

From: Christine Creighton <creightonc@thamesriver.on.ca>
Sent: Wednesday, November 9, 2022 10:25 AM
To: Lysynski, Heather <hlysynsk@London.ca>
Subject: [EXTERNAL] Re: ECAC - Sept 15 - Question from ECAC

Good Morning Heather,

Hope you are keeping well.

Just following up with a response to the inquiry below from Pat Almost. The information/comments has been compiled by the UTRCA's Aquatic Biologist - Erin Carroll.

I looked at our WISKI database and Stoney Creek was sampled for fish nine times at seven different stations between 2017 and 2021 (raw data attached). In 2022, an additional five fish sites were sampled on Stoney Creek at the direction of the City of London.

In recent years, fish sampling sites were selected based on project funding. Major projects focused on detection of Silver Shiner and Black Redhorse. About 5 sites a year are sampled at the direction of the City of London, based on recent planned development or wastewater projects. There are reports published relating to each of these projects. The 2022 fish data, including the five Stoney Creek sites, will not be reported on until the next report, which is scheduled for publishing November 2023.

Upper Thames biologists collect benthic samples in each subwatershed for the purpose of watershed reporting. There were twelve benthic samples collected on Stoney Creek from 2017 to spring 2022 (raw data attached). Stoney Creek at Windermere is the primary benthic station for Stoney Creek. It was sampled six times in that period. The results of this sampling is reported on in Watershed Report Cards. In addition, there are project specific sample sites for benthic relating to wastewater monitoring for the City of London.

Not sure how you want to proceed with this information Heather. Do you want to check with Pat to see if this addresses her question(s)? Do you want to include Erin's response on the agenda? Does Erin need to attend the ECAC meeting?

Please let me know.

Thank you,
Christine



Christine Creighton

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UTRCA (DFO, ROM, MNRF) Fish Sampling Records

Stoney Creek

Sampled: 09/05/2018

Site Code: UT.ST005

Latitude: 43.039985

Agency:

Location: Stoney Creek upstream of Trossacks

Longitude: -81.244084

Common Name	Scientific Name	# Observed	Species at Risk (SAR) Status				Status in the Thames River Watershed	
			ESA2017	Provincial Srank	SARA	Federal COSEWIC	Abundance	Distribution
Rainbow Darter	Etheostoma caeruleum	Few	---	S4	---	---	Uncommon	localized

UTRCA (DFO, ROM, MNRF) Fish Sampling Records

Stoney Creek

Sampled: 16/08/2017

Site Code: UT.ST006

Latitude: 43.039985

Agency: ---

Location: Upstream of Trossacks Ave.

Longitude: -81.244084

Common Name	Scientific Name	# Observed	Species at Risk (SAR) Status				Status in the Thames River Watershed	
			ESA2017	Provincial Srank	SARA	Federal COSEWIC	Abundance	Distribution
White Sucker	Catostomus commersonii	Abundant	---	S5	---	---		
Johnny Darter	Etheostoma nigrum	Few	---	S5	---	---	Abundant	widespread
Creek Chub	Semotilus atromaculatus	Abundant	---	S5	---	---	Abundant	widespread
Rock Bass	Ambloplites rupestris	Abundant	---	S5	---	---	Abundant	widespread
Black Bullhead	Ameiurus melas	Few	---	S4	---	---	Common	widespread
Central Stoneroller	Campostoma anomalum	Many	---	S4	Not at Risk	Not at Risk	Abundant	widespread
Spotfin Shiner	Cyprinella spiloptera	Few	---	S4	---	---	Abundant	widespread
Grenside Darter	Etheostoma blennioides	Few	---	S4	Not at Risk	Not at Risk	Abundant	widespread
Pumpkinseed	Lepomis gibbosus	Abundant	---	S5	---	---	Abundant	widespread
Longear Sunfish	Lepomis megalotis	Abundant						
Largemouth Bass	Micropterus salmoides	Few	---	S5	---	---	Abundant	widespread
Hornyhead Chub	Nocomis biguttatus	Many	---	S4	Not at Risk	Not at Risk	Abundant	widespread
Fathead Minnow	Pimephales promelas	Few	---	S5	---	---	Abundant	widespread
Striped Shiner	Luxilus chrysocephalus	Few	---	S4	Not at Risk	Not at Risk	Abundant	widespread
Common Shiner	Luxilus cornutus	Abundant	---	S5	---	---	Abundant	widespread
Northern Hog Sucker	Hypentelium nigricans	Few	---	S4	---	---	Abundant	widespread
Bluntnose Minnow	Pimephales notatus	Many	---	S5	Not at Risk	Not at Risk	Abundant	widespread
Northern Sunfish	Lepomis peltastes	Abundant	Special Concern	---	Special Concern	---		

