

Appendix 5 Addendum

Lower Thames Valley Source Protection Area Assessment Report

Table A5-1: Thames River Fish Species Summary including Species at Risk

Species (Common Name)	Species (Scientific Name)	Thames Abundance	Sensitive	Coldwater	Native	Migrant	Target	COSEWIC Status
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"/>	Special Concern
Black Buffalo	<i>Ictiobus niger</i>	Rare	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Special Concern
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"/>	Threatened
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 checked="" type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 checked="" 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 checked="" 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"/>	Threatened
Emerald Shiner	<i>Notropis atherinoides</i>	Common	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" 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 checked="" 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 checked="" 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 checked="" 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"/>	Extirpated
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"/>	Special Concern
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"/>	Threatened
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 Cont'd: Thames River Fish Species Summary including Species at Risk

Species (Common Name)	Species (Scientific Name)	Thames Abundance	Sensitive	Coldwater	Native	Migrant	Target	COSEWIC Status
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 Sculpin	<i>Cottus bairdi</i>	Uncommon	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	Special Concern
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"/>	Endangered
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 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"/>	Special Concern
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 type="checkbox"/>	<input checked="" 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"/>	Special Concern
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 checked="" 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 checked="" 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"/>	Special Concern
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 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"/>	Special Concern
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 checked="" 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 checked="" 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"/>	

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

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Table A5-1 Cont'd: Thames River Fish Species Summary including Species at Risk

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.

COSEWIC Status: Status assigned by the Committee on the Status of Endangered Wildlife in Canada for the Species at Risk Act (SARA).

Extinct: A species that no longer exists.

Extirpated: A species no longer existing in the wild in Canada, but occurring elsewhere in the wild.

Endangered: A species facing imminent extirpation or extinction.

Threatened: A species likely to become endangered if limiting factors are not reversed.

Special Concern: A species that may become threatened or endangered species because of a combination of biological characteristics and identified threats.

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Table A5-2: Lower Thames Valley SPA Lake Erie Tributaries Fish Species Summary including Species at Risk

Species (Common Name)	Species (Scientific Name)	Sensitive	Coldwater	Native	Migrant	Target	COSEWIC Status
Alewife	<i>Alosa pseudoharengus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Black Bullhead	<i>Ameiurus melas</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Black Crappie	<i>Pomoxis nigromaculatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Blackchin Shiner	<i>Notropis heterodon</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Blacknose Dace	<i>Rhinichthys atratulus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Blacknose Shiner	<i>Notropis heterolepis</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Blackside Darter	<i>Percina maculata</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bluegill	<i>Lepomis macrochirus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bluntnose Minnow	<i>Pimephales notatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Brassy Minnow	<i>Hybognathus hankinsoni</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Brook Silverside	<i>Labidesthes sicculus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Brook Stickleback	<i>Culaea inconstans</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Brown Bullhead	<i>Ameiurus nebulosus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Burbot	<i>Lota Lota</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Central Mudminnow	<i>Umbra limi</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Channel Catfish	<i>Ictalurus punctatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Common Carp	<i>Cyprinus carpio</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Common Shiner	<i>Luxilus cornutus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Creek Chub	<i>Semotilus atromaculatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Emerald Shiner	<i>Notropis atherinoides</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fantail Darter	<i>Etheostoma flabellare</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fathead Minnow	<i>Pimephales promelas</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Freshwater Drum	<i>Aplodinotus grunniens</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Gizzard Shad	<i>Dorosoma cepedianum</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Golden Redhorse	<i>Moxostoma erythrurum</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Golden Shiner	<i>Notemigonus crysoleucas</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Goldfish	<i>Carassius auratus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Green Sunfish	<i>Lepomis cyanellus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Johnny Darter	<i>Etheostoma nigrum</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lake Chubsucker	<i>Erimyzon sucetta</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Threatened
Largemouth Bass	<i>Micropterus salmoides</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Logperch	<i>Percina caprodes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Longnose Gar	<i>Lepisosteus osseus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mimic Shiner	<i>Notropis volucellus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Mooneye	<i>Hiodon tergisus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Mottled Sculpin	<i>Cottus bairdi</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Northern Pike	<i>Esox lucius</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Pugnose Minnow	<i>Opsopoeodus emiliae</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Special Concern
Pumpkinseed	<i>Lepomis gibbosus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quillback	<i>Carpiodes cyprinus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Rock Bass	<i>Ambloplites rupestris</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sand Shiner	<i>Notropis stramineus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sea Lamprey	<i>Petromyzon marinus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Shorthead Redhorse	<i>Moxostoma macrolepidotum</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Silver Lamprey	<i>Ichthyomyzon unicuspis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Slimy Sculpin	<i>Cottus cognatus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Smallmouth Bass	<i>Micropterus dolomieu</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Spotfin Shiner	<i>Cyprinella spiloptera</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spottail Shiner	<i>Notropis hudsonius</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Spotted Gar	<i>Lepisosteus oculatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Threatened
Tadpole Madtom	<i>Noturus gyrinus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Table A5-2 Cont'd: Lower Thames Valley SPA Lake Erie Tributaries Fish Species Summary including Species at Risk

