North Branch LaHave

Sub-Watershed

Fish Habitat

Restoration Plan

2016

Updated by
Emma Kinley
LaHave River Watershed Project
Bluenose Coastal Action Foundation

Contact Information

Contact Name:	Emma Kinley
Position:	Project Coordinator
Group Name:	Bluenose Coastal Action Foundation
Civic Address:	37 Tannery Road Lunenburg, NS B0J 2C0
Mailing Address:	P.O. Box 730 Lunenburg, NS B0J 2C0
Phone:	902-634-9977
Fax:	902-634-9979
Email:	emma@coastalaction.org
Website:	www.coastalaction.org

Recreational Fisheries Conservation Partnerships

Fisheries and Oceans Canada | Pêches et Océans Canada

Table of Contents

List of Figures

Restoration Plan Objectives

The LaHave River Watershed Project began in 2007 with the goals of developing a long-term record of the river's health through water quality monitoring, and developing a watershed management plan. The LaHave River Watershed is a large (1,700 km^2), highly branched system, therefore, development of a watershed management plan is being been done on a more feasible sub-watershed scale. Sub-watershed Fish Habitat Restoration Plans have been developed for the West Branch, West River, Main River, and North Branch Sub-watersheds and these documents are often adapted and updated as new information is collected.

The objective of this restoration plan is to develop a sound understanding of the environmental conditions within the North Branch Sub-watershed, which will contribute to the overall goal of a LaHave River Watershed Management Plan. By assessing factors such as land-use practices, aquatic connectivity, fish habitat conditions, riparian health, and water quality, we will be able to identify harmful environmental impacts and carry out restoration activities to address those problems.

Objectives	• Investigate land-use practices within the sub-watershed and identify the potential environmental impacts stemming from these practices. • Assess aquatic connectivity within the sub-watershed by identifying culverts and debris blockages which are impeding fish passage. • Assess the riparian and in-stream fish habitat conditions of the watercourses within the sub-watershed. • Identify and prioritize areas within the sub-watershed which are in need of restoration activities (i.e., digger logs, bank stabilization, riparian planting, debris removal, livestock fencing, etc.).
Specific Goals	• GIS analysis of the sub-watershed to identify land-use types, stream crossing locations, and high priority areas in need of assessment. • Complete habitat assessments in watercourses within the sub-watershed (i.e., fish habitat, riparian health, water quality, etc.). • Complete an assessment of aquatic connectivity within the sub-watershed by conducting culvert assessments. Identify and prioritize barriers to fish passage for remediation. • Complete various restoration projects within the sub-watershed to enhance fish habitat and improve the health of the LaHave River Watershed. • Complete various public education and outreach initiatives to engage the public in local environmental issues, provide volunteer opportunities, and foster a sense of watershed stewardship within the local communities.

Introductory Information – North Branch Sub-Watershed

1	Location in province (town[s], county, and region)	**Watershed**: LaHave River Watershed **Location**: Lunenburg County, Kings County; Nova Scotia, Southern Upland Region (Roughly 2⁄3 of sub-watershed is within Lunenburg County, and the remaining 1⁄3 in Kings County) **Nearest Communities:** Pinehurst, Union Square, Newburne, Maplewood, Lake William, Elmwood, Upper Northfield, and Barss Corner
2	Watershed area (square km)	The LaHave River Watershed is approximately 1,700 km^2, and the North Branch Sub-watershed is 445.0 km^2
3	Watershed drains into (include coordinates of confluence)	The North Branch flows from Sherbrooke Lake (Confluence: N 44° 38’26.9” W 064° 35’ 43.2”), through Texas Lake, Indian Lake, and discharges into Wentzells Lake (Confluence: N 44° 28’58.3” W 064° 37’ 56.2”)
4	Distance of watercourse mouth from ocean (km)	The North Branch discharges into Wentzells Lake and is approximately 37.0 km from open ocean.
5	Distance of watercourse mouth from head of tide (km)	16.5 km
6	Natural watercourse width at mouth (m)	30.0 m
7	Length of watercourse (km)	23.0 km
8	Elevation at headwaters (m)	119.0 m
9	Elevation at mouth (m)	34.0 m
10	Lake(s) within watershed (provide name[s], approx. size [square km]	There are 33 lakes within the sub-watershed: Lake Paul – 1.19 km^2 Kerr Lake – 0.21 km^2 Caribou Lake – 0.30 km^2 Hardwood Lake – 1.07 km^2 Colwell Round Lake – 0.14 km^2

		Kidney Lake – 0.08 km² Upper Gully Lake – 0.29 km² Gully Lake – 0.83 km² Sand Lake – 0.29 km² Roast Lake – 0.06 km² Muddy Lake – 0.05 km² County Line Lake – 0.35 km² Burke Lake – 0.19 km² Butler Lake – 0.67 km² Franey Lake – 0.15 km² Sherbrooke Lake – 16.94 km² Harlow Lake – 0.14 km² Pine Lake – 0.13 km² Whetstone Lake – 0.57 km² Cranberry Lake – 0.25 km² Pear Lake – 0.15 km² Holbert Lake – 0.35 km² Doreys Lake – 0.21 km² Texas Lake – 0.13 km² Lake William – 1.06 km² Lake Peter – 0.80 km² Indian Lake – 0.02 km² Church Lake – 1.52 km² Rocky Lake – 0.27 km² Skull Lake – 0.08 km² Shingle Lake – 0.03 km² Moose Snare Lake – 0.03 km² Wentzells Lake – 1.41 km²
11	Significant tributaries within watershed	Tributaries in the North Branch Sub-watershed: Lake Paul Brook – 6.1 km Sand Brook – 11.0 km Colwell Brook – 2.6 km Sherbrooke River – 14.6 km McClintock Brook – 2.7 km Kelley Brook – 4.8 km Butler Lake Brook – 4.0 km Franey Lake Brook – 0.6 km Gully River – 10.4 km Forty River – 16.5 km Muddy Lake Brook – 2.0 km Harlow Brook – 3.2 km Jonah Brook – 1.1 km Pine Lake Brook – 2.5 km Zwicker Brook – 3.0 km Peter Veinot Brook – 2.0 km Tea Brook – 1.6 km

		Crotch Brook – 2.9 km Nelson Brook – 6.0 km William Ross Brook – 6.7 km Solomon Brook – 16.6 km Johnson Brook – 2.0 km Mud Lake Brook – 2.5 km Shingle Brook – 4.4 km Church Lake Brook – 0.5 km Cape Marsh Brook – 1.9 km Patten Brook – 6.3 km Biscuit Brook – 2.2 km Mackays Brook – 4.5 km McKeen Rd. Tributary – 0.5 km Penny Rd. Tributary – 2.1 km
12	Most common substrate type and size	The substrate varies throughout the watershed: fines, gravel, cobble, boulder, and bedrock.
13	Soil type(s) and geological characteristics	**Soils:** The upper part of the sub-watershed, north of Sherbrooke Lake, is dominated by Wolfville Stony Loam, which is a dark brown stony loam over reddish brown stony loam. This soil is well drained but provides poor cropland and is dominated by forest and rough pasture. East of Sherbrooke Lake is dominated by Gibraltar Sandy Loam, which is a light brown sandy loam over lighter yellowish-brown sandy loam. This soil is well drained but provides poor cropland and is dominated by forest and rough pasture. The lower part of the sub-watershed, south of Sherbrooke Lake, is dominated by Bridgewater Sandy Loam, which is a slaty light brown sandy loam over yellowish-brown sandy loam. This soil is well drained and provides for fair cropland and mixed farming. **Bedrock:** The predominant bedrock geology is the Meguma Group broken into the Goldenville Formation and the Halifax Formation. The Goldenville formation consists of sandstone turbidites and slate, while the Halifax formation is composed of slate, siltstone, minor sandstones, and Iron-Magnesium nodules. Source: Cann, D.B., and J.D. Hilchey. Soil Survey of Lunenburg County Nova Scotia.

14	Average water temperature in summer (June-September)	20.3˚C **Note:** Average water temperature is based on data collected at the three water quality monitoring sites (Pinehurst, Franey Corner, Sherbrooke) within the North Branch Sub-watershed from 2007-2016.
15	Peak water temperature	28.04˚C **Note:** Peak water temperature was recorded at the Sherbrooke monitoring site on August 3, 2007.
16	pH range	Pinehurst: 4.7 – 7.3 (2016 Average = 6.02) Franey Corner: 3.97 – 7.46 (2016 Average = 5.28) Sherbrooke: 3.96 – 7.25 (2016 Average = 5.29) **Note:** pH ranges are based on data collected from 2007-2016.
17	Native fish species present	American eel, Atlantic salmon, Gaspereau, Brook trout, Brown bullhead, Creek chub, Lake chub, Blacknose shiner, Common shiner, Golden shiner, White sucker, Yellow perch, White perch, and Banded killifish. **Note:** This is not a complete list and is not specific to the North Branch Sub-watershed at this time.
18	Non-native fish species present	Two non-native fish species have been found within the North Branch Sub-watershed: Chain Pickerel and Smallmouth Bass. Chain Pickerel distribution in North Branch Sub-watershed: County Line Lake, Lake Paul, Gully Lake, and Sherbrooke Lake. Smallmouth Bass distribution in North Branch Sub-watershed: Lake Paul, Butler Lake, Franey Lake, Lake William, Indian Lake, Church Lake, Lake Peter, Sherbrooke Lake, Shingle Lake, Texas Lake, and Wentzells Lake. Source: Leblanc, J. 2010. Geographic distribution of smallmouth bass, *Micropterus dolomieu*, in Nova Scotia: history of early introductions and factors affecting current range.
19	Endangered / threatened / at risk species present (aquatic or non-aquatic)	The following is an incomplete and unconfirmed list of provincial species at risk which may occur within the North Branch Sub-watershed:

		Mainland Moose – Endangered Chimney Swift – Endangered Southern Upland Atlantic Salmon population – Endangered Barn Swallow – Endangered Common Nighthawk - Endangered Canada Warbler – Endangered Rusty Blackbird – Endangered Snapping Turtle – Vulnerable Wood Turtle – Vulnerable Sources: COSEWIC. 2012. Atlantic Salmon – Nova Scotia Southern Upland Population. Government of Canada. 2008. Species at Risk in Nova Scotia Identification and Information Guide. Nova Scotia Department of Natural Resources. 2012. Nova Scotia's Species at Risk.
20	Fish stocking	**Spring Stocking:** No spring stocking occurs in the North Branch sub-watershed. **Fall stocking:** Indian Lake was stocked with speckled trout in 2012 as part of the Nova Scotia Fisheries and Aquaculture fall enhancement program. Source: Nova Scotia Department of Fisheries and Aquaculture, Inland Fisheries Division. 2012. Hatchery Stocking Program.
21	Angling	The following angling restrictions apply to the North Branch sub-watershed: April 1 - May 25: single hook lure or artificial fly, natural bait is prohibited from Wentzells Lake upstream to Sherbrooke Lake. May 26 – End of fishing season: Artificial fly only from Wentzells Lake upstream to Sherbrooke Lake. Source: Nova Scotia Department of Fisheries and Aquaculture, Inland Fisheries Division. 2015. Angler's Handbook and 2015 Summary of Regulations.
22	Forestry activities and impacts	The North Branch Sub-watershed is a heavily forested area with few paved roads and minimal residential development. The upper part of the sub-watershed, north of Sherbrooke Lake, is dominated by forestry activities, Christmas tree production, and

		a network of dirt/gravel roads. The lower part of the sub-watershed, south of Sherbrooke Lake, has some residential development and crop/pasture agriculture, in addition to forestry and Christmas tree production. Under the N.S. Wildlife Habitat and Watercourses Protection Regulations, forest harvesters are required to maintain a 20 m riparian buffer along all watercourses. Unfortunately, the Department of Natural Resources no longer tracks compliance of this regulation annually and has never seen more than a 30% compliance rate. Unsustainable forestry practices, such as clearcutting, can have many negative impacts on watershed hydrology, water quality, and fish habitat. Forested land is able to intercept precipitation by dissipating the energy of rainfall, which then slowly infiltrates the land, feeding vegetation and groundwater aquifers. When forests are cleared, precipitation causes soil erosion and compaction, sedimentation of watercourses, and increased risk of flooding due to high run-off rates and volumes. Sources: Nova Scotia Environment. 2013. Wildlife Habitat and Watercourses Protection Regulations. Rankin, J. & Miller, M. 2014. 'Province Failing on Water Governance'.
23	Urban/residential development impacts (explain)	The impact of residential development is much lower in this sub-watershed compared to the lower reaches of the LaHave River Watershed. There are several small rural communities within the sub-watershed including Pinehurst, Newburne, Lake William, Maplewood, Elmwood, Upper Northfield, Union Square, and Barss Corner. Cottage development is ongoing, especially around Sherbrooke and Indian Lakes. Because there is no legislation requiring landowners to maintain riparian buffers on their properties, development on the lakes and tributaries of this sub-watershed could have a negative impact on water quality and fish habitat. Many properties were found along the assessed watercourses in this sub-watershed with cleared shoreline vegetation and artificial shoreline structures. This has led to bank erosion and sedimentation in many places. Run-off from these properties is more likely to transport chemicals, such as fertilizers and pesticides, into the watercourses due to a lack of vegetation to slow and absorb these pollutants. Source: Rankin, J. & Miller, M. 2014. 'Province Failing on Water

		Governance’
24	Agricultural impacts	Christmas tree production is widespread throughout the sub-watershed. Producers spray fertilizers and pesticides over these tree lots which can drift through the air (severity depends on spraying techniques and weather conditions), as well as enter watercourses through run-off. Crop and pasture agriculture also dominates the landscape in this sub-watershed, especially in the lower portion, south of Sherbrooke Lake. Run-off of fertilizers, pesticides, herbicides, and other chemicals has the potential to degrade water quality, particularly in areas where landowners have not maintained healthy riparian habitat. Livestock pastures can be a source of excess nutrients and fecal contamination of watercourses. Livestock which are not fenced out of watercourses can cause severe bank erosion and sedimentation of streambeds. During habitat assessments, several agricultural properties were found where livestock had full access to streams causing erosion and sedimentation problems. Some of these landowners have been approached to discuss livestock fencing projects; however, none have expressed interest at this point.
25	Other industry impacts	Many rivers in Southwestern NS have been significantly impacted by acid precipitation due to the poor buffering capacity of the soils in this region. In addition, low pH increases the bioavailability of metals such as aluminum, which can have harmful impacts on aquatic species. Acidification of surface waters and soils is an issue throughout the LaHave River Watershed. Acidification impacts have been more severe in the western half of the LaHave River Watershed, due to the high acid rock drainage potential of that area. The North Branch Sub-watershed is located on the eastern side of the watershed and has an average annual pH of 5.61. **Note:** Average annual pH was calculated from the Pinehurst, Franey Corner, and Sherbrooke sample sites (2007-2014). Sources: Trudell, L. L. and White, C. E. 2013. Overview map showing locations of bedrock acid rock drainage potential maps for the southwestern area of Nova Scotia.

26	Historical conditions, impacts and considerations	No information is available on historical conditions at this time.
27	Barriers present on the main river stem	There are no significant barriers present on the main stem of the North Branch; however, there are approximately 150 stream crossings identified within this sub-watershed. Aquatic connectivity surveys have been initiated in the 2016 field season on this sub-watershed. Details can be found in the culvert assessment data section.

North Branch Sub-Watershed Maps

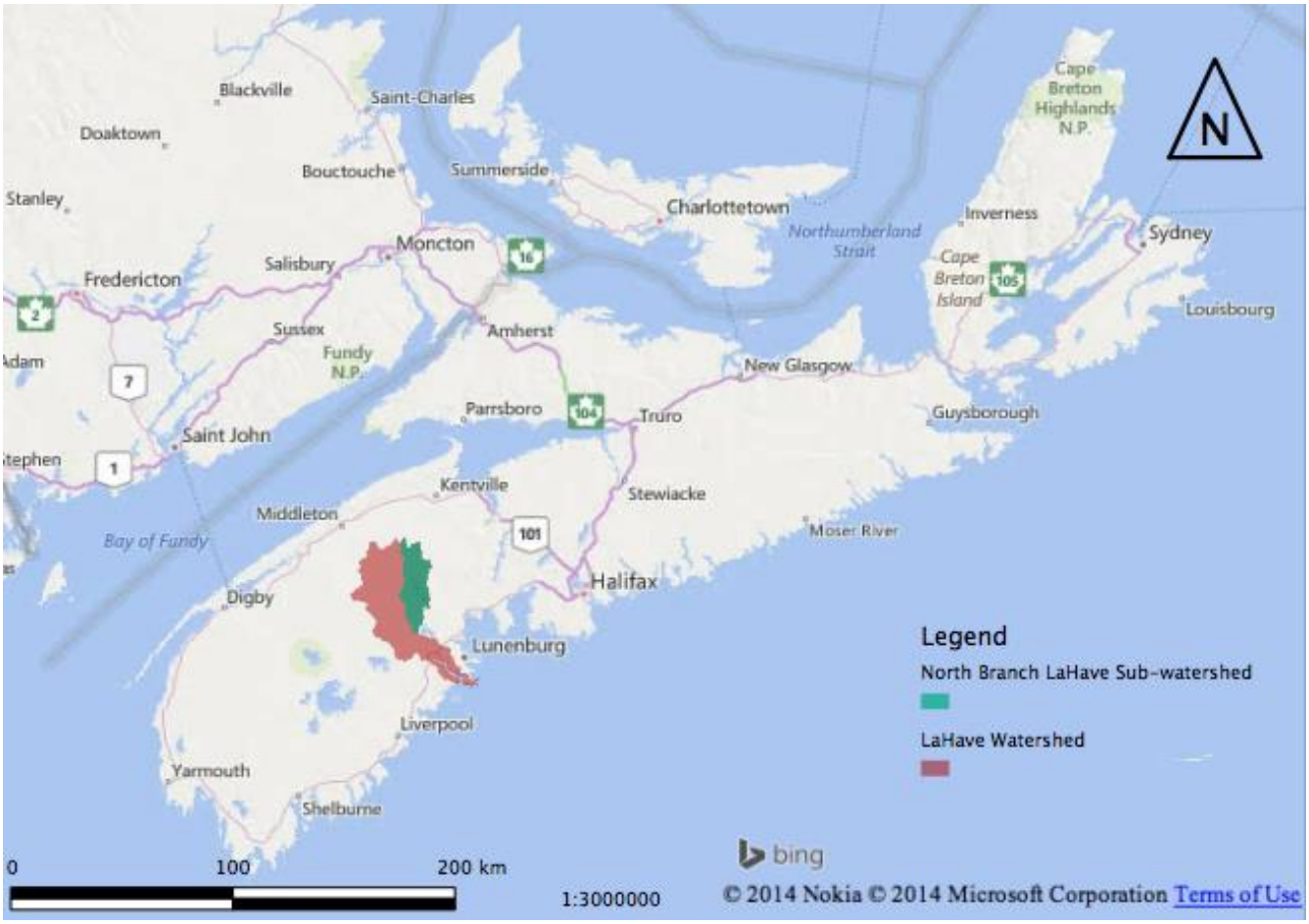

Figure 1. Location of the LaHave River Watershed and the North Branch Sub-watershed in Nova Scotia

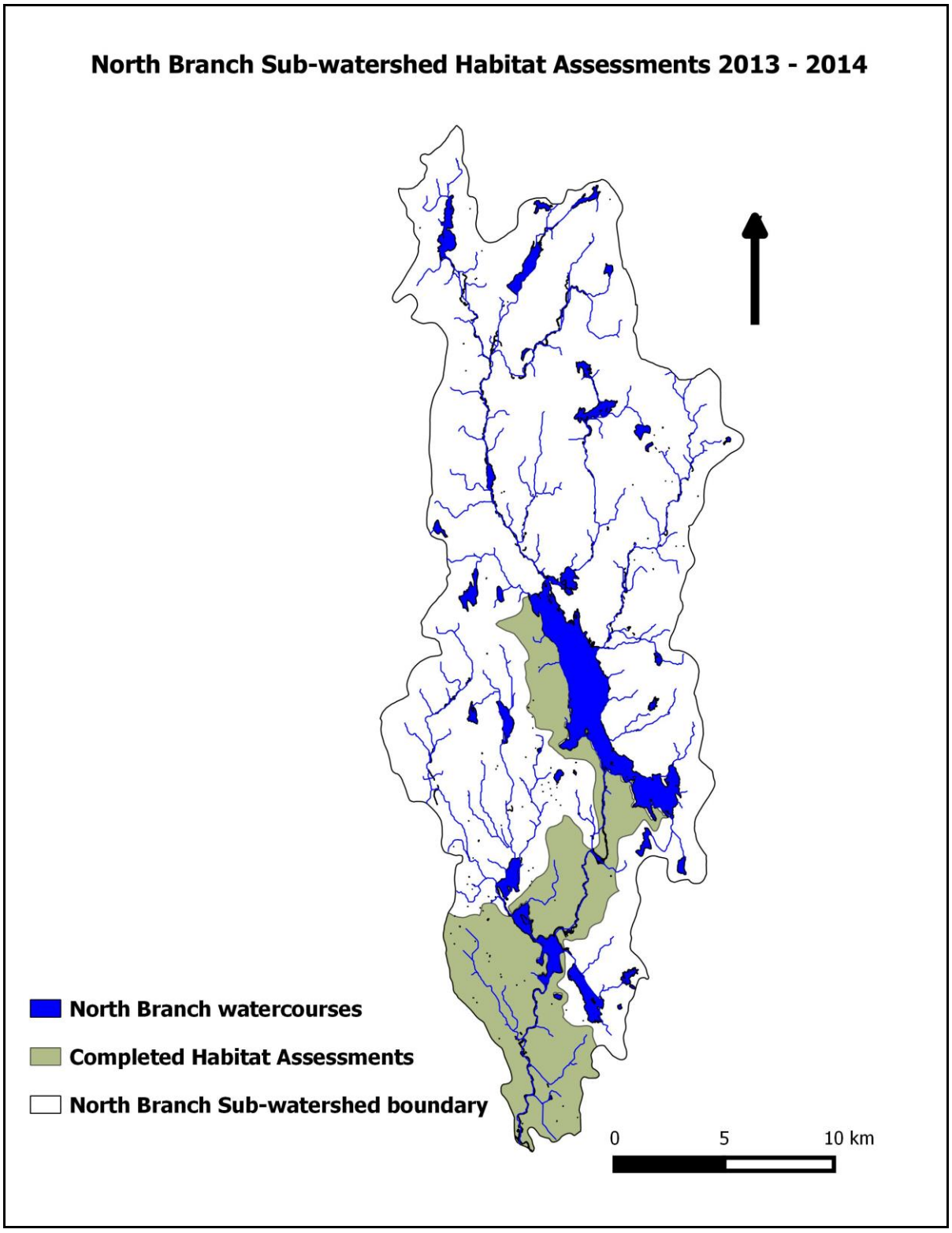

Figure 2. North Branch Sub-watershed habitat assessments completed in 2013 and 2014

North Branch Sub-Watershed: 2013 - 2014 Habitat Assessment Sites

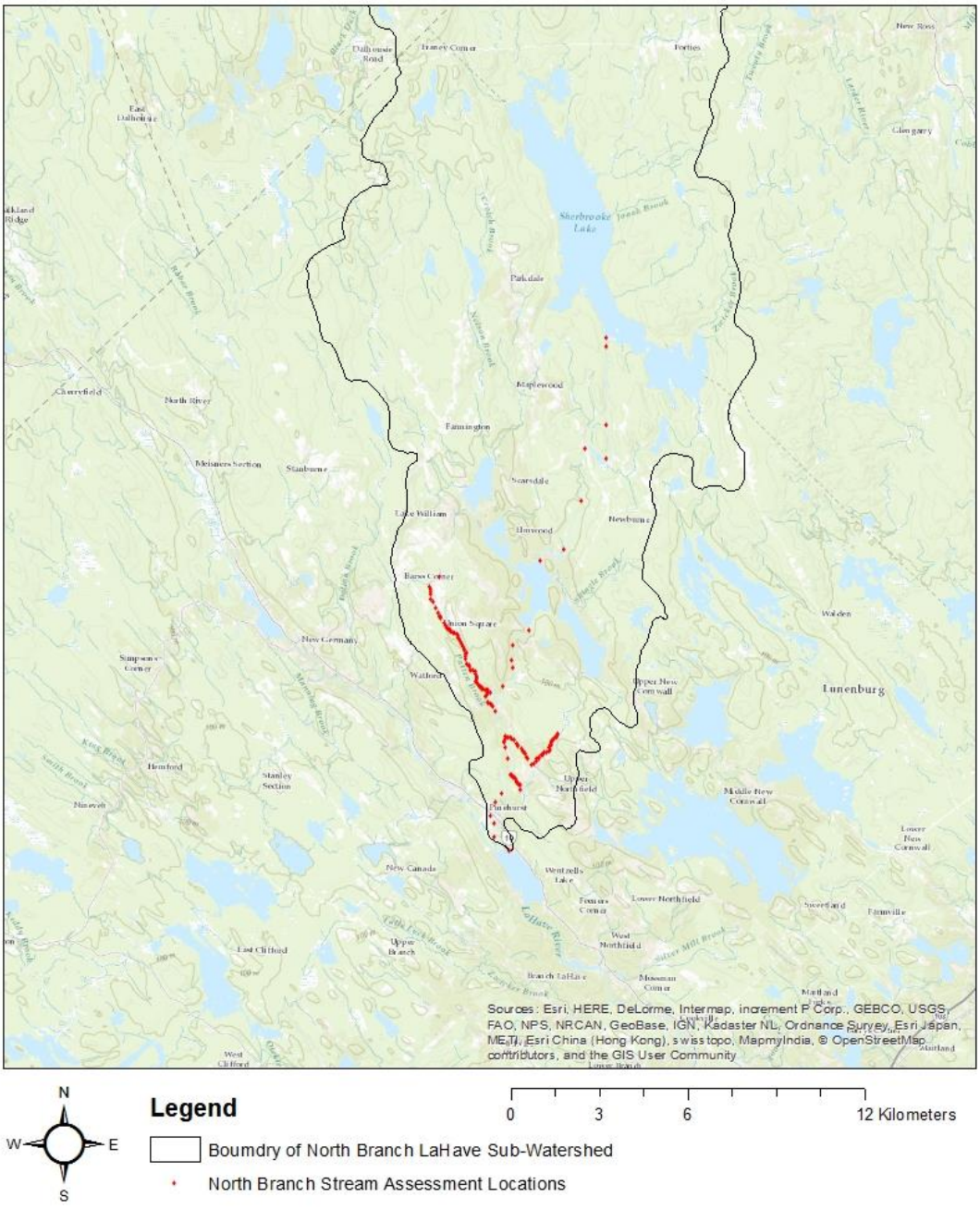

Figure 3. Illustrating the locations of stream habitat assessments conducted within the North Branch LaHave sub-watershed. Locations indicated by red marker, corresponding to Habitat Assessment Data table (P. 37). A total of 138 assessments conducted.

North Branch Sub-Watershed: 2016 Culvert Assessment Maps

The following maps display the locations of culvert assessments completed in the North Branch Sub-watershed in 2016. Sections and site assessment codes correspond to the Culvert Assessment Data table in the Culvert and Habitat Assessments with Restoration Opportunities section of report (P. 27).

