

Appendix 5 Addendum

Upper Thames River Source Protection Area Assessment Report

Table A5-1: Thames River Fish Species Summary

Species (Common Name)	Species (Scientific Name)	Thames Abundance	Sensitive	Coldwater	Native	Migrant	Target
Alewife	<i>Alosa pseudoharengus</i>	Rare	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
American brook lamprey	<i>Lampetra appendix</i>	Uncommon	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bigmouth Buffalo	<i>Ictiobus cyprinellus</i>	Rare	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Black Buffalo	<i>Ictiobus niger</i>	Rare	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Black Bullhead	<i>Ameiurus melas</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Black Crappie	<i>Pomoxis nigromaculatus</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Black Redhorse	<i>Moxostoma duquesnei</i>	Uncommon	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blacknose Dace	<i>Rhinichthys atratulus</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blacknose Shiner	<i>Notropis heterolepis</i>	Uncommon	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blackside Darter	<i>Percina maculata</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bluegill	<i>Lepomis macrochirus</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bluntnose Minnow	<i>Pimephales notatus</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brassy Minnow	<i>Hybognathus hankinsoni</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brindled Madtom	<i>Noturus miurus</i>	Rare	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brook Silverside	<i>Labidesthes sicculus</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brook Stickleback	<i>Culaea inconstans</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brook Trout	<i>Salvelinus fontinalis</i>	Uncommon	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brown Bullhead	<i>Ameiurus nebulosus</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brown Trout	<i>Salmo trutta</i>	Uncommon	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Central Mudminnow	<i>Umbra limi</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Central Stoneroller	<i>Campostoma anomalum</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Channel Catfish	<i>Ictalurus punctatus</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	Rare	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Coho Salmon	<i>Oncorhynchus kisutch</i>	Rare	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Common Carp	<i>Cyprinus carpio</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Common Shiner	<i>Luxilus cornutus</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Creek Chub	<i>Semotilus atromaculatus</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eastern Sand Darter	<i>Ammocrypta pellucida</i>	Uncommon	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emerald Shiner	<i>Notropis atherinoides</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fantail Darter	<i>Etheostoma flabellare</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fathead Minnow	<i>Pimephales promelas</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Freshwater Drum	<i>Aplodinotus grunniens</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ghost Shiner	<i>Notropis buchanani</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gizzard Shad	<i>Dorosoma cepedianum</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Golden Redhorse	<i>Moxostoma erythrurum</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Golden Shiner	<i>Notemigonus crysoleucas</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goldfish	<i>Carassius auratus</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gravel Chub	<i>Erimystax x-punctata</i>	Rare	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Greater Redhorse	<i>Moxostoma valenciennesi</i>	Common	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Green Sunfish	<i>Lepomis cyanellus</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Greenside Darter	<i>Etheostoma blennioides</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hornyhead Chub	<i>Nocomis biguttatus</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Iowa Darter	<i>Etheostoma exile</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Johnny Darter	<i>Etheostoma nigrum</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lake Chubsucker	<i>Erimyzon sucetta</i>	Rare	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Largemouth Bass	<i>Micropterus salmoides</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Least Darter	<i>Etheostoma microperca</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Logperch	<i>Percina caprodes</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Longear Sunfish	<i>Lepomis megalotis</i>	Common	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Longnose Dace	<i>Rhinichthys cataractae</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Longnose Gar	<i>Lepisosteus osseus</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mimic Shiner	<i>Notropis volucellus</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Table A5-1: Thames River Fish Species Summary

