

**Appendix C:** Sensitivity values for benthic macroinvertebrates occurring in Ontario watercourses.

Values range from 4 (most sensitive) to 0 (most tolerant).

? denotes insufficient data. -- denotes value cannot be established for taxonomic level.

Macroinvertebrate Taxa	Sensitivity Value	Macroinvertebrate Taxa	Sensitivity Value
Insects:		Nebrioporus (=Deronectes, in part)	2
ALDERFLIES:		Neoporus (=Hydroporus, in part)	2
Corydalidae:		Neoscutopterous	0
Chauliodes	1	Oreodytes	2
Corydalis	2	Rhantus	0
Nigronia	3	Sanfilippodytes (=Hydroporus, in part)	3
Sialidae:		Stictotarsus (=Deronectes, in part)	2
Sialis	2	Uvarus	2
AQUATIC MOTHS:		Elmidae:	
Pyralidae:		Ancyronxy variegata	2
Petrophila	2	Dubiraphia bivittata	0
others	0	Dubiraphia minima	1
BEETLES:		Dubiraphia quadrinotata	1
Dyropidae:		Dubiraphia vittata	2
Helichus	2	Macronychus galbratus	2
Dytiscidae:		Microcylloepus pusillus	3
Acilius	0	Optioservus fastiditus	2
Agabetes	0	Optioservus ovalis	2
Agabus	2	Optioservus trivittatus	3
Bidessonotus	1	Promoresia elegans	3
Celina	0	Promoresia tardella	4
Colymbetes	1	Stenelmis bicarinata	2
Copelatus	3	Stenelmis crenata	2
Coptotomus lenticus	1	Stenelmis musgravei	1
Coptotomus longulus	1	Stenelmis quadramaculata	0
Coptotomus loticus	2	Stenelmis sandersoni	2
Cybister	0	Stenelmis vittipennis	2
Desmopachria	0	Gyrinidae:	
Dytiscus	1	Dineutes	2
Graphoderus	0	Gyrinus	1
Heterosternuta (=Hydroporus, in part)	3	Haliplidae:	
Hydrocolus (=Hydroporus, in part)	1	Haliplus	1
Hydroporus	1	Peltodytes	1
Hydrovatus	0	Hydrophilidae:	
Hygrotus	0	Anacaena	2
Illybius	2	Berosus	0
Laccophilus	0	Crenitis	2
Laccornis	1	Cymbiodyta	1
Liodessus	2	Enochrus	0
Lioporeus (=Hydroporus, in part)	3	Helochares	?
Matus	2	Helocombus	0
		Helophorus	1
		Hydrobius	1

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Macroinvertebrate Taxa	Sensitivity Value	Macroinvertebrate Taxa	Sensitivity Value
Hydrochara	0	Notonectidae:	
Hydrochus	1	Buena	0
Hydrophilus	3	Notonecta	0
Laccobius	1	Pleidae:	
Paracymus	2	Neoplea	0
Sperchopsis	3	Veliidae:	
Tropisternus	0	Microvelia	0
Lampyridae	1	Rhagovelia	2
Limnichidae:		CADDISFLIES:	
Lutrochus	3	Apataniidae:	
Psephenidae:		Apatania	4
Ectopria	3	Beraeidae:	
Psephenus	3	Beraea	4
Ptilodactylidae:		Brachycentridae:	
Anchytarsus	3	Brachycentrus	3
Scirtidae	?	Mirasema	4
BUGS:		Calamoceratidae:	
Belostomatidae:		Heteroplectron	3
Belostoma	0	Dipseudopsidae:	
Lethocerus	0	Phylocentropus	2
Corixidae:		Glossosomatidae:	
Callicorixa	2	Agapetus	4
Corisella	0	Glossosoma	4
Hesperocorixa	1	Protoptila	2
Palmacorixa	2	Goeridae:	
Sigara grossolineata	2	Goera	3
Sigara lineata	2	Helicopsychidae:	
Sigara mathesoni	3	Helicopsyche	2
Sigara trilineata	2	Hydropsychidae:	
Sigara (others)	0	Arctopsyche	4
Trichocorixa calva	3	Cheumatopsyche	---
Trichocorixa (others)	1	Diplectrona	4
Gerridae:		Homoplectra	4
Aquarius	3	Hydropsyche alhedra	3
Gerris	1	Hydropsyche alvata	1
Limnopus	1	Hydropsyche betteni	2
Metrobates	2	Hydropsyche bronta	3
Neogerris	0	Hydropsyche cuanis	2
Rheumatobates	1	Hydropsyche dicantha	2
Trepobates	1	Hydropsyche hageni	2
Mesoveliidae:		Hydropsyche morosa	2
Mesovelia	1	Hydropsyche orris	2
Nepidae:		Hydropsyche placoda	2
Nepa	1	Hydropsyche scalaris	2
Ranatra	0	Hydropsyche slossonae	3