Species (Common Name)	Species (Scientific Name)	Sensitive	Coldwater	Native	Migrant	Target	COSEWIC Status
Trout-perch	<i>Percopsis omiscomaycus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
White Bass	<i>Morone chrysops</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
White Crappie	<i>Pomoxis annularis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
White Perch	<i>Morone americana</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
White Sucker	<i>Catostomus commersoni</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Yellow Bullhead	<i>Ameiurus natalis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Yellow Perch	<i>Perca flavescens</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

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

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.

COSEWIC Status: Status assigned by the Committee on the Status of Endangered Wildlife in Canada for the Species at Risk Act (SARA).

Extinct: A species that no longer exists.

Extirpated: A species no longer existing in the wild in Canada, but occurring elsewhere in the wild.

Endangered: A species facing imminent extirpation or extinction.

Threatened: A species likely to become endangered if limiting factors are not reversed.

Special Concern: A species that may become threatened or endangered species because of a combination of biological characteristics and identified threats.

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Table A5-3: Lower Thames Valley SPA Lake St. Clair Tributaries Fish Species Summary including Species at Risk

Species (Common Name)	Species (Scientific Name)	Sensitive	Coldwater	Native	Migrant	Target	COSEWIC Status
Alewife	<i>Alosa pseudoharengus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Black Bullhead	<i>Ameiurus melas</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Black Crappie	<i>Pomoxis nigromaculatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Bluegill	<i>Lepomis macrochirus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Bluntnose Minnow	<i>Pimephales notatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Brindled Madtom	<i>Noturus miurus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Brook Silverside	<i>Labidesthes sicculus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Channel Catfish	<i>Ictalurus punctatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Common Carp	<i>Cyprinus carpio</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Emerald Shiner	<i>Notropis atherinoides</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Freshwater Drum	<i>Aplodinotus grunniens</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Gizzard Shad	<i>Dorosoma cepedianum</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Golden Shiner	<i>Notemigonus crysoleucas</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Grass Pickerel	<i>Esox americanus vermiculatus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Green Sunfish	<i>Lepomis cyanellus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Largemouth Bass	<i>Micropterus salmoides</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Logperch	<i>Percina caprodes</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Longnose Gar	<i>Lepisosteus osseus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Mimic Shiner	<i>Notropis volucellus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Northern Pike	<i>Esox lucius</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Pugnose Minnow	<i>Opsopoeodus emiliae</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Special Concern
Pumpkinseed	<i>Lepomis gibbosus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Quillback	<i>Carpiodes cyprinus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
River Darter	<i>Percina shumardi</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Rock Bass	<i>Ambloplites rupestris</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Shorthead Redhorse	<i>Moxostoma macrolepidotum</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Smallmouth Bass	<i>Micropterus dolomieu</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Spotfin Shiner	<i>Cyprinella spiloptera</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Spottail Shiner	<i>Notropis hudsonius</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Spotted Gar	<i>Lepisosteus oculatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Threatened Special Concern
Spotted Sucker	<i>Minytrema melanops</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Walleye	<i>Sander vitreus</i>	<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>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
White Crappie	<i>Pomoxis annularis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
White Perch	<i>Morone americana</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Yellow Bullhead	<i>Ameiurus natalis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Yellow Perch	<i>Perca flavescens</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