Species (Common Name)	Species (Scientific Name)	Thames Abundance	Sensitive	Coldwater	Native	Migrant	Target
Mooneye	<i>Hiodon tergisus</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mottled Soutpin	<i>Cottus bairdi</i>	Uncommon	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Muskellunge	<i>Esox masquinongy</i>	Rare	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Northern Brook Lamprey	<i>Ichthyomyzon fossor</i>	Rare	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Northern Hog Sucker	<i>Hypentelium nigricans</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Northern Madtom	<i>Noturus stigmosus</i>	Rare	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Northern Pike	<i>Esox lucius</i>	Common	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Northern Redbelly Dace	<i>Phoxinus eos</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pearl Dace	<i>Margariscus margarita</i>	Uncommon	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pugnose Minnow	<i>Opsopoeodus emiliae</i>	Rare	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pumpkinseed	<i>Lepomis gibbosus</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quillback	<i>Carpoides cyprinus</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rainbow Darter	<i>Etheostoma caeruleum</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rainbow Trout	<i>Oncorhynchus mykiss</i>	Common	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Redfin Shiner	<i>Lythrurus umbratilis</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
River Chub	<i>Nocomis micropogon</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
River Darter	<i>Percina shumardi</i>	Rare	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
River Redhorse	<i>Moxostoma carinatum</i>	Rare	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rock Bass	<i>Ambloplites rupestris</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rosyface Shiner	<i>Notropis rubellus</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Round Goby	<i>Neogobius melanostomus</i>	Rare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sauger	<i>Sander canadensis</i>	Rare	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sea Lamprey	<i>Petromyzon marinus</i>	Rare	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shorthead Redhorse	<i>Moxostoma macrolepidotum</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Silver Lamprey	<i>Ichthyomyzon unicuspis</i>	Rare	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Silver Redhorse	<i>Moxostoma anisurum</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Silver Shiner	<i>Notropis photogenis</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smallmouth Bass	<i>Micropterus dolomieu</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Spotfin Shiner	<i>Cyprinella spiloptera</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spottail Shiner	<i>Notropis hudsonius</i>	Uncommon	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spotted Sucker	<i>Minytrema melanops</i>	Rare	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stonecat	<i>Noturus flavus</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Striped Shiner	<i>Luxilus chrysocephalus</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tadpole Madtom	<i>Noturus gyrinus</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trout-perch	<i>Percopsis omiscomaycus</i>	Uncommon	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walleye	<i>Sander vitreus</i>	Uncommon	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
White Bass	<i>Morone chrysops</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
White Crappie	<i>Pomoxis annularis</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
White Perch	<i>Morone americana</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
White Sucker	<i>Catostomus commersoni</i>	Abundant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Yellow Bullhead	<i>Ameiurus natalis</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yellow Perch	<i>Perca flavescens</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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With respect to the preceding table, the terms are described as:

Abundance: Refers to the relative abundance or common occurrence of the species found within the waters of the Thames River watershed based on sampling results. Consideration was given to accurately reflect the species presence within the watershed due to the sampling capture method, effort, and biases, difficulty in capturing certain species and

Abundant: Greater than 50 sample records in the database

Common: Between 15 and 50 sample records in the database

Historical: species that have been previously recorded in the Thames.

Rare: Less than 5 sample records in database

Uncommon: Between 5 and 15 sample records in database

Sensitive: In 2005, Coker and Portt identified sensitive species in the draft "Sensitive Species List for Agricultural Municipal Drain Clean Outs". Sensitive species have specific habitat requirements, and any alterations to their habitat could prove to be detrimental to the species.

Coldwater: Life history information was reviewed in "Morphological and Ecological Characteristics of Canadian Freshwater Fishes" to identify species habitat, including thermal 'preferences'. These species are found in coldwater habitats, defined as having water temperatures of less than 19°C.

Native: A species indigenous to a particular region or area.

Migrant: A species that moves to a riverine area from a lake in order to carry out one of its life history requirements such as spawning.

Target: Indicates if the species is a sportfish and considered a top level predator. Generally speaking, any species that is targeted for angling purposes would be a sportfish. Most sportfish feed on smaller fish, and baitfish can be used when angling for sportfish.

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Table A5-2: Thames River Mussel Species Summary