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Macroinvertebrate Taxa	Sensitivity Value	Macroinvertebrate Taxa	Sensitivity Value
Hydropsyche sparna	3	Psychoglypha	4
Hydropsyche ventura	4	Pycnopsyche	3
Hydropsyche walkeri	3	Molannidae:	
Macrostemum	2	Molanna	2
Parapsyche	4	Odontoceridae:	
Potamyia	1	Marilia	3
Hydroptilidae:		Psilotreta	4
Agraylea	1	Philopotamidae:	
Hydroptila	2	Chimarra	3
Ithytrichia	4	Dolophilodes	4
Leucotrichia	3	Wormaldia	4
Mayatrichia	2	Phryganeidae:	
Neotrichia	2	Agrypnia	1
Ochrotrichia	2	Banksiola	0
Orthotrichia	?	Fabria	1
Oxyethira	1	Oligostomis	3
Stactobiella	4	Phryganea	1
Lepidostomatidae:		Ptilostomis	2
Lepidostoma	4	Polycentropodidae:	
Theliopsyche	4	Cyrnellus	1
Leptoceridae:		Neureclipsis	2
Ceraclea	1	Nyctiophylax	2
Leptocerus	0	Polycentropus	---
Mystacides	1	Psychomyiidae:	
Nectopsyche	1	Lype	3
Oecetis	2	Psychomyia	3
Setodes	2	Rhyacophilidae:	
Triaenodes	1	Rhyacophila fenestra	3
Limnephilidae:		Rhyacophila lobifera	3
Anabolia	1	Rhyacophila (others)	4
Asynarchus	1	Sericostomatidae:	
Chyranda	4	Agarodes	3
Frenesia	4	Uenoidae:	
Glyphopsyche	1	Neophylax	4
Hesperophylax	4	DAMSELFLIES:	
Hydatophylax	4	Calopterygidae:	
Ironoquia	2	Calopteryx aequabilis	2
Lenarchus	1	Calopteryx maculata	3
Limnephilus moestus	3	Hetaerina	2
Limnephilus (others)	1	Coenagrionidae:	
Nemotaulius	1	Amphiagrion	0
Onocosmoecus	4	Argia apicalis	1
Platycentropus	2	Argia fumipennis	3
Pseudostenophylax	4	Argia moesta	2

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Macroinvertebrate Taxa	Sensitivity Value	Macroinvertebrate Taxa	Sensitivity Value
Argia sedula	2	Hagenius	2
Argia tibialis	3	Ophiogomphus	3
Argia translata	1	Phanogomphus	2
Chromagrion	2	Stylogomphus	3
Coenagrion	0	Stylurus	3
Enallagma antennatum	2	Libellulidae:	
Enallagma aspersum	0	Erythemis	1
Enallagma basidens	0	Ladona	0
Enallagma boreale	1	Leucorrhinia	0
Enallagma carunculatum	1	Libellula	0
Enallagma civile	0	Perithemis	0
Enallagma clausum	0	Plathemis	0
Enallagma cyathigerum	0	Sympetrum	1
Enallagma ebrium	0	Tramea	0
Enallagma exsulans	3	Macromiidae:	
Enallagma geminatum	2	Didymops	2
Enallagma hageni	0	Macromia	2
Enallagma signatum	1	MAYFLIES:	
Enallagma vesperum	1	Ameletidae:	
Ischnura	0	Ameletus	4
Nehalennia	0	Arthropleidae:	
Lestidae:		Arthroplea	3
Archilestes	2	Baetidae:	
Lestes	0	Acentrella	3
DRAGONFLIES:		Acerpenna macdunnoughi	3
Aeshnidae:		Acerpenna pygmaea	2
Aeshna	2	Baetis brunneicolor	3
Anax	0	Baetis flavistriga	1
Basiaeschna	1	Baetis intercalaris	2
Boyeria	2	Baetis pluto	2
Nasiaeschna	1	Baetis rusticans	?
Cordulegastridae:		Baetis tricaudatus	4
Cordulegaster	3	Callibaetis	0
Corduliidae:		Centroptilum	3
Cordulia	1	Dipheter	3
Epitheca	1	Heterocloeon	2
Helocordulia	2	Plauditus armillatus	2
Neurocordulia	2	Plauditus cestus	3
Somatochlora	3	Plauditus cingulatus (=cinctus)	2
Gomphidae:		Plauditus dubius	1
Arigomphus	1	Plauditus punctiventris	3
Dromogomphus	2	Plauditus virilis	1
Gomphurus	2	Procloeon	2
Gomphus (=Hylogomphus)	3	Pseudocentroptiloides	3

