5	26.8	27.8
[85200] - CLADOTANYTARSUS SP		45	23.5	86	23.2	23.0	20.0	21.0	24.5	26.5	28.1
[78100] - LABRUNDINIA SP		65	23.5	70	23.6	23.5	20.1	22.0	26.0	27.0	28.0
[11120] - BAETIS FLAVISTRIGA		239	23.5	403	23.2	23.3	20.5	21.9	24.9	26.0	27.0
[81280] - NANOCLADIUS (PLECOPTERACOLUTHUS) DOWNESI	I	5	23.5	14	23.9	23.7	20.6	23.1	24.5	27.2	28.6
[68708] - DUBIRAPHIA VITTATA GROUP		355	23.5	876	23.4	23.5	20.5	22.0	25.0	26.4	27.3
[85840] - TANYTARSUS SEPP	MI	479	23.4	556	23.6	23.6	20.5	22.0	25.2	26.8	27.7
[95907] - GYRAULUS (TORQUIS) PARVUS	MT	16	23.4	32	23.0	22.7	20.1	21.4	24.2	26.1	28.9
[85802] - TANYTARSUS CURTICORNIS GROUP	MI	142	23.4	149	23.1	23.5	20.0	21.5	25.0	26.4	28.1
[68130] - HELICHUS SP	MI	97	23.4	333	23.5	23.7	20.1	22.0	25.1	27.0	27.5
[01900] - NEMERTEA		9	23.4	13	22.6	22.5	19.2	21.5	24.1	25.9	28.5
[59300] - MYSTACIDES SP	MI	5	23.4	27	24.4	24.9	21.5	22.6	25.9	26.9	29.6
[85710] - STEPELLINELLA SP	MI	29	23.4	43	23.0	23.0	20.0	21.1	25.0	27.0	27.0
[52200] - CHEUMATOPSYCHE SP		836	23.4	1310	23.4	23.5	20.2	22.0	25.0	26.6	27.7
[03121] - PALUDICELLA ARTICULATA	MI	20	23.4	36	23.7	23.6	21.8	22.7	25.0	25.9	26.3
[08601] - HYDRACARINA		295	23.4	442	23.1	23.1	20.0	21.9	24.9	26.1	27.0
[98600] - SPHAERIUM SP		132	23.4	725	23.6	23.6	20.5	22.0	25.3	26.5	27.4
[82820] - CRYPTOCHIRONOMUS SP		153	23.4	839	23.5	23.5	20.3	22.0	25.1	26.6	27.5
[85400] - MICROPSECTRA SP		40	23.4	50	22.8	22.7	19.0	21.0	24.0	27.0	28.0
[13510] - STENONEMA EXIGUUM	I	132	23.4	154	23.0	23.0	20.1	22.0	24.3	25.4	26.4
[85001] - TANYTARSINI		8	23.4	10	22.2	22.8	20.1	21.0	23.5	23.7	24.0
[83820] - MICROTENDIPES "CAELUM" (SENSU SIMPSON & BODE, 1980)	MI	103	23.3	255	23.3	23.1	20.4	21.8	25.0	26.5	27.3
[12200] - ISONYCHIA SP	MI	362	23.3	656	23.4	23.5	20.3	22.0	25.0	26.5	27.3
[85800] - TANYTARSUS SP	MI	368	23.3	491	23.2	23.5	20.0	21.7	25.0	26.4	27.2
[80400] - CRICOTOPUS SP		10	23.3	14	22.9	23.1	20.9	21.3	24.0	24.6	25.3
[03451] - URNATELLA GRACILIS		54	23.3	65	24.4	24.1	21.0	23.0	26.2	27.5	28.5
[08260] - ORCONNECTES (CROKERINUS) SANBORNII SANBORNII		42	23.3	256	23.1	23.0	20.5	22.0	24.5	26.0	27.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[18600] - EPHEMERA SP	MI	71	23.3	229	23.3	23.5	20.4	22.0	25.0	26.3	27.1
[23909] - BOYERIA VINOSA		82	23.3	593	23.1	23.1	20.0	21.8	24.8	26.0	27.0
[59410] - NECTOPSYCHE DIARINA	MI	11	23.3	42	23.2	22.7	19.8	21.6	25.5	26.7	27.9
[68901] - MACRONYCHUS GLABRATUS	MI	613	23.3	785	23.3	23.3	20.5	22.0	25.0	26.0	27.0
[96900] - FERRISSIA SP		732	23.3	958	23.4	23.5	20.5	22.0	25.0	26.2	27.3
