

Chippewas of Georgina Island Fisheries UPDATE

Shoreline and Littoral Habitat Surveys

February 2013

INTRODUCTION

In 2009, Chippewas of Georgina Island and the Anishinabek/Ontario Fisheries Resource Centre completed a fish habitat management plan. The purpose of this document is to assist in the establishment of appropriate guidelines to ensure sensitive areas, such as spawning shoals, are protected; as well as aid in planning a strategy for habitat rehabilitation. However, the data that assisted in the completion of the plan only included Georgina Island. As such, Chippewas of Georgina Island wanted to complete shoreline and littoral habitat surveys of Fox and Snake Island so that the management plan would encompass all areas of the First Nation territory.

During the summer of 2012, Chippewas of Georgina Island and the Anishinabek/Ontario Fisheries Resource Centre completed surveys of the shoreline and littoral zone areas on Fox and Snake Islands.



Gravel/cobble mix in both the shoreline and littoral zone substrates.

METHODS

Shoreline and littoral studies include cruising the shoreline in a boat and recording characteristics and percentage quantities of substrate, vegetation and fish habitat in both the shoreline and littoral zones. The littoral zone is the area of the waterbody where the sun can penetrate to the bottom. Structural shoreline developments such as docks, culverts, inflow and drainage pipes, river crossings, man-made shoreline stabilizers etc. were also recorded.

As the field crew surveys the shoreline of the study area by boat, they record GPS coordinates at the start and end of each substrate and vegetation community. Each section is represented as % composition (ex. 75% bedrock and 25% boulders) and is totaled to 100%. The field data is then entered into a Microsoft Access database and converted into a database or spreadsheet file which is then added into ArcGIS. The field data can then be represented as lines and points on ArcGIS (as represented in the picture to the left.)

RESULTS

The habitat assessment was completed on September 27th, 2013.

The littoral substrate on both islands was comprised of boulders, cobble, gravel, sand, and muck. Pictured to the left is a gravel/cobble mix in the shoreline and littoral zone. There is uniform distribution between the zones.

The littoral vegetation consisted of submersed, floating vegetation and detritus. Detritus is the decaying organic matter or dead plants. There are higher amounts of detritus around Fox Island than Snake Island.

The entire area of both islands had a gradual slope, similar to a beach. Some of the other highly developed stretches of shoreline had a steeper shoreline. On both islands the slope was greater on the north shore, this is mainly due to wave action. The east, west, and south shorelines had considerably lower slope.

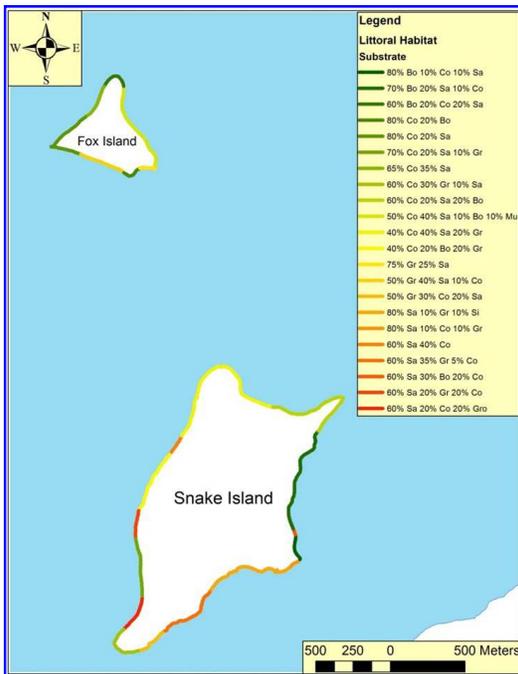
There is extensive residential and recreational development on Fox and Snake Islands.

CONCLUSION

A complete analysis of the shorelines of Fox and Snake Island is currently being written and will be finalized in 2013. This report will also include recommendations for rehabilitation.



Chippewas of Georgina Island students at work on the surveys.



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

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