CONTRACT # EN15TAH414

FISH PASSAGE CULVERT INVESTIGATIONS 2014

Babine TSA

Prepared By:
MarLim Ecological Consulting Ltd.

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THE CONTENTS OF THIS REPORT ARE MEANT TO PROVIDE A SUMMARY OF THE FISH PASSAGE CULVERT INVESTIGATIONS COMPLETED BY MARLIM ECOLOGICAL CONSULTING LTD. BETWEEN SEPTEMBER AND NOVEMBER 2014, FOR BURNS LAKE CONTRACT # EN15TAH414. ANY CHANGES SINCE THE DOCUMENTED DATE OF THE LAST SITE VISIT ON ***NOVEMBER 8TH, 2014*** *ARE NOT ACCOUNTED FOR IN THIS REPORT. THE CONTENTS OF THIS REPORT SHOULD NOT BE SUBSTANTIALLY MODIFIED WITHOUT PRIOR CONSENT FROM MARLIM ECOLOGICAL CONSULTING LTD. THIS IS TO ENSURE THAT THE INTEGRITY OF THE DATA AND ANY OBSERVATIONS MADE IN THIS REPORT ARE MAINTAINED. A COMPLETE COPY OF THIS REPORT HAS BEEN RETAINED IN THE OFFICES OF MARLIM ECOLOGICAL CONSULTING LTD. FOR FUTURE REFERENCE.*

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EXECUTIVE SUMMARY

Marlim Ecological Consulting Ltd. completed a Fish Passage Culvert Investigation (FPCI) contract in the Babine Timber Sales Area, Bulkley Watershed Group, for BC Timber Sales. This project involved the assessment of all designated fish-streams crossings in the priority watersheds within the study area to determine which stream crossing structures were barriers and preventing fish passage. Recommendations were made for each stream crossing structure and ten sites were selected and recommended for restoration projects. The site assessments involved obtaining standardized information at each location and keeping photographic documentation for each site. The field data collected for all structures assessed on fish streams was entered and submitted into the Provincial Stream Crossing Inventory System (PSCIS). The PSCIS has a scoring system which automatically produces results when the data collected in the field is entered into the program. This scoring system determines whether a stream crossing structure is classified as unknown, passable, potential or barrier and aided in determining which sites were selected and recommended for restoration.

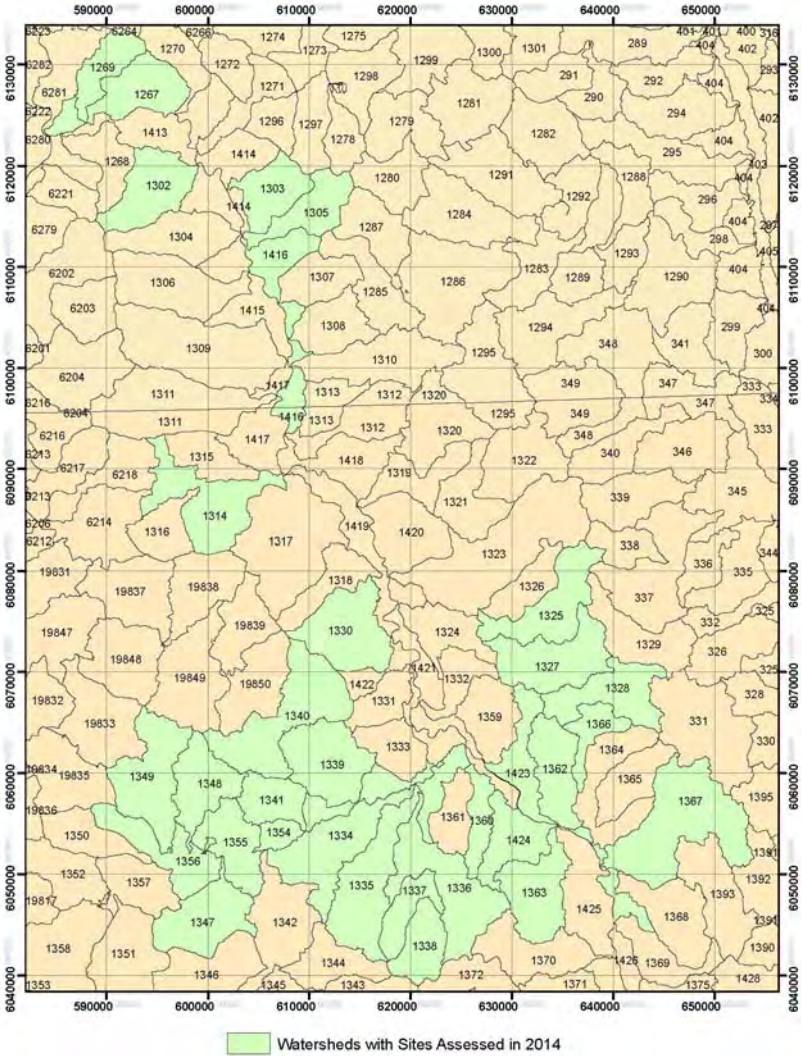
A total of 527 sites were visited and assessed throughout the duration of this study. Out of those, 190 sites did not exist. Photographs were taken at these sites to verify that while they were identified on the mapping provided, they were in fact non-existent.

A total of 32 stream crossings had open bottom structures in place, 23 bridges, 1 pipe arch, and 8 wood box culverts. A total of 176 stream crossings had closed bottom structures installed, 173 round culverts, and 3 oval culverts. A total of 129 sites were classified as “other” and had fords in place at the stream crossing locations. Out of the 337 existing sites assessed, 34 were deemed passable. A total of 21 were classified as potential barriers to fish passage, 156 sites were classified as barriers to fish passage and 129 sites were classified as unknown.

Following analysis of the crossing barrier results, ten stream crossing structures were selected and are being recommended to BC Timber Sales for restoration in this report.

STUDY AREA

The study area of this contract was the Babine Timber Sales Area, Bulkley Watersheds. The sites assessed were located on BC map sheets 93L and 93M. Sites assessed were in the area of Houston, Smithers, Moricetown, and Hazelton BC. Watersheds to be assessed were selected from the general study area by the contract manager at BCTS. For the works completed in 2014, the priority watersheds were those remained unfinished from the works completed in 2012 and 2013. These watersheds were: 1267, 1269, 1302, 1305, 1314, 1325, 1327, 1330, 1334, 1335, 1348, 1349, 1354, 1355, 1360, 1362, 1366, 1367, 1416, and 1424. Following completion of these watersheds, additional sites assessed were selected from watersheds in the 'FRBC or Current Operations' list provided by the contract manager. Watersheds assessed in this list included: 1328, 1336, 1337, 1338, 1339, 1340, 1341, 1347, and 1356. Watersheds assessed (in 2014) are outlined below on the study area map.



SCOPE OF WORKS COMPLETED

The scope of works completed is outlined in the table below:

Table 1: Overall Summary of Sites for Burns Lake FPCI - 2014 Work

NOTE: As the mapsheets overlap significantly along the edges, overlapping numbers have been counted on the mapsheet with the largest area of the watershed, and not on adjacent mapsheets.