[60400] - GYRINUS SP		11	23.3	87	23.4	23.5	20.5	22.0	24.9	26.5	27.4
[54100] - NEOTRICHIA SP		10	23.3	10	23.1	23.0	20.5	22.5	23.5	26.1	27.1
[87540] - HEMERODROMIA SP		273	23.2	313	23.5	23.6	20.6	22.0	25.0	26.3	27.0
[54300] - OXYETHIRA SP		8	23.2	8	23.5	24.0	19.9	22.2	25.3	26.2	26.5
[83840] - MICROTENDIPES PEDELLUS GROUP	MI	311	23.2	445	23.2	23.4	20.0	21.6	25.2	26.7	27.3
[04964] - MOOREOBDELLA MICROSTOMA	T	42	23.2	214	23.8	23.9	21.0	22.2	25.2	26.5	28.2
[84200] - PARATENDIPES SP		10	23.2	11	23.7	23.5	20.4	22.6	25.8	26.6	27.0
[68700] - DUBIRAPHIA SP		132	23.2	191	23.3	23.1	20.0	21.8	25.0	26.5	27.8
[82121] - THIENEMANNIELLA LOBAPODEMA	MI	146	23.2	159	23.5	23.7	20.3	22.0	25.2	26.5	27.4
[13560] - STENONEMA PULCHELLUM GROUP	MI	45	23.2	109	23.5	24.0	20.0	21.5	25.6	27.0	28.0
[71300] - LIMONIA SP		8	23.2	57	23.8	23.8	20.3	22.6	25.7	27.4	28.1
[85814] - TANYTARSUS GLABRESCENS GROUP		690	23.2	773	23.3	23.4	20.3	22.0	25.0	26.4	27.1
[80410] - CRICOTOPUS (C.) SP		363	23.2	495	23.2	23.1	20.0	21.9	24.9	26.2	27.1
[80370] - CORYNONEURA LOBATA	MI	603	23.1	642	23.2	23.2	20.0	21.9	25.0	26.2	27.1
[51001] - POLYCENTROPODIDAE		7	23.1	11	23.5	23.9	20.8	22.1	24.6	25.9	26.9
[85625] - RHEOTANYTARSUS SP	MI	750	23.1	952	23.4	23.5	20.3	22.0	25.0	26.5	27.3
[74650] - ATRICHOPOGON SP		9	23.1	19	24.4	24.5	20.8	22.4	26.0	27.6	29.6
[84300] - PHAENOPSECTRA OBEDIENS GROUP		290	23.0	464	23.2	23.2	20.3	22.0	24.7	26.2	27.3
[08250] - ORCONNECTES (PROCERICAMBARUS) RUSTICUS		111	23.0	660	23.8	24.0	20.4	22.3	25.5	26.9	27.8
[68707] - DUBIRAPHIA QUADRINOTATA		8	23.0	73	22.9	23.0	19.0	21.0	24.9	26.0	27.2
[96264] - PLANORBELLA (PIEROSOMA) PILSBRYI	T	16	23.0	37	24.0	24.0	21.0	22.3	25.1	28.6	29.6
[57900] - PYCNOPSYCHE SP	MI	37	23.0	227	22.8	23.0	19.0	21.1	24.8	25.7	26.5
[79400] - ZAVRELIMYIA SP		16	23.0	23	23.2	23.0	20.9	22.1	24.5	25.3	26.6
[93900] - ELIMIA SP	MI	188	23.0	406	23.0	23.0	20.0	21.5	25.0	26.0	27.0
[77800] - HELOPELOPIA SP		411	23.0	617	23.3	23.5	20.3	22.0	25.0	26.4	27.3

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[68601] - ANCYRONYX VARIEGATA	MI	292	23.0	470	23.1	23.1	20.2	21.9	24.5	25.9	26.5
[11020] - ACERPENNA PYGMAEA	I	140	23.0	160	23.8	24.0	20.4	21.9	25.8	27.1	28.4
[11100] - BAETIS SP		299	23.0	556	23.1	23.0	20.0	22.0	24.8	26.5	27.9
[81690] - PARATRICHOCLADIUS SP	MI	23	22.9	36	22.7	22.7	20.0	20.9	24.7	25.8	26.3
[77500] - CONCHAPELOPIA SP		584	22.9	855	23.3	23.5	20.2	22.0	25.0	26.2	27.3
[16324] - SERRATELLA DEFICIENS	I	15	22.9	19	23.0	22.3	20.5	21.5	24.2	25.9	27.4