Common Name	Scientific Name	Thames	Native
Black Sandshell	<i>Ligumia recta</i>	Live	<input checked="" type="checkbox"/>
Creek Heelsplitter	<i>Lasmigona compressa</i>	Live	<input checked="" type="checkbox"/>
Creeper	<i>Strophitus undulatus</i>	Live	<input checked="" type="checkbox"/>
Cylindrical Floater (papershell)	<i>Anodontooides ferussacianus</i>	Live	<input checked="" type="checkbox"/>
Deertoe	<i>Truncilla truncata</i>	Live	<input checked="" type="checkbox"/>
Elktoe	<i>Alasmidonta marginata</i>	Live	<input checked="" type="checkbox"/>
Fat Mucket	<i>Lampsilis siliquoidea</i>	Live	<input checked="" type="checkbox"/>
Fawnsfoot	<i>Truncilla donaciformis</i>	Live	<input checked="" type="checkbox"/>
Fluted Shell	<i>Lasmigona costata</i>	Live	<input checked="" type="checkbox"/>
Fragile Papershell	<i>Leptodea fragilis</i>	Live	<input checked="" type="checkbox"/>
Giant Floater	<i>Pyganodon grandis</i>	Live	<input checked="" type="checkbox"/>
Hickorynut	<i>Obovaria olivaria</i>	Live	<input checked="" type="checkbox"/>
Kidneyshell	<i>Ptychobranthus fasciolaris</i>	Live	<input checked="" type="checkbox"/>
Lilliput Mussel	<i>Toxolasma parvus</i>	Live	<input checked="" type="checkbox"/>
Mapleleaf	<i>Quadrula quadrula</i>	Live	<input checked="" type="checkbox"/>
Mucket	<i>Actinonaias ligamentina</i>	Live	<input checked="" type="checkbox"/>
Mudpuppy Mussel	<i>Simpsonaias ambigua</i>	Shells only	<input checked="" type="checkbox"/>
Pimpleback	<i>Quadrula pustulosa</i>	Live	<input checked="" type="checkbox"/>
Pink Heelsplitter	<i>Potamilus alatus</i>	Live	<input checked="" type="checkbox"/>
Plain Pocketbook	<i>Lampsilis cardium</i>	Live	<input checked="" type="checkbox"/>
Purple Wartyback	<i>Cyclonaias tuberculata</i>	Live	<input checked="" type="checkbox"/>
Rainbow	<i>Villosa iris</i>	Live	<input checked="" type="checkbox"/>
Rayed Bean	<i>Villosa fabalis</i>	Live	<input checked="" type="checkbox"/>
Round Hickorynut	<i>Obovaria subrotunda</i>	Shells only	<input checked="" type="checkbox"/>
Round Pigtoe	<i>Pleurobema sintoxia</i>	Live	<input checked="" type="checkbox"/>
Slippershell Mussel	<i>Alasmidonta viridis</i>	Shells only	<input checked="" type="checkbox"/>
Snuffbox	<i>Epioblasma triquetra</i>	Shells only	<input checked="" type="checkbox"/>
Spike	<i>Elliptio dilatata</i>	Live	<input checked="" type="checkbox"/>
Threehorned Wartyback	<i>Obliquaria reflexa</i>	Live	<input checked="" type="checkbox"/>
Threeridge	<i>Amblyma plicata</i>	Live	<input checked="" type="checkbox"/>
Wabash Pigtoe	<i>Fusconaia flava</i>	Live	<input checked="" type="checkbox"/>
Wavy-rayed Lampmussel	<i>Lampsilis fasciola</i>	Live	<input checked="" type="checkbox"/>
White Heelsplitter	<i>Lasmigona complanata</i>	Live	<input checked="" type="checkbox"/>
Zebra Mussel	<i>Dreissena polymorpha</i>	Live	<input type="checkbox"/>

With respect to the above table, the terms are described as:

Thames: Indicates whether live specimens have been located or relict shells only located.

Native: A species indigenous to a particular region or area.

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Table A5-3: Benthic Species in the Thames River and Tributaries (species that are more than 0.05% of the 280,000 organisms sampled in 1997 to 2006)

Taxon Name	Common Name
Glossiphoniidae	Leech
Oligochaeta	Aquatic Worm
Acariformes	Water Mite
Gammaridae	Sideswimmer
Talitridae	Sideswimmer
Daphnidae	Water Flea
Cyclopocida	Fish Lice
Asellidae	Sow Bug
Ostracoda	Seed Shrimp
Dytiscidae	Predacious Diving Beetle
Elmidae	Riffle Beetle
Halplidae	Crawling Water Beetle
Hydrophilidae	Water Scavenger Beetle
Psephenidae	Water Penny Beetle
Ceratopogonidae	Biting Midge
Chironomidae	Midge
Empididae	Dance Fly
Simuliidae	Black Fly
Tabanidae	Horse Fly
Tipulidae	Crane Fly
Boetidae	Small Mayfly
Caenidae	Crawling Mayfly
Ephemerellidae	Mayfly
Heptageniidae	Stream Mayfly
Leptophlebiidae	Mayfly
Oligoneuridae	Torpedo Mayfly
Tricorythidae	Crawling Mayfly
Corixidae	Water Boatmen
Coenagrionidae	Narrow-winged Damselfly
Leuctridae	Stonefly
Nemouridae	Stonefly
Perlidae	Stonefly
Helicopsychidae	Snail-case Caddisfly
Hydroptilidae	Micro-caddisfly
Hydropsychidae	Net-spinning Caddisfly
Leptoceridae	Long-horned Caddisfly
Lepidostomatidae	Lepidostomatid Caddisfly
Philopotamidae	Finger-net Caddisfly
Sphaeriidae	Fingernail Clam
Valvatidae	Round-mouthed Snail
Lymnaeidae	Pond Snail
Physidae	Pouch Snail
Planorbidae	Orb Snail
Nematoda	Thread Worm
Planaria	Flatworm
Limnephilidae	Northern Caddisfly
Hydrozoa	Hydra
Taeniopterygidae	Stonefly
Capniidae	Stonefly