Watershed #	Mapsheet #	# of Sites Mapped*	# of Mapped Sites Assessed 2014	# of Unmapped Sites Assessed 2014	# of Sites Unassessed (See Individual Reasoning Attached)	# of Sites Remaining
1267*	93M.022	1	0	0	5	0
	93M.023	1	1	0	0	0
1269*	93M.033	2	2	0	1	0
1302*	93M.023	2	2	0	0	0
1303*	93M.014	3	1	3	3	0
1305*	93M.014	1	1	0	0	0
1314*	93L.093	1	1	0	1	0
1325*	93L.086	1	1	0	0	0
1327*	93L.086	4	4	1	0	0
1328	93L. 076	25	22	6	0	3
	93L.077	4	4	0	0	0
1330*	93L.084	0	0	1	2	0
1334*	93L.054	12	12	1	0	0
	93L.064	66	59	2	7	0
	93L.065	10	7	2	3	0
1335*	93L.054	8	8	0	0	0
	93L.055	5	5	0	0	0
	93L.065	22	22	0	0	0
1336	93L.055	14	10	4	4	0
	93L.065	16	14	0	2	0
1337	93L.055	17	16	1	1	0
1338	93L.055	5	4	0	1	0
1339	93L.064	37	28	15	9	0
	93L.074	8	8	9	0	0
1340	93L.074	0	0	1	5	0
1341	93L.064	1	1	0	1	0
1347	93L.053	4	4	1	0	0
1348*	93L.063	12	11	0	0	1
	93L.073	1	0	0	1	0
1349*	93L.063	13	13	1	0	0
1354*	93L.064	39	38	1	1	0
	93L.065	25	0	0	20	5
1355*	93L.053	2	0	0	2	0
	93L.054	2	2	0	1	0
	93L.063	9	9	0	0	0
	93L.064	6	5	1	1	0
1356	93L.063	34	31	1	3	0
1360*	93L.065	9	8	1	1	0
1362*	93L.066	6	1	1	14	0
1363*	93L.055	1	1	0	0	0
	93L.056	25	9	2	3	13
1366*	93L.066	2	0	0	1	1
	93L.067	22	21	5	0	1
1367*	93L.056	10	3	0	2	5
	93L.066	3	1	0	1	1
	93L.067	37	21	7	4	12
1393*	93L.057	23	18	4	3	5
1416*	93M.014	6	6	2	0	0
1423	93L.066	0	0	1	8	0
1424*	93L.055	2	2	0	0	0
	93L.056	2	2	0	0	0
	93L.066	14	14	0	0	0
TOTAL:		**575**	**453**	**74**	**111**	**47**

*Watersheds that were previously started - 'Number of Sites Mapped' is the number of sites remaining in the unfinished watershed at the beginning of works in 2014.

METHODS

Full size hardcopy maps and PDF copies of the map sheets for the study area were obtained from BC Timber Sales Burns Lake office. Road and stream layers for ArcGIS were obtained through the Land and Resource Data Warehouse (LRDW).

The methodology followed for this survey follows the methods described in the Field Assessment for Determining Fish Passage Status of Closed Bottom Structures, which is the standardized methodology for FPCI surveys. The scoring and data collection sheets from the document have been included in Appendix IV.

A photographic log was kept throughout the duration of the survey, to provide an accurate and standardized record of the physical characteristics of each stream crossing and crossing structure. A minimum of five photos were taken at each crossing structure site which included photos of the stream in the upstream and downstream direction from the crossing structure taken outside the influence of the road, a photo of the barrel of the structure and a photo of the inlet and outlet. Additional photos were taken if necessary to document additional or unusual features at the site such as beaver activity or concerns about road stability.

Stream widths were determined by recording and averaging the width of three locations on the downstream end of the crossing structure, the locations being the most representative of the channel configuration. The measurements were taken from the high water mark on both banks.

Stream gradient was determined using a clinometer. This measurement was taken on the downstream end of the crossing structure and on the longest sighting within the stream reach as possible. Culvert gradient was also measured using a clinometer, the sighting taken through the barrel of the culvert on the downstream end.

Other information recorded during each crossing assessment included UTM coordinates, stream and road name, crossing type, culvert diameter and length, inlet and outlet drop, habitat value and recommendations for the crossing structure. Each crossing structure assessed was marked using flagging tape which had assessment date, crew, and site number written on it for identification purposes.

Following completion of field assessments, all data was entered into the PSCIS excel data template, and submitted to the PSCIS database along with the photographs from each site. As per the standardized methodology for crossings which have two culverts with the same outlet elevation, the measurements used for barrier determination were the combined diameter, longest culvert, and highest gradient slope. The fill depth was recorded for the smaller culvert (if different size culverts were present) as it was the deeper measurement.

The barrier classifications produced by the scoring matrix were used in conjunction with site notes and photographs to select the ten sites which would provide the most benefit from removal or replacement. The ten sites recommended in this report were selected based on fisheries habitat value (limited to the immediate vicinity upstream and downstream from the crossing), barrier severity, potential upstream habitat gained if fish passage is restored, and cost of crossing structure replacement.

RESULTS

In all, 527 mapped sites were assessed through this contract in 2014. Tables 2 and 3 below outline the total number of sites assessed by each structure type and subtype, as well as the scoring matrix barrier classifications. Of the 527 sites assessed, 32 were Open Bottom Structures (OBS) 23 bridges, 1 pipe arch, and 8 wood box culverts, 176 were Closed Bottom Structures (CBS) 174 round culverts, and 3 oval culverts, 129 were Other-Fords, and 190 did not exist (DNE).

Table 2: Structures Assessed

Structure Type	Structure Subtype	# Assessed	Total	%
Open Bottom Structure	Bridge	23	32	6
	Pipe Arch	1		
	Wood Box Culvert	8		
Closed Bottom Structure	Round Culvert	173	176	33
	Oval Culvert	3		
Other	Ford	129	129	24
Do Not Exist	No Crossing at or Near Mapped Location	190	190	36
		Total	527	100

Of the 32 OBS assessed, all structures were classed as Passable by the scoring matrix; however, 5 of the wood box culverts were either collapsed, or had been constructed as log and earth crossings, and were in fact complete barriers to fish passage. These crossings were classified as wood box culverts as there is no suitable option to enter for log and earth structures in the data template.

Of the 176 CBS assessed, 2 of the round culverts were classed as Passable by the matrix. 20 round culverts and 1 oval culvert were classed as Potential barriers, while 151 round culverts, and 2 oval culverts were classed as Barriers.

All 129 ford structures assessed were classified as Unknown by the scoring matrix; however, 3 of the ford crossings had significant debris jams which were creating barriers to fish passage. The remaining fords were passable to fish.

Table 3: Assessment Statistics

Structure Type	Structure Subtype	# Existing Assessed	Passable	Potential	Barrier	Unknown
Open Bottom Structure	Bridge	23	23	-	-	-
	Pipe Arch	1	1	-	-	-
	Wood Box Culvert	8	8*	-	-	-
Closed Bottom Structure	Round Culvert	173	2	20	151	-
	Oval Culvert	3	0	1	2	-
Other	Ford	129	-	-	-	129**
	Total	337	34	21	153	129
	%		10	6	45	38

*All 8 wood box culverts were classed as Passable by the FPCI spreadsheet; however, 5 of these were collapsed, and were in fact complete barriers.

**All 129 fords were classed as Unknown by the FPCI spreadsheet; however, 3 of these had significant debris built up creating barriers to fish passage, while the rest were passable.

The following paragraphs contain detailed summaries of the ten sites selected for removal or replacement based on the results of the site assessments conducted in 2014. Tables 4 and 5 below summarize the assessment results of the ten structures. The order in which the crossing structures are presented and described is numerical, and does not indicate any priority for replacement.

Table 4: Assessment Perameters

Row	My Crossing Reference	Crossing Type	Crossing Subtype	Diameter or Span (meters)	Length or Width (meters)	Continuous Embeddedment? Yes/No	Resemble Channel? Yes / No	Backwatered? Yes / No	Fill Depth (meters)	Outlet Drop (meters)	Outlet Pool Depth (0.01m)	Inlet Drop? Yes / No	Culvert Slope (%)	Downstream Channel Width (meters)	Stream Slope (%)	Beaver Activity? Yes / No	Fish Observed? Yes / No	Valley Fill	Habitat Value
1	M14-025	Closed Bottom Structure	Round Culvert	0.60	6.00	No	No	No	0.72	0.35	0.33	Yes	6.50	2.67	14	No	Yes	Deep Fill	High
2	M14-050	Closed Bottom Structure	Round Culvert	1.80	16.50	No	No	No	4.20	0.41	0.46	No	4.00	2.54	6	No	No	Deep Fill	High
3	M14-063	Closed Bottom Structure	Round Culvert	1.20	18.25	No	No	No	2.15	0.71	0.31	No	6.50	2.80	9	No	No	Deep Fill	High
4	M14-064	Closed Bottom Structure	Round Culvert	1.80	30.90	No	No	No	6.00	1.45	0.29	No	5.00	4.13	12	No	No	Deep Fill	High
5	M14-068	Closed Bottom Structure	Round Culvert	1.20	18.25	No	No	No	1.62	0.6	0.16	No	8.00	1.72	11	No	No	Shallow Fill	Medium
6	M14-099	Closed Bottom Structure	Round Culvert	0.60	12.50	No	No	No	3.50	1.02	0.12	No	14.00	2.26	6	No	No	Deep Fill	High
7	M14-206	Closed Bottom Structure	Round Culvert	1.20	25.00	No	No	No	4.00	0.71	0.38	No	3.00	2.13	7	No	No	Deep Fill	Medium
8	M14-249	Closed Bottom Structure	Round Culvert	1.00	15.00	No	No	No	2.55	0.38	0.17	No	3.00	1.10	14	No	No	Deep Fill	Medium
9	M14-254	Closed Bottom Structure	Round Culvert	1.80	18.20	No	No	No	3.05	0.13	0.33	No	14.00	1.50	13	No	No	Deep Fill	High
10	M14-321	Closed Bottom Structure	Round Culvert	0.94	16.00	No	No	No	3.30	1.39	0.52	No	7.00	1.63	13	No	No	Deep Fill	Medium