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Macroinvertebrate Taxa	Sensitivity Value	Macroinvertebrate Taxa	Sensitivity Value
Pseudocloeon frondalis	2	Stenonema mediopunctatum	3
Pseudocloeon longipalpus	1	Stenonema modestum	2
Pseudocloeon propinquus	2	Stenonema pulchellum	1
Baetiscidae:		Stenonema terminatum	2
Baetisca	2	Stenonema vicarium	3
Caenidae:		Isonychiidae:	
Brachycercus	2	Isonychia	2
Caenis anceps	2	Leptohyphidae:	
Caenis (others)	1	Tricorythodes	2
Ephemerellidae:		Leptophlebiidae:	
Attenella	2	Choroterpes	3
Dannella	3	Habrophlebia	?
Dentatella bartoni	1	Habrophlebiodes	2
Drunella	4	Leptophlebia	1
Ephemerella aurivillii	4	Paraleptophlebia	3
Ephemerella (others)	3	Metretopodidae:	
Eurylophella aestiva	1	Siphloplecton	2
Eurylophella bicolor	3	Oligoneuriidae:	
Eurylophella coxalis	3	Homoeoneuria	2
Eurylophella funeralis	4	Polymitarcyidae:	
Eurylophella lutulenta	1	Ephoron	3
Eurylophella temporalis	1	Potamanthidae:	
Serratella serratoides	4	Anthropotamus	2
Serratella (others)	3	Pseudironidae:	
Ephemeridae:		Pseudiron	2
Ephemera guttulata	3	Siphonuridae:	
Ephemera simulans	2	Parameletus	3
Ephemera varia	3	Siphonurus	2
Hexagenia atrocaudata	3	STONEFLIES:	
Hexagenia (others)	1	Capniidae :	
Litobrancha	3	Allocapnia granulata	2
Pentagenia	3	Allocapnia minima	2
Heptageniidae:		Allocapnia pygmaea	3
Anepeorus	1	Allocapnia recta	4
Epeorus	4	Allocapnia rickeri	3
Heptagenia	3	Allocapnia vivpara	3
Leucrocuta	3	Capnia	4
Nixe	3	Paracapnia	3
Rhithrogena	4	Chloroperlidae:	
Stenacron	2	Alloperla	4
Stenonema exiguum	1	Haploperla	3
Stenonema femoratum	1	Suwallia	4
Stenonema ithaca	2	Sweltsa	4
Stenonema luteum	2		