UTRCA (DFO, ROM, MNRF) Fish Sampling Records

Stoney Creek

Sampled: 16/08/2017

Site Code: UT.ST008

Latitude: 43.041708

Agency: ---

Location: Downstream of Stackhouse Avenue

Longitude: -81.238407

Common Name	Scientific Name	# Observed	Species at Risk (SAR) Status				Status in the Thames River Watershed	
			Provincial	Federal			Abundance	Distribution
			ESA2017	Srank	SARA	COSEWIC		
White Sucker	Catostomus commersonii	Many	---	S5	---	---		
Johnny Darter	Etheostoma nigrum	Abundant	---	S5	---	---	Abundant	widespread
Creek Chub	Semotilus atromaculatus	Abundant	---	S5	---	---	Abundant	widespread
Rock Bass	Ambloplites rupestris	Abundant	---	S5	---	---	Abundant	widespread
Central Stoneroller	Campostoma anomalum	Abundant	---	S4	Not at Risk	Not at Risk	Abundant	widespread
Grenside Darter	Etheostoma blennioides	Few	---	S4	Not at Risk	Not at Risk	Abundant	widespread
Rainbow Darter	Etheostoma caeruleum	Many	---	S4	---	---	Uncommon	localized
Fantail Darter	Etheostoma flabellare	Many	---	S4	---	---	Abundant	widespread
Pumpkinseed	Lepomis gibbosus	Abundant	---	S5	---	---	Abundant	widespread
Longear Sunfish	Lepomis megalotis	Many						
Smallmouth Bass	Micropterus dolomieu	Few	---	S5	---	---	Abundant	widespread
Largemouth Bass	Micropterus salmoides	Few	---	S5	---	---	Abundant	widespread
Hornyhead Chub	Nocomis biguttatus	Few	---	S4	Not at Risk	Not at Risk	Abundant	widespread
Striped Shiner	Luxilus chrysocephalus	Few	---	S4	Not at Risk	Not at Risk	Abundant	widespread
Common Shiner	Luxilus cornutus	Abundant	---	S5	---	---	Abundant	widespread
Northern Hog Sucker	Hypentelium nigricans	Few	---	S4	---	---	Abundant	widespread
Bluntnose Minnow	Pimephales notatus	Many	---	S5	Not at Risk	Not at Risk	Abundant	widespread
Northern Sunfish	Lepomis peltastes	Many	Special Concern	---	Special Concern	---		

UTRCA (DFO, ROM, MNRF) Fish Sampling Records

Powell Drain

Sampled: 09/05/2018

Site Code: UT.ST103

Latitude: 43.040703

Agency:

Location: Powell Drain

Longitude: -81.25753

Common Name	Scientific Name	# Observed	Species at Risk (SAR) Status				Status in the Thames River Watershed	
			ESA2017	Provincial Srank	SARA	Federal COSEWIC	Abundance	Distribution
Pumpkinseed	Lepomis gibbosus	Few	---	S5	---	---	Abundant	widespread

UTRCA (DFO, ROM, MNRF) Fish Sampling Records

Powell Drain

Sampled: 12/06/2019

Site Code: UT.ST103

Latitude: 43.040703

Agency:

Location: Powell Drain

Longitude: -81.25753

Common Name	Scientific Name	# Observed	Species at Risk (SAR) Status				Status in the Thames River Watershed	
			Provincial ESA2017	Provincial Srank	Federal SARA	Federal COSEWIC	Abundance	Distribution
White Sucker	Catostomus commersonii	Abundant	---	S5	---	---		
Creek Chub	Semotilus atromaculatus	Abundant	---	S5	---	---	Abundant	widespread
Black Bullhead	Ameiurus melas	Many	---	S4	---	---	Common	widespread
Central Stoneroller	Camptostoma anomalum	Many	---	S4	Not at Risk	Not at Risk	Abundant	widespread
Northern Redbelly Dace	Chrosomus eos	Few	---	S5	---	---	Abundant	locally common
Pumpkinseed	Lepomis gibbosus	Many	---	S5	---	---	Abundant	widespread
Bluegill	Lepomis macrochirus	Many	---	S5	---	---	Common	localized
Fathead Minnow	Pimephales promelas	Abundant	---	S5	---	---	Abundant	widespread
Common Shiner	Luxilus cornutus	Abundant	---	S5	---	---	Abundant	widespread