Table 5: Scoring Matrix

Row	My Crossing Reference	Stream Width Ratio	Culvert Length Score	Embed Score	Outlet Drop Score	Culvert Slope Score	Stream Width Ratio Score	Final Score	Barrier Result
1	M14-025	4.45	0	10	10	10	6	36	Barrier
2	M14-050	1.41	3	10	10	10	6	39	Barrier
3	M14-063	2.33	3	10	10	10	6	39	Barrier
4	M14-064	2.29	6	10	10	10	6	42	Barrier
5	M14-068	1.43	3	10	10	10	6	39	Barrier
6	M14-099	3.77	0	10	10	10	6	36	Barrier
7	M14-206	1.78	3	10	10	10	6	39	Barrier
8	M14-249	1.10	3	10	10	10	3	36	Barrier
9	M14-254	0.83	3	10	0	10	0	23	Barrier
10	M14-321	1.73	3	10	10	10	6	39	Barrier

TRIBUTARY TO CORDUROY CREEK

MAP NO.: 285871 **MARLIM NO.:** M14-025

STREAM NAME: TRIBUTARY TO CORDUROY CREEK **ROAD NAME:** UNNAMED ROAD

UTM COORDINATES: ZONE 9N 605834E 6007083N

Marlim Site No.: M14-025 was assessed on September 11th, 2014. The site was located at 0.64km on an unnamed branch of the R10108 2 Road in the Babine Timber Sales Area, Bulkley Watershed Group**.**

The crossing structure at this site was a closed-bottom structure (round culvert) with a diameter of 600mm, a length of 6.00m and a gradient of 6.5%. This culvert was not embedded and had a fill depth of 0.72m. There was no substrate inside the culvert, and the culvert was not backwatered. There was an inlet drop of 0.20m, as well as an outlet drop of 0.35m.

The stream had an average channel width of 2.67m and a gradient of 14.0%. The outlet pool depth was 0.33m. There was no presence of beaver activity at this site, and an unidentified fish observation was made. The valley fill at the site was deep and it was determined that this stream had high habitat value.

Photo 2: M14-025

Description: Outlet

Direction: Upstream

TRIBUTARY TO SINCLAIR CREEK

MAP NO.: 284557 **MARLIM NO.:** M14-050

STREAM NAME: TRIBUTARY TO SINCLAIR CREEK **ROAD NAME:** UNNAMED ROAD

UTM COORDINATES: ZONE 9N 595200E 6058432N

Marlim Site No.: M14-050 was assessed on September 29th, 2014. The site was located at 1.5km on an unnamed branch of the R09521 126 Road in the Babine Timber Sales Area Bulkley Watershed Group**.**

The crossing structure at this site was a closed-bottom structure (2 round culverts) with a combined diameter of 1800mm (900mm left, 900mm right), a length of 16.5m and a gradient of 4.0%. Neither culvert was embedded and the fill depth was 4.20m. There was no substrate inside either culvert, and the culverts were not backwatered. There was no inlet drop, although there was an outlet drop of 0.41m.

The stream had an average channel width of 2.54m and a gradient of 6.0%. The outlet pool depth was 0.46m. There was no presence of beaver activity at this site and no fish were observed. The valley fill at the site was deep and it was determined that this stream had high habitat value.

Photo 10: M14-050

Description: Outlet

Direction: Upstream

TRIBUTARY TO TELKWA RIVER

MAP NO.: 284774 **MARLIM NO.:** M14-063

STREAM NAME: TRIBUTARY TO TELKWA RIVER **ROAD NAME:** R09521 103

UTM COORDINATES: ZONE 9N 607209E 6050724N

Marlim Site No.: M14-063 was assessed on October 2nd, 2014. The site was located at 5.91km on the R09521 103 Road in the Babine Timber Sales Area Bulkley Watershed Group**.**

The crossing structure at this site was a closed-bottom structure (round culvert) with a diameter of 1200mm, a length of 18.25m and a gradient of 6.5%. This culvert was not embedded and had a fill depth of 2.15m. There was no substrate present inside the culvert, and the culvert was not backwatered. There was no inlet drop present, while there was an outlet drop of 0.71m.

The stream had an average channel width of 2.80m and a gradient of 9.0%. The outlet pool depth was 0.31m. There was no presence of beaver activity at this site and no fish were observed. The valley fill at the site was deep and it was determined that this stream had high habitat value.

Photo 15: M14-063

Description: Outlet

Direction: Upstream

TRIBUTARY TO TELKWA RIVER

MAP NO.: 284780 **MARLIM NO.:** M14-064

STREAM NAME: TRIBUTARY TO TELKWA RIVER **ROAD NAME:** R09521 103

UTM COORDINATES: ZONE 9N 606889E 6050621N

Marlim Site No.: M14-064 was assessed on October 2nd, 2014. The site was located at 6.30km on the R09521 103 Road in the Babine Timber Sales Area Bulkley Watershed Group**.**

The crossing structure at this site was a closed-bottom structure (round culvert) with a diameter of 1800mm, a length of 30.90m and a gradient of 5.0%. This culvert was not embedded and had a fill depth of 6.00m. The substrate in the culvert did resemble the channel substrate, but was only present at the inlet, and the culvert was not backwatered. There was no inlet drop; however, there was an outlet drop of 1.45m.

The stream had an average channel width of 4.13m and a gradient of 12.0%. The outlet pool depth was 0.29m. There was no presence of beaver activity at this site and no fish were observed. The valley fill at the site was deep and it was determined that this stream had high habitat value.

Photo 22: M14-064

Description: Outlet

Direction: Upstream

TRIBUTARY TO TELKWA RIVER

MAP NO.: 284824 **MARLIM NO.:** M14-068

STREAM NAME: TRIBUTARY TO TELKWA RIVER **ROAD NAME:** R09521 103

UTM COORDINATES: ZONE 9N 608454E 6049535N

Marlim Site No.: M14-068 was assessed on October 2nd, 2014. The site was located at 9.89km on the R09521 103 Road in the Babine Timber Sales Area Bulkley Watershed Group**.**

The crossing structure at this site was a closed-bottom structure (round culvert) with a diameter of 1200mm, a length of 18.25m and a gradient of 8.0%. This culvert was not embedded and had a fill depth of 1.62m. There was no substrate present in the culvert, and the culvert was not backwatered. There was no inlet drop; however, there was an outlet drop of 0.60m.

The stream had an average channel width of 1.72m and a gradient of 11.0%. The outlet pool depth was 0.16m. There was no presence of beaver activity at this site and no fish were observed. The valley fill at the site was shallow and it was determined that this stream had medium habitat value.