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

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.

Lower Thames Valley Source Protection Area Assessment Report

**Table A5-3 Cont'd: Lower Thames Valley SPA Lake St. Clair Tributaries Fish Species
Summary including Species at Risk**

<p>COSEWIC Status: Status assigned by the Committee on the Status of Endangered Wildlife in Canada for the Species at Risk Act (SARA).</p> <p>Extinct: A species that no longer exists.</p> <p>Extirpated: A species no longer existing in the wild in Canada, but occurring elsewhere in the wild.</p> <p>Endangered: A species facing imminent extirpation or extinction.</p> <p>Threatened: A species likely to become endangered if limiting factors are not reversed.</p> <p>Special Concern: A species that may become threatened or endangered species because of a combination of biological characteristics and identified threats.</p>
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Table A5-4: Thames River Mussel Species Summary including Species at Risk

Common Name	Scientific Name	Thames	COSEWIC Status	Native
Black Sandshell	<i>Ligumia recta</i>	Live		<input checked="" type="checkbox"/>
Creek Heelsplitter	<i>Lasmigona compressa</i>	Live		<input checked="" type="checkbox"/>
Creepers	<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	Endangered	<input checked="" type="checkbox"/>
Lilliput Mussel	<i>Toxolasma parvum</i>	Live		<input checked="" type="checkbox"/>
Mapleleaf	<i>Quadrula quadrula</i>	Live	Threatened	<input checked="" type="checkbox"/>
Mucket	<i>Actinonaias ligamentina</i>	Live		<input checked="" type="checkbox"/>
Mudpuppy Mussel	<i>Simpsonaias ambigua</i>	Shells only	Endangered	<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	Endangered	<input checked="" type="checkbox"/>
Rayed Bean	<i>Villosa fabalis</i>	Live	Endangered	<input checked="" type="checkbox"/>
Round Hickorynut	<i>Obovaria subrotunda</i>	Shells only	Endangered	<input checked="" type="checkbox"/>
Round Pigtoe	<i>Pleurobema sintoxia</i>	Live	Endangered	<input checked="" type="checkbox"/>
Slippershell Mussel	<i>Alasmidonta viridis</i>	Shells only		<input checked="" type="checkbox"/>
Snuffbox	<i>Epioblasma triquetra</i>	Shells only	Endangered	<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"/>
Threenidge	<i>Amblyema 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	Endangered	<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.

COSEWIC Status: Status assigned by the Committee on the Status of Endangered Wildlife in Canada for the Species at Risk Act (SARA).

Extinct: A species that no longer exists.

Extirpated: A species no longer existing in the wild in Canada, but occurring elsewhere in the wild.

Endangered: A species facing imminent extirpation or extinction.

Threatened: A species likely to become endangered if limiting factors are not reversed.

Special Concern: A species that may become threatened or endangered species because of a combination of biological characteristics and identified threats.