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Macroinvertebrate Taxa	Sensitivity Value	Macroinvertebrate Taxa	Sensitivity Value
Leuctridae:		TRUE FLIES:	
Leuctra	4	Athericidae:	
Paraleuctra	4	Atherix	3
Nemouridae:		Ceratopogonidae	0
Amphinemura	4	Chaoboridae:	
Nemoura	3	Chaoborus	0
Ostrocerca	4	Chironomidae:	
Paranemoura	4	Ablabesmyia	2
Podmosta	4	Acricotopus	1
Prostoia	3	Apsectrotanypus	4
Shipsa	3	Brillia parva	4
Soyedina	4	Brillia (others)	2
Peltoperlidae:		Brundiniella	4
Peltoperla	3	Cardiocladius	2
Tallaperla	3	Chaetocladius	1
Perlidae:		Chernovskii	1
Acroneuria abnormis	2	Chironomus	0
Acroneuria carolinensis	3	Cladopelma	1
Acroneuria evoluta	2	Cladotanytarsus	2
Acroneuria lycorias	2	Clinotanypus	1
Agneta	3	Coelotanypus	1
Attaneuria	2	Conchapelopia	2
Neoperla	3	Corynoneura	2
Paragnetina	3	Cricotopus (C.) tremulus-gp	3
Perlesta	2	Cricotopus (C.) trifascia	3
Perlinella	3	Cricotopus (C.) (others)	2
Perlodidae:		Cricotopus (Isocladius)	0
Arcynopteryx	4	Cryptochironomus	1
Clioperla	3	Cryptotendipes	2
Cultus	4	Demicryptochironomus	1
Helopicus	?	Diamesa	3
Isogenoides	4	Dicrotendipes	0
Isoperla bilineata	2	Diplocladius	3
Isoperla nana	2	Doncricotopus	3
Isoperla (others)	4	Einfeldia	0
Malirekus	4	Endochironomus	0
Pteronarcyidae:		Epoicocladius	2
Pteronarcys	3	Eukiefferiella claripennis-gp	1
Taeniopterygidae:		Eukiefferiella (others)	3
Oemopteryx	4	Glyptotendipes	0
Strophopteryx	4	Harnischia	1
Taeniopteryx burksi	2	Heleniella	4
Taeniopteryx (others)	3	Helopelopia	3
		Heterotanytarsus	0
		Heterotrissocladius hirtapex	2

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Macroinvertebrate Taxa	Sensitivity Value	Macroinvertebrate Taxa	Sensitivity Value
Heterotrissocladius (others)	1	Polypedilum halterale	0
Hydrobaenus	1	Polypedilum illinoense	1
Labrundinia	1	Polypedilum laetum	2
Larsia	1	Polypedilum nubeculosum	2
Lauterborniella	0	Polypedilum scalaenum	1
Limnophyes	1	Polypedilum trigonus	0
Lipiniella	1	Polypedilum tritum	0
Macropelopia	3	Potthastia	1
Meropelopia	3	Procladius	0
Metriocnemus	3	Prodiamesa	3
Microchironomus	1	Protanypus	0
Microcricotopus	1	Psectrocladius	1
Micropsectra	3	Psectrotanypus	0
Microtendipes	2	Pseudochironomus	1
Monodiamesa	1	Rheocricotopus	2
Nanocladius	3	Rheopelopia	3
Natarsia	3	Rheotanytarsus	3
Nilotanypus	2	Robackia	2
Nilothauma	1	Saetheria	2
Odontomesa	2	Stempellina	2
Orthocladius	---	Stempellinella	3
Pagastia	3	Stenochironomus	2
Pagastiella	0	Stictochironomus	2
Parachaetocladius	3	Stilocladius	?
Parachironomus	1	Sublettea	2
Paracladopelma doris	3	Sympotthastia	3
Paracladopelma doris-gp	2	Syndiamesa	3
Paracladopelma galaptera	0	Synorthocladius	3
Paracladopelma nais	2	Tanypus	1
Paracladopelma nereis	3	Tanytarsus	2
Paracladopelma undine	2	Thienemanniella	2
Paracladopelma winnelli	2	Thienemannimyia	2
Parakiefferiella	2	Tribelos	1
Paralauterborniella	0	Trissopelopia	2
Paramerina	?	Tvetenia	2
Parametriocnemus	3	Unniella	?
Paratanytarsus	1	Xenochironomus	2
Paratendipes	2	Xylotopus	2
Pentaneura	2	Zalutschia	0
Phaenopsectra	1	Zavrelimyia	2
Polypedilum albicorne	3	Culicidae	0
Polypedilum angulum	-	Dixidae	0
Polypedilum aviceps	3	Dolichopodidae	2
Polypedilum fallax	1	Empididae	2
Polypedilum flavum (=convictum)	2	Ephydridae	1
		Muscidae	1