Photo 28: M14-068

Description: Outlet

Direction: Upstream

TRIBUTARY TO TELKWA RIVER

MAP NO.: 284724 **MARLIM NO.:** M14-099

STREAM NAME: TRIBUTARY TO TELKWA RIVER **ROAD NAME:** R09521 103

UTM COORDINATES: ZONE 9N 611046E 6052234N

Marlim Site No.: M14-099 was assessed on October 3rd, 2014. The site was located at 4.61km on the R09521 103 Road in the Babine Timber Sales Area Bulkley Watershed Group**.**

The crossing structure at this site was a closed-bottom structure (round culvert) with a diameter of 600mm, a length of 12.50m and a gradient of 14.0%. This culvert was not embedded and had a fill depth of 3.50m. There was no substrate present in the culvert, and the culvert was not backwatered. There was no inlet drop, while there was an outlet drop of 1.02m. There was a second culvert located below the assessed culvert which was completely buried at the inlet, and non-functional. As such it was not included in the assessment for this crossing, although it is shown in the site photographs.

The stream had an average channel width of 2.26m and a gradient of 6.0%. The outlet pool depth was 0.12m. There was no presence of beaver activity at this site and no fish were observed. The valley fill at the site was deep and it was determined that this stream had high habitat value.

Photo 35: M14-099

Description: Outlet - both.

Direction: Upstream

TRIBUTARY TO TELKWA RIVER

MAP NO.: 284699 **MARLIM NO.:** M14-206

STREAM NAME: TRIBUTARY TO TELKWA RIVER **ROAD NAME:** R09521 1000

UTM COORDINATES: ZONE 9N 594517E 6052303N

Marlim Site No.: M14-206 was assessed on September 30th, 2014. The site was located at 2.12km on the R09521 1000 Road in the Babine Timber Sales Area Bulkley Watershed Group**.**

The crossing structure at this site was a closed-bottom structure (round culvert) with a diameter of 1200mm, a length of 25.00m and a gradient of 3.0%. This culvert was not embedded and had a fill depth of 4.00m. There was no substrate present in the culvert, and the culvert was not backwatered. There was no inlet drop; however, there was an outlet drop of 0.71m.

The stream had an average channel width of 2.13m and a gradient of 7.0%. The outlet pool depth was 0.38m. There was no presence of beaver activity at this site and no fish were observed. The valley fill at the site was deep and it was determined that this stream had medium habitat value.

Photo 41: M14-206

Description: Outlet

Direction: Upstream

TRIBUTARY TO TELKWA RIVER

MAP NO.: 284742 **MARLIM NO.:** M14-249

STREAM NAME: TRIBUTARY TO TELKWA RIVER **ROAD NAME:** R09521 1018-2

UTM COORDINATES: ZONE 9N 598602E 6051343N

Marlim Site No.: M14-249 was assessed on October 4th, 2014. The site was located at 2.70km on the R09521 1018-2 Road in the Babine Timber Sales Area Bulkley Watershed Group**.**

The crossing structure at this site was a closed-bottom structure (round culvert) with a diameter of 1000mm, a length of 15.00m and a gradient of 3.0%. This culvert was not embedded and had a fill depth of 2.55m. There was no substrate present in the culvert, and the culvert was not backwatered. There was no inlet drop; however, there was an outlet drop of 0.38m.

The stream had an average channel width of 1.10m and a gradient of 14.0%. The outlet pool depth was 0.17m. There was no presence of beaver activity at this site and no fish were observed. The valley fill at the site was deep and it was determined that this stream had medium habitat value.

Photo 46: M14-249

Description: Outlet

Direction: Upstream

TRIBUTARY TO TENAS CREEK

MAP NO.: 284850 **MARLIM NO.:** M14-254

STREAM NAME: TRIBUTARY TO TENAS CREEK **ROAD NAME:** R09521 103-1

UTM COORDINATES: ZONE 9N 613644E 6048692N

Marlim Site No.: M14-254 was assessed on October 5th, 2014. The site was located at 9.21km on the R09521 103-1 Road in the Babine Timber Sales Area Bulkley Watershed Group**.**

The crossing structure at this site was a closed-bottom structure (round culvert) with a diameter of 1800mm, a length of 18.20m and a gradient of 14.0%. This culvert was not embedded and had a fill depth of 3.05m. There was no substrate present in the culvert, and the culvert was not backwatered. There was no inlet drop; however, there was an outlet drop of 0.13m.

The stream had an average channel width of 1.50m and a gradient of 13.0%. The outlet pool depth was 0.33m. There was no presence of beaver activity at this site and no fish were observed. The valley fill at the site was deep and it was determined that this stream had high habitat value.

Photo 51: M14-254

Description: Outlet

Direction: Upstream

TRIBUTARY TO GOATHORN CREEK

MAP NO.: 284840 **MARLIM NO.:** M14-321

STREAM NAME: TRIBUTARY TO GOATHORN CREEK **ROAD NAME:** R09521 120-1A

UTM COORDINATES: ZONE 9N 623609E 6045966N

Marlim Site No.: M14-321 was assessed on October 9th, 2014. The site was located at 7.71km on the R09521 120-1A Road in the Babine Timber Sales Area Bulkley Watershed Group**.**

The crossing structure at this site was a closed-bottom structure (round culvert) with a diameter of 940mm, a length of 16.00m and a gradient of 7.0%. This culvert was not embedded and had a fill depth of 3.30m. There was no substrate present in the culvert, and the culvert was not backwatered. There was no inlet drop, and there was an outlet drop of 0.52m.

The stream had an average channel width of 1.63m and a gradient of 13.0%. The outlet pool depth was 0.52m. There was no presence of beaver activity at this site and no fish were observed. The valley fill at the site was deep and it was determined that this stream had medium habitat value.

Photo 56: M14-321

Description: Outlet

Direction: Upstream

ANALYSIS AND RECOMMENDATIONS

The following paragraphs contain recommendations for the stream crossing structures assessed during the course of this study. It is important to note that site assessments were completed at different times throughout the summer and fall and stream characteristics may vary seasonally. It will be important to determine any seasonal differences in channel flow prior to confirming that a recommended site is in fact a high priority for replacement. In addition, fish sampling has not been carried out to confirm fish presence at any of the recommended crossing sites, and no field assessments have been carried out to determine the value of mapped upstream habitat. Recommendations and upstream habitat to be gained has been determined from the mapping data obtained through the Land and Resource Data Warehouse. Prior to restoration, each stream crossing should be assessed by a hydrologist and/or an engineer to determine if the recommended crossing structure will be adequately sized to convey the stream flow and to determine if any design/construction constraints exist. The species potentially present at each site have been determined from the provincial Fisheries Inventory Summary System (FISS) known species locations layer on the maps provided by BCTS. Species listed in the table below are either found in the subject channel, or in the water body the subject channel flows into.

Table 6 on the following page outlines the recommendations provided by Marlim for each selected site.

Table 6: Recommendations

Row	My Crossing Reference	Final Score	Barrier Result	Crossing Fix	Recommended Diameter or Span (meters)	Assessment Comment	Species Potentially Present
1	M14-025	36	Barrier	Open Bottom Structure	2.70	Substantial logging debris, replace with OBS	DV, RB, SP
2	M14-050	39	Barrier	Removal	2.60	Remove, or replace with OBS (2.6)	BT, DV
3	M14-063	39	Barrier	Open Bottom Structure	2.80	Replace with OBS and restore channel	CH, CO, MW, PCC, PK, RB, TS, SU
4	M14-064	42	Barrier	Open Bottom Structure	4.20	Replace with OBS, water overflowing CV inlet	CH, CO, MW, PCC, PK, RB, TS, SU
5	M14-068	39	Barrier	Open Bottom Structure	1.75	Replace with OBS if fish present	CH, CO, MW, PCC, PK, RB, TS, SU
6	M14-099	36	Barrier	Open Bottom Structure	2.30	Replace with OBS if fish present	CH, CO, MW, PCC, PK, RB, TS, SU
7	M14-206	39	Barrier	Open Bottom Structure	2.15	Replace with OBS if fish present	CH, CO, MW, PCC, PK, RB, TS, SU
8	M14-249	36	Barrier	Streambed Simulation	1.10	Replace with properly embedded culvert	CH, CO, MW, PCC, PK, RB, TS, SU
9	M14-254	23	Barrier	Open Bottom Structure	1.50	Replace with OBS if fish present	BT, DV, MW, RB, SP, ST
10	M14-321	39	Barrier	Open Bottom Structure	1.65	Replace with OBS if fish present	CH, CO, RB, SA, SP, ST