[59400] - NECTOPSYCHE SP	MI	13	22.9	24	22.8	23.5	18.8	19.9	25.4	26.4	27.1
[85264] - CLADOTANYTARSUS VANDERWULPI GROUP TYPE 4	MI	10	22.9	26	22.7	23.0	20.3	22.1	24.5	24.9	25.2
[80500] - CRICOTOPUS (ISOCLADIUS) REVERSUS GROUP	VT	5	22.9	7	23.7	23.3	21.1	21.8	25.6	26.7	26.9
[08200] - ORCONNECTES SP		38	22.8	165	23.3	23.5	20.0	21.5	25.0	27.0	28.0
[84315] - PHAENOPSECTRA FLAVIPES		112	22.8	194	22.8	23.0	19.5	21.4	24.6	26.4	27.1
[52550] - HYDROPSYCHE FRISONI	I	31	22.8	38	23.4	23.4	21.5	22.0	25.0	25.7	26.0
[21200] - CALOPTERYX SP		265	22.8	800	23.1	23.2	20.0	21.9	25.0	26.0	27.0
[85230] - CLADOTANYTARSUS MANCUS GROUP		30	22.8	94	24.0	24.3	21.0	22.7	25.8	26.7	27.4
[06800] - GAMMARUS SP		5	22.8	6	23.5	23.7	19.3	22.0	26.0	26.9	27.0
[84490] - POLYPEDILUM (CEROBREGMA) ONTARIO	MI	11	22.8	20	24.4	23.6	21.0	23.0	26.0	27.0	29.0
[13590] - STENONEMA VICARIUM	MI	187	22.8	263	22.8	23.0	19.5	21.6	24.3	26.0	26.5
[05800] - CAECIDOTEA SP	MT	178	22.7	406	23.2	23.5	20.2	22.0	24.9	26.0	26.5
[82101] - THIENEMANNIELLA TAUROCAPITA	I	91	22.7	112	22.8	23.3	18.3	21.0	25.0	26.1	27.0
[34700] - AGNETINA CAPITATA COMPLEX	I	8	22.7	40	23.7	23.7	19.8	22.7	25.5	26.6	27.1
[52530] - HYDROPSYCHE DEPRAVATA GROUP		381	22.7	813	23.2	23.1	20.3	21.9	24.9	26.1	27.2
[84460] - POLYPEDILUM (P.) FALLAX GROUP		807	22.7	887	23.2	23.2	20.1	22.0	24.9	26.0	27.0
[52430] - CERATOPSYCHE MOROSA GROUP	MI	476	22.7	829	23.3	23.3	20.0	21.9	25.0	26.5	27.2
[80450] - CRICOTOPUS (C.) VIERRIENSIS		6	22.7	9	23.1	23.5	18.7	22.0	25.3	25.9	26.2
[04935] - ERPOBELLA PUNCTATA PUNCTATA	T	33	22.7	145	23.4	23.2	20.2	22.0	25.0	26.0	27.4
[68201] - SCIRTIDAE		5	22.7	61	23.6	23.5	21.0	22.2	25.0	27.0	27.0
[81270] - NANOCLADIUS (N.) SPINIPLenus	MI	85	22.6	114	23.2	23.5	20.0	22.0	24.9	26.0	27.0
[15501] - EPHEMERELLIDAE	MI	22	22.6	22	21.8	21.7	18.0	20.0	23.5	25.1	26.4

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[81631] - PARAKIEFFERIELLA N.SP 1		34	22.6	52	22.6	22.6	21.0	21.8	23.5	24.5	24.9
[82141] - THIENEMANNIELLA XENA		381	22.6	473	23.1	23.0	20.2	21.8	24.8	26.0	26.9
[80430] - CRICOTOPUS (C.) TREMULUS GROUP		361	22.6	569	23.1	23.0	20.0	21.8	24.6	26.0	27.3
[59520] - OECETIS CINERASCENS		5	22.6	8	24.7	23.9	22.5	23.0	25.6	28.9	30.2
[85801] - TANYTARSUS TYPE 1	MI	6	22.6	6	23.2	23.1	19.2	21.6	25.2	26.9	27.1
[69420] - STENELMIS SEXLINEATA		7	22.6	26	23.5	23.9	20.5	22.2	24.9	26.0	27.8
[96002] - HELISOMA ANCEPS ANCEPS	MT	14	22.6	47	22.5	22.7	19.2	20.6	25.0	25.9	26.1
[85500] - PARATANYTARSUS SP		450	22.5	542	23.3	23.2	20.5	22.0	25.0	26.1	27.3