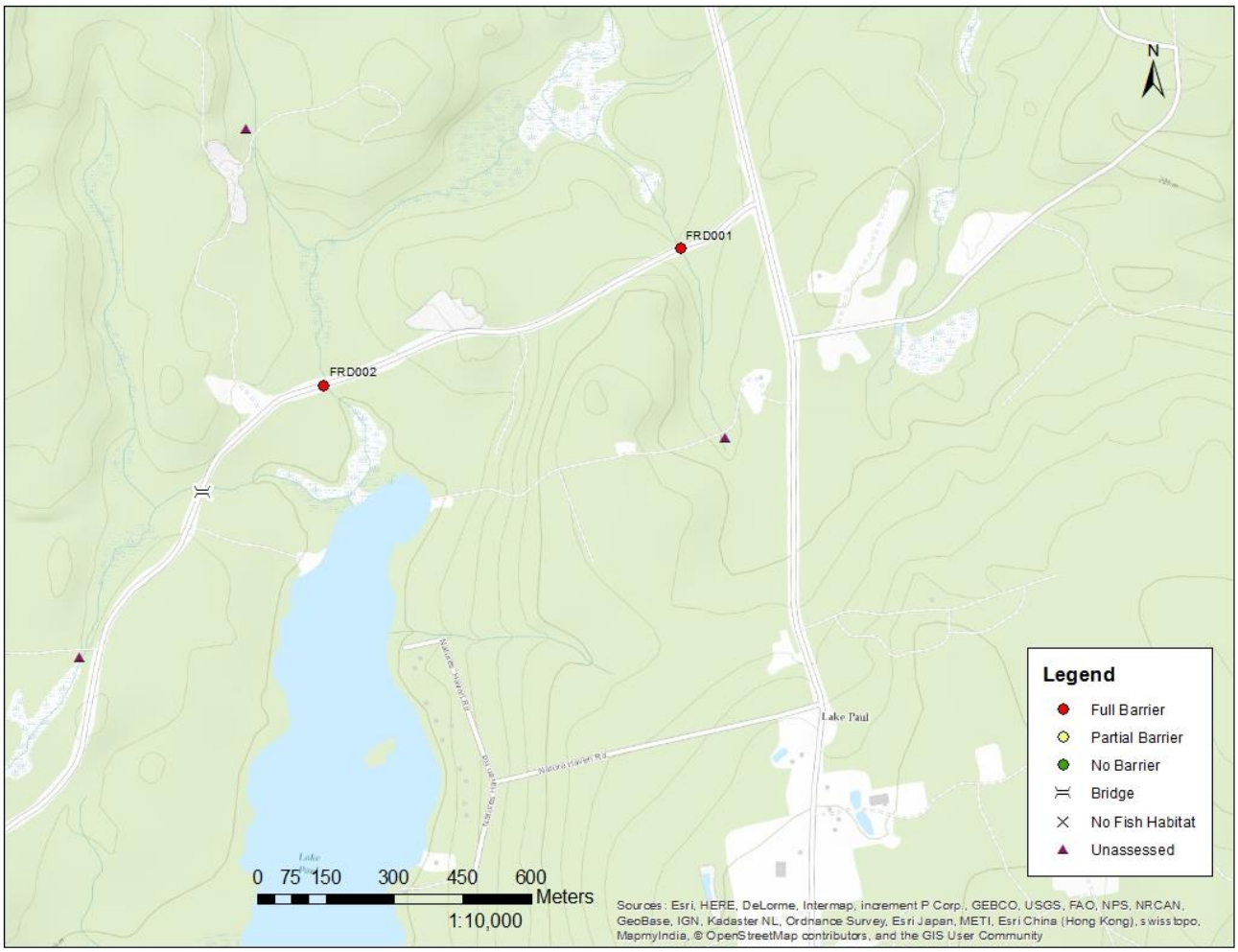

Figure 4. Section 1 - Culverts on Fire Road

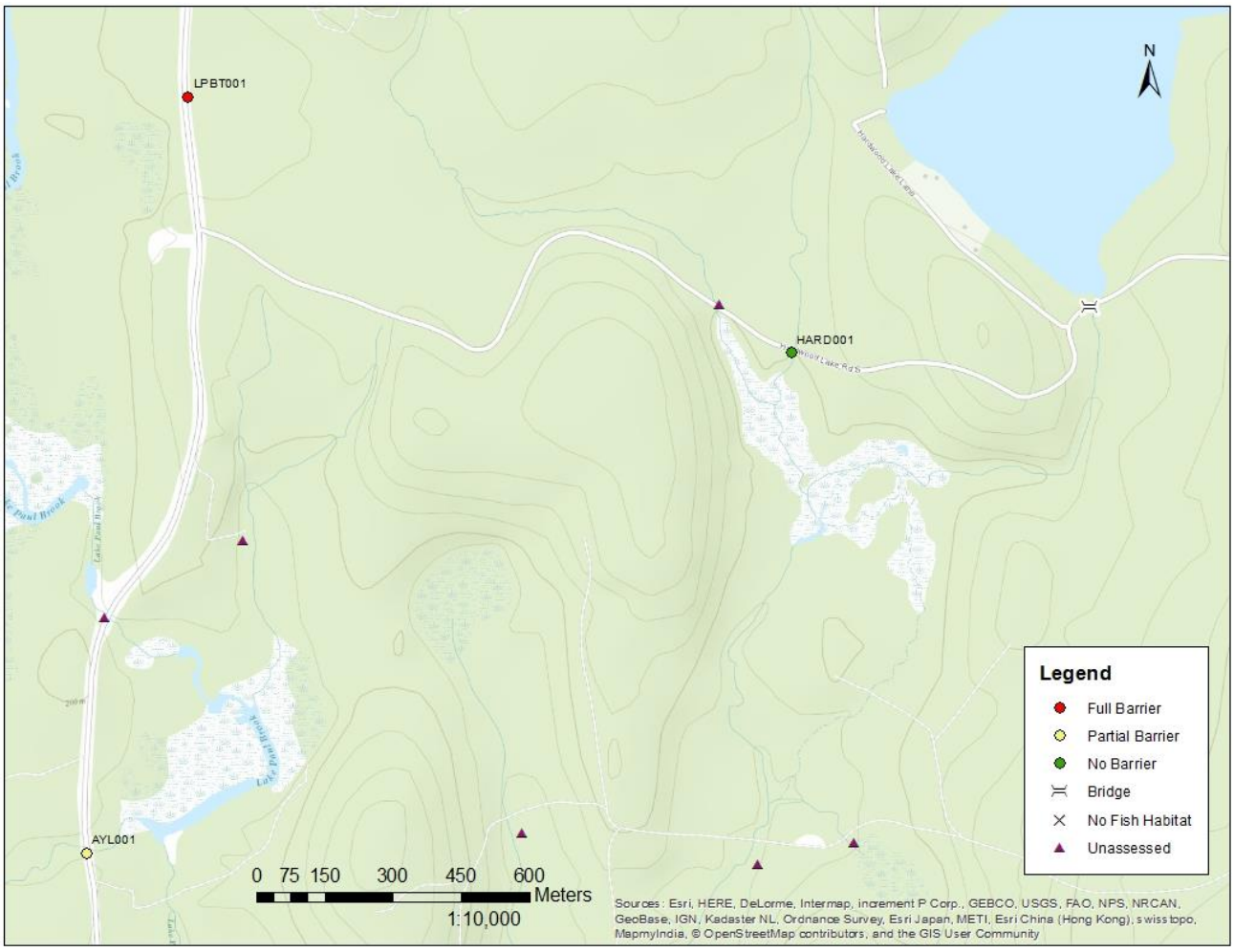

Figure 5. Section 2 - Culverts on Lake Paul Brook

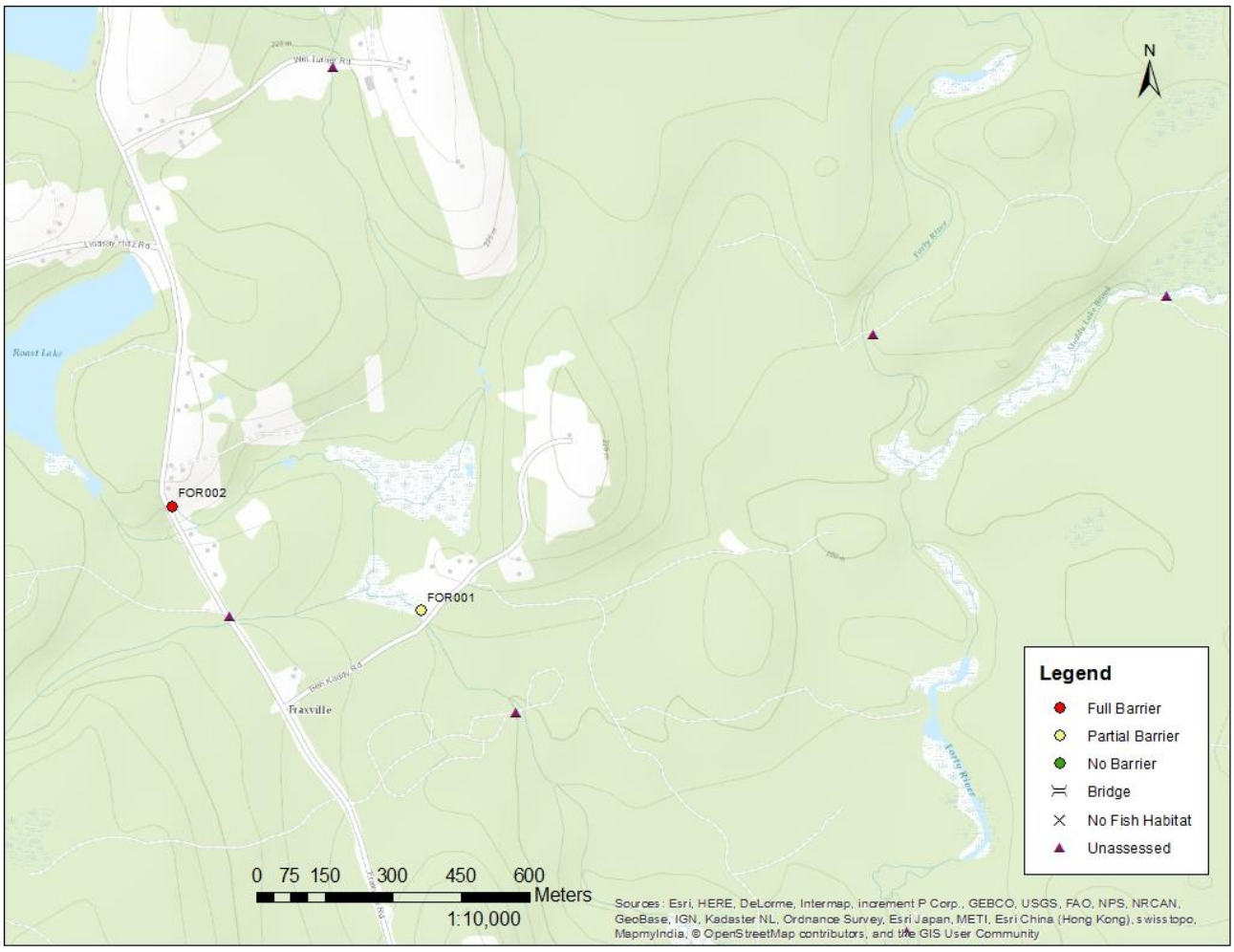

Figure 6. Section 3 - Culverts on Forties River

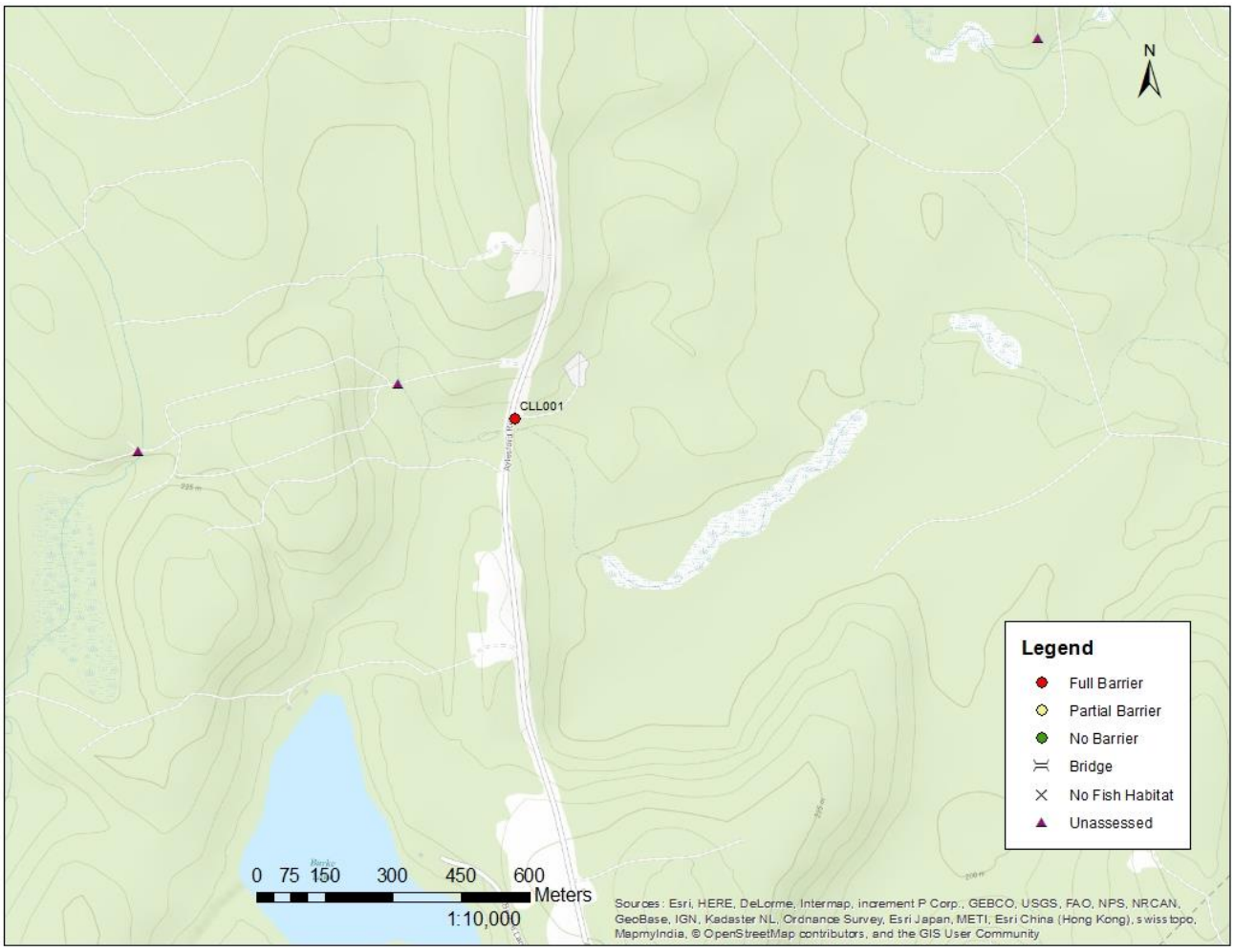

Figure 7. Section 4 - Culvert on McClintock Brook which flows into County Line Lake