BT - Bull trout (*Salvelinus confluentus*)
CH - Chinook salmon (*Oncorhynchus tshawytscha*)
CO - Coho salmon (*Oncorhynchus kisutch*)
CT - Cutthroat trout (*Oncorhynchus clarkii*)
DV - Dolly varden (*Salvelinus malma malma*)
MW - Mountain whitefish (*Prosopium williamsoni*)
PCC - Peamouth chub (*Mylocheilus caurinus*)
PK - Pink salmon (*Oncorhynchus gorbuscha*)
RB - Rainbow trout (*Oncorhynchus mykiss*)
SA - Salmon (general) (*Ocorhynchus sp.)*
SP - Unidentified species
ST - Steelhead (*Oncorhynchus mykiss*)
SU - Sucker (general) (*Catostomus spp.*)

TRIBUTARY TO CORDUROY CREEK

MAP NO.: 285871 **MARLIM NO.:** M14-025

STREAM NAME: TRIBUTARY TO CORDUROY CREEK **ROAD NAME:** UNNAMED ROAD

UTM COORDINATES: ZONE 9N 605834E 6007083N

Marlim Site No. M14-025 had a stream width ratio of 4.45 and a stream width ratio score of 6. The culvert length score was 0, the culvert slope score was 10, the embed score was 10 and the outlet drop score was 10.

This site received a final score of 36 and was classed as a Barrier by the scoring matrix. The potential upstream habitat length to be gained is 2.251km. It is important to note that the mapped channel where this site is located is defaulted to blue – 'Non Fish Habitat'. However, this site is being recommended as an unidentified fish was observed during the crossing assessment, and high value habitat is in fact present at the site location. The fish species potentially present at this site include Dolly varden, Rainbow trout, and an unidentified species.

It is recommended that the current culvert be replaced with an open bottom structure with a minimum 2.70m span.

TRIBUTARY TO SINCLAIR CREEK

MAP NO.: 284557 **MARLIM NO.:** M14-050

STREAM NAME: TRIBUTARY TO SINCLAIR CREEK **ROAD NAME:** UNNAMED ROAD

UTM COORDINATES: ZONE 9N 595200E 6058432N

Marlim Site No. M14-050 had a stream width ratio of 1.41 and a stream width ratio score of 6. The culvert length score was 3, the culvert slope score was 10, the embed score was 10 and the outlet drop score was 10.

This site received a final score of 39 and was classed as a Barrier by the scoring matrix. The potential upstream habitat length to be gained is 2.711km. The fish species potentially present at this site include Bull trout and Dolly varden.

It is recommended that the current culvert be removed and the natural channel restored. If road access is still required to this area, it is recommended that the current culvert be replaced with an open bottom structure with a minimum span of 2.60m.

TRIBUTARY TO TELKWA RIVER

MAP NO.: 284774 **MARLIM NO.:** M14-063
STREAM NAME: TRIBUTARY TO TELKWA RIVER **ROAD NAME:** R09521 103
UTM COORDINATES: ZONE 9N 607209E 6050724N

Marlim Site No. M14-063 had a stream width ratio of 2.33 and a stream width ratio score of 6. The culvert length score was 3, the culvert slope score was 10, the embed score was 10 and the outlet drop score was 10.

This site received a final score of 39 and was classed as a Barrier by the scoring matrix. The potential upstream habitat length to be gained is 2.645km. The fish species potentially present at this site include Chinook salmon, Coho salmon, Mountain whitefish, Peamouth chub, Pink salmon, Rainbow trout, Steelhead, and Suckers (general).

It is recommended that the current culvert be replaced with an open bottom structure with a minimum span of 2.80m, and the channel at the crossing site be restored.

TRIBUTARY TO TELKWA RIVER

MAP NO.: 284780 **MARLIM NO.:** M14-064
STREAM NAME: TRIBUTARY TO TELKWA RIVER **ROAD NAME:** R09521 103
UTM COORDINATES: ZONE 9N 606889E 6050621N

Marlim Site No. M14-064 had a stream width ratio of 2.29 and a stream width ratio score of 6. The culvert length score was 6, the culvert slope score was 10, the embed score was 10 and the outlet drop score was 10.

This site received a final score of 42 and was classed as a Barrier by the scoring matrix. The potential upstream habitat length to be gained is 2.467km. The fish species potentially present at

this site include Chinook salmon, Coho salmon, Mountain whitefish, Peamouth chub, Pink salmon, Rainbow trout, Steelhead, and Suckers (general).

It is recommended that the current culvert be replaced with an open bottom structure with a minimum span of 4.20m, and the channel at the crossing site be restored.

TRIBUTARY TO TELKWA RIVER

MAP NO.: 284824 **MARLIM NO.:** M14-068

STREAM NAME: TRIBUTARY TO TELKWA RIVER **ROAD NAME:** R09521 103

UTM COORDINATES: ZONE 9N 608454E 6049535N

Marlim Site No. M14-068 had a stream width ratio of 1.43 and a stream width ratio score of 6. The culvert length score was 3, the culvert slope score was 10, the embed score was 10 and the outlet drop score was 10.

This site received a final score of 39 and was classed as a Barrier by the scoring matrix. The potential upstream habitat length to be gained is 2.460km. The fish species potentially present at this site include Chinook salmon, Coho salmon, Mountain whitefish, Peamouth chub, Pink salmon, Rainbow trout, Steelhead, and Suckers (general).

It is recommended that the current culvert be replaced with an open bottom structure with a minimum span of 4.20m, and the channel at the crossing site be restored. It is important to note that this crossing is located upstream of the M14-064 crossing site, and should only be considered for restoration if M14-064 is being restored as well. If both crossings are restored, approximately 4.927km of potential upstream habitat length will in fact be present upstream of M14-064.

TRIBUTARY TO TELKWA RIVER

MAP NO.: 284724 **MARLIM NO.:** M14-099

STREAM NAME: TRIBUTARY TO TELKWA RIVER **ROAD NAME:** R09521 103

UTM COORDINATES: ZONE 9N 611046E 6052234N

Marlim Site No. M14-099 had a stream width ratio of 3.77 and a stream width ratio score of 6. The culvert length score was 0, the culvert slope score was 10, the embed score was 10 and the outlet drop score was 10.

This site received a final score of 36 and was classed as a Barrier by the scoring matrix. The potential upstream habitat length to be gained is 6.060km. The fish species potentially present at this site include Chinook salmon, Coho salmon, Mountain whitefish, Peamouth chub, Pink salmon, Rainbow trout, Steelhead, and Suckers (general).

It is recommended that the current culvert be replaced with an open bottom structure with a minimum span of 2.30m, and the channel at the crossing site be restored.

TRIBUTARY TO TELKWA RIVER

MAP NO.: 284699 **MARLIM NO.:** M14-206

STREAM NAME: TRIBUTARY TO TELKWA RIVER **ROAD NAME:** R09521 1000

UTM COORDINATES: ZONE 9N 594517E 6052303N

Marlim Site No. M14-206 had a stream width ratio of 1.78 and a stream width ratio score of 6. The culvert length score was 3, the culvert slope score was 10, the embed score was 10 and the outlet drop score was 10.

This site received a final score of 39 and was classed as a Barrier by the scoring matrix. The potential upstream habitat length to be gained is 2.246km. The fish species potentially present at this site include Chinook salmon, Coho salmon, Mountain whitefish, Peamouth chub, Pink salmon, Rainbow trout, Steelhead, and Suckers (general).

It is recommended that the current culvert be replaced with an open bottom structure with a minimum span of 2.15m, and the channel at the crossing site be restored.

TRIBUTARY TO TELKWA RIVER

MAP NO.: 284742 **MARLIM NO.:** M14-249
STREAM NAME: TRIBUTARY TO TELKWA RIVER **ROAD NAME:** R09521 1018-2
UTM COORDINATES: ZONE 9N 598602E 6051343N

Marlim Site No. M14-249 had a stream width ratio of 1.10 and a stream width ratio score of 3. The culvert length score was 3, the culvert slope score was 10, the embed score was 10 and the outlet drop score was 10.