[87501] - EMPIDIDAE		416	22.5	514	23.0	23.0	19.5	21.5	24.5	26.2	27.3
[97601] - CORBICULA FLUMINEA	MI	42	22.5	132	23.2	23.4	20.1	22.0	24.9	25.9	26.9
[84475] - POLYPEDILUM (P.) OPHIOIDES	MI	7	22.5	33	22.1	22.4	19.3	20.9	23.7	24.5	24.9
[07701] - CAMBARIDAE		13	22.5	51	22.5	22.3	20.0	21.0	23.2	27.0	27.0
[67500] - LACCOBIUS SP		5	22.5	112	23.1	23.1	20.2	21.5	24.1	25.8	27.4
[81260] - NANOCLADIUS (N.) "RECTINERVIS" (OLD)		30	22.4	35	22.8	23.0	19.0	21.6	24.5	26.0	27.0
[69200] - OPTIOSERVUS SP	MI	18	22.4	78	22.6	22.7	19.5	21.0	24.0	26.0	26.6
[85752] - SUBLETTEA COFFMANI	I	40	22.3	45	22.2	22.5	19.0	21.0	24.0	25.0	26.1
[53501] - HYDROPTILIDAE		34	22.3	95	23.2	23.0	20.5	22.0	25.0	26.0	27.0
[15000] - PARALEPTOPHLEBIA SP	MI	148	22.3	168	22.4	22.5	19.0	21.0	24.0	25.5	26.4
[13120] - NIXE PERFIDA	MI	5	22.3	18	23.9	23.2	22.0	22.5	25.1	26.8	27.8
[85720] - STEMPELLINELLA N.SP NR. FLAVIDULA	I	69	22.2	96	23.4	23.5	20.0	21.5	25.5	26.6	28.1
[50906] - PSYCHOMYIA FLAVIDA	I	12	22.1	32	22.6	23.0	19.9	21.7	24.0	24.3	25.7
[06700] - CRANGONYX SP	MT	139	22.1	460	23.2	23.1	20.2	22.0	25.0	26.1	27.1
[78400] - NATARSIA SP	MT	10	22.1	29	22.9	23.0	20.3	21.5	24.2	27.0	27.0
[04685] - PLACOBDELLA ORNATA		8	22.1	63	23.3	23.2	21.0	22.0	24.6	25.7	26.2
[04664] - HELOBDELLA STAGNALIS	T	18	22.1	72	23.0	23.4	19.0	21.2	24.7	26.0	26.5
[82220] - TVETENIA DISCOLORIPES GROUP	I	51	22.0	103	22.3	23.0	18.4	21.0	24.0	25.0	26.5
[78350] - MEROPELOPIA SP		34	22.0	61	22.7	23.0	19.7	21.5	24.0	24.5	27.5
[81825] - RHEOCRICOTOPUS (PSILOCRICOTOPUS) ROBACKI	MI	280	22.0	356	22.5	22.8	19.5	21.2	24.0	25.0	26.1

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[84440] - POLYPEDILUM (URESIPEDILUM) AVICEPS	MI	15	21.9	27	22.2	22.0	18.5	20.0	24.0	26.6	27.4
[78401] - NATARSIA SPECIES A (SENSU ROBACK, 1978)	T	38	21.9	196	23.2	23.3	20.0	21.7	25.0	26.0	27.2
[04962] - MOOREOBDELLA FERVIDA	T	9	21.9	48	23.5	24.0	21.0	22.3	24.8	26.0	27.0
[48610] - NIGRONIA FASCIATUS	MI	5	21.9	11	22.4	21.5	19.4	20.8	24.7	26.2	26.4
[34120] - ACRONEURIA CAROLINENSIS	I	7	21.8	12	22.7	21.7	20.1	21.0	24.1	26.9	27.8
[71900] - TIPULA SP		53	21.8	279	22.7	22.7	19.9	21.5	24.2	25.9	27.0
[94201] - LYMNAEIDAE		5	21.8	11	21.6	21.9	17.6	19.7	24.0	25.0	25.0
[70600] - ANTOCHA SP	MI	85	21.8	139	22.6	22.5	19.5	21.0	24.0	25.9	26.5
[63900] - LACCOPHILUS SP	T	6	21.8	215	24.0	24.0	21.0	22.5	25.5	27.4	28.9
[86100] - CHRYSOPS SP		17	21.7	293	23.2	23.5	20.0	21.7	24.9	26.0	26.8
[83410] - HARNISCHIA CURTILAMELLATA		5	21.7	25	23.0	23.1	19.0	20.8	24.5	26.9	28.3