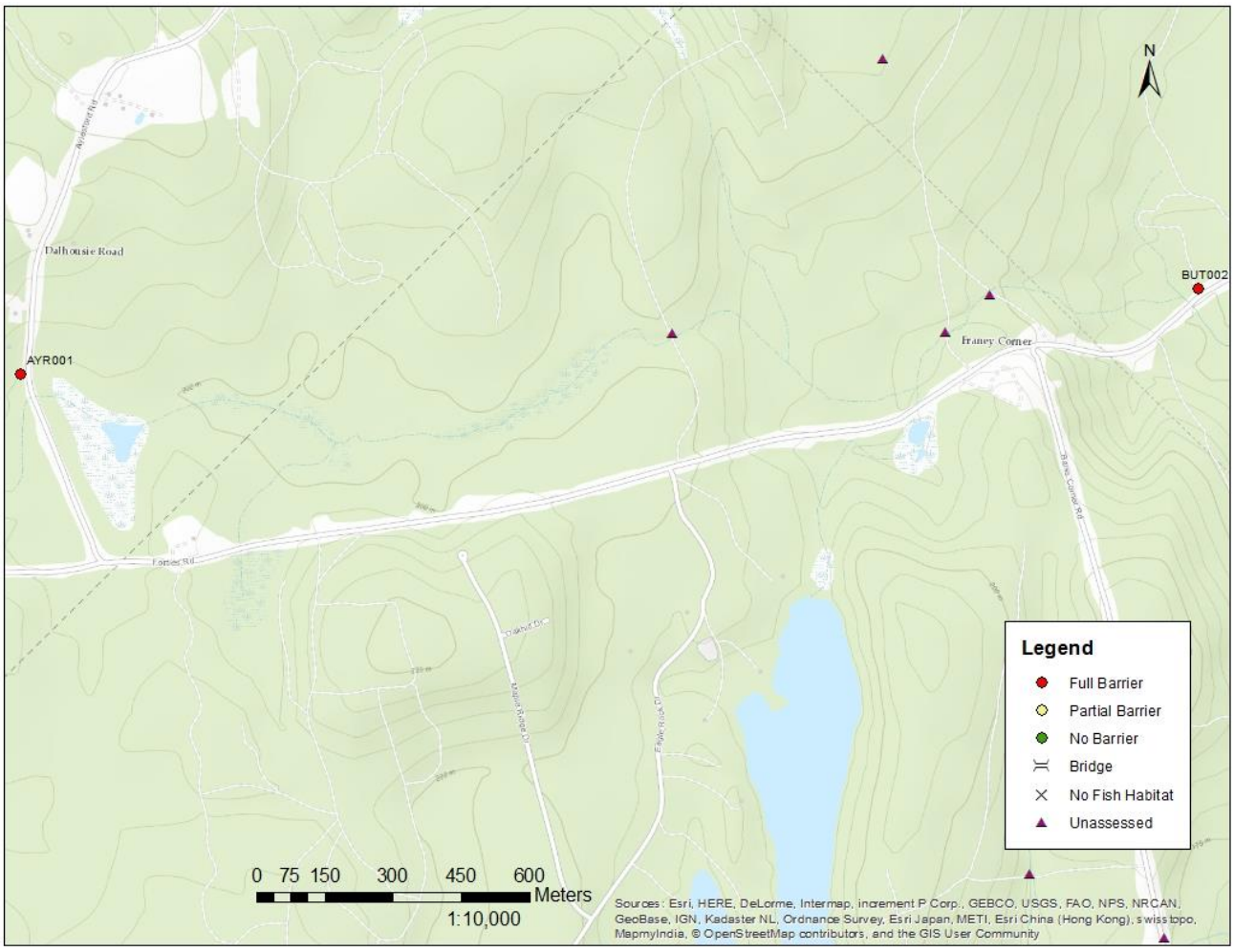

Figure 8. Section 5 - Culverts on Butler Lake Brook

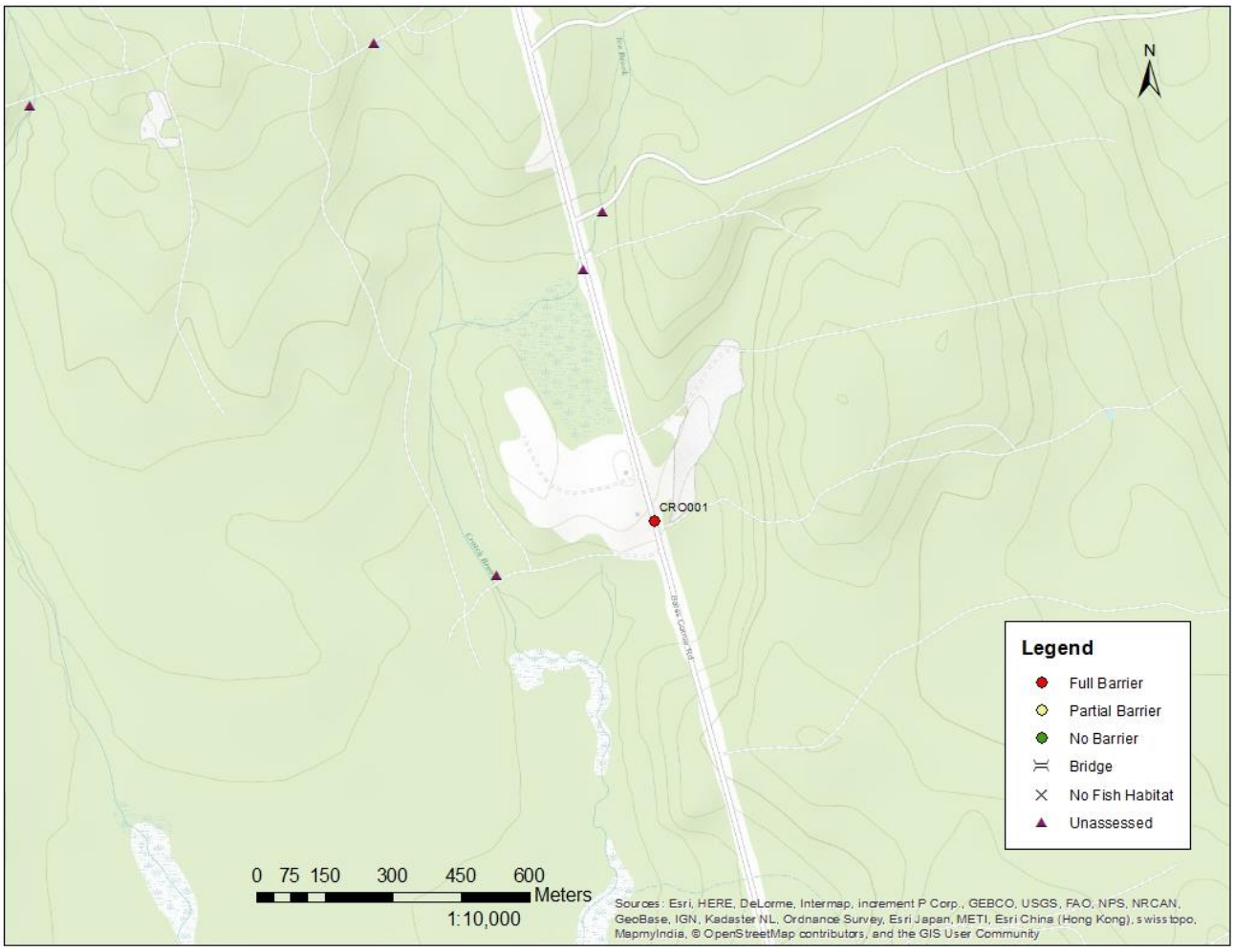

Figure 9. Section 6 - Culverts on a tributary to Crotch Brook

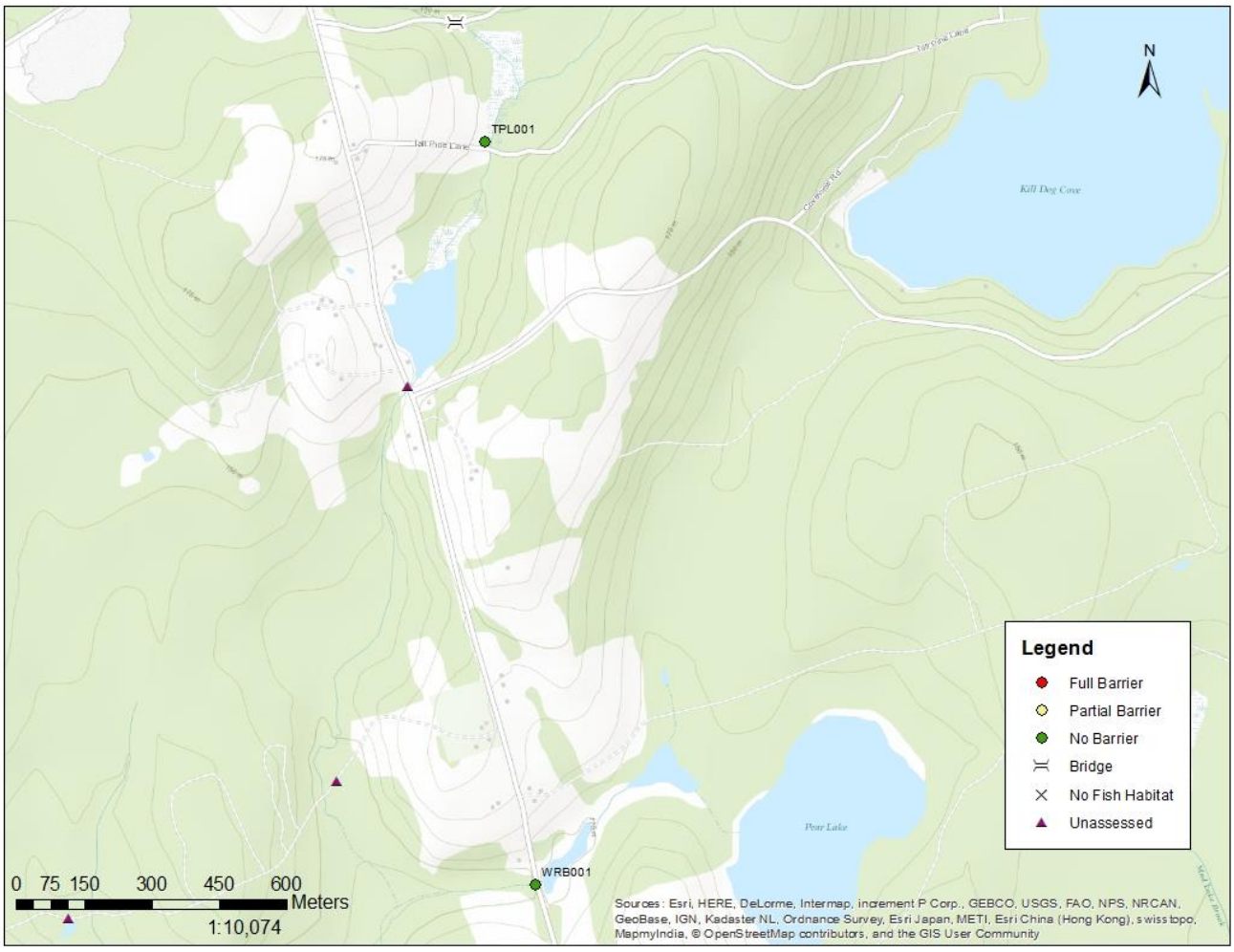

Figure 10. Section 7 - Culverts on tributaries of William Ross Brook

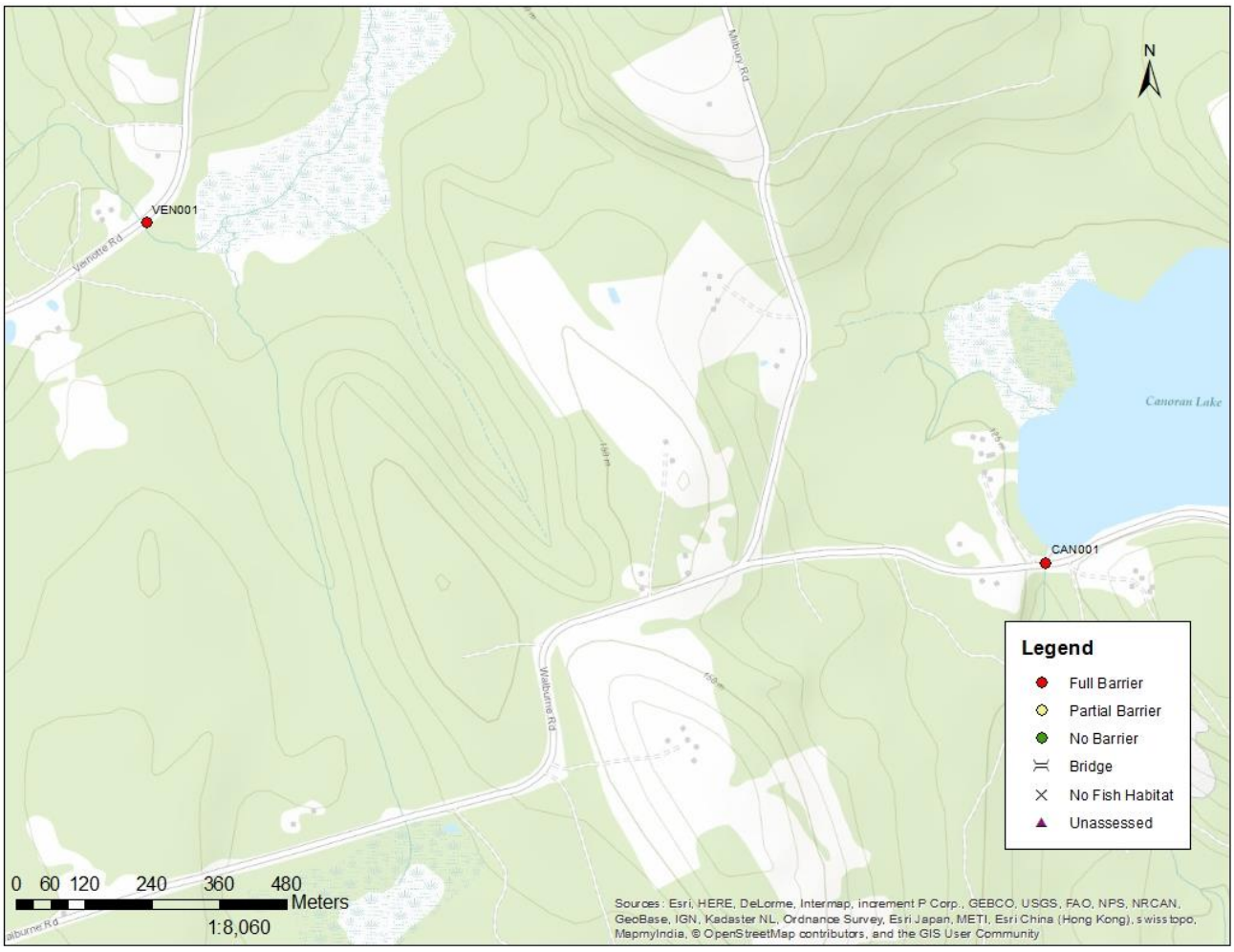

Figure 11. Section 8 - Culvert on outflow of Texas Lake

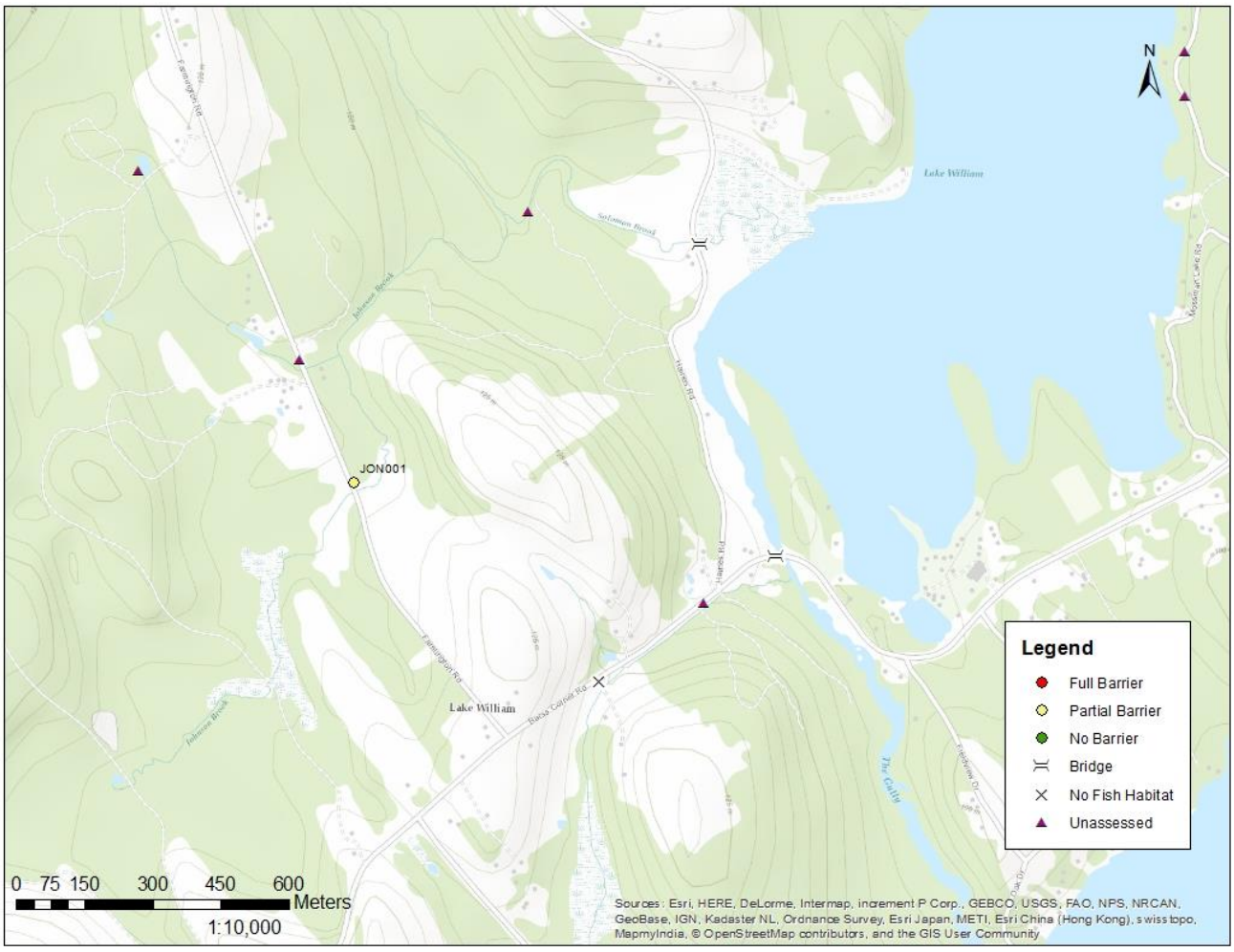

Figure 12. Section 9 - Culvert on Johnson's Brook

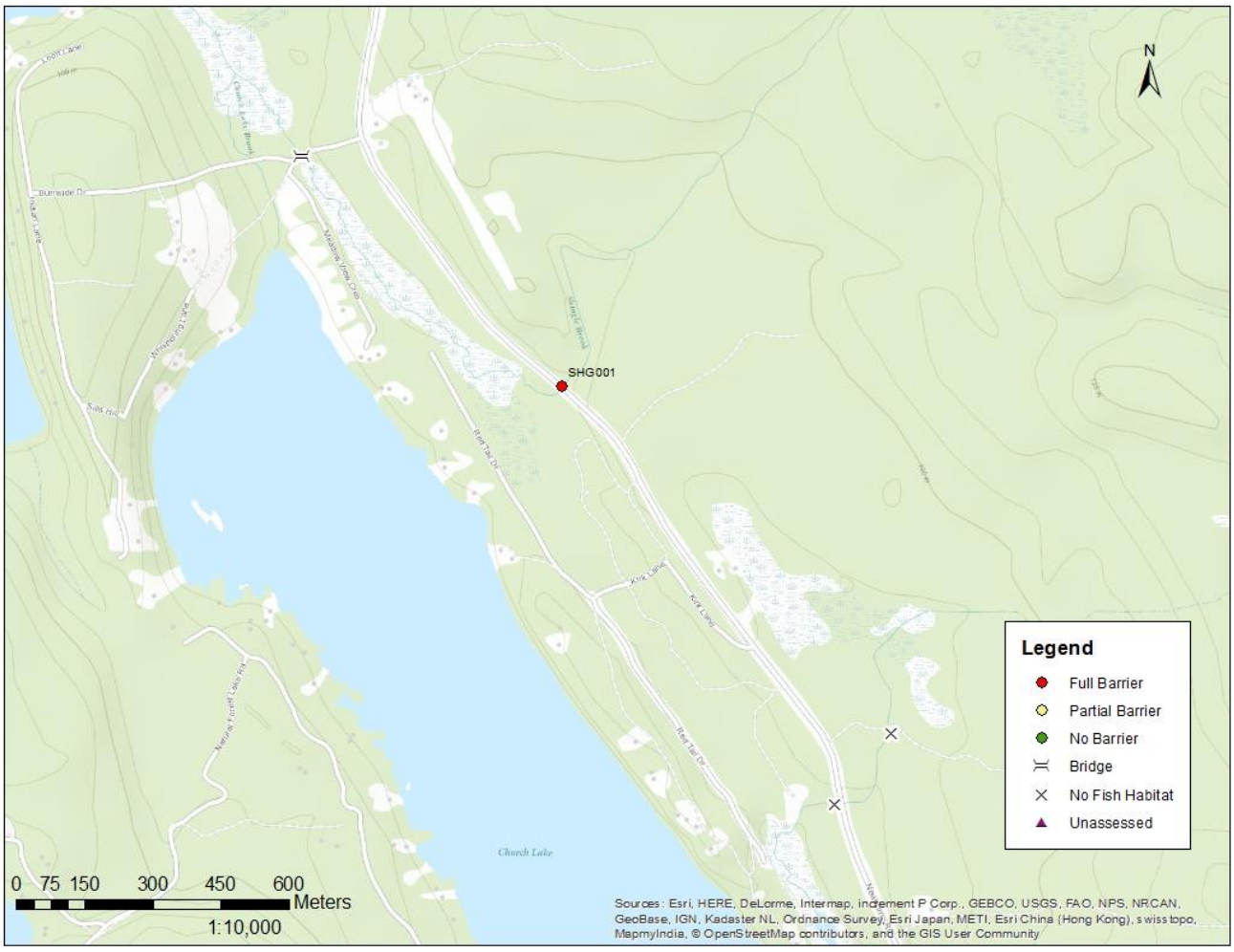

Figure 13. Section 10 - Culvert on Shingle Brook

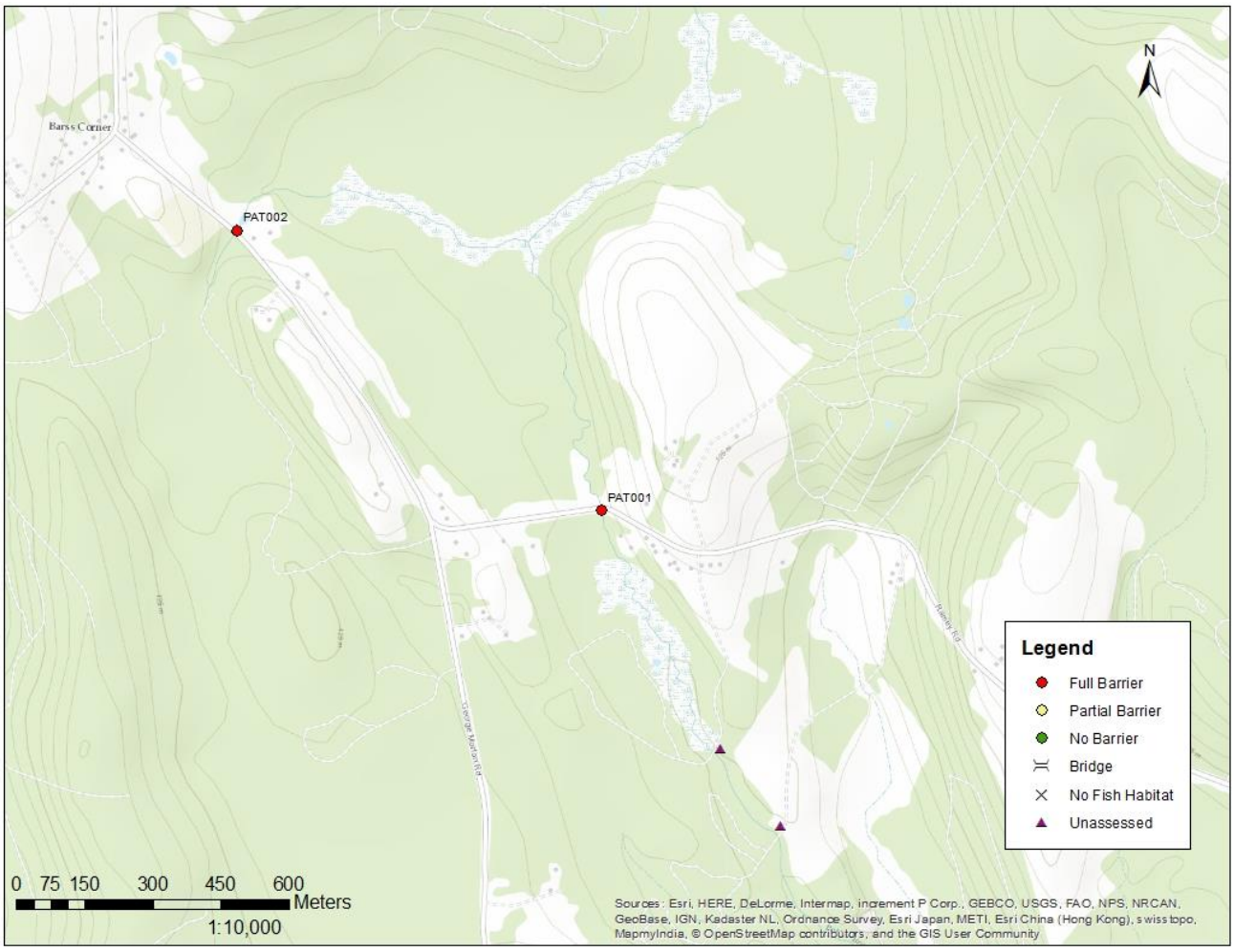

Figure 14. Section 11 - Culverts on Patten Brook

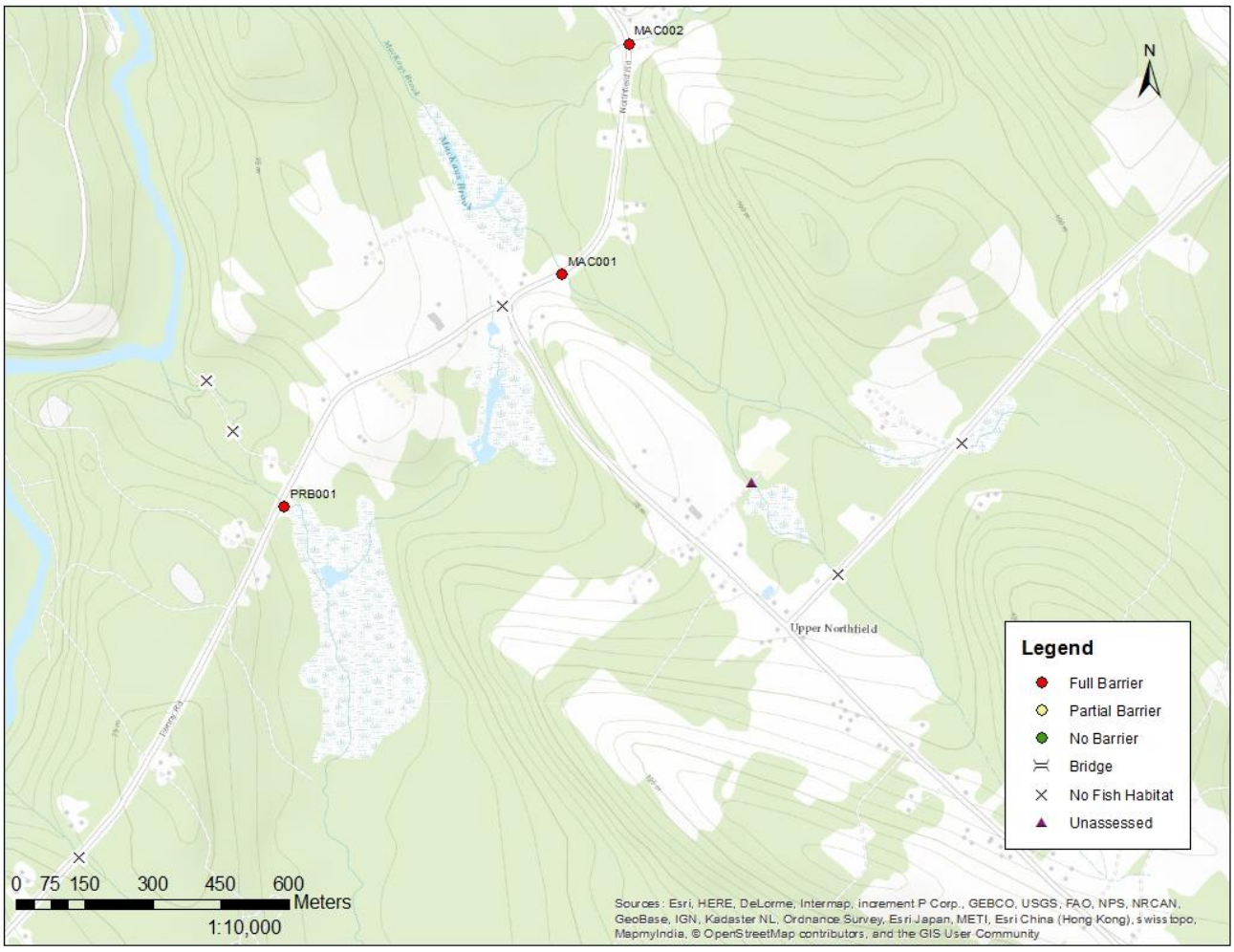

Figure 15. Section 12 - Culverts on MacKay Brook and an unnamed stream on Penny Road

Culvert and Habitat Assessments with Restoration Opportunities – Main River Sub-watershed

Aquatic connectivity is how streams, rivers and lakes flow into one another. When they are not properly connected, it can impede fish migration throughout a watershed. This habitat fragmentation can be caused by blockages and structures such as culverts. Culverts can cause habitat fragmentation by having a steep slope, a large outflow drop, improper sizing, high water velocity and several other factors which prevent fish from traveling upstream. Fixing habitat fragmentation is an extremely important factor in stream restoration because the benefit of any stream habitat restoration work or water quality management is limited if the fish cannot access these areas.

Culvert assessments were conducted using a protocol developed by the Nova Scotia Salmon Association's Adopt-a-Stream Program (see Appendix B). Culverts were classified as no barrier (fully passable for fish), partial barrier or full barrier (not passable for fish) based mainly on measurements of outflow drop and culvert slope (Table 1.0). The target species is brook trout and the target body length used was 5 cm.

Table 1. Criteria used to determine barrier status for a culvert.

Barrier Type	Criteria
No Barrier	Outflow Drop: < 1 body length of target species (< 5 cm) **and** Culvert Slope: < 0.5%
Partial Barrier	Outflow Drop: between 1-2 body lengths of species (5-10 cm) **or** Culvert Slope: between 0.5 and 2.5%
Full Barrier	Outflow Drop: > 2 body lengths of target species (> 10 cm) **or** Culvert Slope: > 2.5%

Culvert Assessment Data

Culvert ID	Photo	Stream Name/ Road Name	Coordinates	Culvert Information	Site Details	Barrier Status	Prescription for Restoration	Project Priority Ranking	Project Status
Section 1	Culvert assessments on Fire Road that are on Lake Paul Brook								
FRD001		Tributary of Lake Paul Brook Fire Road	0367137 4970966	**Material**: Corrugated Metal Pipe (Annular) **Shape**: Circular **Entrance**: Projecting **Baffles**: Absent **Deformed**: Yes **Culvert Bottom**: Unnatural	**Date**: July 13, 2016 **Crew**: Melissa, Sam, Nick, Alisha **Culvert Slope (%)**: 0.16 **Outflow Drop (cm)**: n/a **Notes**: Could not shoot tail water control and 2nd riffle due to visibility issues. Bottom of culvert rotted out causing passage issues	Full Barrier	Replace culvert	Low	N/A
FRD002		Lake Paul Brook Fire Road	0366354 4970666	**Material**: Corrugated Metal Pipe (Spiral) **Shape**: Circular **Entrance**: Projecting **Baffles**: Absent **Deformed**: Yes **Culvert Bottom**: Unnatural	**Date**: July 13, 2016 **Crew**: Melissa, Sam, Nick, Alisha **Culvert Slope (%)**: 8.4 (variable slope) **Outflow Drop (cm)**: -78 **Notes**: 100% backwatered. Fish observed upstream and downstream. Probably not a barrier.	Full Barrier	Further investigation required; potential correction to culvert slope	Low	N/A
Section 2	Three culvert assessments on the downstream side of Lake Paul Brook and tributaries								

Culvert ID	Photo	Stream Name/ Road Name	Coordinates	Culvert Information	Site Details	Barrier Status	Prescription for Restoration	Project Priority Ranking	Project Status
LPTB001		Lake Paul Brook Tributary Aylesford Road	0367502 4966381	**Material**: Corrugated Metal Pipe (Annular) **Shape**: Circular **Entrance**: Projecting **Baffles**: Absent **Deformed**: No **Culvert Bottom**: Unnatural	**Date**: July 13, 2016 **Crew**: Melissa, Sam, Nick, Alisha **Culvert Slope (%)**: 2.08 **Outflow Drop (cm)**: 23 **Notes**: 1 cm water in culvert	Full Barrier	Restore to no barrier by installing baffles to increase backwatering in culvert and chute for outflow drop	High	N/A
HARD001		Lake Paul Brook Tributary Hardwood Lake Road	0368826 4965818	**Material**: Corrugated Metal Pipe (Annular) **Shape**: Open Arch **Entrance**: Headwall **Baffles**: Absent **Deformed**: No **Culvert Bottom**: Natural	**Date**: July 11, 2016 **Crew**: Sam, Alisha, Nick, Philicity **Culvert Slope (%)**: - 3.67 **Outflow Drop (cm)**: -40 **Notes**: 100% backwatered, no riffles, beaver dam slowing water downstream.	No Barrier	Remove blockage	Medium	2016: Small blockage removed
AYL001		Lake Paul Brook Aylesford Road	0367280 4964719	**Material**: Corrugated Metal Pipe (Annular) **Shape**: Circular **Entrance**: Projecting **Baffles**: Absent **Deformed**: Yes **Culvert Bottom**: Unnatural	**Date**: July 11, 2016 **Crew**: Sam, Alisha, Nick, Philicity **Culvert Slope (%)**: 1.22 **Outflow Drop (cm)**: - 6 **Notes**: Beaver dam blockage	Partial Barrier	Remove blockage Restore to no barrier by correcting slope by installing baffles	Medium	2016: Large blockage removed
Section 3	Assessments on tributaries of Forties River								

Culvert ID	Photo	Stream Name/ Road Name	Coordinates	Culvert Information	Site Details	Barrier Status	Prescription for Restoration	Project Priority Ranking	Project Status
FOR001 (Left)	 Upstream Inflow	Tributary to Forty River Ben Keddy Road	0376284 4958430	**Material**: Corrugated Metal Pipe (Annular) **Shape**: Circular **Entrance**: Headwall **Baffles**: Absent **Deformed**: Yes **Culvert Bottom**: Unnatural	**Date**: July 6, 2016 **Crew**: Sam, Shauna, Nick, Philicity **Culvert Slope (%):** 0.78 **Outflow Drop (cm):** 0 **Notes:** 9 cm of water in culvert.	Partial Barrier	Restore by correcting slope by building tailwater control on left side culvert	Medium	N/A
FOR001 (Right)	 Upstream Inflow	Tributary to Forty River Ben Keddy Road	0376284 4958430	**Material**: Corrugated Metal Pipe (Annular) **Shape**: Circular **Entrance**: Headwall **Baffles**: Absent **Deformed**: Yes **Culvert Bottom**: Unnatural	**Date**: July 6, 2016 **Crew**: Sam, Shauna, Nick, Philicity **Culvert Slope (%):** 1.89 **Outflow Drop (cm):** 0 **Notes:** No water in culvert.				
FOR002		Tributary to Forty River Fraxville Road	0375737 4958659	**Material**: Corrugated Metal Pipe (Spiral) **Shape**: Circular **Entrance**: Headwall **Baffles**: Absent **Deformed**: Yes **Culvert Bottom**:	**Date**: July 6, 2016 **Crew**: Sam, Shauna, Nick, Philicity **Culvert Slope (%):** 4.89 **Outflow Drop (cm):** 29 **Notes:** 5 cm of water in culvert.	Full Barrier	Restore to no barrier by correcting for culvert slope and outflow drop	High	N/A

Culvert ID	Photo	Stream Name/ Road Name	Coordinates	Culvert Information	Site Details	Barrier Status	Prescription for Restoration	Project Priority Ranking	Project Status
				Unnatural					
Section 4	Assessments on McClintock Brook, tributary to County Line Lake								
CLL001		McClintock Brook Aylesford Road	0366276 4956256	**Material**: Corrugated Metal Pipe (Spiral) **Shape**: Circular **Entrance**: Projecting **Baffles**: Absent **Deformed**: No **Culvert Bottom**: Natural	**Date**: July 15, 2016 **Crew**: Sam, Blaire, Melissa, Nick **Culvert Slope (%)**: 3.54 **Outflow Drop (cm)**: -11 **Notes**:	Full Barrier	Restore to no barrier by correcting culvert slope	High	N/A
Section 5	Assessments of culverts located on Butler Lake Brook								
AYR001		Butler Lake Brook Aylesford Road	0365868 4953930	**Material**: Corrugated Metal Pipe (Spiral) **Shape**: Circular **Entrance**: Headwall **Baffles**: Absent **Deformed**: Yes **Culvert Bottom**: Unnatural	**Date**: July 15, 2016 **Crew**: Sam, Blaire, Melissa, Nick **Culvert Slope (%)**: 2.58 **Outflow Drop (cm)**: -2 **Notes**: 100% backwatered. May not be a barrier.	Full Barrier	Further investigation required; culvert slope may be corrected for	Low	N/A
BUT002 (Left)		Butler Lake Brook Forties Road (to New Ross)	0368459 4954118	**Material**: Corrugated Metal Pipe (Annular) **Shape**: Circular **Entrance**: Projecting **Baffles**: Absent **Deformed**: No	**Date**: July 7, 2016 **Crew**: Sam, Alisha, Nick, Philicity **Culvert Slope (%)**: 0.63 **Outflow Drop (cm)**: 45 **Notes**: 7 cm water inside	Full Barrier	Restore to no barrier by correcting for culvert slope and outflow drop Large outflow drop may require	High	N/A

Culvert ID	Photo	Stream Name/ Road Name	Coordinates	Culvert Information	Site Details	Barrier Status	Prescription for Restoration	Project Priority Ranking	Project Status
				Culvert Bottom: Unnatural	culvert.		mini-fishway or holding tubs		
BUT002 (Right)		Butler Lake Brook Forties Road (to New Ross)	0368459 4954118	**Material**: Corrugated Metal Pipe (Annular) **Shape**: Circular **Entrance**: Projecting **Baffles**: Absent **Deformed**: No **Culvert Bottom**: Unnatural	**Date**: July 7, 2016 **Crew**: Sam, Alisha, Nick, Philicity **Culvert Slope (%)**: 1.2 **Outflow Drop (cm)**: 41.5 **Notes**: 7 cm of water inside culvert				
Section 6	An assessment on a tributary of Crotch Brook								
CRO001		Tributary of Crotch Brook Barss Corner Road	0368834 4948583	**Material**: Corrugated Metal Pipe (Spiral) **Shape**: Circular **Entrance**: Projecting **Baffles**: Absent **Deformed**: Yes **Culvert Bottom**: Unnatural	**Date**: July 5, 2016 **Crew**: Sam, Shauna, Nick **Culvert Slope (%)**: 1.25 **Outflow Drop (cm)**: 32 **Notes**: No water in culvert	Full Barrier	Further investigation required Correct for culvert slope and outflow drop	Medium	N/A
Section 7	Culvert assessments on two unnamed streams that are tributaries to William Ross Brook								
TPL001 (Left)		William Ross Brook Tributary Tall Pine Lane	0370640 4945540	**Material**: Corrugated Plastic **Shape**: Circular **Entrance**: Projecting **Baffles**: Absent **Deformed**: No **Culvert Bottom**:	**Date**: July 8, 2016 **Crew**: Blaire, Shauna, Shawn **Culvert Slope (%)**: 0 **Outflow Drop (cm)**: 0.2 **Notes**: None.	Partial Barrier	Not required of left side culvert Right side could be restored to no barrier by correcting for culvert slope and	Low	N/A

Culvert ID	Photo	Stream Name/ Road Name	Coordinates	Culvert Information	Site Details	Barrier Status	Prescription for Restoration	Project Priority Ranking	Project Status
				Unnatural			outflow drop		
TPL001 (Right)		William Ross Brook Tributary Tall Pine Lane	0370640 4945540	**Material**: Corrugated Plastic **Shape**: Circular **Entrance**: Projecting **Baffles**: Absent **Deformed**: No **Culvert Bottom**: Unnatural	**Date**: July 8, 2016 **Crew**: Blaire, Shauna, Shawn **Culvert Slope (%)**: 3.28 **Outflow Drop (cm)**: 9 **Notes**: Shallow water depth in culvert.				
WRB001		William Ross Brook Tributary Newburne Road	0370752 4943895	**Material**: Corrugated Metal Pipe (Annular) **Shape**: Circular **Entrance**: Projecting **Baffles**: Absent **Deformed**: Yes **Culvert Bottom**: Unnatural	**Date**: July 6, 2016 **Crew**: Sam, Blaire, Shauna, Melissa **Culvert Slope (%):** 0.3665 **Outflow Drop (cm):** 2 **Notes**: 50% backwatered	No Barrier	Not required	N/A	N/A
Section 8	Culvert assessment on an unnamed stream that is a tributary to Texas Lake								
VEN001		Unnamed Stream Venoit Rd	0374028 4939614	**Material**: Corrugated Metal Pipe (Spiral) **Shape**: Circular **Entrance**: Projecting **Baffles**: Absent **Deformed**: No **Culvert Bottom**: Unatural	**Date**: July 18, 2016 **Crew**: Blaire, Sam **Culvert Slope (%)**: 0.25 **Outflow Drop (cm)**: 23 **Notes**: Seems to be sufficient depth. Revisit to assess outflow drop.	Full Barrier	Further investigation required Correct for outflow drop	Medium	N/A
CAN001		Canaran Lake		**Material**: Concrete	**Date**: July 18, 2016	Full Barrier	Correct for	Medium	N/A

Culvert ID	Photo	Stream Name/ Road Name	Coordinates	Culvert Information	Site Details	Barrier Status	Prescription for Restoration	Project Priority Ranking	Project Status
		Outflow Walburn Rd	0375622 4939016	**Shape**: Circular **Entrance**: Projecting **Baffles**: Absent **Deformed**: No **Culvert Bottom**: Unatural	**Crew**: Blaire, Sam, Shauna, Melissa **Culvert Slope (%)**: 0.16 **Outflow Drop (cm)**: 26 **Notes**: Boulders at outflow with pipe diverting water under them.		culvert outflow drop		
Section 9	Assessment on Johnson's Brook on Farmington Road								
JON001		Johnson's Brook Farmington Road	0367770 4938689	**Material**: Corrugated Metal Pipe (Annular) **Shape**: Circular **Entrance**: Headwall **Baffles**: Absent **Deformed**: Yes **Culvert Bottom**: Unnatural	**Date**: July 5, 2016 **Crew**: Blaire, Melissa, Philicity **Culvert Slope (%):** -1.312 **Outflow Drop (cm):** n/a **Notes:** no riffle, stream goes through a field. Barbed wire fence – can't measure tailwater. No water in culvert.	Incomplete	Revisit to assess outflow drop when water levels are up	N/A	N/A
Section 10	Assessment on Shingle Brook, a tributary to Indian Lake								
SHG001		Shingle Brook Newburne Road	0372704 4935130	**Material**: Corrugated Metal Pipe (Annular) **Shape**: Circular **Entrance**: Headwall **Baffles**: Absent **Deformed**: No **Culvert Bottom**: Unnatural	**Date**: June 27, 2016 **Crew**: Sam, Blaire, Shauna, Melissa **Culvert Slope (%):** 2.75 **Outflow Drop (cm):** 7 **Notes:** 4 cm of water in culvert.	Partial Barrier	Remove blockage Restore to no barrier by correcting for culvert flow and building up tailwater	High	2016: Small blockage removed
Section 11	Culvert assessments on Patten Brook and a tributary to Patten Brook								

Culvert ID	Photo	Stream Name/ Road Name	Coordinates	Culvert Information	Site Details	Barrier Status	Prescription for Restoration	Project Priority Ranking	Project Status
PAT001		Patten Brook Ramey Road	0367584 4935339	**Material**: Wood **Shape**: Box **Entrance**: Wingwall **Baffles**: Absent **Deformed**: Yes **Culvert Bottom**: Natural	**Date**: July 5, 2016 **Crew**: Sam, Shauna, Nick **Culvert Slope (%)**: 2.66 **Outflow Drop (cm)**: 9 **Notes**: Road is being washed out, gravel being washed into stream eroding under concrete walls.	Full barrier	Restore for no barrier by correcting for culvert slope. Build up tailwater control and step-pool habitat	Medium	N/A
PAT002		Patten Brook Tributary Ramey Road	0366782 4935954	**Material**: Corrugated Metal Pipe (Spiral) **Shape**: Circular **Entrance**: Headwall **Baffles**: Absent **Deformed**: No **Culvert Bottom**: Unnatural	**Date**: July 5, 2016 **Crew**: Sam, Shauna, Nick **Culvert Slope (%)**: 6.2 **Outflow Drop (cm)**: 68 **Notes**: Small debris blockage from beavers in culvert	Full Barrier	Remove blockage Correct for culvert slope and outflow drop by building up tailwater control	Medium	2016: Blockage removed, and tailwater control completed
Section 12	MacKay Brook and unnamed Tributary to North Branch River								
MAC001		Mackay Brook Northfield Rd	0371141 4929631	**Material**: Corrugated Metal Pipe (Annular) **Shape**: Circular **Entrance**: Headwall **Baffles**: Absent **Deformed**: No **Culvert Bottom**: Unnatural	**Date**: June 21, 2016 **Crew**: Emma, Sam, Melissa **Culvert Slope (%)**: 0.146 **Outflow Drop (cm)**: 59 **Notes**: Removed debris, no riffle upstream, white suckers present.	Full Barrier	Remove blockage Restore to no barrier by correcting for outflow drop Mini-fishway or holding tubs	High	2016: Small blockage removed

Culvert ID	Photo	Stream Name/ Road Name	Coordinates	Culvert Information	Site Details	Barrier Status	Prescription for Restoration	Project Priority Ranking	Project Status
MAC002 (Left)		Mackay Brook Northfield Rd	0371287 4930137	**Material**: Corrugated Metal Pipe (Annular) **Shape**: Circular **Entrance**: Headwall **Baffles**: Absent **Deformed**: No **Culvert Bottom**: Unnatural	**Date**: June 21, 2016 **Crew**: Emma, Sam, Melissa **Culvert Slope (%)**: 3.0159 **Outflow Drop (cm)**: -46 **Notes**: Variable slope	Full Barrier	Restore to no barrier by correcting for culvert slope; add baffles to slow water on steep section of variable slope	High	N/A
MAC002 (Right)		Mackay Brook Northfield Rd	0371287 4930137	**Material**: Corrugated Metal Pipe (Annular) **Shape**: Circular **Entrance**: Headwall **Baffles**: Absent **Deformed**: No **Culvert Bottom**: Unnatural	**Date**: June 21, 2016 **Crew**: Sam, Melissa, Emma **Culvert Slope (%)**: 3.175 **Outflow Drop (cm)**: -43				
PRB001		Penny Brook Penny Road	0394914 4914395	**Material**: Corrugated Metal Pipe (Annular) **Shape**: Circular **Entrance**: Headwall **Baffles**: Absent **Deformed**: Yes **Culvert Bottom**: Unnatural	**Date**: June 21, 2016 **Crew**: Emma, Sam, Melissa **Culvert Slope (%)**: 1.855 **Outflow Drop (cm)**: 47 **Notes**: Shallow depth in culvert	Full Barrier	Remove blockage Restore to no barrier by correcting for culvert slope and outflow drop; mini-fishway required for large drop	Medium	2016: blockage removed