This site received a final score of 36 and was classed as a Barrier by the scoring matrix. The potential upstream habitat length to be gained is 1.013km. The fish species potentially present at this site include Chinook salmon, Coho salmon, Mountain whitefish, Peamouth chub, Pink salmon, Rainbow trout, Steelhead, and Suckers (general).

It is recommended that the current culvert be replaced with a properly embedded culvert with a minimum diameter of 1100mm.

TRIBUTARY TO TENAS CREEK

MAP NO.: 284850 **MARLIM NO.:** M14-254
STREAM NAME: TRIBUTARY TO TENAS CREEK **ROAD NAME:** R09521 103-1
UTM COORDINATES: ZONE 9N 613644E 6048692N

Marlim Site No. M14-254 had a stream width ratio of 0.83 and a stream width ratio score of 0. The culvert length score was 3, the culvert slope score was 10, the embed score was 10 and the outlet drop score was 0.

This site received a final score of 23 and was classed as a Barrier by the scoring matrix. The potential upstream habitat length to be gained is 1.977km. The fish species potentially present at

this site include Bull trout, Dolly varden, Mountain whitefish, Rainbow trout, unidentified species, and Steelhead.

It is recommended that the current culvert be replaced with an open bottom structure with a minimum span of 1.50m, and the channel at the crossing site be restored.

TRIBUTARY TO GOATHORN CREEK

MAP NO.: 284840 **MARLIM NO.:** M14-321

STREAM NAME: TRIBUTARY TO GOATHORN CREEK **ROAD NAME:** R09521 120-1A

UTM COORDINATES: ZONE 9N 623609E 6045966N

Marlim Site No. M14-321 had a stream width ratio of 1.73 and a stream width ratio score of 6. The culvert length score was 3, the culvert slope score was 10, the embed score was 10 and the outlet drop score was 10.

This site received a final score of 39 and was classed as a Barrier by the scoring matrix. The potential upstream habitat length to be gained is 4.314km. The fish species potentially present at this site include Chinook salmon, Coho salmon, Rainbow trout, Salmon (general), unidentified species, and Steelhead.

It is recommended that the current culvert be replaced with an open bottom structure with a minimum span of 1.65m.

CONCLUSIONS

A total of 527 crossing sites were assessed during this contract. Of the 337 sites that existed, 156 (45%) were classed as barriers by the scoring matrix. A total of 190 of the sites assessed (36%) did not exist as mapped. The 10 sites recommended in this report for removal or replacement are considered to be the top 10 most beneficial for restoring fish access if removed or replaced. Stream crossing structures, especially closed bottom structures and old log and earth structures appear to be a significant issue for fish passage in the Babine Timber Sales Area, while mapping records need to be updated to remove crossings that do not in fact exist.

APPENDIX I

PHOTOGRAPH LOG

M14-025, Row 1 - All Tables

Photo 1: M14-025

Description: Barrel

Direction: Upstream

Photo 2: M14-025

Description: Outlet

Direction: Upstream

M14-025, Row 1 - All Tables

Photo 3: M14-025

Description: Debris at outlet.

Direction: Downstream

Photo 4: M14-025

Description: Downstream Channel

Direction: Downstream

M14-025, Row 1 - All Tables

Photo 5: M14-025

Description: Inlet

Direction: Downstream

Photo 6: M14-025

Description: Upstream Channel

Direction: Upstream

M14-025, Row 1 - All Tables

Photo 7: M14-025

Description: Road washing out.

Direction: N/A

M14-050, Row 2 - All Tables

Photo 8: M14-050

Description: Barrel_Left

Direction: Upstream

Photo 9: M14-050

Description: Barrel_Right

Direction: Upstream

M14-050, Row 2 - All Tables

Photo 10: M14-050

Description: Outlet

Direction: Upstream

Photo 11: M14-050

Description: Downstream Channel

Direction: Downstream

M14-050, Row 2 - All Tables

Photo 12: M14-050

Description: Inlet

Direction: Downstream

Photo 13: M14-050

Description: Upstream Channel

Direction: Upstream

M14-063, Row 3 - All Tables

Photo 14: M14-063

Description: Barrel

Direction: Upstream

Photo 15: M14-063

Description: Outlet

Direction: Upstream

M14-063, Row 3 - All Tables

Photo 16: M14-063

Description: Downstream Channel

Direction: Downstream

Photo 17: M14-063

Description: Debris in downstream channel.

Direction: Downstream

M14-063, Row 3 - All Tables

Photo 18: M14-063

Description: Inlet

Direction: Downstream

Photo 19: M14-063

Description: Upstream Channel

Direction: Upstream

M14-064, Row 4 - All Tables

Photo 20: M14-064

Description: Barrel

Direction: Upstream

Photo 21: M14-064

Description: Barrel at inlet.

Direction: Downstream

M14-064, Row 4 - All Tables

Photo 22: M14-064

Description: Outlet

Direction: Upstream

Photo 23: M14-064

Description: Downstream Channel

Direction: Downstream

M14-064, Row 4 - All Tables

Photo 24: M14-064

Description: Downstream channel at outlet.

Direction: Downstream

Photo 25: M14-064

Description: Inlet

Direction: Downstream

M14-064, Row 4 - All Tables

Photo 26: M14-064

Description: Upstream Channel

Direction: Upstream

M14-068, Row 5 - All Tables

Photo 27: M14-068

Description: Barrel

Direction: Upstream

Photo 28: M14-068

Description: Outlet

Direction: Upstream

M14-068, Row 5 - All Tables

Photo 29: M14-068

Description: Downstream Channel

Direction: Downstream

Photo 30: M14-068

Description: Inlet

Direction: Downstream

M14-068, Row 5 - All Tables

Photo 31: M14-068

Description: Upstream Channel

Direction: Upstream

M14-099, Row 6 - All Tables

Photo 32: M14-099

Description: Barrel

Direction: Downstream

Photo 33: M14-099

Description: Outlet - bottom culvert, non-functional.

Direction: Upstream

M14-099, Row 6 - All Tables

Photo 34: M14-099

Description: Outlet - top culvert.

Direction: Upstream

Photo 35: M14-099

Description: Outlet - both.

Direction: Upstream

M14-099, Row 6 - All Tables

Photo 36: M14-099

Description: Downstream Channel

Direction: Downstream

Photo 37: M14-099

Description: Inlet - top culvert only, bottom culvert is buried.

Direction: Downstream

M14-099, Row 6 - All Tables

Photo 38: M14-099

Description: Debris built up at inlet, burying bottom inlet.