[81632] - PARAKIEFFERIELLA N.SP 2	MI	47	21.7	79	22.8	23.0	19.2	21.5	25.0	25.9	26.9
[50804] - LYPE DIVERSA	MI	73	21.7	92	21.7	22.0	18.0	20.5	23.2	24.9	25.2
[16200] - EURYLOPHELLA SP	MI	36	21.7	39	22.7	22.5	19.0	21.0	24.6	25.8	26.3
[74100] - SIMULIUM SP		257	21.6	771	22.9	23.0	20.0	21.6	24.5	26.0	27.0
[01418] - CRASPEDACUSTA SOWERBYI		14	21.6	14	21.8	22.2	16.9	20.3	23.8	25.5	25.5
[81630] - PARAKIEFFERIELLA SP		8	21.5	10	23.5	23.2	21.2	22.0	25.0	26.2	27.5
[71910] - TIPULA ABDOMINALIS	MI	14	21.5	61	22.5	22.8	19.3	21.4	24.0	25.2	27.1
[80440] - CRICOTOPUS (C.) TRIFASCIA		16	21.5	134	22.1	22.2	18.3	21.0	23.7	25.2	26.4
[30000] - PLECOPTERA		23	21.4	28	22.6	22.4	19.6	21.8	24.3	25.7	26.0
[59310] - MYSTACIDES SEPULCHRALIS	MI	5	21.3	15	22.4	22.3	17.5	21.0	24.9	25.7	26.1
[85261] - CLADOTANYTARSUS VANDERWULPI GROUP TYPE 1	I	42	21.3	86	22.4	22.5	19.5	21.0	24.0	25.0	25.8
[80204] - BRILLIA FLAVIFRONS GROUP		65	21.3	108	21.6	22.0	18.0	20.2	23.1	24.5	25.0
[14600] - CHOROTERPES SP	MI	7	21.2	14	22.9	21.8	20.4	21.0	24.5	26.5	26.9
[12912] - HEPTAGENIA DIABASIA	MI	9	21.2	16	22.0	23.3	17.0	20.2	24.9	25.4	26.4
[52450] - CERATOPSYCHE SPARNA	MI	38	21.1	72	21.4	21.5	17.8	19.0	23.6	25.4	26.0
[81650] - PARAMETRIOCNEMUS SP	MI	108	21.1	220	22.2	22.4	19.0	21.0	24.0	25.0	25.5
[13500] - STENONEMA SP		9	20.9	14	22.8	23.2	20.8	21.5	24.0	24.5	24.9

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[82200] - TVETENIA BAVARICA GROUP	MI	42	20.8	62	21.4	21.3	18.0	20.0	23.1	24.3	25.3
[52431] - CERATOPSYCHE MOROSA	MI	19	20.7	28	22.8	23.6	20.2	21.1	24.0	25.7	26.3
[80570] - DONCRICOTOPUS BICAUDATUS		7	20.6	13	21.5	21.5	18.6	19.8	23.2	24.2	24.8
[11430] - DIPHETOR HAGENI	I	29	20.5	39	21.6	21.9	17.7	20.3	23.7	24.7	25.1
[05900] - LIRCEUS SP		121	20.5	346	23.2	23.7	19.5	22.0	25.3	26.7	27.5
[72160] - PSYCHODA SP	T	9	20.5	13	22.4	22.0	18.7	21.5	23.8	25.1	25.6
[69225] - OPTIOSERVUS FASTIDITUS	MI	8	20.4	61	21.3	21.8	17.2	18.9	23.5	25.0	25.4
[81465] - ORTHOCLADIUS (O.) CARLATUS	MI	8	20.4	10	20.5	20.5	16.7	18.5	22.7	24.2	24.7
[50301] - CHIMARRA ATERRIMA	MI	13	20.3	70	22.4	22.5	18.2	21.0	24.0	25.8	26.5
[84430] - POLYPEDILUM (P.) ALBICORNE	MI	6	20.2	9	20.9	20.6	18.4	18.8	22.4	24.1	24.5
[11018] - ACERPENNA MACDUNNOUGHII	I	10	19.9	10	20.6	21.1	16.6	17.2	23.1	25.4	26.5
[34410] - PARAGNETINA MEDIA	I	22	19.9	32	22.9	23.8	18.3	20.0	25.3	26.1	26.4
[52440] - CERATOPSYCHE SLOSSONAE	MI	59	19.9	102	21.2	21.0	17.4	19.0	23.0	25.3	25.6
[11155] - PLAUDITUS PUNCTIVENTRIS	MI	14	19.9	17	20.1	21.2	17.0	17.1	22.2	23.6	23.9
[86401] - ATHERIX LANTHA	MI	50	19.6	190	22.9	23.0	19.7	21.2	24.5	26.2	27.2