UTRCA (DFO, ROM, MNRF) Fish Sampling Records

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Sampled: 24/08/2021

Site Code: UT.ST108

Latitude: -81.26738

Agency:

Location: ---

Longitude:

Common Name	Scientific Name	# Observed	Species at Risk (SAR) Status				Status in the Thames River Watershed	
			ESA2017	Provincial Srank	SARA	Federal COSEWIC	Abundance	Distribution
Fathead Minnow	Pimephales promelas	Few	---	S5	---	---	Abundant	widespread

UTRCA (DFO, ROM, MNRF) Fish Sampling Records

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Sampled: 12/06/2019

Site Code: UT.ST108

Latitude: -81.26738

Agency: UTRCA

Location: ---

Longitude:

Common Name	Scientific Name	# Observed	Species at Risk (SAR) Status				Status in the Thames River Watershed	
			ESA2017	Provincial Srank	SARA	Federal COSEWIC	Abundance	Distribution
Fathead Minnow	Pimephales promelas	Few	---	S5	---	---	Abundant	widespread

UTRCA (DFO, ROM, MNRF) Fish Sampling Records

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Sampled: 12/06/2019

Site Code: UT.ST109

Latitude: -81.26352

Agency:

Location:

Longitude:

Common Name	Scientific Name	# Observed	Species at Risk (SAR) Status				Status in the Thames River Watershed	
			ESA2017	Provincial Srank	SARA	Federal COSEWIC	Abundance	Distribution
Brook Stickleback	Culaea inconstans	Few	---	S5	---	---	Abundant	widespread
Fathead Minnow	Pimephales promelas	Abundant	---	S5	---	---	Abundant	widespread

UTRCA (DFO, ROM, MNRF) Fish Sampling Records

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Sampled: 12/06/2019

Site Code: UT.ST1100

Latitude: -81.25845

Agency:

Location:

Longitude:

Common Name	Scientific Name	# Observed	Species at Risk (SAR) Status				Status in the Thames River Watershed	
			ESA2017	Provincial Srank	SARA	Federal COSEWIC	Abundance	Distribution
Brook Stickleback	Culaea inconstans	Few	---	S5	---	---	Abundant	widespread
Fathead Minnow	Pimephales promelas	Abundant	---	S5	---	---	Abundant	widespread

COSEWIC Status: The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assesses species for their consideration for legal protection and recover (or management) under the Species at Risk Act (SARA).

Extinct: A wildlife species that no longer exists.

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

Endangered: A wildlife species facing imminent extirpation or extinction.

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

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

Not at Risk: A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.

Data Deficient: A category that applies when the available information is insufficient (a) to resolve a wildlife species' eligibility for assessment or (b) to permit an assessment of the wildlife species' risk of extinction.

Reference: www.cosewic.gc.ca (current to November 2011)

SARA Status: The federal at risk designation for species under the Species at Risk Act (SARA)

Reference: www.sararegistry.gc.ca (current to December 2011)

ESA 2007 / SARO Status: Species at Risk in Ontario (SARO) are designated by the Ontario Ministry of Natural Resources and Forestry (OMNRF) in accordance with the provincial Endangered Species Act (ESA) through the Committee on the Status of Species at Risk in Ontario (COSSARO).

Extirpated: A native species that no longer exists in the wild in Ontario but still occurs elsewhere.

Endangered: A native species facing imminent extirpation or extinction in Ontario.

Threatened: A native species that is at risk of becoming endangered in Ontario.

Special Concern: A native species that is sensitive to human activities or natural events which may cause it to become endangered or threatened.

Reference: www.ontario.ca/speciesatrisk (current to January 2012)

Provincial Rank (SRANK): Provincial (or Subnational) ranks are used by the Natural Heritage Information Centre (NHIC) to set protection priorities for rare species and natural communities. These ranks are assigned to consider only those factors within the political boundaries of Ontario.

