



# 2016 Spring Spawning Survey Summary

## Sucker Creek, Pointe au Baril

### Eastern Georgian Bay Stewardship Council

#### MONITORING OVERVIEW

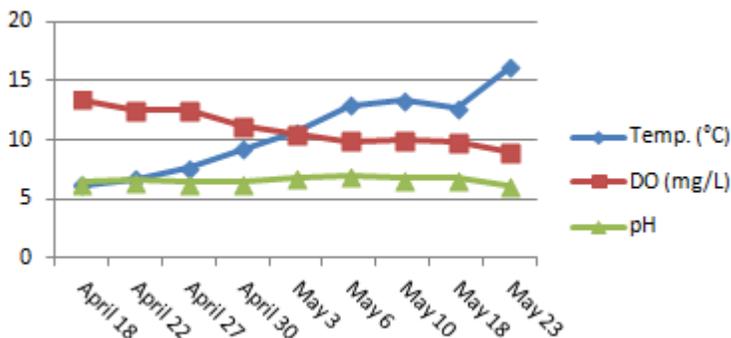
During the 2016 spring spawning and egg incubation period (mid-April to early June), EGBSC monitored spawning habitat for Walleye and Sucker species at Sucker Creek in Pointe au Baril. The goal of the assessment was to document environmental (water chemistry) and hydrologic features (water levels & flow) as well as spawning population observations (fish and eggs) to determine if restoration of the spawning area is required.



*Sucker Creek spawning bed*

As part of the survey, EGBSC monitored water chemistry (temperature, dissolved oxygen, pH, total dissolved solids and conductivity), water levels and speed of water flow. All measurements were within the normal range for the region and were suitable for successful fish spawning and egg incubation.

#### Sucker Creek Spring Water Chemistry



#### WATER LEVEL IMPACTS

Two water level monitoring stations on the spawning bed showed a decrease in water level of 25 to 30 cm over the spawning and egg incubation period. A third station downstream of the spawning bed, closer to Georgian Bay, showed little change.

Despite the significant decrease in water levels, fish were able to move throughout the entire spawning bed. No Walleye eggs were observed to be stranded out of water. However, on May 6th, there were some areas where Common White Sucker eggs were out of water on both sides of the creek.



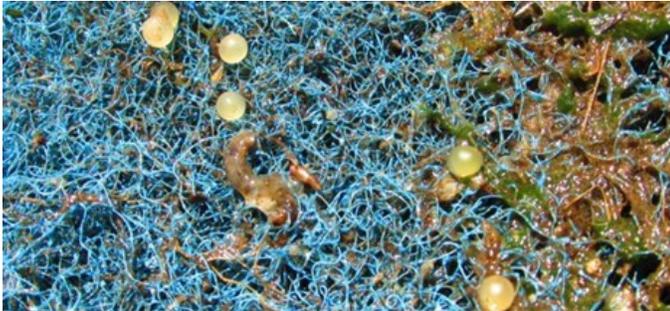
*Common White Suckers along the spawning bed*

Eleven day and five night visual surveys were completed. No Walleye were observed during the day, and the highest number observed in one night was seven. Between April 27th and May 6th, several hundred Common White Sucker were observed during both daytime and night surveys. No Redhorse Sucker species were observed.



## KEY OBSERVATIONS

Three blue mats (furnace filters) were used to collect eggs and placed in areas at the downstream end of the spawning bed. A total of 217 Walleye eggs were counted. The number of eggs found in the mats confirmed that some successful Walleye spawning had occurred. In comparison with other sites along Eastern Georgian Bay, the number of eggs counted for Walleye was low. There were many Sucker eggs deposited along the creek and locations with heavy egg deposition were documented.



*Collected Walleye eggs*

The photo below shows of one of several areas with heavy Common White Sucker egg deposition.



*Common White Sucker eggs at Sucker Creek*

Once eggs incubate and hatch, fish enter their larval stage. This stage is critical for Walleye and most other fish species. Larval Walleye have limited mobility and typically move by water current and wave action. Shortly after hatching, Walleye need to feed on zooplankton to ensure survival, growth and development. The availability of zooplankton is a major factor in surviving this life stage. To help evaluate the amount of zooplankton downstream of

Sucker Creek, five plankton samples were collected in late May. Zooplankton were present, and in comparison with other sites (Magnetawan, Shawanaga, Shebeshekong and Seguin Rivers), the density of zooplankton downstream of Sucker Creek was moderate.



*Five plankton samples taken downstream of Sucker Creek.*

## CONCLUSION

From the measurements taken and observations made, it appears the Sucker Creek spawning area provides excellent spawning and incubation habitat in terms of physical habitat features (substrate size, quality and depth), water chemistry and speed of water flow. Although some Common White Sucker eggs were stranded when water levels dropped, it was quite limited. The majority of eggs remained underwater as water levels declined over the spawning and incubation period. There was no physical habitat or environmental concerns to prevent successful fish spawning and egg incubation.

This spawning assessment is part of a larger project EGBSC is conducting in the Parry Sound District. Between 2015 and 2017, EGBSC is undertaking spawning and nursery habitat assessments for Walleye, Lake Sturgeon and Sucker species on eight rivers flowing into Eastern Georgian Bay. Project partners include Georgian Bay Forever, Georgian Bay Biosphere Reserve, Ministry of Natural Resources & Forestry Upper Great Lakes Management Unit, and Environment and Climate Change Canada.



Environment and  
Climate Change Canada

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Changement climatique Canada

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