



**SALMONID HABITAT RESTORATION**  
**INVERNESS SOUTH ANGLERS ASSOCIATION**

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2019 Project Final Report

**Submitted to:** Amy Weston, *Adopt-A-Stream*  
**Submitted by:** Kailey Mortensen, *Field Technician*  
**Date:** October 2019

<b>GROUP</b>	Inverness South Anglers Association, (ISAA)
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<b>WEBSITE</b>	N/A

<b>PROJECT TITLE</b>
Salmonid Habitat Restoration – 2019 Installation Project in MacLeod’s Settlement

<b>SITE LIST (ALL)</b>	
<b>Watercourse(s):</b>	Southwest Mabou River, MacLeod’s Brook
<b>Watershed(s):</b>	Mabou Harbour Watershed

<b>PART (A): Project Brief Description:</b> 500 words max. describing this year’s project. Include habitat issues this project is addressing, restoration techniques used.
<p>This year’s project had taken place in MacLeod’s Settlement where the Inverness South Anglers Association had restored 3,612.5 meters of fish habitat between two watercourses on the Mabou Harbour Watershed. The 12 weeks of restoration was spent installing a total of 45 new structures such as digger logs, deflectors, rock sills, brush bundles, and bank stabilization done by hand rock.</p> <p>Out of the 45 structures built, eight were placed on the Southwest Mabou River. The Southwest Mabou River is a 16-18 meters wide channel which made the distance between structures approximately 100 meters apart. Due to the width of this river, the channel is straight in some areas and lacks a meandering pattern. It also has shallower water, especially in the warmer months which can increase the water temperature and decrease migratory access for fish. As the width of the river is so large, we chose to build large tree deflectors and stabilized a bank with hand rock. The deflectors are two tiers high and are braced in with 6x3 meter logs. Each deflector alternates sides of the river and are filled with rock out of the substrate which</p>

tapers up into the bank height. These deflectors will direct the stream flow and will eventually create a narrowed-out river with a meandering pattern. This will also form deeper channels and pools which are great for fish habitat and will also supply migratory access. On this river alone, ISAA had restored 800 meters of fish habitat and an area of 1,600 squared meters.

The remaining 37 structures were built on MacLeod's Brook which is a tributary to the Southwest Mabou River. This channel averages between 7-9 meters in width which made the distance between structures approximately 50 meters apart. The structures placed within this brook includes several digger logs, rock sills, digger logs with deflectors, brush bundles, and one deflector. These structures will enhance the quality of the pools, meandering patterns, gravel/sand deposits and will narrow out the channel even more over time. By the end of project completion, ISAA had restored 2,812.5 meters of habitat which equaled out to 22,500 squared meters of area.

**PROJECT DETAIL, DESIGN AND RESULTS:**

<b>LOCATION INFORMATION</b>	
<b>Watercourse</b>	Southwest Mabou River
<b>Watershed</b>	Mabou Harbour Watershed
<b>Location</b>	MacLeod's Settlement
<b>Nearest Community</b>	Judique/Mabou
<b>Road Crossing (Access Point)</b>	Unnamed Road off MacLeod's Settlement Road
<b>Map # (NS Topo Series 1:50,000)</b>	Lake Ainslie 11K/3
<b>Coordinates: UTMS</b>	
<b>Downstream Project Limit: Easting</b>	0627345
<b>Downstream Project Limit: Northing</b>	5087003
<b>Upstream Project Limit: Easting</b>	0627575
<b>Upstream Project Limit: Northing</b>	5086377

<b><u>PROJECT RESULTS:</u></b>	
<b>INSTREAM HABITAT STRUCTURES</b>	
<b>Design Width</b>	16-18 meters
<b>Distance Between Structures (average design)</b>	100 meters
<b>Number and Type of Structures</b>	Deflectors – 7 Bank Stabilization (Hand Rock) - 1
<b>Total Length (meters) of Habitat Restored</b>	800 meters
<b>Total Area (Sq. Meters) of Habitat Restored</b>	1600 squared meters

<b>LOCATION INFORMATION</b>	
<b>Watercourse</b>	MacLeod's Brook
<b>Watershed</b>	Mabou Harbour Watershed
<b>Location</b>	MacLeod's Settlement
<b>Nearest Community</b>	Judique/Mabou
<b>Road Crossing (Access Point)</b>	Unnamed Road off MacLeod's Settlement Road
<b>Map # (NS Topo Series 1:50,000)</b>	Lake Ainslie 11K/3
<b>Coordinates: UTMS</b>	
<b>Downstream Project Limit: Easting</b>	0627714
<b>Downstream Project Limit: Northing</b>	5086186
<b>Upstream Project Limit: Easting</b>	0629004
<b>Upstream Project Limit: Northing</b>	5085487
<b><u>PROJECT RESULTS:</u></b>	
<b>INSTREAM HABITAT STRUCTURES</b>	
<b>Design Width</b>	Downstream from the road: 9 meters Upstream from the road: 7-8 meters

<b>Distance Between Structures (average design)</b>	50 meters
<b>Number and Type of Structures</b>	Digger Logs with Deflectors: <b>5</b> Rock Sills: <b>11</b> Rock Sills with Deflectors: <b>1</b> Digger Logs: <b>17</b> Deflectors: <b>1</b> Brush Bundles: <b>2</b>
<b>Total Length (meters) of Habitat Restored</b>	2,812.5 meters or 2.81 kilometers
<b>Total Area (Sq. Meters) of Habitat Restored</b>	22,500 squared meters