SX Presumed Extirpated: Species or community is believed to be extirpated from the nation or state/province. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.

SH Possibly Extirpated (Historical): Species or community occurred historically in the nation or state/province, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years. A species or community could become NH or SH without such a 20-40 year delay if the only known occurrences in a nation or state/province were destroyed or if it had been extensively and unsuccessfully looked for. The NH or SH rank is reserved for species or communities for which some effort has been made to relocate occurrences, rather than simply using this status for all elements not known from verified extant occurrences.

S1 Critically imperiled: Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.

S2 Imperiled: Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.

S3 Vulnerable: Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

S4 Apparently Secure: Uncommon but not rare; some cause for long-term concern due to declines or other factors.

S5 Secure: Common, widespread, and abundant in the nation or state/province.

SNR Unranked: Nation or state/province conservation status not yet assessed.

SU Unrankable: Currently unrankable due to lack of lack of information or substantially conflicting information about status or trends.

SNA Not Applicable: A conservation status rank is not applicable because the species is not a suitable target for conservation activities.

S#S# Range Rank: A numeric range rank (e.g. S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g. SU is used rather than S1S4).

Reference: <http://nhci.mnr.gov.on.ca/MNR/nhic/nhic.cfm> (current to March 2012)

Abundance: Refers to the relative abundance of the species found within the waters of the Upper Thames River watershed based on sampling results. Some species may be underrepresented as they are difficult to capture with commonly used sampling methods.

Abundant: Occurred in >25% of the sampling records.

Common: Occurred in 10-25% of the sampling records.

Uncommon: Occurred in <10% of the sampling records.

Distribution: Based on the number of Upper Thames Watershed Report Card subwatersheds in which a species has been recorded.

Throughout: Recorded in >20 subwatersheds.

Widespread: Recorded in 10-20 subwatersheds.

Localized: Recorded in <10 subwatersheds.

UTRCA Benthic Sampling Data

Stoney Creek

Sampled: 10/05/2022

Location: Stoney Creek Windermere Rd

Stream Health:

Site Code: UT.ST000

Latitude: 43.022435

Longitude: -81.252115

Family Biotic Index:

Scientific Name	Common Name (family/order)	Life Stage	# in Subsample	Biotic Index
Oligochaeta		ADULT	29	8
Perlidae	Stonefly	NYMPH	4	3
Acariformes		ADULT	1	6
Elmidae	Riffle Beetle	ADULT	5	5
Elmidae	Riffle Beetle	LARVAE	26	5
Crangonyctidae	Sideswimmer	ADULT	2	6
Chironomidae	Midge	PUPA	22	6
Chironomidae	Midge	LARVAE	241	6
Ceratopogonidae	Biting Midge	LARVAE	1	6
Simuliidae	Black Fly	LARVAE	4	5
Hydropsychidae	Net-spinning Caddisfly	LARVAE	1	5
Psephenidae	Water Penny Beetle	LARVAE	7	4
Empididae	Dance Fly	LARVAE	9	6
Philopotamidae	Finger-net Caddisfly	LARVAE	1	4
Baetidae	Small Mayfly	NYMPH	2	6
Ephemerellidae	Mayfly	NYMPH	1	2

Benthic samples were obtained using Rapid Bioassessment Protocol developed by the United States Environmental Protection Agency and modified by Dr. Robert Bailey of the University of Western Ontario Zoology Department. A representative section of stream is selected, incorporating a riffle if present, and sampled by wading upstream along a diagonal transect, dislodging and capturing invertebrates with a .5 mm mesh "D" - frame net. Samples are preserved in the field and analyzed in the lab to randomly select a 100 bug subsample which is identified to the Family taxonomic level.

The biotic index is a value assigned to benthic invertebrate taxa indicating their pollution sensitivity and tolerance on a scale from 1 to 10. Lower numbers indicate pollution sensitivity and high numbers tolerance. A value of -1 indicates that no biotic index value has been assigned to these taxa.

The Family Biotic Index is the weighted average of the biotic index and number of bugs in each taxa in the sample. The water quality ranges for the FBI values are as follows: <4.25 = Excellent; $4.25 - 5.00$ = Good; $5.00 - 5.75$ = Fair; $5.75 - 6.50$ = Fairly Poor; $6.50 - 7.25$ = Poor; and >7.25 = Very Poor.