Habitat and Culvert Description with Restoration Opportunities – North Branch Sub-Watershed

Habitat Assessment Data

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
Section 1	Confluence of the North Branch LaHave and Wentzells Lake to the bridge at Pinehurst on Trunk 10 (North Branch River)						
1A	Confluence of North Branch LaHave and Wentzells Lake	N 44° 29' 00.1" W 064° 37' 57.1"	**Right/Left Banks:** bog/swamp, emergent grasses, large boulders **Water Description:** light tannin colour, suspended solids visible **Wetted Width:** 21 m **Average Depth:** 1 m + The LaHave River Trail and Trunk 10 Hwy run parallel to the eastern edge of Wentzells Lake. Landowners have cleared shoreline vegetation to maintain lake views, causing run-off and erosion issues. **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 14.9° C **DO %:** 95 **DO:** 9.4 mg/L	LaHave River Trail Trunk 10 Hwy Residential	Riparian planting along eastern shoreline of Wentzells Lake	High	**Completed:** Outreach event hosted by BCAF and Reg Newell (DNR) to educate Wentzells Lake landowners about riparian habitat (Oct 18, 2014). Riparian planting of 24 native species along 100 m section of shoreline (Oct 20-21, 2014)

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			SPC: 0.027 mS/cm **TDS:** 17.4 mg/L **Salinity:** 0.01 ppt **pH:** 5.41				
1B	Bog/Swamp Upstream of confluence	N 44° 29' 14.8" W 064° 38' 20.9"	**Right/Left Banks:** bog/swamp, tall grasses **Water Description:** light tannin colour, suspended solids visible, moderate flow velocity **Wetted Width:** 32 m **Average Depth:** 1 m + **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 13.2°C **DO %:** 90.0 **DO:** 9.1 mg/L **SPC:** 0.026 mS/cm **TDS:** 17.4 mg/L **Salinity:** 0.01 ppt **pH:** 5.32	Bog / Swamp Trunk 10	N/A	N/A	N/A
1C	Braided section of several channels (2-5	N 44° 29' 30.9" W 064° 38' 21.5"	**Right/Left Banks:** bog/swamp, bank undercutting, sedges, shrubs **Water Description:** dark tannin color,	Bog / Swamp Pond	Possible dry channels during low flow period	Low	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	m width)		suspended solids visible **Wetted Width:** 3 m **Average Depth:** 50 cm **Substrate Composition:** gravel, some cobble, sedimentation **Shade:** 80% **Riparian Heath Score:** 50 **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 13.8˚C **DO %:** 87 **DO:** 8.5 mg/L **SPC:** 0.028 mS/cm **TDS:** 19.8 mg/L **Salinity:** 0.01 ppt **pH:** 5.28	Trunk 10			

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
1d	Trunk 10 Hwy bridge at Pinehurst	N 44° 29' 39.7" W 064° 38'4.6"	**Right/Left Banks:** bank undercutting, small sandy boat launch **Water Description:** clear with foam on surface **Wetted Width:** 20 m **Average Depth:** 1 m + **Shade:** 50 % **Riparian Heath Score:** 48 **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 13.8°C **DO %:** 87 **DO:** 8.4 mg/L **SPC:** 0.027 mS/cm **TDS:** 17.4 mg/L **Salinity:** 0.01 ppt **pH:** 5.38	Pinehurst Bridge (road salt/chemical run-off) Large hayfield Trunk 10	N/A	N/A	N/A
Section 2	Pinehurst Bridge on Trunk 10 Hwy to Mackays Bridge on Northfield Road						

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
2A	McKeen Road comes within 6 m of North Branch	N 44° 29' 53.8" W 064° 38' 20.2"	**Right/Left Banks:** bank undercutting, some erosion areas. Thin riparian zone near McKeen Road with rope swing, bank erosion **Water Description:** clear of suspended solids, moderate flow velocity **Wetted Width:** 15 m **Average Depth:** 3 m + **Shade:** 70 % **Riparian Heath Score:** 54 **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 13.2°C **DO %:** 95 **DO:** 9.2 mg/L **SPC:** 0.026 mS/cm **TDS:** 16.9 mg/L **Salinity:** 0.01 ppt **pH:** 5.25	Gravel / dirt road Garbage, rope swing, swimming location Residential properties	N/A	N/A	N/A
2B	Rapids	N 44° 30' 3.65" W 064° 38' 10.8"	**Right/Left Banks:** steep 10 m high banks with mass wasting, **Water Description:** fast flowing rapids with boulders	Logging road Clear cut Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Wetted Width: 24 m **Water Quality:** Crew could not access water due to steep banks				
2C	Rapids	N 44° 30' 24.5" W 064° 37' 56.8"	**Right/Left Banks:** steep banks with mass wasting, grasses and ferns, mixed forest **Water Description:** small falls section with rapids, boulders **Wetted Width:** 30 m **Water Quality:** Crew could not access water due to steep banks	Forested area Kayak/canoe location Clear cut Logging trail	N/A	N/A	N/A
2D	Class 2 Rapids 'Black Rattle'	N 44° 30' 41.4" W 064° 38' 01.2"	**Right/Left Banks:** right bank very steep with mass wasting, grasses and ferns, mixed forest **Water Description:** rapids, boulders **Wetted Width:** 18 m **Water Quality:** Crew could not access water due to steep banks	Forested area Kayak/canoe location	N/A	N/A	N/A
2E	McKeen Road comes within 50 m of North Branch	N 44° 30' 53.8" W 064° 38' 06.0"	**Right/Left Banks:** banks flat for 2 m then steep embankments, flooding has deposited cobble and woody debris along banks. Right bank is partially harvested in riparian zone,	Gravel / dirt road Partial harvesting	Check for future harvesting in riparian area	Low	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			only large hardwoods remaining **Water Description:** riffle/run, clear of suspended solids, fast flowing **Wetted Width:** 20 m **Average Depth:** 50 cm **Substrate Composition:** boulders and large cobble **Shade:** 60 % Riparian Heath Score: 57 **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 13.4°C **DO %:** 97 **DO:** 9.3 mg/L **SPC:** 0.026 mS/cm **TDS:** 16.9 mg/L **Salinity:** 0.01ppt **pH:** 5.94				
2F	Fancy's Pool	N 44° 31' 00.7" W 064° 38' 08.4"	**Right/Left Banks:** gently sloping banks, undercutting, alders **Water Description:** Class 2 rapid stretch 150 m long, clear of suspended solids	Gravel / dirt road Kayak/canoe location Residential properties	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Wetted Width: 21 m **Average Depth:** 1 m + **Shade:** 80 % Riparian Heath Score: 56 **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 13.3˚C **DO %:** 90 **DO:** 9.2 mg/L **SPC:** 0.026 mS/cm **TDS:** 15.9 mg/L **Salinity:** 0.01ppt **pH:** 5.62				
2G	Sanford's Intervale Pool	N 44˚ 31' 33.5" W 064˚ 38' 22.3"	**Right/Left Banks:** right bank has alders and mixed forest, left bank has thin riparian zone then a residential property **Water Description:** light tannin colour, suspended solids visible **Wetted Width:** pool is 26 m x 50 m **Average Depth:** 5 m + **Shade:** right bank 80%, left bank 60% **Riparian Heath Score:** Right Bank: 52	Forested area Kayak/canoe location Residential properties	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Left Bank: 43 **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 13.8˚C **DO %:** 89 **DO:** 8.7 mg/L **SPC:** 0.026 mS/cm **TDS:** 15.9 mg/L **Salinity:** 0.01 ppt **pH:** 5.58				
Section 3	MacKays Bridge on Northfield Road to Feindel's Bridge on Cornwall Road						
3A	MacKay's Bridge Pool upstream of bridge near confluence of Patten Brook	N 44˚ 31' 39.5" W 064˚ 38' 26.3"	**Right/Left Banks:** confluence of Patten Brook on right bank, gently sloping banks **Water Description:** suspended solids visible **Wetted Width:** pool is 30 m x 60 m **Average Depth:** 1 m + **Substrate Composition:** gravel and cobble **Shade:** 10 % **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 13.6˚C	Mackays Bridge Paved Road Residential properties	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			DO %: 96 **DO:** 9.2 mg/L **SPC:** 0.027 mS/cm **TDS:** 17.2 mg/L **Salinity:** 0.01 ppt **pH:** 5.66				
3B	Thin riparian area	N 44˚ 32’ 00.86” W 064˚ 38’ 12.4”	**Right/Left Bank:** left bank mixed forest, undercutting, grasses and ferns. Right bank has thin riparian zone (10-12 m) near clear cut **Water Description:** suspended solids visible, boulders, rapids **Wetted Width:** 18 m **Average Depth:** 1 m **Shade:** left bank 90 %, right bank 50 % Riparian Heath Score: Right Bank: 56 Left Bank: 42 **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 13.4˚C **DO %:** 91 **DO:** 9.0 mg/L	Forested area Clear-cutting	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			SPC: 0.027 mS/cm **TDS:** 15.7 mg/L **Salinity:** 0.01 ppt **pH:** 5.55				
3C	Blue Ledge Pool	N 44˚ 32’ 22.4” W 064˚ 37’ 56.9”	**Right/Left Banks:** gently sloping, mixed forest, grasses and ferns, cobble and boulders along banks **Water Description:** 150 m deep water run, moderate flow velocity, light tannin colour, suspended solids visible **Wetted Width:** 23 m **Average Depth:** 1 m + **Shade:** 80 % **Riparian Heath Score:** Right Bank 56 **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 13.6˚C **DO %:** 88 **DO:** 8.5 mg/L **SPC:** 0.026 mS/cm **TDS:** 15.4 mg/L **Salinity:** 0.01 ppt **pH:** 5.44	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
3D	Slippery Ledge Pool	N 44˚ 34’ 27.5” W 064˚ 36’ 44.8”	**Right/Left Banks:** gently sloping, mixed forest, boulders and cobble along banks **Water Description:** light tannin colour, suspended solids visible **Wetted Width:** 17 m **Average Depth:** 5 m + **Shade:** 80 % **Riparian Heath Score:** Right Bank 55 **Water Quality:** **YSI MEASUREMENTS:** Temp: 13.6˚C DO: 89.0 % DO: 8. mg/L **SPC:** 0.026 mS/cm **TDS:** 15.4 mg/L **Salinity:** 0.01 ppt **pH:** 5.40	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
3E	Long Pool	N 44˚ 32’ 46.1” W 064˚ 37’ 58.1”	**Right/Left Banks:** gently sloping, mixed forest, boulders on banks **Water Description:** light tannin colour, suspended solids visible, moderate velocity, deep water run **Wetted Width:** 20 m **Average Depth:** 1 m + **Shade:** 80 % **Riparian Heath Score:** Right Bank 54 **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 13.6˚C **DO %:** 89 **DO:** 8.8 mg/L **SPC:** 0.026 mS/cm **TDS:** 15.4 mg/L **Salinity:** 0.01 ppt **pH:** 5.40	Forested area	N/A	N/A	N/A
3F	Feindel’s Bridge Pool, downstream of Feindel’s	N 44˚ 33’ 03.3” W 064˚ 37’ 34.3”	**Right/Left Banks:** steep gravel banks leading up to bridge, alders and shrubs, very little shade within 50 m	Outflow of Indian Lake Feindel’s Bridge	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	Bridge		on both sides of the bridge **Water Description:** clear of tannins, suspended solids visible, deep run for 70 m **Wetted Width:** 23 m **Average Depth:** 1 m + **Riparian Heath Score:** Right Bank 54 **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 13.5˚C **DO %:** 90 **DO:** 8.9 mg/L **SPC:** 0.026 mS/cm **TDS:** 15.3 mg/L **Salinity:** 0.01 ppt **pH:** 5.45	Forested area			
Section 4	Patten Brook (6.5 km long tributary), between Union Square and Barss Corner						
4A	Confluence of Patten Brook with North Branch LaHave	N 44˚ 31’ 39.9” W 064˚ 38’ 28.6”	**Right Bank:** fairly flat and adjacent to a manicured lawn, with a thin riparian zone (thin to no vegetation in some areas). Both banks are undercut **Left Bank:** sloping, with the riparian	Manicured Lawn	Plant saplings where riparian area is degraded Speak with	Medium	Riparian Planting **completed on Sept 3, 2014** (18 riparian

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			zone consisting of alders and shrubs, some hardwood trees **Water description:** light tannin colour and suspended solids are visible. Water flowing at a moderate velocity after flowing through a 100 m long riffle **Wetted width:** 3 m **Average depth:** 50 cm **Substrate Composition:** Boulder, cobble and some gravel **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 12.5˚C **DO%**: 91.4 **DO**: 9.2 mg/L **SPC**: 0.026 mS/cm **TDS**: 17.2 mg/L **Salinity**: 0.01 ppt **pH**: 5.62		residents about keeping an acceptable riparian zone		shrubs planted along 55 m of shoreline)
4B	Riffle	N 44˚ 31’ 39.9” W 064˚ 38’ 28.6”	**Right Bank:** Fairly flat and adjacent to a manicured lawn, manicured grasses, and several large hardwoods. Banks in this area are undercut **Left Bank:** sloping, the riparian zone consists of alders and shrubs, with some hardwood trees. Shade	Manicured Lawn	Plant saplings where riparian area is degraded Speak with residents about keeping an	Medium	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			coverage on this bank is 70% **Water Description:** light tannin colour, suspended solids are visible. This is a very gently flowing riffle, slow velocity **Wetted Width:** 1.5 m **Average Depth:** 30 cm **Substrate Composition:** Cobble and some gravel **Water Quality:** **YSI MEASUREMENTS:** **Temperature**: 12.7˚C **DO%**: 91.2 % **DO**: 9.0 mg/L **SPC**: 26.1 µs/cm **TDS**: 17.3 mg/L **Salinity**: 0.01ppt **pH**: 5.58		acceptable riparian zone		
4C	Bridge on MacKay Road	N 44˚ 31’ 39.9” W 064˚ 38’ 28.6”	**Right Bank:** Flat and adjacent to a manicured lawn, which consists of manicured grasses, and several large hardwoods. Banks in this area are undercut. Shade coverage is 20%. **Left Bank:** Sloping, and the riparian zone consists of alders and shrubs, with some hardwood trees. Shade coverage is 70%.	Manicured Lawn	Plant saplings where riparian area is degraded Speak with residents regarding keeping an acceptable riparian zone	Medium	

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Water Description: light tannin color and suspended solids are visible. This is a very slow moving section, it is hard to pinpoint a current. **Wetted Width:** 10 m for approximately 50 m, then narrows to 5 m in width for another 50 m **Average Depth:** 50 cm **Substrate Composition:** mostly gravel and some cobble. **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature**: 13.1˚C **DO%**: 88.2 **DO**: 8.8 mg/L **SPC**: 0.026 mS/cm **TDS**: 17.4 mg/L **Salinity**: 0.01 ppt **pH**: 5.56				
4D	Un-named feeder brook	N 44˚ 31’ 39.9” W 064˚ 38’ 28.6” To N 44˚ 31’ 48.6” W 064˚ 38’ 37.4”	**Right Bank & Left Bank:** Both banks are gently sloping. Riparian zone consists of alders and shrubs, leading into a mixed forest stand. Ground coverage is grasses and ferns **Water Description:** light tannin colour and suspended solids are visible. This reach of the stream is a	Forested area Residential homes	Digger Logs	N/A	4A – 4D assessed in 2013 Site checked in 2014, **no restoration is needed**

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			shallow run, lacking pools **Wetted Width:** 3 m **Average Depth:** 50 cm **Shade**: 90% **Substrate Composition:** mostly cobble and gravel **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature**: 13.0˚C **DO%**: 86.2 **DO**: 8.6 mg/L **SPC**: 0.026 mS/cm **TDS**: 17.2 mg/L **Salinity**: 0.01 ppt **pH**: 5.53				
4E	180˚ bend in stream and a substrate change	N 44˚31'49.8" W 064˚38'37.7"	**Right bank:** sandy with alders and has a gradual slope of about 1 m with grass vegetation. Patches of invasive glossy buckthorn. Both banks have mixed-wood forest **Left bank:** larger in height ranging from 1 m to 3 m with some undercutting, lots of young softwood growth, moss and leaf litter on the ground, and a swampy area about 10 m away from stream. **Water Description:** tannin in colour	Forested and swampy area Invasive Glossy Buckthorn	Removal of invasive plants	Medium	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			and flowing slowly. **Wetted width:** 7.5 m **Bankfull width:** 10 m **Floodplain:** +30 m **Average depth:** 50 cm **Thalweg:** 60 cm **Shade:** 50% **Substrate Composition:** 10% cobble, 30% coarse, 10% medium, 40% fines and 10% organic **Riparian Health Assessment Score:** 47 **Water Quality May 27, 2014, 11:42am** **Water Temperature:** 9.5˚C **DO%**: 94 **DO**: 10.7 mg/L **SPC**: 0.061 mS/cm **TDS**: 39.65 mg/L **Salinity**: 0.03 ppt **pH**: 6.9				
4F	Stream splits and left side flows into a pond. A lot of wood debris built up and	N 44˚31'51.1" W 064˚38'36.7"	**Right bank:** erosion and undercutting, fallen trees, exposed roots, mostly grass with some young trees and sand on banks, looks like small braid runs 5 m behind the bank **Left bank**: 2 m high, some	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	banks have mounds of cobble		undercutting and erosion, sandy parts with human footprints, grass, moss and sprouts with mixed wood vegetation **Water Description:** Water is fast flowing and has a lot exposed and dry cobble, and wood debris creating a dam **Wetted width:** 11 m **Bankfull width:** 11 m **Floodplain:** +30 m **Average depth:** 25 cm **Thalweg:** 40 cm **Shade:** 40% **Substrate Composition:** 10% boulder, 40% cobble, 10% coarse, 15% medium, and 25% fine **Embedded:** ~10% and caddis flies and dragon fly larvae found **Riparian Health Assessment Score:** 47 **Water Quality May 27, 2014, 11:52am** **Water Temperature:** 9.5˚C **DO%**: 106 **DO**: 12.1 mg/L **SPC**: 0.061 mS/cm				

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			TDS: 39.65 mg/L **Salinity**: 0.03 ppt **pH**: 6.76				
4G	Wooden/steel bridge and 100 m downstream there is a deep section of a depth of ~1 m	N 44˚31'53.5" W 064˚38'34.8"	**Right bank**: has a trail that continues over bridge, wire present, undercutting, sand, clearing with a building about 20 m from bank, and logs on bank of bridge **Left bank:** has a trail that crosses over bridge, bank is 1.5 m high with erosion but boulders help stabilize, lots of logs used on banks of bridge, fallen dead trees, moss, green sprouts and softwood vegetation **Water Description:** has large boulders sticking out, straight section **Wetted width:** 7.5 m **Bankfull width:** 7.5 m **Floodplain:** +30 m (Bridge may be affecting width of stream) **Average depth:** 30 cm **Thalweg:** 35 cm **Shade:** 80% **Substrate Composition:** 40% boulders, 20% cobble, 10% medium, and 30% fine **Embedded:** 10% with caddis flies **Riparian Health Assessment Score**:	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			45 **Water Quality May 27, 2014, 12.02pm** **Water Temperature:** 9.7˚C **DO%**: 101 **DO**: 11.6 mg/L **SPC**: 0.061 mS/cm **TDS**: 39.65 mg/L **Salinity**: 0.03 ppt **pH**: 6.73				
4H	House on left bank with a lot of poultry in yard	N 44˚31'54.8" W 064˚38'30.6"	**Right bank:** has a sandy section, with wood and forest debris built up. There are also green grasses and mixed wood. Large boulders downstream, 90˚ bend in the stream **Left bank:** has a large property with a house and some sheds as well as a lot of poultry. A small section has grass right to the water and other sections have shrubs and a few trees, erosion, road visible on the left side **Water Description:** tannin colored, a lot of sand, swans and eggs found in stream **Wetted width:** 8 m **Bankfull width:** 20 m	Residential home with poultry Sedimentation in stream (possibly erosion on site or a result of cattle access upstream)	Approach landowners about keeping an appropriate riparian area Plant saplings in degraded riparian area	High	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Floodplain: +30 m **Average depth:** 40 cm **Thalweg:** 50 cm **Shade:** 60% **Substrate Composition:** 5% cobble, 5% coarse, 20% medium and 70% fine **Embedded:** 5% with caddis fly larvae present **Riparian Health Assessment Score:** 41 **Water Quality May 27, 2014, 12:10pm** **Water Temperature:** 9.7˚C **DO%**: 99 **DO**: 11.3 mg/L **SPC**: 0.061 mS/cm **TDS**: 39.65 mg/L **Salinity**: 0.03 ppt **pH**: 6.76				
4I	The right bank is higher and the substrate has changed	N 44˚31'56.6" W 064˚38'35.0"	**Right bank:** 3 m high with heavy erosion, fallen trees and there is a clearing further back, a lot of forest debris, few sprouts, some moss and dead standing wood **Left bank:** a couple meters past the end of the residential lawn, few mixed wood trees with a sandy/ fine	Forested with residential land downstream	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			substrate inlet. Heavily eroded with roots exposed and some green sprouts **Water Description:** tannin in colour and moderately flowing. There are boulders and a really shallow section just upstream and then gets deeper at this site **Wetted width:** 10 m **Bankfull width:**12 m **Floodplain** +30 m on the left side **Average depth:** 30 cm **Thalweg:** 50 cm **Shade:** 70% **Substrate composition:** 10% boulder, 15% coarse, 20% medium and 55% fines **Embedded:** 5% with caddis fly larvae and minnows present **Riparian Health Assessment Score:** 47 **Water Quality May 27, 2014, 12:20pm** **Water Temperature:** 9.6˚C **DO%**: 106 **DO**: 12.1 mg/L **SPC**: 0.062 mS/cm				

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			TDS: 40.3 mg/L **Salinity**: 0.03 ppt **pH**: 6.62				
4J	Confluence of unknown tributary	N 44˚31'56.8" W 064˚38'36.1"	**Left bank:** 1 m high, erosion, balsam fir, hemlock and alder present. The bank is also grassy and the confluence is on the left bank with and old rusty car nearby **Right bank:** 30 cm high and grassy with red maple, alder, some erosion, standing and fallen deadwood with a lot of woody debris **Water Description:** tannin coloured and relatively fast flowing, a couple meters downstream it is extremely shallow 2cm deep **Wetted width:** 7 m **Bankfull width:** 7 m **Floodplain:** +30 m **Average depth:** 15 cm **Thalweg:** 45 cm **Shade:** 60% **Substrate Composition:** 30% coarse, 35% medium and 35% fines **Embedded:** 5% with only minnows present **Riparian Health Assessment Score:** 56	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Water Quality May 27, 2014, 12:24 pm **Water Temperature:** 9.7˚C **DO**: 102 **DO**: 11.6 mg/L **SPC**: 0.061 mS/cm **TDS**: 39.65 mg/L **Salinity**: 0.03 ppt **pH**: 6.68				
4K	Water is deeper with significant undercutting	N 44˚31'57.2" W 064˚38'38.4"	**Right bank:** 1.5 m high and heavily undercut. Red maple, balsam fir, fallen trees and wood debris are present **Left bank:** grassy with alders, choke cherry, woody debris and few ferns **Water Description:** The water is slow flowing, very deep in spots 1 m. There is a slight sill from fallen trees upstream and woody debris in the water **Wetted width:** 6 m **Bankfull width:** 6 m **Floodplain:** +30 m **Average depth:** 50 cm **Thalweg:** 10 cm **Shade:** 40% **Substrate Composition:** 20% boulder,	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			10% cobble, 50% medium, 15% fines and 5% organics **Embedded:** 5% with caddis fly larvae present. **Riparian Health Assessment Score:** 54 **Water Quality May 27, 2014, 12:35 pm** **Water Temperature**: 9.8˚C **DO%**: 101 **DO**: 11.4 mg/L **SPC**: 0.060 mS/cm **TDS**: 39.0 mg/L **Salinity**: 0.03 ppt **pH**: 6.68				
4L	Woody debris down, thicket of alders	N 44˚31'57.5" W 064˚38'42.6"	**Right bank:** grassy with lots of speckled alders, thick and overhanging the water, some fallen trees present, a lot of woody debris **Left bank:** grassy with lots of speckled alders, thick and overhanging the water. Lots of woody debris in the water **Water Description:** tannin coloured and relatively slow moving	Alder swamp surrounded by forest	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Wetted width: 6 m **Bankfull width:** 6 m **Floodplain** +30 m **Average depth** 35 cm **Thalweg:** 50 cm **Shade:** 90% **Substrate composition**: 50% medium, 40% fine, 10% organic **Embedded:** 5% no macroinvertebrates present **Riparian Health Assessment Score**: 54 **Water Quality May 27, 2014, 12:46 pm** **Water Temperature**: 9.8˚C **DO%**: 98 **DO**: 11.1 mg/L **SPC**: 0.060 mS/cm **TDS**: 39 mg/L **Salinity**: 0.03 ppt **pH**: 6.68				
4M	End of alder swamp, braiding	N 44˚26’31” W 064˚34’41.3”	**Right bank:** red maple, balsam fir, tamarack, grasses, and some alders. Braid has thicket of alders on it, grassy, muddy, and has some woody debris **Left bank**: has alders and grasses	Alder swamp surrounded by forest	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Water Description: Water is slow flowing, deep pool present, tannin coloured, some woody debris, downed logs forming sills up and downstream of pool **Wetted width (Right braid):** 5m, Narrow braiding on left (1m) **Bankfull width (Right braid):** 7 m **Floodplain (Right braid):** +30 m **Average depth (Right braid):** 35 cm **Thalweg (Right braid):** 50 cm **Shade:** 90% **Substrate Composition:** 50% fine, 25% medium, 25% organic **Riparian Health Assessment Score:** 57 **Water Quality May 27, 2014, 12:52 pm** **Water Temperature**: 9.9˚C **DO%**: 101 **DO**: 11.4 mg/L **SPC**: 0.060 mS/cm **TDS**: 39.0 mg/L **Salinity**: 0.03 ppt **pH**: 6.75				
4N	Upstream from braid	N 44˚31’59.1” W 064˚38’44.2”	**Right bank**: muddy, grassy, fewer alders than left bank. Balsam fir,	Alder swamp surrounded by forest	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			chokecherries, and a lot of downed woody debris **Left bank**: muddy, grassy, alders, and has lots of downed woody debris **Water Description:** very slow moving (almost stagnant) and very muddy, with lots of debris **Wetted width:** 10 m **Bankfull width:** 11 m **Floodplain:** +30 m **Average depth:** 20 cm **Thalweg:** 30 cm **Shade:** 30% **Substrate composition**: 80% fine, 20% organic **Riparian Health Assessment Score:** 51 **Water Quality May 27, 2014, 1:01 pm** **Water Temperature**: 10.2˚C **DO%**: 82% **DO**: 9.2 mg/L **SPC**: 0.060 mS/cm **TDS**: 38.35 mg/L **Salinity**: 0.03 ppt **pH**: 6.8				