[81460] - ORTHOCLADIUS (O.) SP		7	19.4	33	21.1	21.5	18.3	19.9	22.6	23.7	24.4
[85501] - PARATANYTARSUS N.SP 1	MI	24	17.7	28	20.6	21.0	17.0	18.6	23.1	24.0	24.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
			Wadeable	- P10max							
[43015] - SUCKERMOUTH MINNOW		444	25.7	444	24.3	24.0	20.6	22.3	26.0	28.2	29.3
[47002] - CHANNEL CATFISH		244	25.4	244	25.0	25.0	22.0	23.5	26.5	28.3	28.9
[40005] - QUILLBACK CARPSUCKER		259	25.4	259	24.7	25.0	21.0	23.0	26.5	28.2	28.9
[43031] - STEELCOLOR SHINER	MT	35	25.3	35	25.5	26.5	22.0	24.1	26.9	27.5	28.5
[77005] - SPOTTED BASS		217	25.2	217	24.7	24.8	22.0	23.5	26.0	27.3	28.3
[43035] - MIMIC SHINER	I	115	25.0	115	24.7	24.5	21.8	24.0	26.1	27.0	27.5
[54002] - BLACKSTRIPE TOPMINNOW		423	25.0	423	24.3	24.4	21.3	23.0	26.0	27.5	28.5
[43002] - GOLDFISH	T	151	24.9	151	24.3	24.0	20.9	23.0	26.0	28.8	29.0
[77010] - ORANGESPOTTED SUNFISH		267	24.9	267	24.2	24.1	20.5	22.3	26.0	27.5	28.5
[85001] - FRESHWATER DRUM	MT	94	24.8	94	24.4	24.5	22.0	23.8	25.9	27.5	28.1
[43020] - EMERALD SHINER		151	24.7	151	24.9	25.0	22.3	23.8	26.0	28.0	29.0
[77011] - LONGEAR SUNFISH	MI	919	24.7	919	24.3	24.4	21.5	23.0	26.0	27.3	28.5
[80007] - SLENDERHEAD DARTER	R	7	24.7	7	24.7	24.5	24.0	24.1	25.0	26.2	26.5
[77004] - SMALLMOUTH BASS	MI	1189	24.6	1189	23.9	24.0	21.0	22.5	25.5	27.0	28.0
[40011] - SHORRHEAD REDHORSE	MI	68	24.6	68	24.3	25.0	20.5	23.2	26.0	27.4	28.9
[10004] - LONGNOSE GAR		24	24.6	24	24.5	24.9	20.9	23.6	26.2	27.5	28.1
[80002] - WALLEYE		10	24.6	10	24.9	25.2	21.7	24.1	26.0	27.5	29.0
[40012] - GREATER REDHORSE	R	6	24.6	6	24.9	25.0	23.7	23.7	25.6	26.6	26.8
[43023] - REDFIN SHINER		461	24.5	461	23.7	24.0	20.3	22.0	25.9	27.0	28.0
[40010] - GOLDEN REDHORSE	MI	1066	24.5	1066	24.0	24.0	21.0	22.5	25.5	27.0	28.0
[70001] - BROOK SILVERSIDE	MI	116	24.4	116	24.3	24.3	21.6	23.0	26.0	26.9	27.5
[43039] - SILVERJAW MINNOW		928	24.4	928	23.9	24.0	21.0	22.3	25.6	27.0	28.2
[43034] - SAND SHINER	MI	1120	24.4	1120	24.0	24.0	21.0	22.3	25.5	27.1	28.5
[80001] - SAUGER		31	24.4	31	24.5	24.5	22.4	23.5	25.3	27.0	27.8
[47008] - STONECAT MADTOM	I	444	24.4	444	24.3	24.0	21.4	23.0	25.9	27.1	28.0
[43032] - SPOTFIN SHINER		1150	24.3	1150	24.0	24.0	21.0	22.5	25.6	27.1	28.4
[40009] - BLACK REDHORSE	I	358	24.3	358	24.1	24.0	21.0	22.5	25.8	27.0	28.1
[43042] - FATHEAD MINNOW	T	549	24.2	549	23.7	23.9	20.0	22.0	25.5	27.2	28.8
[80016] - BANDED DARTER	I	644	24.2	644	23.8	24.0	21.0	22.3	25.0	27.0	27.5
[43024] - SCARLET SHINER	MI	436	24.2	436	23.8	24.0	21.0	22.2	25.5	26.9	27.5