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

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Table A5-5: Benthic Species in the Thames River and Tributaries

Phylum	Class	Order	Family	Common Name		
Annelida	Hirudinea	Arhynchobdellida	Erbodellidae	Leech		
		Rhynchobdellida	Glossiphoniidae	Leech		
	Oligochaeta	Class ID only	Class ID only	Aquatic Worm		
Arthropoda	Arachnida	Acan	Class ID only	Water Mite		
		Crustacea	Amphipoda	Gammaridae	Sideswimmer	
			Talitridae	Sideswimmer		
	Cladocera		Daphnidae	Water Flea		
	Cyclopoida		Order ID only	Fish Lice		
	Decapoda		Cambaridae	Crayfish		
	Isopoda		Asellidae	Sow Bug		
	Ostracoda		Order ID only	Seed Shrimp		
	Insecta		Coleoptera		Chrysomelidae	Leaf Beetle
					Dytiscidae	Predacious Diving Beetle
					Elmidae	Riffle Beetle
				Halipidae	Crawling Water Beetle	
				Hydrophilidae	Water Scavenger Beetle	
				Psephenidae	Water Penny Beetle	
		Diptera			Chaoboridae	Fantom Midge
					Ceratopogonidae	Biting Midge
					Chironomidae	Midge
					Empididae	Dance Fly
				Ephyridae	Shore Fly	
				Muscidae	Musoid Fly	
				Psychodidae	Sand Fly	
		Ephemeroptera		Simuliidae	Black Fly	
				Stratiomyidae	Soldier Fly	
				Tabanidae	Horse Fly	
				Tipulidae	Crane Fly	
			Baetidae	Small Mayfly		
			Caenidae	Crawling Mayfly		
	Ephemerellidae		Mayfly			
	Heptageniidae		Stream Mayfly			
	Leptophlebiidae		Mayfly			
	Oligoneuridae		Torpedo Mayfly			
Hemiptera		Corixidae	Water Boatmen			
		Velidae	Ripple Bug			
Lepidoptera		Pyralidae	Pyralid Moth			
Megeleoptera		Sialidae	Alderfly			
Odonata		Calopterygidae	Broad-winged Damselfly			
		Coenagrionidae	Narrow-winged Damselfly			
Plecoptera		Capniidae	Stonefly			
		Leuctridae	Stonefly			
		Nemouridae	Stonefly			
		Perlodidae	Stonefly			
		Perlidae	Stonefly			
	Taeniopterygidae	Stonefly				

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Table A5-5 Cont'd: Benthic Species in the Thames River and Tributaries

Phylum	Class	Order	Family	Common Name
		Tricoptera	Brachycentridae	Brachycentrid Caddisfly
			Glossosomatidae	Caddisfly
			Helicopsychidae	Snail-case Caddisfly
			Hydroptilidae	Micro-caddisfly
			Hydropsychidae	Net-spinning Caddisfly
			Leptoceridae	Long-horned Caddisfly
			Limnephilidae	Northern Caddisfly
			Lepidostomatidae	Lepidostomid Caddisfly
			Phryganeidae	Large Caddisfly
			Philopotamidae	Finger-net Caddisfly
			Polycentropodidae	Caddisfly
Rhyacophilidae	Primitive Caddisfly			
Onidaria	Hydrozoa	Class ID only	Class ID only	Hydra
Mollusca	Gastropoda	Prosobranchia	Hydrobiidae	Snail
			Valvatidae	Round-mouthed Snail
		Pulmonata	Ancylidae	Limpet
			Lymnaeidae	Pond Snail
			Physidae	Pouch Snail
			Planorbidae	Orb Snail
	Bivalvia	Veneroida	Sphaeriidae	Fingemal Clam
Nematoda	Phylum only	Phylum only	Phylum only	Thread Worm
Platyhelminthes	Turbellaria	Class ID only	Class ID only	Flatworm

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Table A5-6: Aquatic Species At Risk in the Thames River Watershed