Direction: Downstream

Photo 39: M14-099

Description: Upstream Channel

Direction: Upstream

M14-206, Row 7 - All Tables

Photo 40: M14-206

Description: Barrel

Direction: Upstream

Photo 41: M14-206

Description: Outlet

Direction: Upstream

M14-206, Row 7 - All Tables

Photo 42: M14-206

Description: Downstream Channel

Direction: Downstream

Photo 43: M14-206

Description: Inlet

Direction: Downstream

M14-206, Row 7 - All Tables

Photo 44: M14-206

Description: Upstream Channel

Direction: Upstream

M14-249, Row 8 - All Tables

Photo 45: M14-249

Description: Barrel

Direction: Upstream

Photo 46: M14-249

Description: Outlet

Direction: Upstream

M14-249, Row 8 - All Tables

Photo 47: M14-249

Description: Downstream Channel

Direction: Downstream

Photo 48: M14-249

Description: Inlet

Direction: Downstream

M14-249, Row 8 - All Tables

Photo 49: M14-249

Description: Upstream Channel

Direction: Upstream

M14-254, Row 9 - All Tables

Photo 50: M14-254

Description: Barrel

Direction: Upstream

Photo 51: M14-254

Description: Outlet

Direction: Upstream

M14-254, Row 9 - All Tables

Photo 52: M14-254

Description: Downstream Channel

Direction: Downstream

Photo 53: M14-254

Description: Inlet

Direction: Downstream

M14-254, Row 9 - All Tables

Photo 54: M14-254

Description: Upstream Channel

Direction: Upstream

M14-321, Row 10 - All Tables

Photo 55: M14-321

Description: Barrel

Direction: Upstream

Photo 56: M14-321

Description: Outlet

Direction: Upstream

M14-321, Row 10 - All Tables

Photo 57: M14-321

Description: Downstream Channel

Direction: Downstream

Photo 58: M14-321

Description: Inlet

Direction: Downstream

M14-321, Row 10 - All Tables

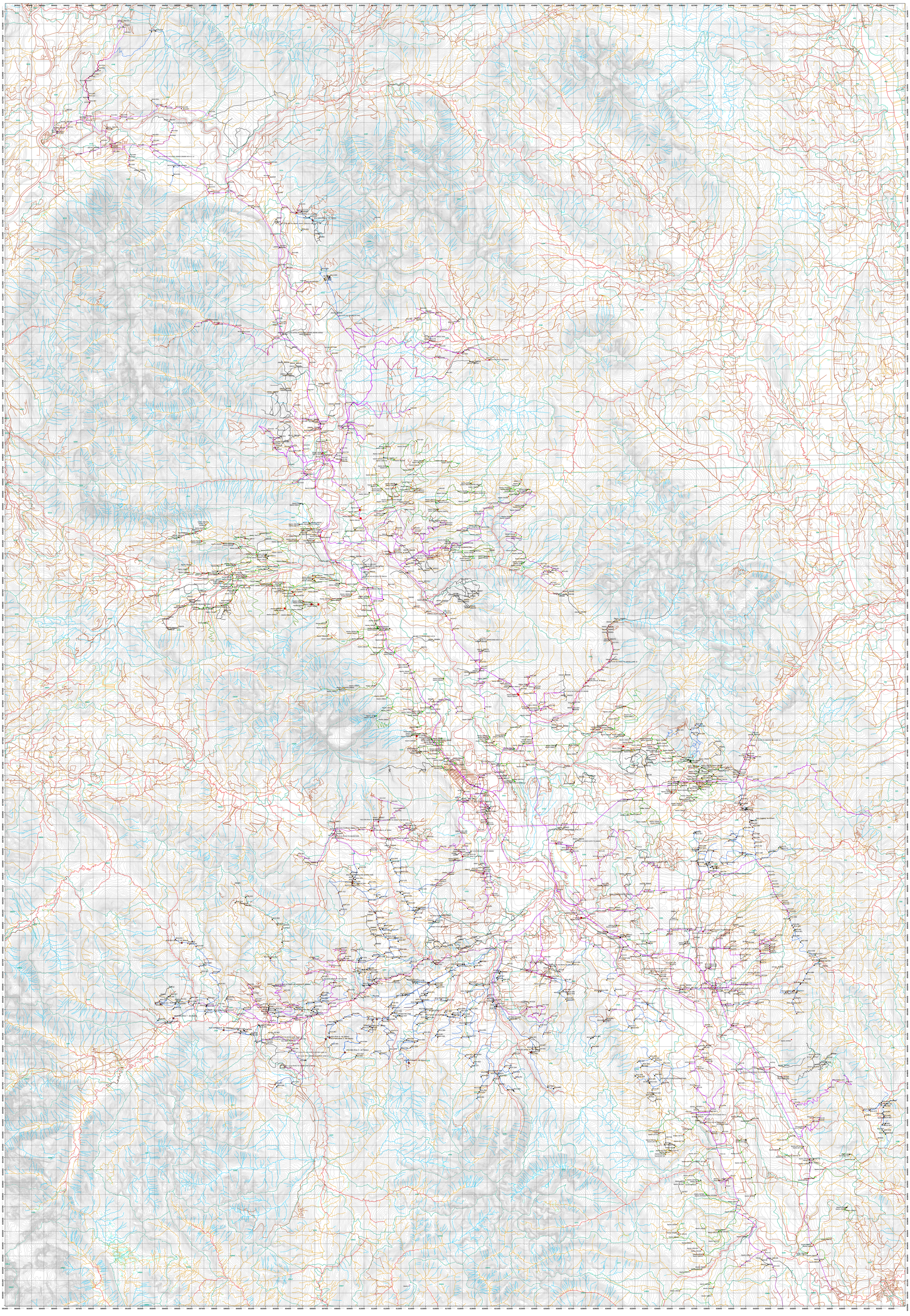
Photo 59: M14-321

Description: Upstream Channel

Direction: Upstream

APPENDIX II

OVERVIEW MAP
DIGITAL VERSION ONLY



Legend

Crossing Status by Year

2012	2013	2014
Barrier	Barrier	Barrier
Priority	Priority	Priority
Passable	Passable	Passable
Potential	Potential	Potential
Unknown	Unknown	Unknown
DNE	DNE	DNE
		No Assessment Required*
		Access Data

Roads
- Unassessed
- Inaccessible
- Assessed 2012
- Assessed 2013
- Assessed 2014

Contours
- 20m Interval

Watersheds
- Boundary
- 5005 Label

Fish Habitat
- None
- Inferred
- Observed
- Lakes

N

0 390 780 1,560 2,340 3,120 Meters

1:50,000

*Sites that are either: inaccessible due to overgrown roads or denied permission from landowner, or have no downstream channel.

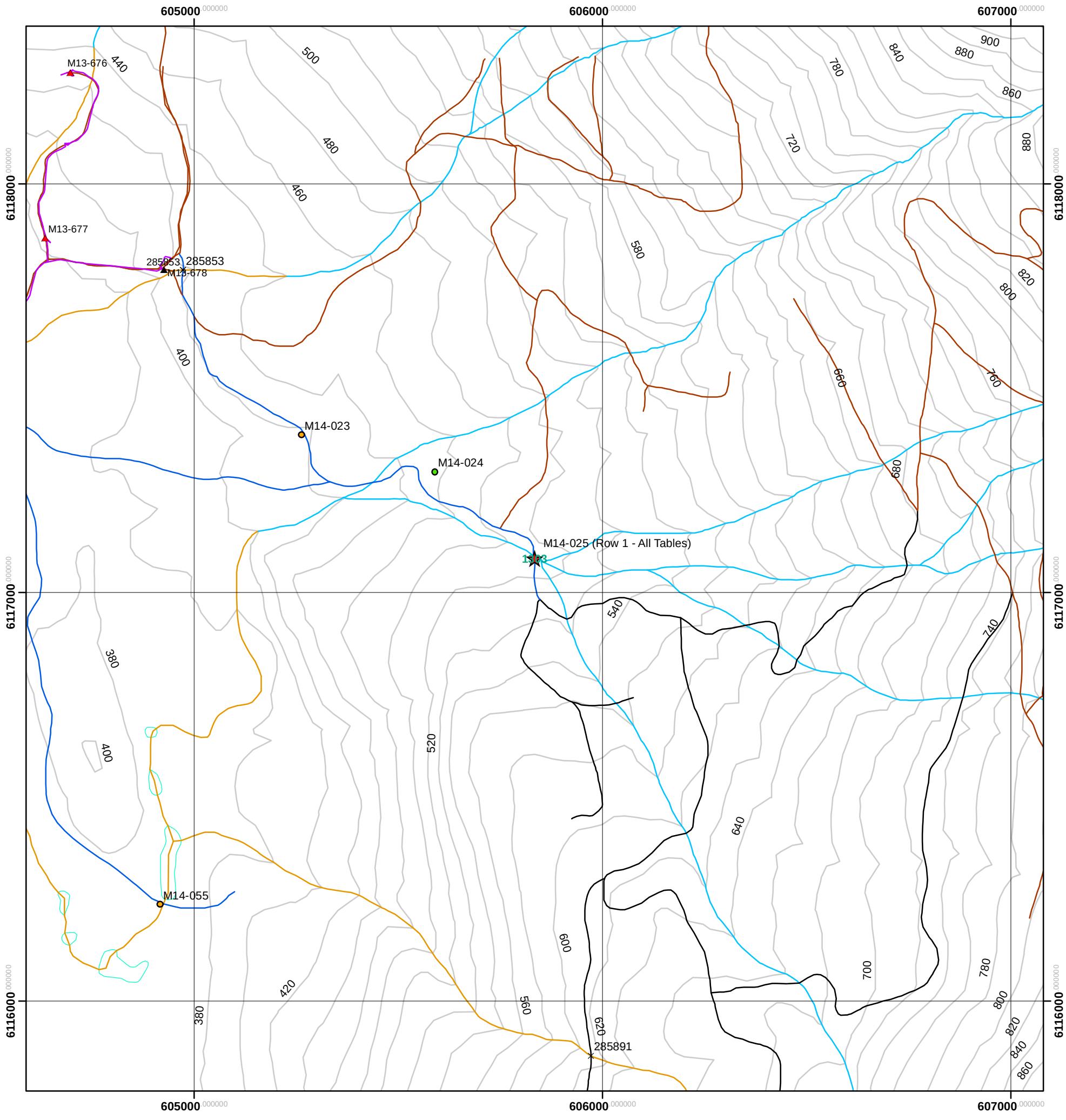
PLEASE NOTE Data points as mapped correspond to field data while road and stream layers were obtained through the Land and Resource Data Warehouse. Field data points do not always match up exactly with mapped streams and roads. Duplicate road layers in the maps created by Marlim are due to using both FTEN and DRA road layers, in order to map the complete road network. Some overlap is present between the layers.