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Macroinvertebrate Taxa	Sensitivity Value	Macroinvertebrate Taxa	Sensitivity Value
Psychodidae	0	Molluscs:	
Ptychopteridae	1	BIVALVES:	
Simuliidae	2	Dreissenidae:	
Stratiomyidae	0	Dreissena	0
Syrphidae	0	Sphaeriidae:	
Tabanidae:		Musculium lacustre	1
Chrysops	2	Musculium partumeium	1
Tabanus	0	Musculium securis	1
Tipulidae:		Musculium transversum	2
Antocha	3	Pisidium	---
Cryptolabis	4	Sphaerium fabale	3
Dactylobolis	3	Sphaerium occidentale	0
Dicranota	3	Sphaerium rhomboideum	1
Erioptera	1	Sphaerium simile	1
Helius	1	Sphaerium striatinum	2
Hexatoma	2	Unionidae:	
Limnophila	2	Actinonaias carinata	2
Limonia	2	Actinonaias ligamentina	3
Ormosia	3	Alasmidonta marginata	3
Pedicia	3	Alasmidonta viridis	3
Pilaria	1	Amblema plicata	2
Pseudolimnophila	3	Anodontoides ferussacianus	3
Tipula	---	Carunculina parva	1
Crustaceans:		Cyclonaias tuberculata	2
AMPHIPODS:		Elliptio dilatata	1
Crangonyctidae:		Epioblasma (=Dysnomia)	2
Crangonyx gracilis-cmpx	3	Fusconaia flava	1
Crangonyx rivularis	3	Lampsilis cardium	3
Crangonyx (others)	2	Lampsilis fasciola	3
Gammaridae:		Lampsilis radiata siliquoidea	1
Gammarus fasciatus	2	Lampsilis ventricosa	1
Gammarus lacustris	3	Lasmigona complanata	1
Gammarus pseudolimnaeus	3	Lasmigona compressa	3
Hyalloleidae:		Lasmigona costata	2
Hyallolela	2	Leptodea fragilis	1
CRAYFISHES:		Ligumia nasuta	0
Cambaridae:		Ligumia recta	2
Cambarus	1	Obliquaria reflexa	1
Orconectes	2	Obovaria subrotunda	2
Palaemonetidae:		Pleurobema coccineum	1
Palaemonetes	3	Proptera alata	0
ISOPODS:		Ptychobranchus fasciolaris	3
Asellidae:		Pyganodon (=Anodonta, in part)	1
Caecidotea	1	Quadrula pustulosa	1
Lirceus	2		

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Macroinvertebrate Taxa	Sensitivity Value	Macroinvertebrate Taxa	Sensitivity Value
Quadrula quadrula	2	Annelids:	
Simpsoniconcha ambigua	2	LEECHES:	
Strophitus undulatus	3	Erpobdellidae:	
Truncilla	2	Dina dubia	1
Villosa fabalis	2	Dina parva	0
Villosa iris	2	Erpobdella	1
		Mooreobdella	2
SNAILS:		Nephelopsis	2
Ancylidae:		Hirudinidae:	
Ferrissia fragilis	0	Haemopsis	1
Ferrissia parallela	1	Macrobdella	0
Ferrissia rivularis	2	Glossiphoniidae:	
Bithyniidae:		Alboglossiphonia	2
Bithynia	1	Batracobdella	2
Hydrobiidae:		Glossiphonia	2
Amnicola	2	Helobdella elongata	1
Birgella (=Somatogyrus)	2	Helobdella fusca	2
Cincinnatia	1	Helobdella papillata	1
Fontigens	3	Helobdella stagnalis	2
Potamopyrgus	1	Helobdella triserialis	2
Probythinella	2	Placobdella	1
Lymnaeidae:		Theromyzon	?
Bulimnea	1	WORMS:	
Fossaria	1	Lumbriculidae	-
Lymnaea	1	Tubificidae:	
Pseudosuccinea	0	Aulodrilus	2
Radix	1	Bothrioneurum	2
Stagnicola	0	Branchiura	0
Physidae:		Ilyodrilus	0
Physella	0	Isochaetides curvisetosus	3
Planorbidae:		Isochaetides freyi	1
Gyraulus	1	Limnodrilus	0
Helisoma	1	Potamothenrix bavaricus	2
Planorbella	0	Potamothenrix moldaviensis	2
Planorbula	1	Potamothenrix vej dovskyi	2
Promenetus	2	Quistadrilus	0
Pleuroceridae:		Rhyacodrilus	3
Elimia (=Goniobasis)	2	Spirosperma	1
Pleurocera	1	Tasserkidrilus	2
Valvatidae:		Tubifex	0
Valvata	2	Platyhelminthes:	
Viviparidae:		FLATWORMS:	
Campeloma	1	Alloeocoela	1
Cipangopaludina	1	Tricladida	3
Viviparus	1		