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
4O	Beaver lodge, braid	N 44˚32'00.5" W 064˚38'45.6"	**Right bank:** alders, grass, red maple, and balsam fir surrounding a beaver lodge **Left bank**: grassy with alders, red spruce and tamarack. Lots of woody debris and old man's beard (lichen) present on trees **Water Description:** nearly stagnant with lots of debris, a very muddy bottom, and it is relatively deep **Wetted width:** 7 m in braiding section, 18 m downstream of braids **Bankfull width:** 7 m in braiding section, 18 m downstream of braids **Floodplain:** +30 m **Average depth:** 40 cm **Thalweg:** 50 cm **Shade:** 20% **Substrate composition:** 80% fine, 20% organic **Riparian Health Assessment Score:** 50 **Water Quality May 27, 2014, 1:11 pm** **Water Temperature:** 10.2˚C **DO%**: 84 **DO**: 9.5 mg/L	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			SPC: 0.060 mS/cm **TDS**: 39.0 mg/L **Salinity**: 0.03 ppt **pH**: 6.8				
4P	Confluence, water is moving faster	N 44˚32'01.3" W 064˚38'48.6"	**Right bank**: balsam fir, alders, red maple, sensitive ferns and grass **Left Bank:** alders, grass and lots of rotten woody debris **Water Description:** lots of woody debris, tannin coloured, flowing at moderate speed **Wetted width**: 5 m **Bankfull width**: 5 m **Floodplain**: +30 m **Average depth**: 20 cm **Thalweg**: 30 cm **Shade**: 90% **Substrate Composition:** 70% medium, 30% fines **Riparian Health Assessment Score:** 53 **Water Quality May 27, 2014, 1:22 pm** **Water Temperature**: 10.3˚C **DO%**: 99 **DO**: 11.2 mg/L **SPC**: 0.061 mS/cm	Forested/swampy area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			TDS: 39.65 mg/L **Salinity**: 0.03 ppt **pH**: 6.8				
4Q	Ending of one braid, and beginning of another. Downed trees in the water	N 44˚32'03.4" W 064˚38'50.2"	**Right bank:** lots of dead wood standing and debris, 30 cm high with undercutting **Left bank:** mixed wood forest. The braid is an alder marsh with grass vegetation **Water Description:** clear and moving at moderate speed **Wetted width**: 3 m **Bankfull width**: 5 m **Floodplain**: +30 m (the braid is close to water level) **Average depth**: 10 cm **Thalweg**: 15 cm **Substrate Composition:** 60% medium, 40% fines. Some organic material sitting on top of the substrate **Riparian Health Assessment Score:** 53 **Water Quality May 27, 2014, 1:32 pm** **Water Temperature**: 10.3˚C **DO%**: 103	Forested/swampy area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			DO: 11.5 mg/L **SPC**: 0.060 mS/cm **TDS**: 39.0 mg/L **Salinity**: 0.03 ppt **pH**: 6.71				
4R	End of one braid and beginning of another. The braid could possibly be a confluence	N 44˚32'05.0" W 064˚38'52.0"	**Right & Left Banks:** mixed wood forests, with mostly softwoods, 30 cm in height. The braid is a thick alder swale. There is marshy land throughout the area with an abundance of alders, making it difficult to see ahead (may have deviated from main stream) **Water Description:** Water is moving faster between braids and is almost still on the right side of the braid. The water is dark tannin colour **Wetted width**: 3 m **Bankfull width**: 4 m **Floodplain**: +30 m **Average depth**: 40 cm **Thalweg**: 55 cm **Substrate Composition:** 30% boulder, 20% cobble, 10% coarse, 20% medium, 20% fines **Riparian Health Assessment Score**: 57	Forested/swampy area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Water Quality May 27, 2014, 1:43 pm **Water Temperature:** 10.1˚C **DO%**: 72 **DO**: 8.1 mg/L **SPC**: 0.055 mS/cm **TDS**: 35.75 mg/L **Salinity**: 0.02 ppt **pH**: 6.64				
4S	Stream is wide with change in substrate	N 44˚32'06.8" W 064˚38'54.1"	**Right bank:** has mixed wood, is 50 cm high, has exposed roots and the trees are right next to the water **Left bank:** lower than right, muddy and has a lot of alders **Water Quality:** brown with suspended particles and looks dirty. There is only water in some surrounding patches **Wetted width**: 7 m **Bankfull width:** 10 m **Floodplain:** +30 m **Average depth:** 30 cm **Thalweg:** 55 cm **Substrate composition**: 5% boulder, 10% cobble, 20% coarse, 20% medium and 35% fines **Embedded:** 0% embedded with caddis fly larvae present	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Riparian Health Assessment Score: 54 **Water Quality May 27, 2014, 1:52 pm** **Water Temperature:** 10.6˚C **DO%**: 100 **DO**: 11.2 mg/L **SPC**: 0.061 mS/cm **TDS**: 39.65 mg/L **Salinity**: 0.03 ppt **pH**: 6.84				
4T	Old braid that is no longer flowing on the right side. Banks about 70 cm high on both sides	N 44˚32'09.2" W 064˚38'53.2"	**Right bank**: a pool of still water (during high flow would be part of a braid), exposed roots and alders **Left bank:** mixed wood with the majority being hardwoods. Fewer alders present and sandy patches on both sides **Water Description:** water is moving faster into a slow moving area about 7 m wide. The narrow area is about 4m wide. Water is tannin in colour **Bankfull width**: 10 m – 12 m **Floodplain**: +30 m **Average depth**: 40 cm **Thalweg**: 60 cm **Substrate Composition:** 60% coarse,	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			20% medium, 20% fines **Embedded:** 20% macro-invertebrates: some caddisflies **Riparian Health Assessment Score**: 54 **Water Quality May 27, 2014, 2:03pm** **Water Temperature:** 10.7˚C **DO%**: 96 **DO**: 10.6 mg/L **SPC**: 0.061 mS/cm **TDS**: 39.65 mg/L **Salinity**: 0.03 ppt **pH**: 6.82				
4U	Large pool in the center of the stream, confluence on the left side and change in substrate (more cobble, less fines)	N 44˚32'11.0" W 064˚38'53.2"	**Right bank:** Mainly alders and hardwood, lower than left bank **Left bank**: 80 cm high with some undercutting. Made up of mixed wood, forest litter, and some young firs **Water Description:** tannin in colour, and flowing at moderate speed. There is little debris in the water **Wetted width**: 8 m **Bankfull width**: 8 m **Floodplain**: +30 m **Average depth**: 40 cm **Thalweg**: 80 cm	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Substrate Composition: 40% cobble, 30% coarse, 15% medium, 15% fines **Embedded**: 5% macro invertebrates: stonefly **Riparian Health Assessment Score**: 53 **Water Quality May 27, 2014, 2:08 pm** **Water Temperature:** 10.8˚C **DO%**: 93 **DO**: 10.3 mg/L **SPC**: 0.061 mS/cm **TDS**: 39.65 mg/L **Salinity**: 0.03 ppt **pH**: 6.8				
4V	Dam of debris across the wetted width of the stream. Mostly made of old beaver cuttings. Saw a group of trout in a still pool caused by	N 44˚32'12.1" W 064˚38'52.6"	**Right bank:** made up of alders, and mixed wood. It is muddy with a small slope about 50 cm long. Grass on the bank **Left bank:** mostly hardwood with alders, muddy. Bank is about the same level as the water. Lots of woody debris **Water Description:** The water is slow moving with lots of mucky sand and debris. Tannin in colour **Wetted width**: 7 m	Forested area	Clear blockage caused by old beaver debris	Low	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	surrounding debris		**Bankfull width**: 11 m **Floodplain**: +30 m **Average depth**: 40 cm **Thalweg**: 50 cm **Substrate Composition:** 60% organic, 20% Medium, 20% fine **Riparian Health Assessment Score:** 45 **Water Quality May 27, 2014, 2:15 pm** **Water Temperature**: 10.8˚C **DO%**: 98 **DO**: 10.9 mg/L **SPC**: 0.061 mS/cm **TDS**: 39.65 mg/L **Salinity**: 0.03 ppt **pH**: 6.95				
4W	Becomes shallower with less organic material. Narrows upstream with rocks on both banks	N 44˚32'13.9" W 064˚38'54.3"	**Right bank**: has many large boulders. Mixed wood forest with birch and balsam fir. About 30 cm high downstream **Left bank:** rocky with grasses and mixed wood. Has some moss and ferns. There are downed logs and debris blocking part of the stream. Riffle-run with some foam collecting	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			against the logs. It is wider upstream and bends around a rocky spit **Wetted width**: 5 m **Bankfull width**: 8 m **Floodplain**: +30 m **Average depth**: 15 cm **Thalweg**: 30 cm **Shade**: 80% **Substrate Composition:** 30% boulder, 20% coarse, 20% cobble, 20% medium, 10% fines **Embedded:** 25% macro invertebrates: caddisflies **Riparian Health Assessment Score:** 53 **Water Quality May 27, 2014, 2:24 pm** **Water Temperature**: 10.7˚C **DO%**: 107 **DO**: 11.9 mg/L **SPC**: 0.061 mS/cm **TDS**: 39.65 mg/L **Salinity**: 0.03 ppt **pH**: 6.86				
4X	Sill from fallen log and 90 degree	N 44˚32'17" W 064˚38'53.7"	**Right bank**: rocky with mixed wood forest and lots of deadfalls, slightly undercut downstream. Both banks	History of forest harvesting	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	meander, pool on left bank		approximately 20 cm high. Another sill and riffles downstream **Left bank**: Some exposed bedrock with lots of moss and mostly softwood forest. Fairly open with young growth about 20 m from bank. May have been cut in past **Wetted width**: 6m **Bankfull width:** 8 m **Average depth:** 25 cm **Thalweg:** 50 cm **Pool depth:** 30 cm **Pool width:** 7 m **Shade:** 50% **Substrate composition**: 40% boulder, 30% cobble, 20% coarse, 5% medium, 5% fine **Embedded:** 15% stoneflies and caddisflies present, downed trees across stream **Riparian Health Assessment Score:** 53 **Water Quality May 28, 2014, 1:28 pm** **Water Temperature**: 12.1˚C **DO%**: 102 **DO**: 11.0 mg/L				

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			SPC: 0.061 mS/cm **TDS**: 39.65 mg/L **Salinity**: 0.03 ppt **pH**: 7.05				
4Y	Upstream of small riffle and straight run for about 40m, fairly slow moving and shallow	N 44˚32'17.9" W 064˚38'58.7"	**Right bank:** composed of rocks, lots of deadfall. Tree partially overhangs stream **Left bank:** undercut, 20 cm high, moss covered with mixed wood and some deadfalls, clearing 30 m from stream **Water Description:** tannin coloured **Wetted width:** 5 m **Bankfull width:** 7 m **Average depth:** 20 cm **Thalweg:** 40 cm **Shade:** 70% **Embedded:** 5% caddisflies present **Substrate composition:** 5% boulder, 30% coarse, 15% fine, 30% cobble, 20% medium **Riparian Health Assessment Score:** 56 **Water Quality May 28, 2014, 1:36 pm** **Water Temperature**: 12.1˚C **DO%**: 107	Forested	Revisit site to check if digger logs in area would be acceptable	Medium	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			DO: 11.5 mg/L **SPC**: 0.061 mS/cm **TDS**: 39.65 mg/L **Salinity**: 0.03 ppt **pH**: 7.04				
4Z	Confluence of small stream, riffle with deadfall across stream, 90 degree meander	N 44˚32'17.8" W 064˚39'01.5"	**Right bank:** boulders and bedrock present, abundance of moss and ferns in mixed wood forest. Lots of deadfall in the area **Left bank:** undercut, lots of moss and grasses, mixed wood forest with rocky ground **Water Description:** tannin coloured and flowing at moderate speed **Wetted width:** 6 m **Bankfull width:** 8 m **Average depth:** 30 cm **Thalweg:** 55 cm **Shade:** 30% **Embedded:** 5% stoneflies and caddisflies present **Substrate composition:** 10% bedrock, 10% boulder, 35% cobble, 20% coarse, 20% medium, 5% fines **Riparian Health Assessment Score:** 58	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Water Quality May 28, 2014, 1:42 pm **Water Temperature:** 12.7˚C **DO%**: 108 **DO**: 11.5 mg/L **SPC**: 0.052 mS/cm **TDS**: 40.3 mg/L **Salinity**: 0.03 ppt **pH**: 7.11				
4AA	Middle of braid, huge pile of woody debris, potential to block fish passage in future	N 44˚ 32’ 19” W 064˚ 39’ 03”	**Right bank:** lots of standing deadwood along bank, some still standing. Evidence of erosion and undercut banks. Both banks 15 cm high **Left Bank:** Rocky cobble with plants growing (may have once been part of streambed). Deadfall, grass, and moss in mixed wood forest. Pool on left bank directly below debris blockage **Wetted width:** 3.5 m **Bankfull width:** 6 m **Average depth:** 20 cm **Thalweg:** 40 cm **Pool width:** 7 m **Pool depth:** 60 cm **Shade:** 50% **Substrate composition:** 5% boulder, 40% cobble, 25% coarse, 10% fine,	Forested area	Clear debris blockage	High	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			20% medium **Embedded:** 20% caddisflies and stoneflies present **Riparian Health Assessment Score:** 55 **Water Quality May 28, 2014, 1:49 pm** **Water Temperature:** 12.9˚C **DO%**: 105 **DO**: 11.0 mg/L **SPC**: 0.049 mS/cm **TDS**: 31.85 mg/L **Salinity**: 0.02 ppt **pH**: 7.15				
4BB	Small confluence on left side (LS), Top of two braids. LS Braid 3 m long, RS braid 40 m long and small 20 cm waterfall in middle stream	N 44˚32'22.7" W 064˚39'03.9"	**Right bank:** extensive dead fall and debris on the braid, mostly softwood growing, clear cut area about 25 m away, appears to be a small buffer zone on each side of stream **Left bank:** undercutting, rock piles extending into stream, lots of ferns and mosses, large old clear cut 10 m from stream **Wetted width:** 3 m **Bankfull width:** 7 m **Floodplain:** +30 m **Average depth:** 15 cm	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Thalweg: 30 cm **Shade:** 60% **Substrate Composition:** 15% boulders, 35% cobble, 25% coarse, 15% medium, and 5% fines **Embedded:** 5% **Riparian Health Assessment Score:** 50 **Water Quality May 28, 2014, 1:56 pm** **Water Temperature:** 13.2˚C **DO%**: 108 **DO**: 11.3 mg/L **SPC**: 0.062 mS/cm **TDS**: 40.3 mg/L **Salinity**: 0.03 ppt **pH**: 7.05				
4CC	Series of shallow, wide riffles, lots of downed balsam fir	N 44˚32'24.5" W 064˚39'04.8"	**Right bank:** similar to left bank with red maple, white ash present, boulder/cobble exposed, cutover 30 m back. Lots of debris and dead trees on both banks **Left Bank:** mossy, balsam fir, there is a cutover about 30 m back from stream **Wetted width:** 8 m **Bankfull width:** 8 m	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Floodplain: +30 m **Average depth:** 15 cm **Thalweg:** 20 cm **Shade:** 80% **Substrate Composition:** 20% boulders, 40% cobble, 30% coarse, 5% medium, and 5% fines **Embedded:** 7% with some caddis flies **Riparian Health Assessment Score:** 55 **Water Quality May 28, 2014, 2:00 pm** **Water Temperature:** 13.4˚C **DO%**: 108 **DO**: 11.3 mg/L **SPC**: 0.062 mS/cm **TDS**: 40.3 mg/L **Salinity**: 0.03 ppt **pH**: 7.03				
4DD	Confluence, and a narrow buffer zone	N 44˚32'25.4" W 064˚39'07.4"	**Right bank:** red maple, fir, white ash, red spruce, moss, fir regeneration, and a narrow buffer strip (>8 m) from cut **Left bank:** sensitive fern, grass, moss, fir, red spruce, white birch, and some fir regeneration	Forest area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Water Description: tannin in colour, fast moving with a series of riffles **Wetted width:** 7 m **Bankfull width:** 8 m **Floodplain:** +30 m **Average depth:** 20 cm **Thalweg:** 25 cm **Shade:** 60% **Embedded:** 10% with some caddis flies **Substrate Composition:** 5% bedrock, 20% boulder, 49% cobble, 30% coarse and %5 medium **Riparian Health Assessment Score:** 52 **Water Quality May 28, 2014, 2:12pm** **Water Temperature:** 13.9˚C **DO%**: 106 **DO**: 10.9 mg/L **SPC**: 0.063 mS/cm **TDS**: 40.95 mg/L **Salinity**: 0.03 ppt **pH**: 7.04				
4EE	Upstream from braid and small confluence	N 44˚32'30.9" W 064˚39'09.9"	**Right bank:** lower to the stream than left bank, and has ferns, red maple, white pine, and mossy banks **Left bank:** 1.5 tall, exposed bedrock,	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	with dense vegetation and taller banks on left side		white birch, eastern white pine, dead balsam fir, and mossy banks **Wetted width:** 5 m **Bankfull width:** 7 m **Floodplain:** +30 m on the right side **Average depth:** 20 cm **Thalweg:** 25 cm **Shade:** 50% **Embedded:** 10% with some stoneflies **Substrate Composition:** 20% bedrock, 20% boulder, 30% cobble, 20% coarse, 7% medium, and 3% fines **Riparian Health Assessment Score:** 60 **Water Quality May 28, 2014, 2:28pm** **Water Temperature:** 14.7˚C **DO%:** 107 **DO**: 11.0 mg/L **SPC**: 0.070 mS/cm **TDS**: 45.5 mg/L **Salinity**: 0.03 ppt **pH**: 7.22				
4FF	Braiding, 90˚ bend	N 44˚32’32.8” W 064˚39’10.9”	**Right bank:** somewhat sandy, grassy with washed up debris, balsam fir, white ash, grey birch, red maple and some dead falls	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Left bank: mossy, dead falls, ferns, white birch, red maple, red spruce, slightly undercut **Wetted width:** 5 m **Bankfull width:** 8 m **Floodplain:** +30 m **Average depth:** 25 cm **Thalweg:** 40 cm **Substrate Composition:** 5% boulder, 40% cobble, 30% coarse, 20% medium and 5% fines **Embedded:** 15%, caddis fly larvae present **Riparian Health Assessment Score:** 56 **Water Quality May 28, 2014, 2:35 pm** **Water Temperature:** 15.0˚C **DO%**: 108 **DO**: 10.9 mg/L **SPC**: 0.070 mS/cm **TDS**: 45.5 mg/L **Salinity**: 0.03 ppt **pH**: 7.17				
4GG	Sharp bend in stream	N 44˚32'36.5" W 064˚39'09.5"	**Left bank:** grassy with ferns, balsam fir, red maple, white birch, lots of debris and larger piles of debris	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Right bank: grassy with debris, white ash and balsam fir **Wetted width:** 4 m **Bankfull width:** 6 m **Floodplain:** +30 m **Average depth:** 20 cm **Thalweg** 25 cm **Substrate Composition:** 50% bedrock, 20% boulder, 10% cobble, 10% medium, 10% fines **Riparian Health Assessment Score:** 56 **Water Quality May 28, 2014, 2:52 pm** **Water Temperature:** 15.2˚C **DO%**: 106 **DO**: 10.6 mg/L **SPC**: 0.070 mS/cm **TDS**: 45.5 mg/L **Salinity**: 0.03 ppt **pH**: 7.22				
4HH	Braid (active when water is higher) water level is lower than all previous sites	N 44˚32’37.0” W 064˚39’09.2”	**Right bank:** sensitive ferns, grass, balsam fir, red maple and white birch. The rocks are moss covered **Left bank:** sensitive ferns, new york ferns, occasional balsam fir saplings, scattered red maple and white birch,	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			lots of grass and a few stumps **Wetted width**: 6 m **Bankfull width**: 8 m **Floodplain**: +30 m **Average depth**: 10 cm **Thalweg**: 20 cm **Shade**: 40% **Substrate Composition**: 2% boulder, 30% cobble, 30% coarse, 15% medium, 5% fines **Embedded:** 30% macro invertebrates: caddisflies **Riparian Health Assessment Score:** 53 **Water Quality May 29th, 2014 at 9:08 am.** **Water Temperature:** 7.1˚C **DO%**: 105 **DO**: 12.8 mg/L **SPC**: 0.072 mS/cm **TDS**: 46.8 mg/L **Salinity**: 0.03 ppt **pH**: 6.71				
4II	Downed log in stream, eroded bank	N 44˚32'40.0" W 064˚39'11.8"	**Right bank:** has lots of debris, balsam fir, white ash, ferns, and is very eroded	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	and deep pool		**Left bank**: woody debris, grassy with some ferns and has red maple and balsam fir **Wetted width:** 7.5 m **Bankfull width:** 7.5 m **Average depth:** 1 m **Thalweg:** 1 m **Floodplain:** 20 m on left **Shade:** 30% **Substrate Composition:** 30% bedrock, 20% boulder, 20% Cobble, 10% coarse, 10% medium, 10% fines **Embedded:** 20%, macro invertebrates: caddisflies **Riparian Health Assessment Score:** 51 **Water Quality May 29, 2014 at 9:24 am.** **Water Temperature:** 7.1˚C **DO%**: 95 **DO**: 11.5 mg/L **SPC**: 0.072 mS/cm **TDS**: 46.8 mg/L **Salinity**: 0.03 ppt **pH**: 7.01				

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
4JJ	Small sill/ waterfall formed by outcropping of bedrock	N 44˚32'41.7" W 064˚39'11.9"	**Right bank:** moss covered with sensitive ferns, grass, red maple, white ash and balsam fir **Left bank:** grassy with lots of sensitive ferns, balsam fir and red maple **Wetted width:** 6 m **Bankfull width:** 8 m **Floodplain:** 15 m **Average depth:** 15 cm **Thalweg:** 30 cm **Substrate Composition:** 60% bedrock, 5% boulder, 10% cobble, 15% coarse, 5% medium, 5% fines **Embedded:** 10% macro invertebrates: caddisflies **Riparian Health Assessment Score:** 53 **Water Quality May 29, 2014 (time):** **Temperature:** 7.4˚C **DO%**: 110 **DO**: 13.2 mg/L **SPC**: 0.072 mS/cm **TDS**: 46.15 mg/L **Salinity**: 0.03 ppt **pH**: 7.16	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
4KK	Upstream from large amount of woody debris, near a series of riffles, logs across the stream	N 44˚32'44.8" W 064˚39'14.2"	**Right bank:** mossy and grassy with ferns, balsam fir, red maple, and white birch **Left bank:** lots of downed logs, exposed rock, and a steep hill. It is mossy with ferns, grass, balsam fir, and eastern white pine **Wetted width:** 5 m **Bankfull width:** 6 m **Floodplain:** 10 m **Average depth**: 20 cm **Thalweg**: 30 cm **Shade**: 80% **Substrate**: 40% bedrock, 20% boulder, 10% coarse, 10% cobble, 15% medium, 5% fines **Embedded**: 10%, no macro invertebrates **Riparian Health Assessment Score**: 52 **Water Quality May 29, 2014 at 9:58 am:** **Water Temperature**: 7.5˚C **DO%**: 112 **DO**: 13.4 mg/L **SPC**: 0.071 mS/cm **TDS**: 46.15 mg/L	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Salinity: 0.03 ppt **pH**: 6.98				
4LL	Very calm, wide stretch, change in substrate	N 44˚32'47.0" W 064˚39'16.0"	**Right bank:** same as the left but there appears to have been a windstorm and some point as there is balsam fir re-growing into a canopy gap **Left bank:** mossy with lots of ferns, red maple, and balsam fir **Wetted width**: 8 m **Bankfull width**: 8 m **Floodplain**: 15 m **Average depth**: 20 cm **Thalweg**: 20 cm **Shade**: 80% **Substrate Composition**: 5% boulder, 40% cobble, 40% coarse, 5% medium, 10% fines **Embedded**: 50% macro invertebrates: caddisflies **Riparian Health Assessment Score:** 54 **Water Quality May 29, 2014 at 10:11 am.** **Water Temperature**: 8.4˚C **DO%**: 105	Forested area	Possible digger log/deflector site	Medium	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			DO: 12.3 mg/L **SPC**: 0.071 mS/cm **TDS**: 46.15 mg/L **Salinity**: 0.03 ppt **pH**: 7.09				
4MM	Adjacent to Christmas tree farm on both banks	N 44˚32'50.2" W 064˚39'18.5"	**Right bank:** rocky with moss, grass, ferns, balsam fir, white birch, and red maple **Left bank:** grassy with lots of ferns, moss, red maple, white ash and balsam fir **Wetted width**: 5 m **Bankfull width**: 7 m **Floodplain**: 20 m **Average depth**: 20 cm **Thalweg**: 30 cm **Shade**: 60% **Substrate**: 15% boulder, 50% Cobble, 20% coarse, 10% medium, 5% fines **Embedded**: 10% macro invertebrates: caddisflies Riparian Health Assessment Score: 50 **Water Quality May 29th, 2014 at 10:24 am.** **Water Temperature:** 8.9˚C	Christmas tree production	N/A	N/A	Visited tree lot with landowner to confirm adequate riparian buffer, no restoration recommended at this site

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			DO%: 113 **DO**: 13.1 mg/L **SPC**: 0.070 mS/cm **TDS**: 45.5 mg/L **Salinity**: 0.03 ppt **pH**: 6.91				
4NN	Stream narrows, has a slight meander, 5 m buffer zone to the Christmas tree farm on the right bank. Downhill from parked vehicles	N 44˚32'52.1" W 064˚39'21.0"	**Right bank:** 1 m high, with lots of boulders holding up the bank. Little buffer before tree farm **Left bank:** 10-15 m buffer of mixed wood forest, with ferns and grasses before the tree farm. Small pool/ inlet on the left bank about 6 m long. Pool is shallow with lots of boulders and not a suitable fish habitat. Rocky spit uncovered by water upstream on left bank **Wetted width**: 5 m **Pool width**: 6 m **Bankfull width**: 6 m **Average depth**: 20 cm **Thalweg**: 30 cm **Shade**: 80% **Substrate Composition**: 20% bedrock, 40% boulder, 10% cobble, 15% coarse, 5% medium, 10% fines **Embedded**: 10% macro	Christmas tree production	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			invertebrates: caddisflies **Riparian Health Assessment Score:** 49 **Water Quality May 29th, 2014 at 10:41 am.** **Water Temperature**: 9.3˚C **DO%**: 107 **DO**: 12.3 mg/L **SPC**: 0.070 mS/cm **TDS**: 45.5 mg/L **Salinity**: 0.03 ppt **pH**: 7.03				
4OO	Tall wooden bridge crossing stream. 90˚ meanders downstream. Very little buffer of trees on either side of the stream to the Christmas trees	N 44˚32'54.3" W 064˚39'22.4"	**Right bank:** made up of mixed wood and is slightly undercut downstream, 30 cm high and flat with a slight incline further back from the stream **Left bank:** small cobble in stream uncovered by water, 30 cm high, flat with mixed wood, grasses and ferns. Small pool on the right bank about 5 m long and 1.5 m wide, shaded by trees **Wetted width**: 7 m **Bankfull width**: 7.5 m **Average depth**: 20 cm **Thalweg**: 40 cm	Christmas tree production	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Shade: 50% **Substrate Composition**: 5% boulder, 35% cobble, 40% coarse, 15% medium, 5% fines **Embedded**: 5% no macro invertebrates **Riparian Health Assessment Score:** 42 **Water Quality May 29, 2014 at 10:59 am.** **Water Temperature**: 10.1˚C **DO%**: 102 **DO**: 11.5 mg/L **SPC**: 0.070 mS/cm **TDS**: 45.5 mg/L **Salinity**: 0.03 ppt **pH**: 7.18				
4PP	Shallow pool on right side, stream is very shallow	N 44˚32'56.2" W 064˚39'23.2"	**Right bank:** slightly undercut, 30 cm tall and very flat, 10 m buffer of mixed wood, grasses and ferns before the tree lot **Left Bank:** 5 m buffer with mixed wood. Similar to the right bank **Water Description:** The water is fairly clear and moving at a moderate pace **Wetted width**: 6 m	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Pool width: 5 m **Bankfull width**: 7.5 m **Pool depth**: 15 cm **Average depth**: 7 cm **Thalweg**: 15 cm **Shade**: 60% **Substrate Composition**: 2.5% boulder, 40% cobble, 40% coarse, 10% medium, 7.5% fines **Embedded**: 5% macro invertebrates: dragonfly larvae **Riparian Health Assessment Score:** 50 **Water Quality May 29, 2014 at 11:17 am.** **Water Temperature:** 10.9˚C **DO%**: 100 **DO**: 11.1 mg/L **SPC**: 0.070 mS/cm **TDS**: 45.5 mg/L **Salinity**: 0.03 ppt **pH**: 7.13				
4QQ	Middle of an alder swale. Very shallow water, meander	N 44˚32'58.3" W 064˚39'25.0"	**Right bank:** lots of alders, moss, ferns, 20 cm high and very flat at the top **Left bank:** Christmas trees 30 m away from banks. Clearing of alders with	Forested area Christmas tree production	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	downstream with braid upstream		very few softwood trees. Banks very undercut ~50 cm high, flat with ferns and grass **Wetted width:** 4 m **Bankfull width:** 5 m **Floodplain:** 30+ m **Shade:** 60% **Depth:** 10 cm **Thalweg:** 15 cm **Substrate Composition**: 5% boulder, 10% cobble, 50% coarse, 20% medium, 15% fine. **Embeddedness:** 5% **Riparian Health Assessment Score:** 57 **Water Quality May 29th, 2014 at 11:33 am** **Water Temperature:** 11.4˚C **DO%**: 109 **DO**: 11.9 mg/L **SPC**: 0.067 mS/cm **TDS**: 43.55 mg/L **Salinity**: 0.03 ppt **pH:** 6.86				
4RR	Upstream of a large amount	N 44˚32’58.6” W 064˚39’28.4”	**Right bank:** 10 m buffer zone to Christmas tree farm. Mostly	Forested Christmas tree	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	of braiding. Left braid is fairly deep, slow moving until it reaches rock sill where it narrows. Right braid is narrow, shallow and fast		softwood, ferns, alders, very flat **Left bank:** has alders and ferns. Lots of alders overhanging the stream and some woody debris in the stream. **Water Description:** tannin coloured, slow moving **Wetted width:** 6.5 m **Bankfull width:** 7 m **Floodplain:** 30+ m **Average depth:** 30 cm **Thalweg:** 35 cm **Shade:** 70% **Embedded:** 5%, mayflies and stoneflies present **Substrate Composition**: 10% cobble, 45% coarse, 10% medium, 5% boulder, 30% fine **Riparian Health Assessment Score:** 55 **Water Quality May 29th, 2014 at 11:52 am.** **Water Temperature**: 11.9˚C **DO%**: 100 **DO**: 10.8 mg/L **SPC**: 0.059 mS/cm **TDS**: 38.35 mg/L **Salinity**: 0.03 ppt	production			

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			pH 7.06				
4SS	Wooden bridge crossing, almost no buffer zone between tree lot and stream, and the stream is quite shallow with riffles upstream	N 44˚32'58.6" W 064˚39'30.9"	**Right bank:** slopes upward 5 m then becomes flat, alders and grasses line bank until clearing of Christmas trees **Left bank:** slopes up with very few alders and trees along bank **Wetted:** 5 m **Bankfull width:** 5 m **Floodplain:** +30 m **Average depth:** 25 cm **Under bridge depth:** 70 cm and the bridge appears to restrict the flow of the stream **Thalweg:** 30 cm **Shade:** 30% **Substrate Composition:** 25% boulders, 35% cobble, 20% coarse, 15% medium, and 5% fines. **Embedded:** 5% with caddis flies and stone flies found **Riparian Health Assessment Score:** 40 **Water Quality Sample** **May 29, 2014 (12:31 pm):** **Water Temperature:** 13.5˚C **DO%**: 106	Christmas tree production	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			DO: 10.9 mg/L **SPC**: 0.065 mS/cm **TDS**: 42.25 mg/L **Salinity**: 0.03 ppt **pH**: 7.2				
4TT	Stream narrows, riffles upstream, short run about 20 m downstream, water is fairly shallow and moving at moderate speed, and small buffer on both sides to Christmas tree farm	N 44˚32'59.9" W 064˚39'33.8"	**Right bank:** made up of boulders piled on top of each other, appears man made. Both banks about 20 cm tall with mixed wood and leaf litter **Left bank:** looks the same but only for a short 10 m length **Wetted width:** 4 m **Bankfull width:** 4.5 m **Floodplain:** +30 m **Average depth:** 20 cm **Thalweg** of 30 cm **Shade:** 80% **Substrate Composition:** 40% boulder, 40% cobble, 10% coarse, 5% medium, and 5% fines **Embedded:** 10% with stone flies and caddis flies **Riparian Health Assessment Score:** 48 **Water Quality Sample** **May 29, 2014 (12:51 pm):**	Agriculture land and forested	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Water Temperature: 14.2˚C **DO%**: 108 **DO**: 11.0 mg/L **SPC**: 0.065 mS/cm **TDS**: 42.25 mg/L **Salinity**: 0.03 ppt **pH**: 7.14				
4UU	Stream meanders ~90˚ around bedrock bank then turns ~90˚ after bedrock. Bedrock creates riffle downstream, and section around bedrock is wider and a slow moving run	N 44˚33'01.5" W 064˚39'34.6"	**Right bank**: undercut with lots of alders, softwoods and grass with a slightly larger buffer before tree farm **Left bank:** has bedrock for 5 m and a small hill 5 m tall upstream where buffer zone narrows and trees almost come to water's edge. Very few hardwood trees **Wetted width:** 7 m **Bankfull width:** 7 m **Floodplain:** +30 m on the right side. **Average depth:** 30 cm **Thalweg:** 40 cm **Shade:** 50% **Substrate Composition:** 60% bedrock, 20% boulders, 5% cobble, 5% coarse, 5% medium, and 5% fines **Riparian Health Assessment Score:** 54	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Water Quality Sample **May 29, 2014 (1:09 pm):** **Water Temperature:** 14.2˚C **DO%**: 88 **DO**: 9.0 mg/L **SPC**: 0.066 mS/cm **TDS**: 42.9 mg/L **Salinity**: 0.03 ppt **pH**: 7.31				
4VV	No buffer zone on right bank from tree farm, pool on right side, and lots of bedrock	N 44˚33'02.5" W 064˚39'35.9"	**Right bank**: Christmas tree farm with no buffer zone, bedrock, moss, dried sedges and one big tree **Left bank:** 2 m high, small to no buffer zone, moss, ferns, and green sprouts near water, alders and trees on bank. There is some braiding and bedrock intrusions in the water creating a calm pool area, boulders extruding, riffle over bedrock, fairly shallow and fast flowing **Wetted width:** 5 m **Bankfull width:** 8 m **Floodplain:** +30 m **Average depth:** 15 cm **Pool depth:** 30 cm **Thalweg:** 20 cm **Shade:** 50%	Christmas tree production near stream	Riparian planting in degraded spots	Low	Site already visited with landowner but could approach again about planting