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[43003] - GOLDEN SHINER	T	265	24.2	265	23.6	24.0	21.0	22.5	25.1	26.0	27.0
[77001] - WHITE CRAPPIE		399	24.2	399	23.9	24.0	21.0	22.4	25.8	27.0	28.0
[43043] - BLUNTNOSE MINNOW	T	2563	24.2	2563	23.6	23.7	20.5	22.0	25.2	26.7	27.8
[77012] - REDEAR SUNFISH		14	24.1	14	24.1	24.0	21.4	23.0	25.4	27.0	27.0
[80017] - VARIEGATE DARTER	I	104	24.1	104	23.9	24.0	21.3	23.0	25.0	26.0	26.9
[80004] - DUSKY DARTER	MI	30	24.1	30	24.8	25.1	22.4	23.2	26.0	27.5	28.0
[47013] - TADPOLE MADTOM		156	24.0	156	24.3	24.7	21.8	23.1	26.0	26.9	28.1
[47004] - YELLOW BULLHEAD	T	1717	24.0	1717	23.7	24.0	21.0	22.0	25.2	26.8	28.0
[47012] - BRINDLED MADTOM	I	157	24.0	157	24.3	24.1	21.6	23.0	25.5	26.6	28.0
[43036] - GHOST SHINER		5	24.0	5	24.5	24.9	22.1	22.4	26.5	26.8	26.8
[77002] - BLACK CRAPPIE		195	23.9	195	23.9	24.0	21.5	22.7	25.3	26.5	27.5
[43044] - CENTRAL STONEROLLER		2201	23.9	2201	23.5	23.5	20.3	22.0	25.1	26.7	27.7
[47007] - FLATHEAD CATFISH		13	23.9	13	25.4	25.0	22.4	24.0	27.9	28.2	28.3
[77009] - BLUEGILL SUNFISH	MT	1725	23.9	1725	23.6	23.7	20.5	22.0	25.1	26.6	27.5
[80011] - LOGPERCH	MI	734	23.9	734	24.0	24.0	21.0	22.5	25.5	26.7	27.5
[77008] - GREEN SUNFISH	T	2371	23.8	2371	23.6	23.7	20.5	22.0	25.2	26.9	28.0
[40020] - CREEK CHUBSUCKER		28	23.8	28	23.8	24.0	21.5	23.0	24.7	26.0	26.2
[40008] - SILVER REDHORSE	MI	184	23.8	184	23.8	24.0	21.0	22.3	25.2	26.5	27.7
[47005] - BROWN BULLHEAD	T	178	23.8	178	23.5	23.6	20.5	22.0	25.0	26.2	27.0
[01006] - LEAST BROOK LAMPREY		82	23.8	82	23.8	23.9	21.2	22.5	25.2	26.5	27.0
[80015] - GREENSIDE DARTER	MI	1726	23.8	1726	23.6	23.8	21.0	22.0	25.2	26.6	27.5
[43022] - ROSYFACE SHINER	I	424	23.8	424	23.8	24.0	21.3	22.5	25.0	26.5	27.4
[77003] - ROCK BASS		1656	23.7	1656	23.6	23.7	20.5	22.0	25.1	26.5	27.4
[47006] - BLACK BULLHEAD	MT	272	23.7	272	23.9	24.0	20.5	22.7	25.8	27.0	28.5
[80024] - FANTAIL DARTER		1162	23.7	1162	23.7	23.8	20.5	22.0	25.2	26.8	27.8
[43021] - SILVER SHINER	I	532	23.7	532	23.5	23.8	20.3	22.0	25.0	26.6	27.5
[43025] - STRIPED SHINER		1731	23.7	1731	23.7	23.7	20.6	22.0	25.2	26.7	27.5
[77006] - LARGEMOUTH BASS		1362	23.6	1362	23.7	23.8	20.5	22.0	25.2	27.0	28.0
[43033] - BIGMOUTH SHINER		28	23.6	28	22.5	23.0	18.0	20.2	24.5	27.0	27.2
[40015] - NORTHERN HOG SUCKER	MI	1777	23.5	1777	23.5	23.5	20.5	22.0	25.1	26.5	27.3
[43001] - COMMON CARP	T	1397	23.5	1397	23.7	23.8	20.7	22.0	25.3	26.8	28.0

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and Wadeable stream size categories.

