

Alderville Fisheries UPDATE

Muskellunge Spawning and Nursery Habitat & Wild Rice Assessment

November 2012

INTRODUCTION

The mouth of Stoney Creek is located at the upper southwest section of Rice Lake. It was taken into consideration and assessed to be an area of concern by the Alderville First Nation. Concerns that were highlighted for this complex wetland, that flows through both forested and agricultural landscapes, surround the presence of Muskellunge and their use of Stoney Creek as a spawning and nursery ground. Also, documenting the locations of the re-seeded wild rice stock within the study area were of concern for the First Nation. Wild rice is known to provide high quality spawning and nursery habitat for Muskellunge.



Stoney Creek culvert as it passes under County Road 18.

patrol the shallow waters from the mouth of the creek to the first beaver dam located on the eastern side of County Road 18.

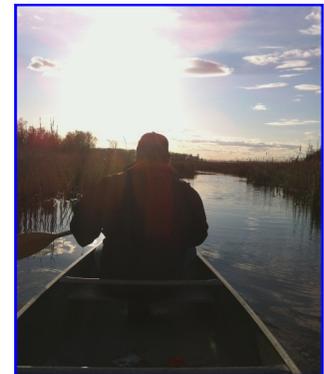
Phase two of the project was based on the presence of spawning Muskellunge. If Muskellunge were present during the spawning time, then modified quatrefoil light traps were to be set in the creek to attract and trap larval and juvenile Muskellunge. Minnow traps would have also been set sporadically throughout the summer to target juvenile Muskellunge.

RESULTS

Visual surveys were conducted throughout the day (i.e. morning, afternoon and evening) during the weeks of April 16-18, 2012 and May 9-11, 2012. Both surveys resulted in no target fish being observed. This resulted in the project not proceeding to its second phase. Even though no target fish were observed, water and sediment samples were collected from the mouth of the creek and sent away for analysis. These samples will give insight into the suitability or limiting factors for wild rice regeneration and Muskellunge spawning and nursery habitat restoration.

The water depth in the creek ranged from 50 cm to 2.5 m (at the mouth). The water was turbid at the mouth of the creek and clear in the rest of the creek. Water temperatures ranged from 11—13° C in April and 13—14.5° C in May.

In April, observable wildlife included turtles, bass, minnows, and perch. In May, wildlife included turtles, catfish and small forage fish, as well as dead pumpkinseed and carp.



Paddling through Stoney Creek to complete visual surveys.

CONCLUSIONS

Despite the lack of observable Muskellunge within Stoney Creek, all results will be presented in a report along with recommendations for restoration. The full technical report is currently being drafted and will be finalized in 2013.



Turtle in Stoney Creek.



Location of Stoney Creek.

As a result of these concerns, Alderville First Nation completed a Muskellunge Spawning and Nursery Habitat & Wild Rice Assessment with the Anishinabek/Ontario Fisheries Resource Centre.

METHODS

Visual surveys were conducted in mid-April and early May when the preferred spawning temperatures were within range (between 8°C and 15°C) in an attempt to confirm spawning Muskellunge presence in the creek. Surveys were conducted using a canoe to



For more information on this or other fisheries projects please contact the A/OFRFC:

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