

# Rehabilitating and Restoring Unique Landscapes

October Newsletter



## About the Project

Our five-year project will address areas of fish habitat concern in the **Chiganois, Debert, Folly, Great Village, and Portapique** Watersheds. Four of the five watersheds within the project scope are identified as critical habitat for the endangered inner Bay of Fundy (iBoF) Atlantic Salmon.

The five watersheds project is funded through the Department of Fisheries and Oceans, Oceans Protection Plan, Coastal Restoration Fund.

## Our Team

Chelsey Whalen, who was the former Lead Field Technician has taken over the role of Project Manager, and continues to perform field work.

Abby Macleod, is the Project Administrator and takes care of the administration and communications for the project.

Abbie Martyn, is the Project Researcher and she focuses on aboiteau research, community outreach and history on the project area.

Through Saint Mary's University, we have been granted several students who will be volunteering with field work, providing ArcGIS guidance, and performing further research on the aboiteaux.

## Exciting News

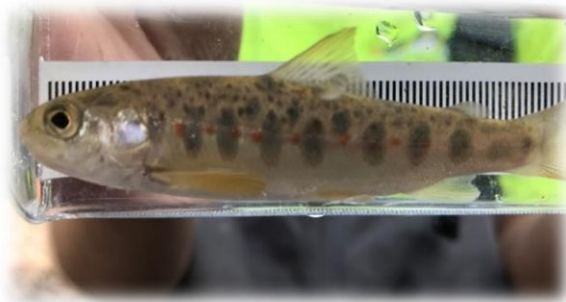
During the last week of September while conducting our fall electrofishing, we discovered a small Atlantic Salmon Parr. Images were sent to the Department of Fisheries and Oceans, and it was later confirmed to be an Atlantic Salmon parr.

The Department of Fisheries and Oceans also clarified that two of our watersheds are stocked with fry during the Fall, these include the Debert and Folly River. Adults are also released into the Great Village River in the fall. Fry, is a stage in the Atlantic Salmon lifecycle that have absorbed their yolk sacs, and have emerged from the gravel and are ready to feed on small benthic macroinvertebrates.

To determine if the parr found was native or captive released, we took a small fin clip from the caudal fin of the fish. A small fin clip was removed from the fish to have genetic testing done. Genetic testing is important determine the genetic makeup of the fish, and

to maintain the diversity of the Inner Bay of Fundy Salmon for future conservation.

The genetic results from the fin clip have not come back from the lab, but they can be shared when they are received!



## Field Work

During the summer of 2018, the field technicians for the five watershed project performed several assessments. These assessments are crucial for developing the restoration plan for future enhancement work. These assessments include:

**Habitat Assessments:** The objective is to obtain an overview of the stream in respects to flow, water chemistry, substrate detail and embeddedness, pool class, and to determine areas of habitat concern. A total of 23 Habitat assessments were completed on all watersheds above and below potential barriers.

**Culvert Assessments:** The objective is to assess water crossings to determine if barriers pose a threat to fish passage or habitat connectivity. A few problematic culverts have been identified, and are included in the restoration and improvement plan. A culvert that is listed as an area of habitat concern can be seen in the right hand corner. This culvert is located along the Chiganois River.

**Canadian Aquatic Biomonitoring Index:** Also known as CABIN, measures the health of freshwater ecosystems with standardized methods, and takes into consideration benthic Macroinvertebrates. Macroinvertebrates were collected using a kick net and sent to a lab to be analyzed and identified.

Healthy rivers have a more diverse group of benthic macroinvertebrates compared to rivers that are unhealthy or have pollution issues.

**Water Quality:** A YSI was used to measure water quality parameters bi-weekly, which measured pH, salinity, temperature, dissolved oxygen, total dissolved solids as well as other parameters. Water samples were also taken monthly and sent to AGAT where they were analyzed for metals. Results have come back normal, and we are happy with the results. Water temperature is constantly being monitored by small HOBO pendants. This software creates a graph with time and temperature on the axis.

**Fish Surveys:** A beach seine, minnow traps or an electrofisher was used in all watersheds to determine the presence or absence of fish. Trout, Gaspereau, American Eel as well as small minnows are the dominant species found in the watersheds.

**Redd Surveys:** Redds are the gravel beds where salmonids lay their eggs. Surveying for redds begins in November when spawning occurs. Once a redd is identified, it is marked with a GPS point and transferred onto a computer mapping system called ArcGIS. The results from these surveys can help guide restoration efforts and inform managers of the preferred flow and water temperature needed for spawning fish.



## Upcoming Events

Join the Maritime Aboriginal Peoples Council as we hold our third community engagement session at Masstown Market on October 17, 2018 from 11-3pm.

## Restoration Plan

We are now in the process of creating and planning a potential restoration plan for a few areas that are a concern to fish passage.

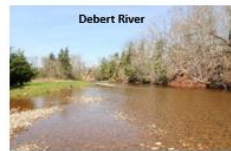
We have discussed with stakeholders and the Department of Fisheries of oceans, and we are currently working with our project engineer to create design ideas for these two locations. However, due to the time of the year, we expect construction to begin during the next field season.

If you have any questions, or would like more information about the event, or the project, please contact:

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Chiganois River



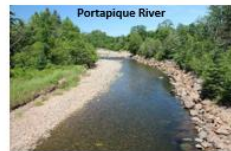
Debert River



Folly River



Great Village River



Portapique River

## Community Engagement Session

**WHERE:** Masstown Market  
10622 Trunk 2, Debert, NS

**WHEN:** October 17 2018, from 11-3pm

*Join the Maritime Aboriginal Peoples Council as we introduce the Five Watersheds Project. Share your knowledge pertaining to the Chiganois, Debert, Folly, Great Village and Portapique watersheds.*

*Our five-year coastal restoration project will address issues to fish passage, habitat and erosion within the five watersheds of Colchester county.*

*We would like to hear your experiences, knowledge, and usage of these river systems to help make the project a success!*

**Refreshments and Coffee provided**

*For more information, please call Chelsey Whalen at 902-895-6899*