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Substrate Composition: 40% bedrock, 10% boulders, 30% cobble, 15% coarse, 5% fines **Embedded:** 5% **Riparian Health Assessment Score:** 44 **Water Quality Sample May 29, 2014 (1:24 pm):** **Water Temperature:** 13.8˚C **DO%**: 111 **DO**: 11.5 mg/L **SPC**: 0.066 mS/cm **TDS**: 42.9 mg/L **Salinity**: 0.03 ppt **pH**: 6.99				
4WW	90˚ bend in stream and meander	N 44˚33'03.4" W 064˚39'38.7"	**Right bank:** has a wire fence with large bedrock outcrop, 10 m buffer zone from tree farm, mostly softwood, moss. Both banks have undercutting. Stream has sharp 90˚ bend from bedrock, bedrock causes narrowness, and stream becomes narrower downstream **Left bank:** has a wider buffer zone with more trees, softwood, moss, ferns, can still see tree farm, bank is	Christmas tree production near stream	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			not very high, lots of bedrock **Wetted width:** 2 m **Bankfull width:** 9 m **Floodplain:** +30 m **Average depth:** 20 cm **Thalweg:** 30 cm **Shade:** 90% **Substrate Composition:** 50% bedrock, 5% boulders, 30% cobble, 10% coarse, 2.5 medium, and 2.5% fines **Embedded:** 5% **Riparian Health Assessment Score:** 52 **Water Quality Sample** **May 29, 2014 (1:41 pm):** **Water Temperature**: 14.0˚C **DO%**: 105 **DO**: 10.9 mg/L **SPC**: 0.066 mS/cm **TDS**: 42.9 mg/L **Salinity**: 0.03 ppt **pH**: 6.95				
4XX	Change in vegetation on right bank to	N 44˚33'05.0" W 064˚39'40.6"	**Right bank:** has alders creating shade in water, moss, mixed wood, and forest litter. Water has boulders with	Christmas tree production near stream	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	alders		moss, little erosion on bank, shallow, fast flowing **Left bank:** 7 m to the tree farm, tall green grass on bank edge, alders, slight 1 m high bank **Wetted width:** 4 m **Bankfull width:** 4.5 m **Floodplain:** +30 m **Average depth:** 20 cm **Thalweg:** 30 cm **Shade:** 40% **Substrate Composition:** 20% boulder, 40% cobble, 20% coarse, 10% medium, 10% fines **Embedded:** 5% with one caddis fly **Riparian Health Assessment Score:** 51 **Water Quality Sample** **May 29, 2014 (1:56 pm):** **Water Temperature:** 14.9˚C **DO%**: 107 **DO**: 10.9 mg/L **SPC**: 0.065 mS/cm **TDS**: 42.25 mg/L **Salinity**: 0.03 ppt **pH**: 7.02				

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
4YY	Downstream from small confluence, and cow pasture fenced off about 3 m from stream. Cows do not have access to stream here. Upstream there is a 90˚ meander by confluence	N 44˚33'06.9" W 064˚39'42.6"	**Right bank**: bedrock bank, tree farm 5 m from stream, and a few hardwoods before farm. There is a pool on the right bank formed by bedrock **Left bank:** has mixed wood, grasses and rocks (small) making up bank and cow pasture on bank **Wetted width:** 3 m **Bankfull width:** 6 m **Floodplain:** +30 m **Average depth:** 15 cm **Thalweg:** 20 cm **Shade:** 80% **Substrate Composition:** 50% bedrock, 30% boulders, 10% cobble, 5% coarse, 5% medium **Embedded:** 5% with a may-fly **Riparian Health Assessment Score:** 42 **Weather is Sunny, air 20˚C** **Water Quality Sample** **May 30, 2014 (11:22 am):** **Water Temperature**: 11.8˚C **DO%**: 110 **DO**: 11.9 mg/L **SPC**: 0.067 mS/cm	Christmas tree production near stream Cattle pasture	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			TDS: 43.55 mg/L **Salinity**: 0.03 ppt **pH**: 6.73				
4ZZ (Couldn't access right up to stream, was assessed from afar)	Bridge crossing stream in cow pasture, no access to site because it is fenced in and cows have full access to stream	N 44˚33'09.9" W 064˚39'44.4"	There is a braid downstream inside pasture. Erosion along bank most likely from cows going into water. Observed cows using stream as a drinking source. Fencing occurs for at least 200 m and continues. Christmas tree farm on the right side and cow pasture on the left. Barely any buffer zone of vegetation on bank	Livestock pasture, Christmas tree production near stream	Speak with landowners about fencing cattle out of stream Reclaim riparian area, and plant saplings to improve	High	Letter to landowner to discuss fencing project, no response from landowner, will approach again in future
4AAA	Upstream side of fenced section of cow pasture on stream (fenced section ~500m). Remains of old bridge are laying across the stream.	N 44˚33'15.5" W 064˚39'49.5"	Lots of fenced section was forested, cows had access to both banks of stream, erosion from cows entering water. **Right bank:** composed of alders, moss, and leaf litter, some softwoods, undercut banks 30cm above water **Left bank:** undercut, lots of boulders, mixed wood forest. Pasture 5m away from stream **Wetted width:** 6 m **Bankfull width:** 6 m **Floodplain:** 30+ m **Average depth:** 15 cm	Livestock pasture	Speak with landowners about fencing cattle out of stream Assess old bridge for fish passage	High	Old fallen bridge is not posing barrier to fish passage but does provide a shaded pool, recommended to keep in place for now

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Thalweg: 20 cm **Shade:** 60% **Substrate Composition**: 20% boulder, 30% cobble, 30% coarse, 10% medium, 10% fines **Embedded:** ~5% Stoneflies present **Riparian Health Assessment Score**: 49 **Water Quality May 30th, 2014 at 12:01pm.** **Water Temperature**:14.4˚C **DO%**: 104 **DO**: 10.6 mg/L **SPC** 0.080 mS/cm **TDS**: 52 mg/L **Salinity**: 0.04 ppt **pH**: 6.74				
4BBB	2 culverts placed into stream with rocks on top of them for vehicle passage. Inhibits water flow (water is	N 44˚33'16.2" W 064˚39'50.5"	**Right bank:** Composed of alders, mixed wood forest, mosses, and grasses **Left bank:** Composed of alders and mixed wood with lots of grass **Wetted width:** 3 m **Bankfull width:** 2.5 m **Floodplain:** 30+ m **Depth:** 10 cm	Forested area	Culvert assessment to confirm barrier to fish passage Restore fish passage	High	Culvert crossing was removed on Sept. 30th, 2014 and replaced by a single-span bridge in January 2015

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	only passing through one of them and it is not enough for fish passage. More water passes under the rocks in the stream.		**Thalweg:** 15 cm **Shade:** 30% **Embedded:** 5%, mayflies present **Riparian Health Assessment Score:** 43 **Water Quality May 30th, 2014 at 12:16pm.** **Water Temperature:** 15˚C **DO%**: 111 **DO**: 11.2 mg/L **SPC**: 0.080 mS/cm **TDS**: 52 mg/L **Salinity**: 0.04 ppt **pH**: 6.73				
4CCC	Wide, slow moving section (stillwater) with multiple inlets, stream opens into marsh land covered in sedges and is very slow moving	N 44˚33'17.0" W 064˚39'51.5"	**Right bank:** 10 cm higher than water, sedges and a few small alders along banks with softwoods 10 m back from water's edge, very flat ground **Left bank:** has some boulders, lots of sedge, flat ground, mixed wood forest 20 m back from water **Wetted width**: 20 m **Bankfull width:** 22 m **Floodplain:** +30 m **Depth:** 50 cm + **Shade:** none in area	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Substrate Composition: 30% boulder, 70% fines **Riparian Health Assessment Score:** 56 **Water Quality May 30th, 2014 at 1:00pm** **Water Temperature:** 15.3˚C **DO%**: 92 **DO**: 9.2 mg/L **SPC**: 0.081 mS/cm **TDS**: 52.65 mg/L **Salinity**: 0.04 ppt **pH**: 6.73				
4DDD	Top of braid, narrowed into very slow moving stream. Flowing through wetland dominated by sedges, water is tannin coloured with lots of fines	N 44˚33'21.1" W 064˚39'53.5"	**Right bank:** scattered alders and sedges, very flat, bank 30 cm above water level **Left bank:** has alders and sedges, mixed wood forest 10m from stream **Wetted width:** 2m **Bankfull width:** 2 m **Floodplain:** + 30 m **Average depth:** 30 cm **Shade:** 5% **Substrate composition**: 5% coarse, 10% organic, 85% fine **Riparian Health Assessment Score:**	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	and mud		50 **Water Quality May 30th, 2014 at 1:16pm** **Water Temperature**: 14.4˚C **DO%**: 76 **DO**: 7.8 mg/L **SPC**: 0.081 mS/cm **TDS**: 53.95 mg/L **Salinity**: 0.04 ppt **pH**: 6.68				
4EEE	Stream is shallow and slow moving, in the middle of dried up braid. Very muddy and sandy on bottom of stream, lots of braiding but most is dried up	N 44˚33'26.3" W 064˚39'58.1"	**Right bank & Left Bank:** Banks 10 cm above water level, alders and sedges lining banks, very muddy, some erosion, organic debris in the stream **Wetted width:** 2 m **Bankfull width:** 3 m **Floodplain:** +30 m **Shade:** 70% **Depth:** 10 cm **Thalweg:** 12 cm **Substrate Composition**: 5% cobble, 15% organic, 80% fine **Embedded:** Cobble is visible but very embedded in stream **Riparian Health Assessment Score:** 57	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Water Quality May 30th, 2014 at 1:42pm **Water Temperature**: 14.1˚C **DO%**: 103 **DO**: 10.6 mg/L **SPC**: 0.084 mS/cm **TDS**: 54.6 mg/L **Salinity**: 0.04 ppt **pH** 6.51				
4FFF	End of large alder wetland (~750m in length). Logging trail leading to cutover nearby. Site ~100m from Ramey Rd. Gets very shallow downstream. Bridge is narrower than stream	N 44˚33'32.5" W 064˚40'01.9"	**Right bank:** very gradually sloping with some rocks and mud present. Bank is undercut, 30cm high, lots of sedges and mixed wood. Logging trail 50m from stream **Left bank:** very eroded and undercut, very high (1.5m) with lots of boulders holding bank in place. Forest of mixed wood **Water Description:** tannin coloured, shallow, and slow moving **Wetted width:** 4 m **Bankfull width:** 6 m **Floodplain:** +30 m **Shade:** 30% **Average depth:** 20 cm **Thalweg:** 25 cm	Paved road crossing and forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Substrate Composition: 25% boulder, 30% cobble, 20% coarse, 15% medium, 10% fine **Embedded:** 25%. Caddisflies and stoneflies present **Riparian Health Assessment Score:** 47 **Water Quality May 30th, 2014 at 2:14pm** **Water Temperature**: 17˚C **DO%**: 113 **DO**: 10.9 mg/L **SPC**: 0.073 mS/cm **TDS**: 47.45 mg/L **Salinity** 0.03 ppt **pH** 6.73				
4GGG	Cow Pasture	N 44˚ 33’ 35.8” W 064˚ 40’ 05.3”	**Right bank:** a clearing with grass and sedges. This bank is flatter and hardwood and softwood trees start 20m back from the bank. Also on the right side is a logging trail 25m from the stream **Left bank:** has a 20 m high sloping hill with a rock wall put in to prevent some erosion which was likely caused by cows	Livestock, pasture	Speak with landowners about fencing cattle out of stream	High	Spoke to landowner about livestock fencing project, landowner was not interested

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Substrate Composition: of 10% cobble, 20% coarse, 50% medium and 20% fines. (Taken when the stream became visible behind the fence) **Riparian Health Assessment Score:** 50 **Water Quality June 2nd, 2014 at 11:21am** **Water Temperature**: 15.1˚C **DO%**: 66 **DO**: 6.6 mg/L **SPC**: 73.4 µs/cm **TDS**: 48.1 mg/L **Salinity**: 0.03 ppt **pH**: 7.15				
4HHH	Woody debris blocking fish passage	N 44˚ 33’ 41.0” W 064˚ 40’ 05.5”	**Right bank:** sedges and mostly hardwood with muddy banks **Left bank:** small alder swale with mixed wood forest. The cow pasture fence is only 5 m back from the stream **Water Description:** shallow and tannin in color. It is slow moving with vegetation in the water. There could also be some limestone present here **Wetted width:** 2 m	Livestock pasture	Remove any debris blocking fish passage	Medium	Landowner gave permission to clear any debris blockages throughout pasture Completed on August 6th,

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Bankfull width: 4 m **Floodplain:** +30 m **Average depth:** 5 cm **Thalweg:** 10 cm **Shade:** 40% **Substrate Composition:** 15% coarse, 50% medium, 25% fines **Embedded:** 0%, some leeches present **Riparian Health Assessment Score**: 53 **Water Quality June 2nd, 2014 at 11:37am** **Water Temperature**: 15.2˚C **DO%**: 81 **DO**: 8.1 mg/L **SPC**: 0.072 mS/cm **TDS**: 46.8 mg/L **Salinity**: 0.03 ppt **pH**: 6.42				2014
4III	Dried up confluence on right side	N 44˚ 33’ 43.3” W 064˚ 40’ 06.6”	**Right bank:** sedges, alders and some mixed wood trees **Left bank:** low with sedges and alders **Water Description:** muddy, tannin in color and still **Wetted width:**4 m **Bankfull width:** 5 m	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Floodplain: +30 m **Average depth:** 15 cm **Thalweg:** none visible **Substrate Composition:** 10% coarse, 50% medium, 30% fines, 10% organics **Riparian Health Assessment Score:** 56 **Water Quality June 2nd, 2014 at 12:00pm** **Water Temperature**: 15.6˚C **DO%**: 86 **DO**: 8.6 mg/L **SPC**: 0.072 mS/cm **TDS**: 46.8 mg/L **Salinity**: 0.03 ppt **pH**: 6.45				
4JJJ	Dried up confluence on right side and beaver debris blocking the stream	N 44˚ 23’ 45.8” W 064˚ 40’ 06.8”	**Right bank:** flat and muddy with mixed wood, alders, and sedges **Left bank:** 30 m sloping hill with a clearing at the top. Mostly hardwood and alders close to the bank **Water Description:** stillwater, tannin in colour **Wetted width:** 6 m **Bankfull width:** 8 m	Forested area	Remove any debris blocking fish passage	Medium	Landowner gave permission to clear any debris blockages throughout pasture

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Floodplain: +30 m **Average depth:** 35 cm **Thalweg:** none visible **Shade:** 20% **Substrate Composition:** 50% medium and 50% fines **Riparian Health Assessment Score:** 54 **Water Quality June 2nd, 2014 at 12:22pm** **Water Temperature**: 13.4˚C **DO%**: 52 **DO**: 5.5 mg/L **SPC**: 0.071 mS/cm **TDS**: 46.15 mg/L **Salinity**: 0.03 ppt **pH**: 5.92				Completed on August 6th, 2014
4KKK	Bottom of braid and start of sedges, swampy area	N 44˚ 33’ 49.2” W 064˚ 40’ 08.3”	**Right bank:** mixed wood trees and sedges 5 m back until the forest starts. There are young fir trees. Both banks are flat until a hill on the left side 20m back **Left bank:** mixed wood forest with a mossy floor and boulders lining the banks edge. The bank has a 10 m sloping hill	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Wetted width: 5 m **Bankfull width:** 7 m **Floodplain:** +30 m **Average depth:** 10 cm **Thalweg:** 20 cm **Substrate Composition:** 5% boulder, 5% cobble, 10% coarse, 50% medium and 30% fines **Riparian Health Assessment Score:** 56 **Water Quality June 2nd, 2014 at 1:12pm** **Water Temperature:** 16.5˚C **DO%**: 65 **DO**: 6.4 mg/L **SPC**: 0.073 mS/cm **TDS**: 47.45 mg/L **Salinity**: 0.03 ppt **pH**: 5.87				
4LLL	Middle of alder/sedge area with swampy banks	N 44˚ 34’ 00.7” W 064˚ 39’ 53.4”	**Right bank:** sedges for 10 m, mixed wood forest. There is less standing dead wood on this bank **Left bank:** a lot of dead standing wood and woody debris on the bank There are sedges for 20 m and then thick alders **Water Description:** filled with	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			organics and wood debris, dark stillwater **Wetted width:** 5 m **Bankfull width:** 5 m **Floodplain:** +30 m **Average depth:** 50 cm **Thalweg:** none visible **Substrate Composition:** muddy and mostly fines and organics **Riparian Health Assessment Score:** 43 **Water Quality June 2nd, 2014 at 1:51pm.** **Water Temperature**: 15˚C **DO%**: 31 **DO**: 3.1 mg/L **SPC**: 0.072 mS/cm **TDS**: 41.8 mg/L **Salinity**: 0.03 ppt **pH**: 5.90				
Section 5	Feindel's Bridge on Cornwall Road to Joudrey Lane Bridge on Newburne Road (North Branch main stem)						
5A	Confluence of North Branch LaHave and Indian Lake	N 44˚ 34' 20.5" W 064˚ 37' 19.2"	**Right/Left Banks:** bog/swamp, large floodplain on right bank **Water Description:** light tannin colour, suspended solids visible, large	Indian Lake Marsh / Swamp	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			boulders in river **Wetted Width:** 45 m **Average Depth:** + 1 m **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 13.9˚C **DO %:** 96.2 **DO:** 9.4 mg/L **SPC:** 0.027 mS/cm **TDS:** 17.2 mg/L **Salinity:** 0.01 ppt **pH:** 5.32	Residential area			
5B	Feeners pool	N 44˚ 33’ 04.0” W 064˚ 44’ 48.4”	**Right/Left Banks:** habitat changes from swamp to mixed forest **Water Description:** large deep water pool, slow velocity, dark tannin colour, suspended solids visible **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 13.8˚C **DO %:** 87 **DO:** 8.9 mg/L **SPC:** 0.028 mS/cm **TDS:** 15.6 mg/L **Salinity:** 0.01 ppt	Marsh / Swamp Forested	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			pH: 5.25				
5C	Indian Falls	N 44˚ 35’ 29.3” W 064˚ 36’ 17.6”	**Right/Left Banks:** steep sloped banks, right bank mature mixed forest, grasses, ferns, fish ladder **Water Description:** cobble bar downstream of falls **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 12.3˚C **DO %:** 97.4 **DO:** 9.7 mg/L **SPC:** 0.027 mS/cm **TDS:** 14.5 mg/L **Salinity:** 0.01 ppt **pH:** 5.33	Marsh / Swamp Forested area Indian Falls Park	N/A	N/A	N/A
5D	Joudrey’s Bridge Pool	N 44˚ 33’ 03.8” W 064˚ 44’ 58.0”	**Right/Left Banks:** steep gravel banks leading up to bridge, fixed forest stand, remnants of old structure on right bank **Water Description:** long fast flowing pool, light tannin, suspended solids visible	Joudrey’s Lane Bridge Residential Area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Wetted Width: 30 m **Shade:** 80% **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 12.5˚C **DO:** 98.2 **DO:** 9.9 mg/L **SPC:** 0.026 mS/cm **TDS**: 16.6 mg/L **Salinity:** 0.01 ppt **pH:** 5.50 Riparian Heath Score: Right Bank: 57				
Section 6	Joudrey's Lane Bridge on Newburne Road to Sherbrooke Lake confluence (North Branch main stem)						
6A	Texas Lake Pool	N 44˚ 36' 14.7" W 064˚ 35' 39.9"	**Right/Left Banks:** large marshy floodplain, mixed forest stand **Water Description:** **Shade:** 80% **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 12.7˚C **DO %:** 89.1 **DO:** 8.9 mg/L **SPC:** 0.027 mS/cm	Marsh / Swamp Forested area Residential area	Speak with residents about maintaining an acceptable riparian zone	Medium	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			TDS: 16.9 mg/L **Salinity:** 0.01 ppt **pH:** 5.27				
6B	Change in forest & riparian area	N 44˚ 36’ 14.7” W 064˚ 35’ 39.9” To N 44˚ 36’ 51.5” W 064˚ 35’ 40.9”	Right/Left Banks: bank undercutting, braiding with large islands **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 12.1˚C **DO %:** 93.3 **DO:** 9.6 mg/L **SPC:** 0.025 mS/cm **TDS:** 15.7 mg/L **Salinity:** 0.01 ppt **pH:** 5.25	Forested area Logging road	N/A	N/A	N/A
6C	Housing and Cottage Development	N 44˚ 36’ 51.5” W 064˚ 35’ 40.9”	Surveyed from Sherbrooke Lake outflow downstream for 3 km. Left bank not developed, healthy riparian habitat. Right bank has cottages, many properties have been cleared to the shoreline. Gravel pads for trailers, cabins near shoreline in many areas, section of steep slopes	Forested area Residential area	Riparian enhancements	High	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Water Quality Average: **YSI MEASUREMENTS:** **Water Temperature:** 12.5˚C **DO %:** 91.2 **DO:** 9.3 mg/L **SPC:** 0.027 mS/cm **TDS:** 16.9 mg/L **Salinity:** 0.01 ppt **pH:** 5.27				
6D	North Branch confluence with Sherbrooke Lake	N 44˚32’ 56.5” W 064˚45’ 01.6”	**Right/Left Banks:** wetland, mixed forest, private docks, degraded riparian along cottage waterfronts **Water Description:** light tannin colour, suspended solids visible **Wetted Width:** 31 m **Water Quality:** **YSI MEASUREMENTS:** **Water Temperature:** 11.7˚C **DO %:** 87.9 **DO:** 9.1 mg/L **SPC:** 26.4 µs/cm **TDS:** 16.9mg/L **Salinity:** 0.01 ppt **pH:** 5.27	Residential	Speak with residents about maintaining an acceptable riparian zone	High	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
Section 7	MacKays Brook (4.5 km long tributary) in Upper Northfield						
7A	Headwaters of brook, draining out of large bog/meadow. Adjacent to black spruce bog with sphagnum moss present. Leatherleaf, rhodora, lambkill are present shrubs, pitcher plant is notable herbaceous species. Beaver activity at this location. Nutrient poor, wet soil	N 44° 31' 10.3" W 064° 36' 46.3"	**Right bank:** similar to left bank, however exposed rocks not as frequent (more muddy). Water has reddish/tannin colour, slow moving **Left bank:** approximately level with water, some exposed rocks, rhodora and meadowsweet present **Wetted width:** 8 m **Bankfull width:** 8 m **Avg. depth:** 40 cm **Thalweg:** 55 cm **Floodplain:** +20 m **Substrate:** 30% boulder, 5% cobble, 15% coarse, 40% medium, 10% fine **Embeddedness:** 10%. Caddis flies present, suspended sediments, floating forest litter **Riparian Health Assessment Score**: 47 **Water Quality Sample May 7, 2014 (11:03 am):** **Water Temperature:** 9˚C **DO%:** 66 **DO:** 7.5 mg/L **SPC:** 2.4 mS/cm	Mixture of forested and wetland area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			TDS: 1560 mg/L **Sal:** 1.23 ppt **pH:** 5.69				
7B	Large outcropping of bedrock on left bank	N 44° 31' 09.1" W 064° 36' 45.8"	**Right Bank:** Slight hill on right bank. Vegetation dominated by softwood. Undisturbed grass and sedges. Slight undercutting of both banks, barbed wire crossing stream **Left Bank:** Large outcropping of bedrock. Undisturbed grass and sedges **Wetted width:** 9 m **Bankfull width:** 9 m **Average depth:** 30 cm **Thalweg:** 45 cm **Floodplain:** >30 m **Substrate (approximate):** 25% bedrock, 20% boulder, 20% cobble, 25% coarse, 5% medium, 5% fine **Embeddedness:** 10% caddis flies present, some algal growth on rocks, slow current **Riparian Health Assessment Score:** 43 **Water Quality Sample May 7, 2014**	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			(11:11 am): **Water Temperature:** 9˚C **DO%:** 70 **DO:** 8.1 mg/L **SPC:** 2.6 mS/cm **TDS:** 215.6 mg/L **Sal:** 1.23 ppt **pH:** 5.69				
7C	Braiding, exposed rock face. Right braid 1 m wide, left braid 2 m wide. Pool at end of braids ~15 m wide	N 44° 31’ 08.1” W 064° 36’ 47.9”	**Right bank**: 3 m high with exposed bedrock, moss, some undercutting, forest litter, fallen trees, small pool, ferns, white ash, red spruce, white pine **Left bank:** small slope, boulders, cut trees, undercut banks, woody debris, sedges, mixed wood **Average depth:** 15 cm **Thalweg:** 30 cm. Water full of debris, moss, and aquatic vegetation. **Floodplain**: +30 m on left bank, steep bedrock on right bank. **Substrate composition**: 60% bedrock, 5% boulder, 20% cobble, 5% coarse, 5% medium, 5% fine **Riparian Health Assessment Score:** 38	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Water Quality Sample May 7, 2014 (11:20 am): **Water Temperature:** 9.2˚C **DO%:** 77 **DO:** 8.8 mg/L **SPC:** 2.3 mS/cm **TDS:** 1534 mg/L **Sal:** 1.22 ppt **pH:** 5.89				
7D	Logging road through stream, evidence of harvesting adjacent to water. Vegetation is mixed wood. Timber was harvested right to water's edge and there did not appear to be a buffer zone	N 44° 31' 07.2" W 064° 36' 47.5"	**Right bank:** Has some bedrock, standing dead timber **Left bank:** A cutover area with lots of harvesting debris, banks sloping downward. Muddy ruts from heavy machinery present leading down into stream **Wetted width:** 4 m **Bankfull width:** 4.5 m **Average depth:** 10 cm **Thalweg:** 15 cm **Floodplain:** +30 m **Substrate composition:** 20% bedrock, 20% boulder, 40% cobble, 10% coarse, 5% medium, 5% fines **Embeddedness:** 50%. Mayflies present. Water moving at moderate speed	Partially forested, logging operations in recent past	Re-visit site to document potential violation of SMZ riparian buffer regulations	High	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	retained. Downstream from a riffle		**Riparian Health Assessment Score:** 23 **Water Quality Sample May 7, 2014 (11:30 am):** **Water Temperature:** 9.5˚C **DO%:** 86 **DO:** 9.9 mg/L **SPC:** 0.31 mS/cm **TDS:** 207 mg/L **Sal:** 0.15 ppt **pH:** 6.10				
7E	Downstream from braiding	N 44° 31’ 06.7” W 064° 36’ 48.9”	**Right bank:** Mostly hardwood (red maple, white birch), moss/grass along banks, harvesting debris similar to left bank **Left bank:** Harvesting debris, occasional red spruce, balsam fir, Eastern white pine. Alders, grasses lining banks **Wetted width:** 6 m left braid, right braid 1.5 m **Bankfull width**: same as wetted width **Average depth**: 15 cm **Thalweg:** 25 cm **Floodplain:** +30 m	Logging operation nearby	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Substrate composition: 20% boulder, 20% cobble, 20% coarse, 30% medium, 10% fines **Riparian Health Assessment Score:** 40 **Water Quality Sample May 7, 2014 (11:40 am):** **Water Temperature**: 9.8˚C **DO%:** 95 **DO:** 10.7 mg/L **SPC:** 2.3 mS/cm **TDS:** 1469 mg/L **Sal:** 1.17 ppt **pH:** 6.08				
7F	Meandering, log sill, slow water. Banks are very flat, log sills up and downstream	N 44°31' 05.0" W 064°36' 50.9"	**Right bank:** Slightly more sparse than left bank, less alders **Left Bank:** Lots of organic material built up on sides, very little erosion. Banks are same level as water, lots of woody vegetation on left bank down to water (alders, red maple, and red spruce). Some tree cover, dense alders **Wetted width:** 4 m **Bankfull width:** 4 m **Average depth:** 30 cm	Logging operation nearby	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Thalweg: 50 cm. Dark, tannin-coloured water, slow moving with no macroinvertebrates **Floodplain:** +30 m **Shade:** 20% **Substrate composition:** 50% fine, 50% organic material **Riparian Health Assessment Score:** 50 **Water Quality Sample May 7, 2014 (11:50 am):** **Water Temperature:** 10.3˚C **DO%:** 98 **DO:** 10.8 mg/L **SPC:** 2.2 mS/cm **TDS:** 1449.5 mg/L **Sal:** 1.15 ppt **pH:** 6.09				
7G	Alder swale, deep water	N 44° 31’ 04.1” W 064° 36’ 53.7”	**Right bank:** Lined with sedges, alders, mostly softwood forest (red spruce) and some red maple, banks undercut. Aquatic vegetation present, water tannin-coloured, organic matter in water, still, calm **Left bank:** Flat with lots of alders, sedges, forest is approximately 30 m	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			in from water's edge, banks slightly undercut with some moss **Wetted width:** 6.5 m **Bankfull width:** 7 m **Average depth:** 55 cm **Thalweg:** 60 cm **Floodplain:** +30 m **Shade:** 35% **Substrate composition:** 30% boulder, 30% cobble, 10% coarse, 15% medium, 15% fines **Embeddedness**: 20%, mayflies present **Riparian Health Assessment Score:** 50 **Water Quality Sample May 7, 2014 (12:00 pm):** **Water Temperature**: 10.8˚C **DO%:** 90 **DO:** 9.9 mg/L **SPC:** 2.3 mS/cm **TDS:** 1501.5 mg/L **Sal:** 1.19 ppt **pH:** 5.86				