**SUMMARY:**

<b>OVERALL PROJECT RESULTS (All Watercourses)</b>	
<b>Total Number and Type of Structures</b>	Deflectors: <b>8</b> Digger Logs: <b>17</b> Digger Logs with Deflectors: <b>5</b> Rock Sills: <b>11</b> Rock Sills with Deflectors: <b>1</b> Brush Bundles: <b>2</b> Bank Stabilization (Hand Rock): <b>1</b>  <b>Total: 45</b>
<b>Total Length (Meters) of Stream Restored</b>	3,612.5 meters or 3.61 kilometers
<b>Total Stream Habitat Area in Sq. Meters Restored</b>	24,100 squared meters
<b>Total Riparian Area in Sq. Meters Restored</b>	N/A
<b>Total Number of Trees Planted</b>	N/A
<b>Total Number of Fish Passage Remediation Sites</b>	2
<b>Other Results</b>	N/A

**PAST WORK & FUTURE PLAN'S: Putting this year's project in context of the watershed:**

<b>Has habitat work been done on the watercourse(s) in previous years? Which? How much?</b>
No there has not been any habitat work previously done on the South West Mabou River or on MacLeod's Brook.
<b>Is further additional work planned or anticipated?</b>
Yes, there is additional work anticipated for the Southwest Mabou River. The work will involve installing large tree deflectors, and rock sills. The work will continue both upstream and downstream from the structures built in the 2019 season. When the work is complete, there should be approximately 2500 meters of restored habitat. We also plan to restore the habitat in the unnamed tributary that empties into the Southwest Mabou River, also located in MacLeod's Settlement. We will install digger logs, deflectors, and a few digger logs with deflectors. On that tributary alone, we will restore around 275 meters of stream.

**OTHER GOOD STUFF:**

<b>Please covey any other addition activities undertaken to support the project (education, promotion, assessments, etc.) even if not directly funded by NSLC Adopt A Stream</b>
<ul style="list-style-type: none"> <li>- 6 weeks of winter damage assessments and habitat restoration by completing maintenance on all previously built structures in Southern Inverness County, Cape Breton.</li> <li>- Involvement in the Learn to Fish program and organizing/coordinating the Fishing Derby at the Mabou Landing.</li> <li>- Collection of Broodstock with the Margaree Fish Hatchery and Department of Fisheries and Oceans.</li> <li>- We are in the works of building a website to promote our group where we can educate the surrounding communities about habitat restoration and involve the public in future projects. This will also provide us with potential donations to continue towards future work projects.</li> </ul>

**PART B: Project Delivery (Overall Project)**

<b>VOLUNTEERS</b>	
<b>Describe How Volunteers Contribute to your Adopt-A-Stream Project and to your Organization in General</b>	<p>ISAA's volunteers contributed to the Adopt-A-Stream project and to the overall organization in several ways. The volunteer components include:</p> <ul style="list-style-type: none"> <li>• Project Management (127.5 hrs)</li> <li>• Accounting/Bookkeeping (390 hrs)</li> <li>• Project Involvement (655 hrs)</li> <li>• Committee Meetings (20 hrs)</li> </ul>

	<ul style="list-style-type: none"> <li>• Trout Stocking and Salmon Brood Stock Collection (72 hrs and 48 hrs)</li> <li>• Fishing Derby (220 hrs)</li> <li>• NSLC Adopt-A-Stream</li> </ul>
<b>Number of People Volunteering on All Aspects of the Project</b>	2 +
<b>Total Volunteer Hours</b>	1,532.5 hours
<b>Approximate Breakdown of Roles</b>	Both Dave Cameron and Geoff Nishi, chair officials of the Inverness South Anglers Association volunteer their time to organize and coordinate project activities for each season of Salmonid Habitat Restoration. Each project requires funding money and is obtained by the volunteers of ISAA with the help of Adopt-A-Stream. Both Dave and Geoff work together on project management, accounting/bookkeeping, taking part in committee meetings, stocking trout and collection of brood stock, organizing the annual fishing derby and much more.
<b>Management/Supervision</b>	Dave Cameron, and Geoff Nishi are both project managers for the Inverness South Anglers Association. Each volunteer approximately 127.5 hours of their time each year to project management.
<b>Labour</b>	N/A
<b>Other</b>	N/A

<b>PAID PERSONNEL</b>	
<b>Number of Project Workers</b>	<p><b><u>Crew Members:</u></b> (5 Crew Members)                      Nathan MacLean (18 weeks)                      Alex MacKinnon (17 weeks)                      Michael Campbell (17 weeks)                      Sandy Rankin (14 weeks)                      Shaw Cameron (3 weeks)</p> <p><b><u>Field Technicians:</u></b> (2 Field Tech.)                      Kailey Mortensen (18 weeks)</p>

Inverness South Anglers Association (2019)

	Cody Langille - <i>Student Intern</i> (10 weeks)
<b>Total Tally Weeks of Work</b>	18 weeks total <ul style="list-style-type: none"><li>• 6 weeks of winter damage assessments and remediation</li><li>• 12 weeks of new installation on the Southwest Mabou River and MacLeod's Brook.</li></ul>
<b>Start Date:</b>	May 27 <sup>th</sup> , 2019
<b>End Date:</b>	September 27 <sup>th</sup> , 2019
<b>Other Paid Staff Contributing to the Project</b>	Charles MacInnis, <i>Planning and Technical Consultant</i>

**IMPORTANT ATTACHMENTS:**

- Please see separately attached document for project photos - named: *Southwest Mabou River - 2019 Project Photos*.
- Please see separately attached pdf file to view the Oran news article on the work completed by ISAA in 2019 - named: *ISAA 2019 Oran Article Sept 25<sup>th</sup>*.
- Please see attached Financial Report.