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Table A5-4: Aquatic and Semi-Aquatic Species At Risk in the Thames River Watershed (May 2010)

Common Name	Scientific Name	SARO 2010	COSEWIC 2010	SARA 2010
<u>Fish</u>				
Bigmouth Buffalo	<i>Ictiobus cyprinellus</i>	Not at Risk	Not at Risk	No Status
Black Buffalo	<i>Ictiobus niger</i>	Data Deficient	Data Deficient	No Status
Black Redhorse	<i>Moxostoma duquesnei</i>	Threatened	Threatened	Threatened
Eastern Sand Darter	<i>Ammocrypta pellucida</i>	Endangered	Threatened	Threatened
Grass Pickerel	<i>Esox americanus vermiculatus</i>	Special Concern	Special Concern	Special Concern
Gravel Chub	<i>Erimystax x-punctata</i>	Extirpated	Extirpated	Extirpated
Greenside Darter	<i>Etheostoma blennioides</i>	Not at Risk	Not at Risk	No Status
Northern Brook Lamprey	<i>Ichthyomyzon fossor</i>	Special Concern	Special Concern	Special Concern
Northern Madtom	<i>Noturus stigmosus</i>	Endangered	Endangered	Endangered
Pugnose Minnow	<i>Opsopoeodus emiliae</i>	Special Concern	Special Concern	Special Concern
River Redhorse	<i>Moxostoma carinatum</i>	Special Concern	Special Concern	Special Concern
Silver Shiner	<i>Notropis photogenis</i>	Special Concern	Special Concern	Special Concern
Spotted Sucker	<i>Minytrema melanops</i>	Special Concern	Special Concern	Special Concern
Spotted Gar	<i>Lepisosteus oculatus</i>	Threatened	Threatened	Threatened
<u>Mussels</u>				
Fawnsfoot	<i>Truncilla donaciformis</i>	Endangered	Endangered	Endangered
Kidneyshell	<i>Ptychobranchnus fasciolaris</i>	Endangered	Endangered	Endangered
Mapleleaf	<i>Quadrula quadrula</i>	Threatened	Threatened	Threatened
Mudpuppy Mussel	<i>Simpsonaias ambigua</i>	Endangered	Endangered	Endangered
Rainbow	<i>Villosa iris</i>	Threatened	Endangered	Endangered
Rayed Bean	<i>Villosa fabalis</i>	Endangered	Endangered	Endangered
Round Hickorynut	<i>Obovaria subrotunda</i>	Endangered	Endangered	Endangered
Round Pigtoe	<i>Pleurobema sintoxia</i>	Endangered	Endangered	Endangered
Snuffbox	<i>Epioblasma triquetra</i>	Endangered	Endangered	Endangered
Wavy-rayed Lampmussel	<i>Lampsilis fasciola</i>	Endangered	Special Concern	Endangered
<u>Reptiles</u>				
E. Ribbonsnake	<i>Thamnophis sauritus</i>	Special Concern	Special Concern	Special Concern
Queensnake	<i>Regina septemvittata</i>	Threatened	Endangered	Threatened
Blanding's Turtle	<i>Emydoidea blandingii</i>	Threatened	Threatened	Threatened
N. Map Turtle	<i>Graptemys geographica</i>	Special Concern	Special Concern	Special Concern
Snapping Turtle	<i>Chelydra serpentina</i>	Special Concern	Special Concern	No Status
Spiny Softshell	<i>Apalone spinifera</i>	Threatened	Threatened	Threatened
Spotted Turtle	<i>Clemmys guttata</i>	Endangered	Endangered	Endangered

A "species at risk" (SAR) is any naturally-occurring plant or animal in danger of extinction or of disappearing from the province. Once classified as "at risk", they are added to the Species at Risk in

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Ontario (SARO) List. COSEWIC Status is the status assigned by the Committee on the Status of Endangered Wildlife in Canada for the Species at Risk Act (SARA). These include:

- Extinct (X) – A wildlife species that no longer exists.
- Extirpated (XT) – A wildlife species no longer existing in the wild in Canada, but occurring elsewhere.
- Endangered (E) – A wildlife species facing imminent extirpation or extinction
- Threatened (T) – A wildlife species likely to become endangered if limiting factors are not reversed
- Special Concern (SC) – A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.

(Source: <http://www.mnr.gov.on.ca/en/Business/Species/>).

Species at Risk Act (SARA) is a key federal government commitment to prevent wildlife species from becoming extinct and secure the necessary actions for their recovery. It provides for the legal protection of wildlife species and the conservation of their biological diversity.

(Source: http://www.sararegistry.gc.ca/approach/act/default_e.cfm)