Common Name	Scientific Name	COSEWIC Status	Provincial Rank	Global Rank	Status in Watershed
Reptiles					
Spiny Softshell	<i>Apalone spinifera</i>	Threatened	S3	G5	Reduced range, may be declining
Northern Map Turtle	<i>Graptemys geographica</i>	Special Concern	S3	G5	Locally common, under pressure
Northern Ribbonsnake	<i>Thamnophis sauritus septentrionalis</i>	Special Concern	S3	G5	Rare
Queen Snake	<i>Regina septemvittata</i>	Threatened	S2	G5	Reduced Range, declining population
Blanding's Turtle	<i>Emys (Emydoidea) blandingii</i>	Threatened	S3	G4	Rare
Spotted Turtle	<i>Clemmys guttata</i>	Endangered	S3	G5	May be extirpated or very rare
Stinkpot Turtle	<i>Sternotherus odoratus</i>	Threatened	S3	G5	May be extirpated
Fish					
Bigmouth Buffalo	<i>Ictiobus cyprinellus</i>	Special Concern	SU	G5	Rare, may be expanding range
Black Buffalo	<i>Ictiobus niger</i>	Special Concern	SU	G5	Recent unconfirmed record
Black Redhorse	<i>Moxostoma duquesnei</i>	Threatened	S2	G5	Rare, localized
Eastern Sand Darter	<i>Ammocrypta pellucida</i>	Threatened	S2	G3	Uncommon, localized
Gravel Chub	<i>Ermystax x-punctatus</i>	Extirpated	SX	G4	Presumed extirpated
Greenside Darter	<i>Etheostoma blennioides</i>	Special Concern	S4	G5	Common, widespread
Lake Chubsucker	<i>Erimyzon sucetta</i>	Threatened	S2	G5	Rare, localized
Northern Brook Lamprey	<i>Ichthyomyzon fossor</i>	Special Concern	S3	G4	Rare, localized
Northern Madtom	<i>Noturus stigmosus</i>	Endangered	S1S2	G3	Rare, localized
Pugnose Minnow	<i>Opsopoeodus emiliae</i>	Special Concern	S2	G5	Rare, localized, may be extirpated
River Redhorse	<i>Moxostoma carinatum</i>	Special Concern	S2	G4	One recent record only
Silver Shiner	<i>Notropis photogenis</i>	Special Concern	S2S3	G5	Locally common
Spotted Sucker	<i>Minytrema melanops</i>	Special Concern	S2	G5	Uncommon, localized, may be expanding in range
Mussels					
Kidneyshell	<i>Ptychobranthus fasciolaris</i>	Endangered	S1	G4G5	Very rare

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Table A5-6: Aquatic Species At Risk in the Thames River Watershed

Common Name	Scientific Name	COSEWIC Status	Provincial Rank	Global Rank	Status in Watershed
Mudpuppy Mussel	<i>Simpsonaias ambigua</i>	Endangered	S1	G3	Presumed extirpated
Rayed Bean	<i>Villosa fabalis</i>	Endangered	S1	G1G2	Very rare
Round Hickorynut	<i>Obovaria subrotunda</i>	Endangered	S1	G4	Presumed extirpated
Round Pigtoe	<i>Pleurobema sintoxia</i>	Endangered	S2	G4	Rare
Snuffbox	<i>Epioblasma triquetra</i>	Endangered	S1	G3	Presumed extirpated
Wavy-rayed lampmussel	<i>Lampsilis fasciola</i>	Endangered	S1	G4	Stable

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Table A5-7: Aquatic Species At Risk in the Lower Thames Valley SPA Lake Erie Watershed