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
7H	Braiding, ATV trail through stream	N 44° 31’ 02.4” W 064° 36’ 55.5”	**Left bank:** Mixed-wood, roughly same height as water **Right bank:** Mixed-wood with moss, dense forest surrounding trail. Vegetation change on both banks, less alders, more trees than last site. Alders still present on braids **Wetted width:** 15 m **Bankfull width:** 15 m **Average depth:** 25 cm **Thalweg** 30 cm, Pool on left side of stream, stream moving fastest in middle between braids. Water has less organic colour to it, still tannin in colour **Floodplain**: +30 m **Shade:** 60% **Substrate composition:** 80% cobble, 10% coarse, 10% fine **Embeddedness:** 40% **Riparian Health Assessment Score:** 42 **Water Quality Sample May 7, 2014 (12:10 pm):** **Water Temperature:** 10.7˚C **DO%:** 88 **DO:** 9.7 mg/L	ATV trail, forested	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			SPC: 2.4 mS/cm **TDS:** 1592.5 mg/L **Sal:** 1.27 ppt **pH:** 5.93				
7I	Riffle, downstream from braid	N 44°31' 00.7" W 064°36' 55.4"	**Right bank:** Flat, balsam fir and white ash, dead tree, moss, ferns, grass **Left bank**: Flat, downed log, grass/moss/leaf litter, sensitive ferns, balsam fir regenerating **Wetted width**: 6 m **Bankfull width:** 6 m **Average depth:** 15 cm **Thalweg:** 20 cm **Floodplain:** +30 m. Natural log sill from downed log, water well oxygenated, lots of aquatic vegetation **Substrate composition**: 25% boulder, 35% cobble, 25% coarse, 10% medium, 5% fines **Embeddedness:** 30% **Riparian Health Assessment Score:** 54 **Water Quality Sample May 7, 2014 (12:20 pm):** **Water Temperature:** 11˚C	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			DO%: 99 **DO:** 10.8 mg/L **SPC:** 2.3 mS/cm **TDS:** 1469 mg/L **Sal:** 1.17 ppt **pH:** 6.11				
7J	Two confluences (one left, one right), pools downstream, upstream riffle. Riffle-run-pool sequence	N 44° 30’ 58.5” W 064° 36’ 56.1”	**Right Bank & Left Bank:** Lots of mossy cover on the banks, undercutting present. 25 cm higher than water level. Softwood forest and ferns present on banks, in addition to leaf litter. Lots of fallen trees in riparian zone. Small stagnant puddle on left bank with strange white fungal or algal growth **Wetted width:** 3 m **Bankfull width:** 2.5 m **Average Depth:** 20 cm deep **Thalweg**: 25 cm **Floodplain:** +30 m **Substrate composition**: 5% boulder, 10% cobble, 50% coarse, 20% medium, 15% fines **Embeddedness:** 20%, mayflies present. Water fast-flowing **Riparian Health Assessment Score:** 55	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Water Quality Sample May 7, 2014 (12:30 pm): **Water Temperature:** 10.6˚C **DO%:** 98 **DO:** 10.8 mg/L **SPC:** 2.4 mS/cm **TDS:** 1592.5 mg/L **Sal:** 1.27 ppt **pH:** 5.94				
7K	Logging trail crosses the stream. Good meander. Riffle run	N 44˚30'55.6" W 064˚36'58.3"	**Right bank**: Has a logging trail with exposed rocks, forest litter, mixed wood, 0.5 m slope with boulders along both banks. Logging trail causes stream widening. Boulders create two sills **Left Bank**: logging trail, forest litter, exposed rocks on trail, mixed wood, moss, flat bank, sedges and green sprouts **Wetted width:** 6 m **Bankfull width:** 7 m **Average depth:** 10 cm **Thalweg:** 15 cm, tannin colour water **Floodplain:** +30 m **Shade:** 70% **Substrate Composition**: 20% boulder,	Logging	Talk to landowner about constructing a bridge or temporary crossing	Medium	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			40%, cobble 20%, coarse 10%, medium 10% **Embedded:** 15% macro invertebrates: 1 stonefly and worms **Riparian Health Assessment Score**: 40 **Water Quality Sample May 7, 2014 (12:40 pm):** **Water Temperature**: 11.1˚C **DO%:** 104 **DO:** 11.4 mg/L **SPC:** 0.33 mS/cm **TDS:** 202.15 mg/L **Sal:** 0.15 ppt **pH**: 5.97				
7L	Large pool on right side	N 44˚30'58.0" W 064˚36'57.3"	**Right Bank:** Mixed wood, downed trees and young fir trees on both banks. Lots of standing dead wood. Water is moving at a moderate speed, and is tannin in colour **Left Bank:** About 30 m of Alders up to this point. Lots of woody debris **Wetted width:** 4 m **Bankfull width:** 4 m **Average depth:** 20 cm **Thalweg:** 30 cm	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Pool depth: 50 cm **Floodplain:** +30 m **Substrate Composition:** boulder: 5% cobble: 5% coarse: 40% medium: 40% fines **Embeddedness:** 10% macro invertebrates: stonefly and mayfly **Riparian Health Assessment Score:** 54 **Water Quality Sample May 7, 2014 (12:49 pm):** **Water Temperature:** 11.5˚C **DO%:** 102 **DO:** 11.1 mg/L **SPC:** 0.30 mS/cm **TDS:** 196.95 mg/L **Sal:** 0.15 ppt **pH:** 5.99				
7M	30 m downstream from confluence Rock sill, pool	N 44˚30'52.4" W 064˚36'57.8"	**Right bank:** Has a downed tree, sensitive ferns, small pool, and grassy vegetation **Left bank:** Also has a downed tree, sensitive ferns, balsam fir, standing dead tree and grasses. Water is relatively calm above the sill, fast	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			flowing below, and tannin colour **Wetted width**: 6 m **Bankfull width**: 6 m **Average depth:** 25 cm **Thalweg:** 30 cm **Pool depth:** 15 cm **Floodplain:** +30 m **Shade:** 40% **Substrate Composition:** 30% boulder, 30% cobble, 20% coarse, 10% medium, 10% fine **Embedded:** 20% **Riparian Health Assessment Score:** 52 **Water Quality Sample May 7, 2014 (12:53 pm):** **Water Temperature:** 11˚C **DO%:** 100 **DO:** 10.9 mg/L **SPC:** 2.4 mS/cm **TDS:** 1527.5 mg/L **Sal:** 1.21 ppt **pH:** 5.97				

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
7N	Deep still water. Riffles downstream	N 44˚30'51.3" W 064˚36'59.9"	**Right Bank:** Has many rocks, very little trees, and a manicured lawn and fence about 10 m from stream. Mixed wood on banks, Some grass and ferns. Beaver activity nearby. Water is slow moving, tannin colour, lots of organic material decomposing **Left bank**: Slightly undercut, many softwoods present **Wetted width:** 7 m **Bankfull width:** 9 m **Average depth:** 45 cm **Thalweg**: 70 cm **Floodplain**: +30 m **Shade:** 30% **Substrate Composition:** 30% boulder, 30% coarse, 30% medium, 10% fines **Embedded:** 30% **Riparian Health Assessment Score:** 36 **Water Quality Sample May 7, 2014 (1:03 pm):** **Water Temperature:** 11˚C **DO%:** 98 **DO:** 10.8 mg/L **SPC:** 2.2 mS/cm **TDS:** 1573 mg/L	Residential Fencing and buildings 5 m from stream	Riparian enhancements	Low	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Sal: 1.25 ppt **pH:** 6.13				
7O	Near fire pond and lawn area on the right bank. Also appears to be an old trail that goes through the stream. Lots of beaver action occurring. Run, moderate speed	N 44˚30'50.0" W 064˚37'02.9"	**Right bank:** Has lawn grass and a pond. Both banks increase in height from water level to 3 m. Also have small buffer zone of mix wood and small bushes. Lots of woody debris in water **Left bank**: Has large boulders and some erosion occurring. There is also a Christmas tree farm further up the bank **Wetted width:** 7 m **Bankfull width:** 8 m **Average depth:** 50 cm **Thalweg:** 90 cm **Shade:** 40% **Substrate Composition:** 10% bedrock, 15% boulder, 40% organic, 15% cobble, 5% coarse, 5% medium, 10% fine **Embedded:** 30% **Riparian Health Assessment Score:** 47	Residential	Riparian enhancements	Low	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Water Quality Sample May 7, 2014 (1:19 pm): **Water Temperature:** 11˚C, **DO%:** 92 **DO:** 10.0 mg/L **SPC:** 2.3 mS/cm **TDS:** 1482 mg/L **Sal:** 1.18 ppt **pH:** 5.97				
7P	Higher bank, close to lawn, well and parkway. Before wooden bridge near house. Riffle-run. Rock sill and old bridge	N 44˚30'49.1" W 064˚37'05.9"	**Right Bank & Left Bank:** About 2.5 m high, there are fewer trees, more grass and a rock road driveway. Rock on banks looks like it might have been placed there **Wetted width:** 4 m **Bankfull width:** 5 m **Average depth:** 35 cm **Thalweg:** 40 cm Water is tannin colour and there is less organic matter **Floodplain:** +30 m **Substrate Composition:** 50% shade, 30% boulder, 30% cobble, 20% coarse, 10% medium, 10% fines **Embedded:** 20% Lots of rock that looks to be out of place	Residential	Riparian enhancements	Low	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Riparian Health Assessment Score: 29 **Water Quality Sample May 7, 2014 (1:52 pm):** **Water Temperature:** 11.9˚C **DO%:** 95 **DO:** 9.6 mg/L **SPC:** 19.7 mS/cm **TDS:** 12740 mg/L **Sal:** 11.68 ppt **pH:** 6.13				
7Q	Man-made pool, between the wooden driveway bridge and the highway (main road) bridge. Riffle-run pattern, rock walls are surrounding the stream	N 44˚30'47.5" W 064˚37'08.2"	**Right bank**: Has a man-made garden **Left bank**: Has gravel driveway. Lawn on both sides. Pool on left side 6 m width and 10 m long. Floodplain on right side but left bank is about 2 m high. Few large hardwood trees and one softwood spruce **Wetted width:** 3 m **Bankfull width:** 3.5 m **Average depth**: 30 cm **Thalweg:** 50 cm **Substrate Composition:** 30% boulder, 40% cobble, 20% coarse, 10% medium, 10% fine **Riparian Health Assessment Score:**	Residential	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			23 **Water Quality Sample May 7, 2014 (2:06 pm):** **Water Temperature:** 12.3˚C **DO%:** 98 **DO:** 10.4 mg/L **SPC:** 2.3 mS/cm **TDS:** 1482 mg/L **Sal:** 1.18 ppt **pH:** 6.11				
7R	Deeper, wider, after the highway bridge. Alder marshy area has been cut back 30m on the left and 10m on the right. Beaver activity is present. There is a mixed wood forest about 20 m down. There is a	N 44˚30'47.1" W 064˚37'10.7"	**Right Bank & Left Bank:** The banks are undercut, Water is still and tannin. **Wetted width:** is 6 m and narrows to 1 m about 15 m downstream **Bankfull width:** 6 m **Average depth:** 60 cm **Thalweg:** 90 cm **Floodplain:** +30 m **Shade:** none, aside from the culvert **Substrate Composition:** 20% boulder, 40% cobble, 15% coarse, 5% medium, 20% fine **Embedded:** 30% **Riparian Health Assessment Score:** 34	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	house and fire pond on the left side		**Water Quality Sample May 7, 2014 (2:25 pm):** **Water Temperature:** 12.4˚C **DO%:** 82 **DO:** 8.6 mg/L **SPC:** 2.3 mS/cm **TDS:** 1482 mg/L **Sal:** 1.18 ppt **pH:** 6.20				
7S	Across from a red barn. Habitat type is a run	N 44˚30.0'44.5" W 064˚37'13.5"	**Right bank:** Flat with forest litter, sedges, moss, mixed wood, and wood debris. Some undercutting is present. The water is moderately fast moving and tannin in colour **Left bank:** Large gravel driveway with a barn and cut logs. Some trees, green sprouts, grass, fallen branches, cinder blocks, and is flat until the driveway. ~ 1 m slope and boulders look placed along the bank. There is some sand **Wetted width**: 5 m **Bankfull width:** 4.5 m **Average depth**: 30 cm **Thalweg**: 35 cm **Floodplain**: +30 m **Shade**: 50%	Residential, fire pond	Riparian enhancements	Medium	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Substrate Composite: 30% boulder, 30% cobble, 20% coarse, 5% medium, 15% fines **Embedded**: 15% macro invertebrates: mayfly and caddisfly **Riparian Health Assessment Score:** 28 **Water Quality Sample May 8, 2014 (11:34 am):** **Water Temperature:** 9.7˚C **DO%:** 98 **DO:** 11.2 mg/L **SPC:** 2.4 mS/cm **TDS**: 1560 mg/L **Sal**: 1.24 ppt **pH**: 6.87				
7T	Narrow, and a lot of garbage, 20 m downstream is a swampy confluence with lots of algae	N 44˚30’42.8” W 064˚37’14.4”	**Right Bank:** Has dead sedges, green sprouts, large alder bushes, some beaver wood, and garbage. It is eroded and undercut. The site is downstream from a natural log sill, there is some moss on boulders, water is tannin and fast flowing with lots of garbage around **Left Bank:** Bank is undercut and the whole bank looks cut with a bush	Forested area	Speak to landowner about maintaining riparian habitat and garbage removal	Medium	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			saw. A few green sprouts are present along bank with sandy substrate, sedges and bedrock. There is also cutting of large trees close to the stream **Wetted width**: 1.5 m **Bankfull:** 1.25 m **Average depth**: 30 cm **Thalweg**: 35 cm **Floodplain**: +30 m **Shade**: 50% **Substrate Composite:** 10% boulder, 30% cobble, 30% coarse, 10% medium, 20% fines **Embedded**: 50% macro invertebrates: mayfly **Riparian Health Assessment:** 29 **Water Quality Sample May 8, 2014 (11:45 am):** **Water Temperature**: 10.3˚C **DO%**: 102 **DO**: 11.4 mg/L **SPC**: 2.2 mS/cm **TDS**: 1417 mg/L **Sal**: 1.12 ppt **pH**: 6.71				

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
7U	Wide with a lot of fallen trees and fine substrate	N 44˚ 30’ 43.0” W 064˚ 37’ 17.6”	**Right bank:** Fairly flat, mixed wood forest with forest litter, moss and undercutting. There are mossy inlets along the water. The stream widens a lot, there is a lot of beaver activity present. There are boulders sticking out of the stream and there is a 90˚ meander downstream. The water is a tannin color **Left bank:** Densely forested with logging further in on the bank. Sand, moss, fiddleheads, green sprouts, forest litter and garbage along the banks. Mixed wood forest with a wooden pallet floating in the water as well as some garbage **Wetted width:** 13 m **Bankfull width:** 13 m **Average depth:** 20 cm **Thalweg:** 30 cm **Floodplain:** +30 m **Shade:** 80% **Substrate Composition:** 40% boulder,	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			20% cobble, 5% coarse, 5% medium and 30% fines **Embedded:** 5%. Caddis fly larvae **Riparian Health Score:** 51 **Water Quality:** **YSI: May 8, 2014 (12:06 pm). (Not Working)** **Water Temperature**: 10.5˚C **DO%**: 96 **DO**: 10.7 mg/L **SPC**: 2.2 mS/cm **TDS**: 1410.5 mg/L **Sal**: 1.12 ppt **pH**: 6.74				
7V	Rock sill, riffles, exposed tree roots. Alder swale upstream	N 44˚ 30’ 40.5” W 064˚ 37’ 18.7”	**Right bank:** mixed wood, extensive leaf litter and moss. A lot of dead fallen trees and branches. Both banks are undercut. The water is tannin colour, fairly fast flowing over riffles. Garbage and wire in stream **Left bank:** Rocky, alders and mostly softwood trees and a lot of moss and leaf litter **Wetted width:** 6 m **Bankfull width:** 6 m **Average depth:** 15 cm	Forested area	Removal of garbage and wire	Medium	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Thalweg: 30 cm **Floodplain:** +30 m **Shade:** 70% **Substrate Composition:** 45% boulder, 20% cobble, 15% coarse, 10% medium and 10% fine **Embeddedness:** 10%. Stonefly, caddis fly and mayfly larvae present **Riparian Health Score:** 53 **Water Quality:** **YSI: May 8, 2014, 12:45 pm (Not Working)** **Water Temperature:** 10.8˚C **DO%:** 100% **DO**: 10.5 mg/L **SPC**: 15.2 mS/cm **TDS**: 9672 mg/L **Salinity**: 8.71 ppt **pH**: 6.9				
7W	Stream flows into a field/bog. Alder swale upstream, very marshy. Slight riffles	N 44˚ 30’ 37.4” W 064˚ 37’ 21.3”	**Right bank:** Softwood, alders, fallen branches, a lot of grass and sedges. Both banks have swampy inlets. The water is tannin color with a lot of organic debris **Left bank:** Softwood trees, a lot of alders and grass	Marsh/Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	upstream. Some inlets have an oily surface. There is heavy beaver activity and a farm downstream across a road		**Wetted width:** 4 m **Bankfull width:** 4 m **Average depth:** 30 cm **Thalweg:** 45 cm **Floodplain:** +30 m **Substrate Composition:** 40% boulder, 15% cobble, 5% coarse, 10% organics and 30% fines **Embedded:** 15% embedded with caddis fly larvae present **Riparian Health Score:** 49 **Water Quality:** **YSI: May 8, 2014, 1:00 pm. (Not Working)** **Water Temperature**:11.5˚C **DO%**: 83% **DO**: 9.1mg/L **SPC**: 2.1 mS/cm **TDS**: 1371.5mg/L **Salinity**:1.08 ppt **pH**: 6.83				
7X	Wide section running through bog, river splits 90˚ in each	N 44˚ 30’ 36.3” W 064˚ 37’ 25.4”	**Right bank:** Open field, only grasses and sedges. Wetland with entire section (200 m) of slow flowing water **Left bank:** A rock wall is built up along 30 m of the bank. Alders and	Mash/Forested area, Farmland in the distance on left bank side	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	direction. Left branch ends		sedges on the flat section of the bank. A few shrubs on the rocks **Wetted width:** 15 m **Average depth:** 1.5 m **Floodplain:** entire field - very wet and marshy **Shade:** 0% **Substrate Composition:** Unable to enter stream because of depth, however estimated to be mostly organic materials **Riparian Health Score:** 43 **Water Quality:** **YSI: May 8, 2014, 1:20 pm. (Not Working)** **Water Temperature**: 7.5˚C **DO%**: 72% **DO**: 8.5mg/L **SPC**: 2.2 mS/cm **TDS**: 1410.5 mg/L **Salinity**: 1.11 ppt **pH**: 7.02				

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
7Y	Convergence of marsh to mainstream with braiding through the forest. Many riffles with fast flowing water. Upstream are alders and the wetland	N 44˚ 30’ 42.5” W 064˚ 37’ 30.7”	**Right bank:** Alders, sedges and forest about 5 m from bank **Left bank:** Fairly flat with a lot of boulders in and around the bank. Alders and softwood with a lot of standing dead wood present **Wetted width:** 4 m **Bankfull width:** 4 m **Average depth:** 20 cm **Thalweg:** 30 cm **Floodplain:** +30 m **Shade:** 80% **Substrate Composition:** 45% boulder, 20% cobble, 5% coarse, 25% medium and 5% fines **Embedded:** 60%. Stonefly larvae present **Riparian Health Score:** 51 **Water Quality:** **YSI: May 8, 2014, 2:00 pm. (Not Working)** **Water Temperature**: 11.0˚C **DO%**: 93% **DO**: 10.3 mg/L **SPC**: 0.30 mS/cm **TDS**: 214.5 mg/L **Sal**: 0.27 ppt	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			pH: 6.69				
7Z	Confluence and braiding	N 44˚ 30’ 43.8” W 064˚ 37’ 32.9”	**Right Bank:** Fallen trees, sedges, ferns, moss, red maple, white ash, red spruce and alder. The is a confluence with braiding and some riffles but mainly a run, the water is fairly fast flowing **Left bank:** Similar to the right bank **Wetted width:** 10 m with 5 m width on either side of the braid **Bankfull width:** 10 m **Average Depth:** 10 cm **Thalweg:** 15 cm **Floodplain:** +30 m **Shade:** 80% **Substrate Composition:** 50% boulder, 30% cobble, 5% bedrock, 5% coarse, 5% medium and 5% fines **Embedded:** 15% no macroinvertebrates present **Riparian Health Score**: 55 **Water Quality:** **YSI: May 8, 2014, 2:15 pm. (Not**	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Working) **Temperature:** 11.1˚C **DO%**: 97% **DO**:10.6 mg/L **SPC**: 1.9 mS/cm **TDS**: 1239 mg/L **Salinity**: 0.97 ppt **pH**: 7.33				
7AA	Beaver Lodge	N 44˚ 30’ 48.2” W 064˚ 37’ 35.5”	**Right Bank & Left Bank:** Same level as water with banks slightly flooded. Mixed wood forest, a lot of dead standing wood, mossy forest cover, some young growth and fir trees, with a beaver lodge on the right bank. The water is very still with a lot of organics on the streambed **Wetted width**: 10 m **Bankfull width:** 10 m **Average depth:** 60 cm **Thalweg:** none – very still water **Floodplain:** +30 m **Shade:** 70% **Substrate Composition:** very few boulders, and mostly organic material **Riparian Health Score:** 53 **Water Quality:**	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			YSI: May 12, 2014, 8:40 am. (Not Working) **Water Temperature**: 10.3˚C **DO%**: 66 **DO**: 7.3 mg/L **SPC**: 0.40 mS/cm **TDS**: 228.15 mg/L **Salinity**: 0.17 ppt **pH**: 7.38				
7BB	Beaver Dam	N 44˚ 30’ 49.4” W 064˚ 37’ 37.6”	**Right bank:** Has a pool 3 x 1 m in size, mixed wood forest, small woody debris, moss, and leaves. The right bank is 50 cm higher than water. The water is fast flowing and there is a narrow channel **Left bank:** Has a cleared area caused by beaver cutting, mostly hardwood with some young softwood trees and is 50 cm higher than the water **Wetted width**: 5 m **Bankfull width:** 6 m **Floodplain:** +30 m **Average depth:** 25 cm **Thalweg:** 30 cm **Shade:** 80% **Substrate Composition:** 30% bedrock, 40% boulder, 20% cobble,	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			5% coarse, 5% fines **Embedded:** 10% mayfly larva were present **Riparian Health Score**: 42 **Water Quality:** **YSI: May 12, 2014, 9:00 am. (Not Working)** **Water Temperature:** 11.2˚C **DO%**: 91 **DO**: 10.0 mg/L **SPC**: 0.33 mS/cm **TDS**: 215.15 mg/L **Salinity**: 0.16 ppt **pH**: 7.52				
7CC	Riffle-run with pool	N 44˚ 30’ 50.7” W 064˚ 37’ 39.0”	**Right bank:** Has a pool, a 1.5 m high bank and mixed wood forest. There is a good riffle run system and the stream is wide becoming narrow downstream **Left bank:** 30 cm high with more young softwood **Wetted width:** 11 m **Bankfull width:** 12 m **Floodplain:** +30 m **Thalweg:** 50 cm. The pool is 65 cm deep	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Average depth: 30 cm **Shade:** 80% **Substrate Composition:** 50% boulder, 30% cobble, 10% coarse, 5% medium and 5% fine **Embedded:** 10% caddis fly larvae present **Riparian Health Score**: 53 **Water Quality:** **YSI: May 12, 2014, 9:30 am. (Not Working)** **Water Temperature**: 11.1˚C **DO%**: 89 **DO**: 9.9 mg/L **SPC**: 0.34 mS/cm **TDS**: 213.20 mg/L **Salinity**: 0.16 ppt **pH**: 7.43				
7DD	Abundance of bedrock in stream and on banks, and increase bank heights	N 44˚30’53.4” W 064˚37’42.0”	**Right bank:** Has a gradual slope of 6 m, with a pool on the right side. Both banks have mixed-wood forest, forest litter and mossy floors. The water moves at a moderate speed **Left bank**: 2 m in height and about 15 m hill farther inland **Wetted width**: 4 m	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Bankfull width: 10 m **Average depth:** 20 cm **Thalweg:** 30 cm **Shade:** 70% **Substrate Composition:** 70% bedrock, 20% boulders, and 10% cobble **Embedded:** ~20% embedded may-fly, stone-fly and caddis fly larvae on some of the cobble **Riparian Health Assessment Score:** 50 **Water Quality Sample May 12, 2014 (9:45 am)** **Water Temperature:** 11.0˚C **DO%**: 95 **DO**: 10.5 mg/L **SPC**: 0.33 mS/cm **TDS**: 214.5 mg/L **Sal**: 0.16 ppt **pH**: 6.74				
7EE	Banks level off with less bedrock	N 44˚30’55.3” W 064˚37’46.5”	**Right bank**: Ranges from 1 to 2 m in height. Both banks have mixed-wood forest, but right bank has more young growth **Left bank**: 3 m high and levels off at a	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			cleared 10 m wide trail; which is at the bottom of a gradual sloping hill (20 m high before leveling off again). Large boulders are holding the left bank together **Wetted width:** 6 m **Bankfull width:** 9 m **Floodplain:** none on left bank, water level would have to be very high to break over right bank **Shade:** 60% **Substrate Composition:** 30% boulders, 40% cobble, 20% coarse, 5% medium, and 5% fine **Embedded:** 30% Many caddis-flies and a may-fly seen on a few cobble stones **Riparian Health Assessment Score:** 47 **Water Quality Sample May 12, 2014 (10:03 am)** **Water Temperature:** 11.0˚C **DO%**: 96 **DO**: 10.6 mg/L **SPC**: 0.33 mS/cm **TDS**: 212.55 mg/L **Sal**: 0.16 ppt				

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			pH: 7.43				
7FF	Logging trail with old wooden bridge falling into stream (upstream), and a small marshy confluence	N 44˚30'55.2" W 064˚37'46.0"	**Right Bank:** Mixed-wood forest and lots of leaf debris and some undercutting on bank, 30 cm in height **Left bank**: Undercutting, mixed-wood, marshy, with a small confluence and steep hill about 10 m back from stream **Wetted width:** 7 m **Bankfull width:** 7 m **Average depth:** 20 cm **Thalweg:** 35 cm **Floodplain:** +30 m on the right bank **Substrate Composition:** 10% boulders, 60% cobble, 10% coarse, 5% medium, and 15% fines **Riparian Health Assessment Score:** 41 **Water Quality Sample May 12, 2014 (10:13 am)** **Water Temperature:** 11.0˚C **DO%**: 98 **DO**: 10.8 mg/L **SPC**: 0.34 mS/cm **TDS**: 214.85 mg/L	Forested area with old logging trail	Remove fallen bridge (blocking fish passage), riparian planting to restore stream banks	High	**Complete (Summer 2014)** Bridge was removed and riparian habitat restored by planting 23 native species Restored fish passage to 4 km of upstream habitat