Species	Tolerance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[77013] - PUMPKINSEED SUNFISH	MT	490	23.5	490	23.5	23.5	20.8	22.0	24.5	26.0	27.0
[20003] - GIZZARD SHAD		555	23.4	555	24.3	24.1	21.0	22.8	26.0	27.7	28.8
[43026] - COMMON SHINER		465	23.4	465	23.1	23.3	20.0	21.8	25.0	26.1	27.1
[80005] - BLACKSIDE DARTER		758	23.3	758	23.5	23.6	20.4	22.0	25.3	26.6	27.4
[80022] - RAINBOW DARTER	MI	1361	23.3	1361	23.5	23.9	20.2	22.0	25.3	26.8	27.5
[43004] - HORNYHEAD CHUB	I	177	23.3	177	23.1	23.0	21.0	21.8	24.5	25.6	26.0
[77007] - WARMOUTH SUNFISH		188	23.3	188	23.5	23.6	20.5	22.0	24.9	26.0	27.5
[37001] - GRASS PICKEREL	MT	512	23.2	512	23.4	23.5	20.5	22.0	25.0	26.0	27.0
[43016] - SOUTH. REDBELLY DACE		47	23.2	47	23.2	23.2	20.7	22.0	24.5	25.2	25.5
[43005] - RIVER CHUB	I	320	23.2	320	23.6	24.0	21.0	22.0	25.0	26.5	27.0
[43045] - COMMON CARP X GOLDFISH	T	41	23.2	41	23.2	23.2	18.7	22.4	24.6	26.7	27.7
[40018] - SPOTTED SUCKER		250	23.2	250	23.6	23.8	20.8	22.1	25.0	26.0	27.2
[80013] - EASTERN SAND DARTER	R	7	23.1	7	22.5	23.0	20.6	21.0	23.9	24.4	24.5
[63001] - TROUT-PERCH		108	23.1	108	23.4	23.3	21.2	22.0	24.9	26.2	26.5
[80014] - JOHNNY DARTER		1746	23.1	1746	23.4	23.5	20.3	22.0	25.2	26.5	27.5
[37003] - NORTHERN PIKE		44	23.1	44	22.6	23.0	16.8	21.5	24.9	26.5	27.7
[43007] - BIGEYE CHUB	I	57	23.0	57	22.9	22.7	20.7	21.0	24.4	26.5	27.0
[40016] - WHITE SUCKER	T	2432	22.9	2432	23.4	23.5	20.2	22.0	25.0	26.4	27.4
[43013] - CREEK CHUB	T	2319	22.9	2319	23.3	23.5	20.2	22.0	25.0	26.5	27.3
[74001] - WHITE BASS		8	22.9	8	23.9	23.0	19.4	20.9	26.7	30.1	31.0
[80023] - ORANGETHROAT DARTER		171	22.9	171	23.6	23.5	20.1	22.0	25.3	27.3	29.0
[80003] - YELLOW PERCH		81	22.6	81	23.3	23.0	20.5	21.9	24.5	26.9	27.9
[80025] - LEAST DARTER		6	22.2	6	22.8	22.7	21.8	22.1	23.0	24.4	24.6
[34001] - CENTRAL MUDMINNOW	T	164	21.9	164	22.2	22.0	19.0	21.0	23.5	25.5	26.0
[43011] - WESTERN BLACKNOSE DACE	T	849	21.8	849	22.7	23.0	19.5	21.2	24.4	26.0	27.0
[90002] - MOTTLED SCULPIN		510	21.4	510	22.4	22.4	19.2	21.0	24.0	25.6	27.0
[43017] - REDSIDE DACE	I	65	21.0	65	20.8	20.5	16.5	17.3	23.0	26.4	27.5
[95001] - BROOK STICKLEBACK		49	20.8	49	21.3	20.5	17.8	20.0	22.9	25.8	26.0
[43012] - LONGNOSE DACE	R	9	20.5	9	20.8	21.5	19.0	20.5	21.5	21.8	22.0
[25001] - BROWN TROUT		37	19.2	37	19.2	19.0	16.5	17.0	20.5	22.5	24.0
[01007] - AMER BROOK LAMPREY	R	60	19.1	60	20.2	20.0	17.0	17.4	21.5	24.4	25.5

Appendix Table 3. Weighted Stressor Values (WSVs) for selected stressors for fish species or macro taxa at headwater and wadeable stream size categories.

Species	Toler- ance	No. WSV Sites	Weighted Mean	No. Stations	Mean	Median	10th %tile	25th %tile	75th %tile	90th %tile	95th %tile
[25002] - RAINBOW TROUT		32	18.2	32	19.3	19.0	16.5	17.1	20.5	23.9	26.2
[43014] - TONGUETIED MINNOW	S	33	17.4	33	18.4	17.3	16.4	17.0	20.0	23.3	24.5