Common Name	Scientific Name	COSEWIC Status	Provincial Rank	Global Rank	Status in Watershed
Reptiles					
Eastern Spiny Softshell	<i>Apalone spinifera</i>	Threatened			Reduced range, may be declining
Northern Map Turtle	<i>Graptemys geographica</i>	Special Concern			Locally common, under pressure
Blanding's Turtle	<i>Emydoidea blandingii</i>	Threatened			Unknown
Spotted Turtle	<i>Clemmys guttata</i>	Endangered			May be extirpated or very rare
Stinkpot Turtle	<i>Sternotherus odoratus</i>	Threatened			May be extirpated
Fowler's Toad	<i>Bufo fowleri</i>	Threatened			Sustainable population at Rondeau
Northern Cricket Frog	<i>Acris crepitans</i>	Endangered			Extirpated
Queen Snake	<i>Regina septemvittata</i>	Threatened			Reduced range, declining population
Tiger Salamander	<i>Ambystoma tigrinum</i>	Extirpated			Extirpated
Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	Threatened			Rare
Eastern Foxsnake	<i>Elaphe gloydi</i>	Threatened			Discontinuous distribution along the Lake Erie - Lake Huron waterway shoreline, including tributaries and several islands
Massasauga	<i>Sistrurus catenatus</i>	Threatened			
Eastern Ribbonsnake	<i>Thamnophis sauritus</i>	Special Concern			Localized, may be extirpated
Fish					
Bigmouth Buffalo	<i>Ictiobus cyprinellus</i>	Special Concern			Disjunct
Black Buffalo	<i>Ictiobus niger</i>	Special Concern			Rare
Black Redhorse	<i>Moxostoma duquesnei</i>	Threatened			Rare, localized
Eastern Sand Darter	<i>Ammocrypta pellucida</i>	Threatened			Uncommon, localized

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Table A5-7: Aquatic Species At Risk in the Lower Thames Valley SPA Lake Erie Watershed

Common Name	Scientific Name	COSEWIC Status	Provincial Rank	Global Rank	Status in Watershed
Greenside Darter	<i>Etheostoma blennioides</i>	Special Concern			Common, Widespread
Lake Chubsucker	<i>Erimyzon sucetta</i>	Threatened			Rare, localized
Northern Brook Lamprey	<i>Icthyomyzon fossor</i>	Special Concern			Rare, localized
Northern Madtom	<i>Noturus stigmosus</i>	Endangered			
Pugnose Minnow	<i>Opsopoeodus emiliae</i>	Special Concern			Rare, may be extirpated
River Redhorse	<i>Moxostoma carinatum</i>	Special Concern			Unknown
Pugnose Shiner	<i>Notropis anogenus</i>	Endangered			Restricted to the Great Lakes
Spotted Gar	<i>Lepisosteus oculatus</i>	Threatened			Rare, localized
Channel Darter	<i>Percina copelandi</i>	Threatened			Rare to unknown
Warmouth	<i>Lepomis gulosus</i>	Special Concern			Extant, localized
Orangespotted Sunfish	<i>Lepomis humilis</i>	Special Concern			Unknown
Silver Chub	<i>Macrhybopsis storeriana</i>	Special Concern			Localized
Grass Pickerel	<i>Esox americanus vermiculatus</i>	Special Concern			Unknown
Lake Sturgeon	<i>Acipenser fulvescens</i>	Special Concern			Unknown
Spotted Sucker	<i>Minytrema melanops</i>	Special Concern			Uncommon, localized, may be expanding
Mussels					
Northern Riffleshell	<i>Epioblasma torulosa rangiana</i>	Endangered			May be extirpated or very rare
Wavy-rayed Lampmussel	<i>Lampsilis fasciola</i>	Endangered			Extirpated
Rayed Bean	<i>Villosa fabalis</i>	Endangered			Presumed extirpated
Round Hickorynut	<i>Obovaria subrotunda</i>	Endangered			Presumed extirpated
Round Pigtoe	<i>Pleurobema sintoxia</i>	Endangered			Rare

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Table A5-7: Aquatic Species At Risk in the Lower Thames Valley SPA Lake Erie Watershed

Common Name	Scientific Name	COSEWIC Status	Provincial Rank	Global Rank	Status in Watershed
Snuffbox	<i>Epioblasma triquetra</i>	Endangered			Presumed extirpated