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Sal: 0.16 ppt **pH**: 7.47				
7GG	Cabin, two small confluences, and sandy sedge braid	N 44˚30'59.0" W 064˚37'49.6"	**Right bank:** 2.5 m high, has a cabin, cleared road and small confluence upstream from measurements. Both banks have mixed-wood forest **Left bank**: 50 cm high and has a small confluence **Wetted width:** 9 m **Bankfull width:** 10 m **Average depth:** 10 cm **Thalweg:** 25 cm **Floodplain:** 20 m, mostly on the left side **Substrate Composition:** 10% boulders, 40% cobble, 30% coarse, 10% medium, and 10% fines **Embedded:** ~25%, caddis flies and stoneflies **Riparian Health Assessment Score:** 45 **Water Quality Sample May 12, 2014 (10:30 am)** **Water Temperature:** 10.9˚C **DO%:** 99 **DO**: 10.9 mg/L	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			SPC: 1.9 mS/cm **TDS**: 1209 mg/L **Sal**: 0.95 ppt **pH**: 7.52				
7HH	Riffle-run pattern, stream meander, and pools	N 44˚31'02.2" W 064˚37'53.3"	**Right & Left Banks:** 50 cm high with mixed-wood forest, moss and forest litter on surface. They both have undercutting and the right side has a 3 m wide pool. Water has foam buildup on surface and is tannin in colour **Wetted width**: 7 m **Bankfull width:** 7 m **Average depth:** 20 cm **Thalweg:** 30 cm **Floodplain:** +30 m **Substrate Composition:** 10% boulders, 30% cobble, 30% coarse, 20% medium, 10% fines **Embedded:** 10% presence of mayflies on cobble, and about 90% in area over water **Riparian Health Assessment Score:** 54 **Water Quality Sample May 12, 2014 (10:42 am)**	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Water Temperature: 10.8˚C **DO%:** 99 **DO:** 10.9 mg/L **SPC**: 1.9 mS/cm **TDS**: 1215 mg/L **Sal**: 0.95 ppt **pH**: 7.61				
7II	Downed trees with lots of woody debris, and change in vegetation	N 44˚31'03.8" W 064˚37'56.6"	**Right bank**: Marshy similar level to water with grassy and alder vegetation, and mixed-wood farther back from bank **Left bank**: 1.5 m high and mixed-wood forest **Wetted width:** 4 m **Bankfull width:** 5 m **Average depth:** 30 cm **Thalweg:** 40 cm **Floodplain:** +30 m on right side **Shade:** 50% over the water **Substrate Composition:** 20% boulders, 10% cobble, 40% coarse, 20% medium, and 10% fines **Embedded:** 20%, caddis flies and stoneflies found on cobble **Riparian Health Assessment Score**: 52	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Water Quality Sample May 12, 2014 (10:54 am) **Water Temperature:** 10.8˚C **DO%:** 98 **DO**: 10.8 mg/L **SPC**: 1.9 mS/cm **TDS**: 1209 mg/L **Sal**: 0.95 ppt **pH**: 7.55				
7JJ	Channel narrows, run upstream, and braiding downstream	N 44˚31'04.8" W 064˚37'59.6"	**Right bank**: Has alder swale upstream with lots of grass, and shady bank extending into stream **Left bank:** Has lots of deadfall and organic debris, few hardwoods and many young softwoods. Water is tannin in colour, and fairly slow moving **Wetted width:** 4 m **Bankfull width:** 5 m **Average depth:** 30 cm **Thalweg:** 45 cm **Floodplain:** +30 m on the right side. **Shade:** 20% **Substrate Composition:** 20% coarse, 40% medium, and 40% fine. There was one stone fly found **Riparian Health Assessment Score:**	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			52 **Water Quality Sample May 12, 2014 (11:12 am)** **Water Temperature:** 10.8˚C **DO%**: 99 **DO**: 11.0 mg/L **SPC**: 0.34 mS/cm **TDS**: 215.15 mg/L **Sal**: 0.16 ppt **pH**: 7.66				
7KK	Channel widens into 50 m run	N 44˚31'05.3" W 064˚38'03.1"	**Right bank**: Steep for 5 m upwards and has a trail and pond 10 m from stream. Consists of hard and softwood with lots of leaf litter **Left bank**: Has boulders embedded into bank along with mixed wood. Water flowing fairly slow **Wetted width:** 8 m **Bankfull width:** 9 m **Average depth:** 30 cm **Thalweg:** 40 cm **Floodplain:** on the left side **Shade:** 30% **Substrate Composition:** 5% boulders, 5% cobble, 10% coarse, 30% medium, and 50% fines	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Embedded: 60% Caddis flies and stoneflies present **Riparian Health Assessment Score**: 54 **Water Quality Sample May 12, 2014 (11:25 am)** **Water Temperature:** 10.9˚C **DO%**: 95 **DO**: 10.5 mg/L **SPC:** 0.33 mS/cm **TDS:** 214.5 mg/L **Sal:** 0.16 ppt **pH:** 7.63				
7LL	Riffle-run pattern, and fallen tree across width of stream	N 44˚31'06.4" W 064˚38'07.0"	**Right bank**: Has a steep slope of 5 m above stream level held together by some trees, and some erosion **Left bank**: Flat with 20 cm height above stream level with grass on immediate bank and mixed-wood further back **Substrate Composition:** 5% bedrock, 5% boulder, 5% cobble, 30% coarse, 30% medium, and 25% fines **Embedded:** 20% with stoneflies and caddis flies found **Shade:** 60% over the water	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Wetted width: 5 m **Bankfull width:** 5 m **Average depth:** 60 cm **Thalweg:** no clear thalweg **Floodplain:** +30 m on the left bank **Riparian Health Assessment Score:** 47 **Water Quality Sample May 12, 2014 (11:40 am)** **Water Temperature:** 10.8˚C **DO%**: 96 **DO**: 10.6 mg/L **SPC:** 0.33 mS/cm **TDS:** 215.8 mg/L **Sal:** 0.16 ppt **pH**: 7.58				
7MM	Large meander (180˚) with riffles downstream, and pool with foam on surface	N 44˚31'03.7" W 064˚38'06.9"	**Right bank**: Mixed-wood, lots of leaf litter, deadfall, and organic matter, with fairly flat banks **Left bank**: Flat with lots of moss and mixed-wood, swampy with patch of oily water **Wetted width:** 5 m **Bankfull width:** 10 m **Average depth:** 30 cm **Thalweg:** 40 cm	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Substrate Composition: 5% cobble, 2% coarse, 40% medium, and 35% fine. **Embedded:** 50% with caddis flies. **Riparian Health Assessment Score:** 54 **Water Quality Sample May 12, 2014 (11:57 am)** **Water Temperature:** 10.9˚C **DO%**: 100 **DO:** 11.0 mg/L **SPC:** 0.70 mS/cm **TDS**: 598 mg/L **Sal**: 0.16 ppt **pH**: 7.60				
7NN	Confluence of Mackay's Brook and North Branch	N 44˚31'00.4" W 064˚38'07.8"	**Right Bank**: 40 cm up from stream level, sandy grass, alders and softwood. Has a 5 m wide spit that ends at the North Branch **Left bank:** has a steep 1 m high bank with lots of large softwoods and organic debris **Wetted width:** 7 m **Bankfull width:** 8 m **Average depth:** 20 cm **Thalweg:** 25 cm	North Branch River surrounded by forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Substrate Composition: 10% cobble, 20% coarse, 20% medium, and 50% fine and organics **Embedded:** 30% **Riparian Health Assessment Score:** 56 **Water Quality Sample May 12, 2014 (12:12 am)** **Water Temperature:** 10.9˚C **DO%**: 90 **DO:** 10 mg/L **SPC:** 1.8 mS/cm **TDS:** 1189.5 mg/L **Sal**: 0.93 ppt **pH**: 7.62				
Section 8	Penny Road Tributary (2 km in length), between Pinehurst and Upper Northfield						
8A	Wetland 700m long	N 44° 36’ 08.5” W 064° 37’ 41.1”	**Right Bank:** grass and sedges, more than left bank. Tree line 50m back from bank **Left Bank:** grass, ferns, sedges, woodland **Water Description:** tannin in colour, sedge, grasses and water lilies. Water is not flowing **Wetted width:** 100m	Marsh land, and forested	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Bankfull width: no solid banks **Floodplain:** 30+ m **Average Depth:** Too deep to assess **Thalweg:** n/a **Shade:** none **Substrate Composition:** Assume fines and organics **Embedded:** n/a **Riparian Health Assessment Score:** 54 **Water Quality Sample: July 31, 2014 (9:18 AM)** **Water Temperature:** 21˚C **DO %:** 29 **DO:** 2.5 mg/L **SPC:** 0.048 mS/cm **TDS:** 31.85 mg/L **Sal:** 0.02 ppt **pH:** 6.44				
8B	Beaver pond leveler structure	N 44° 30’ 13.6” W 064° 37’ 41.7”	**Right Bank:** Beaver lodge 50m upstream, grasses, rushes. Tree line 6m back from bank **Left Bank:** Shrubs, grasses, rushes. Tree line 5m back from bank **Water Description:** dark tannin, lots of organics (lilies, cattails, rushes)	Marsh land, and forested	Examine the culvert entrance for fish passage	Medium	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Wetted width: 30m **Bankfull width:** no solid banks **Floodplain:** 30+ m **Average Depth:** 1.2 m **Thalweg:** none visible, low flow **Shade:** none **Substrate Composition:** 90% organics and fines, few boulders **Embedded:** n/a **Riparian Health Assessment Score:** 50 **Water Quality Sample: July 31, 2014 (9:45 AM)** **Water Temperature:** 21.9 ˚C **DO %:** 26 **DO:** 2.2 mg/L **SPC:** 0.044 mS/cm **TDS:** 28.6 mg/L **Sal:** 0.02 ppt **pH:** 5.47				
8C	Just upstream of culvert blocked with debris. Downstream of wetland	N 44° 30’ 13.9” W 064° 37’ 43.3”	**Right Bank:** Alders, sedges, steep bank **Left Bank:** Alders, sedges, steep bank **Water Description:** tannin colour, lilies, grasses **Wetted width:** 4.0 m	Corrugated metal culvert crossing on Penny Rd.	Remove debris from culvert	High	Completed on August 1st, 2014. Removal of metal caging and organic debris restored

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Bankfull width: 4.3 m **Floodplain:** none **Average Depth:** 35 cm **Thalweg:** 55cm **Shade:** 10% **Substrate Composition:** 90% fines, 10% gravel **Embedded:** n/a **Riparian Health Assessment Score:** 36 **Water Quality Sample: July 31, 2014 (10:36 AM)** **Water Temperature:** 20.8 ˚C **DO %:** 52 **DO:** 4.6 mg/L **SPC:** 0.050 mS/cm **TDS:** 32.5 mg/L **Sal:** 0.02 ppt **pH:** 5.01				aquatic connectivity at this site.
8D	Borders a residential yard. Riffle-run sequence, shallow and slow flow	N 44° 30’ 15.4” W 064° 37’ 45.0”	**Right Bank:** Private yard, alders and a rock wall **Left Bank:** Soft and hardwood, pipe near road **Water Description:** Dark, tannin **Wetted width:** 4.0 m **Bankfull width:** 4.5 m	Residential land and forested area	Approach landowners about replanting and keeping acceptable riparian area	Medium	Incomplete

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Floodplain: 15.0 m on left bank, 5.0 m on right **Average Depth:** 15 cm **Thalweg:** 20 cm **Shade:** 60% **Substrate Composition:** 5% boulder, 50% cobble, 20% coarse, 10% medium, 10% fines **Embedded:** 20% **Riparian Health Assessment Score:** 48 **Water Quality Sample: July 31, 2014** **Water Temperature:** 21.1 ˚C **DO %:** 50 **DO:** 4.4 mg/L **SPC:** 0.052 mS/cm **TDS:** 33.8 mg/L **Sal:** 0.02 ppt **pH:** 5.33				
8E	Rock sill, good meander, Pool under hemlock tree	N 44° 30’ 16.7” W 064° 37’ 47.1”	**Right Bank:** wet deciduous forest, large floodplain **Left Bank:** 2m steep bank, softwood forest, erosion causing fallen trees **Water Description:** Dark, tannin **Wetted width:** 6.0 m **Bankfull width:** 7.0 m	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Floodplain: 0.5 m on left bank, 15.0+ m on right **Average Depth:** 15 cm **Thalweg:** 25 cm **Shade:** 85% **Substrate Composition:** 50% boulder, 30% cobble, 10% medium, 10% fines **Embedded:** 30-40% **Riparian Health Assessment Score:** 52 **Water Quality Sample: July 31, 2014** **Water Temperature:** 21.1 ˚C **DO %:** 70 **DO:** 6.2 mg/L **SPC:** 0.049 mS/cm **TDS:** 31.85 mg/L **Sal:** 0.02 ppt **pH:** 5.38				
8F	In a riffle, lower banks, narrowed from previous site	N 44° 30’ 18.2” W 064° 37’ 48.8”	**Right Bank:** fir trees and needle litter **Left Bank:** dead fallen fir, and ferns **Water Description:** tannin colour **Wetted width:** 4.5 m **Bankfull width:** 5.0 m **Floodplain:** 6 m **Average Depth:** 10 cm **Thalweg:** 20 cm	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Shade: 70% **Substrate Composition:** 70% boulder, 20% cobble, 10% coarse, 5% medium, 5% fines **Embedded:** 30% **Riparian Health Assessment Score:** 56 **Water Quality Sample: July 31, 2014 (12:49 PM)** **Water Temperature:** 21.1 ˚C **DO %:** 80 **DO:** 7.1 mg/L **SPC:** 0.048 mS/cm **TDS:** 31.2 mg/L **Sal:** 0.02 ppt **pH:** 5.6				
8G	Just after meander, shallow, fewer boulders, in a large floodplain with undercut banks	N 44° 30’ 20.1” W 064° 37’ 50.1”	**Right Bank:** alders, hazelnut, sedges. Both banks are undercut **Left Bank:** downed trees, sedges, grass **Water Description:** tannin colour **Wetted width:** 3.5 m **Bankfull width:** 3.5 m **Floodplain:** 30+ m **Average Depth:** 15 cm **Thalweg:** 20 cm	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Shade: 60% **Substrate Composition:** 10% boulder, 70% cobble, 10% coarse, 5% medium, 5% fines **Embedded:** 20%, 1 dragon fly larva, 1 caddisfly **Riparian Health Assessment Score:** 56 **Water Quality Sample: July 31, 2014 (1:10 PM)** **Water Temperature:** 21.0 ˚C **DO %:** 84 **DO:** 7.5 mg/L **SPC:** 0.048 mS/cm **TDS:** 31.2 mg/L **Sal:** 0.02 ppt **pH:** 5.76				
8H	Confluence, many fallen trees, large brush pile, narrow stream, oily substance present	N 44° 30’ 21.1” W 064° 37’ 51.2”	**Right Bank:** Beside confluence, brush pile on bank **Left Bank:** many fallen trees, blown over roots, 2.5 m tall bank **Water Description:** tannin colour, reeds/grasses **Wetted width:** 2 m **Bankfull width:** 5 m **Floodplain:** 15+ m	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Average Depth: 6 cm **Thalweg:** 7 cm **Shade:** 15% **Substrate Composition:** 10% boulder, 40% cobble, 20% coarse, 10% medium, 20% fines **Embedded:** 20% **Riparian Health Assessment Score:** 51 **Water Quality Sample: July 31, 2014 (1:27 PM)** **Water Temperature:** 21.0 ˚C **DO %:** 89 **DO:** 7.9 mg/L **SPC:** 0.048 mS/cm **TDS:** 31.2 mg/L **Sal:** 0.02 ppt **pH:** 5.33				
8I	Downstream of a meander, stream widens, undercut banks, riffles, fallen log, confluence	N 44° 30’ 20.9” W 064° 37’ 54.4”	**Right Bank:** flat, leaf litter and mixed wood. Both banks are undercut **Left Bank:** steep bank, ferns **Water Description:** tannin colour **Wetted width:** 5 m **Bankfull width:** 5 m **Floodplain:** 30+ m on right, none on left	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
	upstream of site, rocksill downstream		**Average Depth:** 15 cm **Thalweg:** 30 cm **Shade:** 80% **Substrate Composition:** 30% boulder, 40% cobble, 10% coarse, 10% medium, 10% fines **Embedded:** 10%, 3 stoneflies **Riparian Health Assessment Score:** 56 **Water Quality Sample: July 31, 2014 (1:47 PM)** **Water Temperature:** 20.8 ˚C **DO %:** 91 **DO:** 8.1 mg/L **SPC:** 0.052 mS/cm **TDS:** 33.8 mg/L **Sal:** 0.02 ppt **pH:** 5.91				
8J	Confluence to North Branch, gravel bar, shallow, after a meander	N 44° 30’ 23.9” W 064° 37’ 55.1”	**Right Bank:** very steep (10 m), leaf litter, fallen trees **Left Bank:** mixed wood, undercut banks, gravel bars **Water Description:** tannin colour, deeper in confluence **Wetted width:** 4 m **Bankfull width:** 6 m	Forested area	N/A	N/A	N/A

Section Number and Site	Stream Feature	Lower Limit (coordinates and landmarks)	Site Details	Adjacent Land Use Considerations	Prescription for Restoration	Project Priority Ranking	Project Status
			Floodplain: 20 m on left, 3-4 m on right **Average Depth:** 20 cm **Thalweg:** 25 cm **Shade:** 65% **Substrate Composition:** 15% boulder, 50% cobble, 10% coarse, 10% medium **Embedded:** 30% **Riparian Health Assessment Score:** 57 **Water Quality Sample: July 31, 2014** **Water Temperature:** 20.7 ˚C **DO %:** 97 **DO:** 8.7 mg/L **SPC:** 0.050 mS/cm **TDS:** 32.4 mg/L **Sal:** 0.02 ppt **pH:** 6.3				

Restoration Plan Summary – North Branch Sub-Watershed

Changes in the watershed - current conditions compared to historical conditions. Future changes to the natural environment expected in the watershed.	The North Branch Sub-watershed is a heavily forested region that has been subjected to widespread harvesting activities and also supports a large number of Christmas tree farms. The landscape has been fragmented by clear cuts and logging roads. This has decreased wildlife habitat values, opened up remote areas to public access and the potential of invasive species introductions, created more crossings over watercourses, and led to increased run-off rates and a greater flood risk. Low compliance of the Wildlife Habitat and Watercourse Protection Regulations by the forestry industry has resulted in the degradation of riparian habitats along many watercourses. This has led to mass wasting, bank erosion, sedimentation of watercourses, and increased water temperatures due to lack of shade. Cropland and livestock agriculture is a significant form of land-use in this sub-watershed, particularly the lower portion. There is no legislation in place requiring the agricultural industry to maintain riparian buffer zones, therefore, these habitats are often cleared for agricultural use, which leads to many negative impacts on water quality and fish habitat. Similarly, private residential properties are not required to maintain riparian buffers and the same degraded habitat issues are found on private land throughout the sub-watershed. The negative impacts associated with forestry, agriculture, and residential development are expected to continue and can best be addressed through legislative change, watershed education and stewardship, and the continued assessment of watershed habitat and water quality conditions.

Most likely limiting factors with regard to aquatic productivity in the watershed.	The most likely limiting factors are: 1. Degraded riparian habitat (forestry, agriculture, residential) 2. Aquatic connectivity problems (culvert barriers, debris blockages) 3. Spreading of invasive fish species (Chain Pickerel and Smallmouth Bass) 4. Water quality issues (toxic acidic episodes, run-off pollution, sedimentation)
Most important habitat restoration needs in the watershed.	The most significant habitat restoration needs in the sub-watershed are as follows: 1. A complete assessment of aquatic connectivity, including culvert assessments, debris blockage removals, and culvert restoration activities. 2. Riparian habitat restoration projects needed on many private properties. 3. Agricultural assessments and restoration projects (livestock fencing, riparian planting, wetland restoration).
Habitat connectivity restoration projects, in order of importance	**Correct outflow drop:** LPTB001 – High FOR002 – High BUT002 – High MAC001 – High PRB001 – High CRO001 – Medium VEN001 – Medium **Correct Slope:** LPTB001 – High FOR002 – High CLL001 – High

	SHG001 – High MAC002 – High PRB001 – High AYL001 – Medium CRO001 – Medium ALR001 – Low TPL001 – Low FRD002 – Low **Tailwater control enhancement:** FOR001 – Medium PAT001 – Medium PAT002 – Medium **Removal of blockage:** PRB001 – Completed 2016 MAC001 – Completed 2016 PAT002 – Completed 2016 AYL001 – Completed 2016 HARD001 – Completed 2016 SHG001 – Completed 2016 **General construction problems:** FRD001 – Culvert bottom rusted and deteriorated AYL001 – Deformed FOR001 – Deformed FOR002 – Deformed AYR001 – Deformed JON001 – Deformed PAT001 – Deformed PRB001 – Deformed

Water quality improvement and/or monitoring projects.	There are currently three regular water quality monitoring sites (Franey Corner, Sherbrooke, and Pinehurst) in the North Branch Sub-watershed, which are strategically located to represent water quality throughout the whole sub-watershed: • Franey Corner sample site is a headwaters site located on the Sherbrooke River approximately 1 km upstream from Sherbrooke Lake. • Sherbrooke sample site is on the main stem of the North Branch, downstream of Sherbrooke Lake at the outflow of Texas Lake. • Pinehurst sample site is on the main stem of the North Branch, at the lower end of the sub-watershed, just before the confluence with Wentzells Lake. Water quality field parameters are measured during stream assessments, which provide a more detailed record of water quality health along the entire length of assessed watercourses. Increased monitoring is only recommended if a significant chronic land-use issue is identified during assessments.
Riparian buffer zone restoration projects.	The following riparian buffer zone restoration projects are recommended: 4E, 4H, 7N, 7O, 7P, 7S, 8D
Needed land use improvement practices.	The following land-use improvement practices projects are recommended: 2E, 6A, 6C, 6D, 7D, 7T
Physical habitat restoration projects.	The following physical habitat restoration projects are recommended: 4V, 4Y, 4AA, 4LL, 4ZZ, 7K, 7V, 8B

Appendix A – LaHave River Watershed Water Quality Monitoring Sites

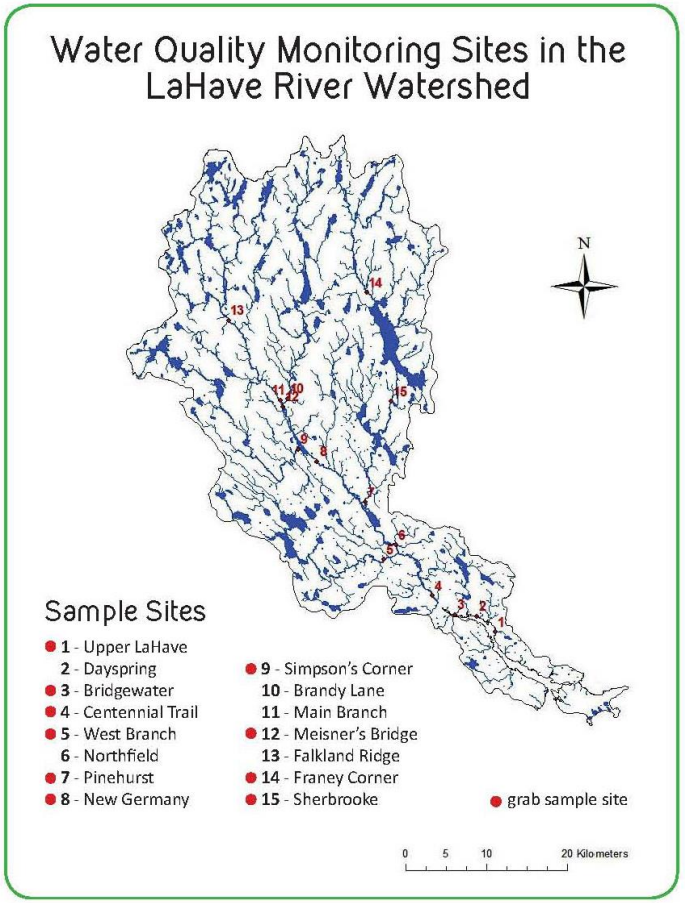

Figure A1. LaHave River Watershed Water Quality Monitoring Program site map

Table A1. LaHave River Watershed Water Quality Monitoring Program site locations

Sample Site	Latitude	Longitude	Easting	Northing
Upper LaHave	44˚21'07.78"	64˚26'05.44"	385646	4911986
Dayspring	44˚22'09.90"	64˚27'50.62"	383351	4913947
Bridgewater	44˚22'13.49"	64˚29'52.71"	380651	4914104
Centennial Trail	44˚23'28.59"	64˚32'00.42"	377868	4916473
West Branch	44˚25'51.12"	64˚36'32.63"	371932	4920988
Northfield	44˚26'50.40"	64˚35'28.63"	373383	4922790
Pinehurst	44˚29'39.30"	64˚38'25.47"	369579	4928079
New Germany	44˚32'19.56"	64˚42'58.82"	363645	4933146
Simpsons Corner	44˚33'04.67"	64˚44'47.50"	361277	4934589
Brandy Lane	44˚36'29.91"	64˚45'49.57"	360045	4940953
Main Branch	44˚36'21.44"	64˚46'32.16"	359101	4940711
Meisners Bridge	44˚35'57.03"	64˚46'16.63"	359426	4939950
Falkland Ridge	44˚41'37.04"	64˚51'33.51"	352679	4950597
Franey Corner	44˚43'41.53"	64˚38'40.38"	369774	4954072
Sherbrooke	44˚36'25.63"	64˚36'10.91"	372796	4940557

Appendix B – Aquatic Connectivity Program Culvert Assessment Data Sheet 2016

NSLC adopt a stream

SALMON

Aquatic Connectivity Program Culvert Assessment

Site Information

Field Crew			
Culvert ID		Date (dd/mm/yyyy)	
Stream Name		Time	
Road Name		Projection	WGS 84 / NAD 83
Ownership of Crossing	□ Public Road ROW □ Rail Bed ROW □ Private	Lat (deg, min, sec)	
Debris Blockage Present	□ Yes □ No	Long (deg, min, sec)	
Description of Debris		Fish Habitat	□ Yes □ No

*If culvert is identified as being located on a fish bearing stream, then proceed with further data collection

Photo Files

Upstream	File Name	Downstream	File Name
Toward Inflow		Toward Outflow	
Through Culvert		Through Culvert	
Looking Upstream		Looking Downstream	
Other		Other	

Stream Characteristics

Water Quality

Air Temp (°C)		pH		DO (mg/L)	
Water Temp (°C)		conductivity (µS/cm)		TDS (mg/L)	

Substrate Sizes (taken upstream of culvert in percent composition)

Fines (< 0.2 cm)		Cobble (6.4-25.6 cm)		Bedrock	
Gravel (0.2-6.4 cm)		Boulder (> 25.6 cm)			

Channel Measurements (taken upstream)

	Pool	Riffle	Run	Average
Wetted Width (m)				
Bankfull Width (m)				
Stream Width Ratio	Stream Width Ratio = Average Bankfull Width / Culvert Width			

Culvert Information

Culvert Material	□ Concrete □ Corrugated Metal Pipe (Spiral) □ Corrugated Metal Pipe (Annular) □ Corrugated Plastic □ Wood □ Other	Culvert Shape (check all that apply)	□ Circular □ Box □ Pipe Arch □ Open Arch □ Multiple □ Other	Entrance Type	□ Projecting □ Headwall □ Mitered □ Wingwall □ Other
				Multiple Culverts	□ No □ Yes # ______
				Baffles	□ Present □ Absent
				Deformed	□ Yes □ No
Culvert Bottom	□ Unnatural □ Natural - Substrate ______			Variable Slope	□ Yes □ No

Culvert Dimensions

	WIDTH	HEIGHT		WIDTH	DEPTH
Culvert Measurements (m)			Corrugation (cm)		

Additional Information

Inflow Habitat Type	□ Pool □ Riffle □ Run □ Drop	Beaver Dam Present	□ Yes □ No
Backwatered	□ 0% □ 25% □ 50% □ 75% □ 100%	Fish Observed	□ Upstream □ Downstream

Embedment	□ from upstream □ from downstream		
Length of Culvert with Embedment	□ 0% □ 25% □ 50% □ 75% □ 100%	Degree of Embedment	□ 0% □ < 20% □ > 20%

Elevations (upstream)

	HI (m)	FS (m)	Elevation (m) (HI-FS)
Crest of Riffle Upstream			
Inflow			
Upstream Channel Slope (%)			

Measurements

Water Depth at Inflow (cm)	
Stagnation Depth at Inflow (cm)	
Upstream Riffle to Inflow Invert (m)	
Culvert Length (m)	

Downstream of Culvert

Elevations

	HI (m)	FS (m)	Elevation (m) (HI-FS)
Outflow			
Plunge Pool Bottom			
Tailwater Control			
Crest of 2nd Riffle			
Pool Surface Elevation			
Downstream Channel Slope			

Measurements

Water Depth at Outflow (cm)			
Stagnation Depth at Outflow (cm)			
Pool (m)	WIDTH	LENGTH	DEPTH
Outflow to Tailwater Control (m)			
Tailwater Control to 2nd Riffle Downstream (m)			
Culvert Slope (%)			
Outflow Drop			

Tailwater Cross Section

Widths	Station	HI (m)	FS (m)	Elevation (m) (HI-FS)	Water Depth (m)
	0 (Left Floodplain)				
Wetted Width	1 (Left Bankfull) 0				
	2 (1/5 bankfull width)				
Bankfull Width	3 (2/5 Bankfull width)				
	4 (3/5 Bankfull width)				
Bankfull Width/5	5 (4/5 Bankfull width)				
	6 (Right Bankfull)				
	8 (Right Floodplain)				

Baffle Information (Complete if culvert is baffled)

Baffle Height (cm)		Baffle Material	□ Concrete □ Wood □ Other
Notch Depth (cm)		Baffle Type	□ Straight □ Diagonal □ Right Angled □ Other
Notch Width (cm)		Notch Chutes	□ Yes □ No
Number of Baffles		Notch Chute Material	□ Concrete □ Metal □ Wood □ Other
Distance Between Baffles (m)		Elevations	HI (m) / FS (m) / Elevation (m)
Distance from Bottom Baffle to Outflow Invert (m)		Upstream Baffle	
		Downstream Baffle	
Drop Between Baffles (m)	Drop between baffles = Elevation upstream baffle - Elevation downstream baffle		

References

Cann, D.B., and J.D. Hilchey. Soil Survey of Lunenburg County Nova Scotia. Report 7. Ottawa: Edmond Cloutier, C.M.G, O.A., D.S.P. Queens Printer and Controller of Stationery, 1958. eBook. <http://sis.agr.gc.ca/cansis/publications/surveys/ns/ns7/index.html>.

COSEWIC. 2013. Atlantic Salmon – Nova Scotia Southern Upland Population. Online document available at: [http://www.cosewic.gc.ca/eng/sct1/searchdetail_e.cfm?id=672&StartRow=1&boxestatus=All&]. Accessed October, 2013.

DP ME 43, Version 2, 2006. Digital Version of Nova Scotia Department of Natural Resources Map ME 2000-1, Geological Map of the Province of Nova Scotia, scale 1:500 000, compiled by J. D. Keppie, 2000. Digital product compiled by B.E. Fisher and J.C. Poole. Online document available at: [http://www.novascotia.ca/natr/meb/download/mg/map/htm/map_2000-001.asp]

Government of Canada. Species at Risk in Nova Scotia Identification and Info. Guide. [http://www.speciesatrisk.ca/SARGuide/]. Accessed on January 8, 2015.

Leblanc, J. 2010. Geographic distribution of smallmouth bass, *Micropterus dolomieu*, in Nova Scotia: history of early introductions and factors affecting current range. Pictou: Nova Scotia Department of Fisheries and Aquaculture, Inland Fisheries Division. Online Document. [https://novascotia.ca/fish/documents/special-management-areas-reports/2010_028_e.pdf]. Accessed January, 2016.

Natural Resources Canada. 2013. Toporama Map. Online Atlas available at [http://atlas.nrcan.gc.ca/site/english/toporama/index.html#]. Accessed November, 2013.

Nova Scotia Department of Fisheries and Aquaculture, Inland Fisheries Division. 2013. Angler's Handbook. Online Document available at [http://www.gov.ns.ca/fish/sportfishing/angling/2013angregs.shtml]. Accessed October, 2013.

Nova Scotia Department of Fisheries and Aquaculture, Inland Fisheries Division. 2013. Hatchery Stocking Program. Online Documents available at [http://gov.ns.ca/fish/sportfishing/stocked]. Accessed October, 2013.

Nova Scotia Department of Natural Resources. 2012. Nova Scotia's Species at Risk. Online document. [http://www.speciesatrisk.ca/municipalities/mun_lunenburg.htm]. Accessed November, 2013.

Nova Scotia Environment. 2012. Nova Scotia Lake Survey Program: Lake Chemistry Data Spreadsheet. Online Documents available at [https://www.gov.ns.ca/nse/surface.water/lakesu rveyprogram.asp]. Accessed October, 2013.

Nova Scotia Environment. 2013. Wildlife Habitat and Watercourses Protection Regulations. Online Document available at [http://www.novascotia.ca/just/regulations/regs/fowhwp.htm]. Accessed December, 2014.

Rankin, J. & Miller, M. 2014. 'Province Failing on Water Governance'. Online Document available at [https://www.ecologyaction.ca/press-release/province-failing-water-governance]. Accessed December, 2014.

Trudell, L. L. and White, C. E. 2013: Overview map showing locations of bedrock acid rock drainage potential maps for the southwestern area of Nova Scotia; Nova Scotia Department of Natural Resources, Open File Map ME 2013-002, scale 1:250 000. Online Document available at [http://novascotia.ca/natr/meb/data/mg/ofm/pdf/ofm_2013-002_d484_dp.pdf]. Accessed December, 2014.