MARLIM ECOLOGICAL CONSULTING LTD.

Fish Passage Culvert Investigations - Babine TSA Contract: EN15TAH414	Date: February 2015	Map Title: Overview
MarLim Ecological Consulting Ltd. Phone/Fax: 604-531-4338 Web: www.marlimecological.com Email: mail@marlimecological.com	Project: 327.14.01	Page: 1

APPENDIX III

SITE MAPS



PLEASE NOTE Data points as mapped correspond to field data while road and stream layers were obtained through the Land and Resource Data Warehouse. Field data points do not always match up exactly with mapped streams and roads. Duplicate road layers in the maps created by Marlim are due to using both FTEN and DRA road layers, in order to map the complete road network. Some overlap is present between the layers.

Legend

Crossing Status by Year

2012	2013	2014
Barrier	Barrier	Barrier
Priority	Priority	Priority
Passable	Passable	Passable
Potential	Potential	Potential
Unknown	Unknown	Unknown
DNE	DNE	DNE

× No Assessment Required*

Access Data

Roads

- Unassessed
- Inaccessible
- Assessed 2012
- Assessed 2013
- Assessed 2014

Contours

- 20m Interval

Fish Habitat

- None
- Inferred
- Observed
- Lakes

Watersheds

- Boundary
- 5005 Label

N

0 75 150 300 450 600 Meters

1:10,000

*Sites that are either: inaccessible due to overgrown roads or denied permission from landowner, or have no downstream channel.

MARLIM ECOLOGICAL CONSULTING LTD

Fish Passage Culvert Investigations - Babine TSA

Contract: EN15TAH414

Date: February 2015

Map Title: M14-025

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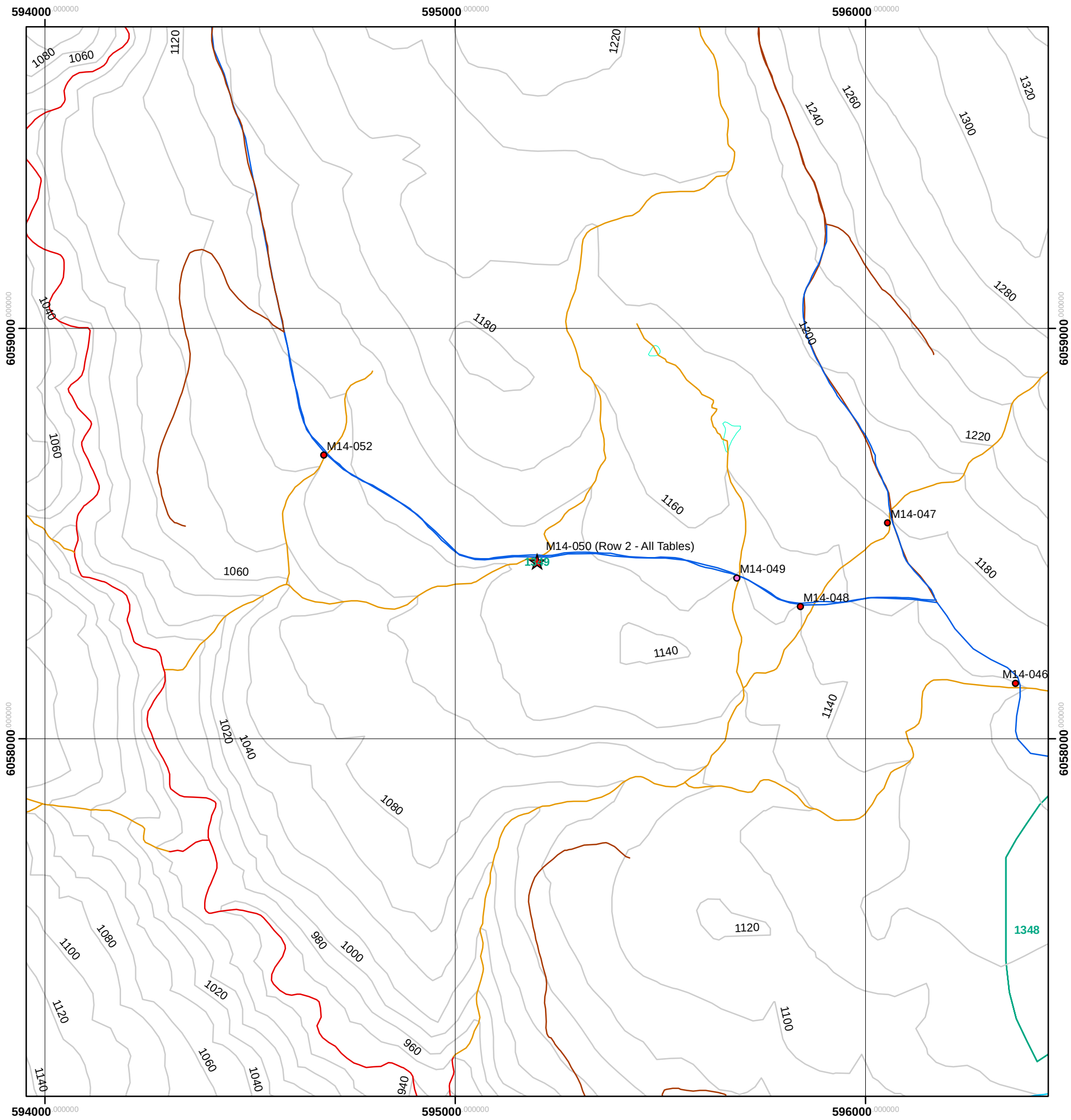
Project: 327.14.01

Page: 1



PLEASE NOTE Data points as mapped correspond to field data while road and stream layers were obtained through the Land and Resource Data Warehouse. Field data points do not always match up exactly with mapped streams and roads. Duplicate road layers in the maps created by Marlim are due to using both FTEN and DRA road layers, in order to map the complete road network. Some overlap is present between the layers.

Legend

Crossing Status by Year

2012	2013	2014
Barrier	Barrier	Barrier
Priority	Priority	Priority
Passable	Passable	Passable
Potential	Potential	Potential
Unknown	Unknown	Unknown
DNE	DNE	DNE

× No Assessment Required*

Access Data

Roads

- Unassessed
- Inaccessible
- Assessed 2012
- Assessed 2013
- Assessed 2014

Contours

- 20m Interval

Fish Habitat

- None
- Inferred
- Observed
- Lakes

Watersheds

- Boundary
- 5005 Label

N

0 75 150 300 450 600 Meters

1:10,000

*Sites that are either: inaccessible due to overgrown roads or denied permission from landowner, or have no downstream channel.

MARLIM ECOLOGICAL CONSULTING LTD

Fish Passage Culvert Investigations - Babine TSA

Contract: EN15TAH414

Date: February 2015

Map Title: M14-050

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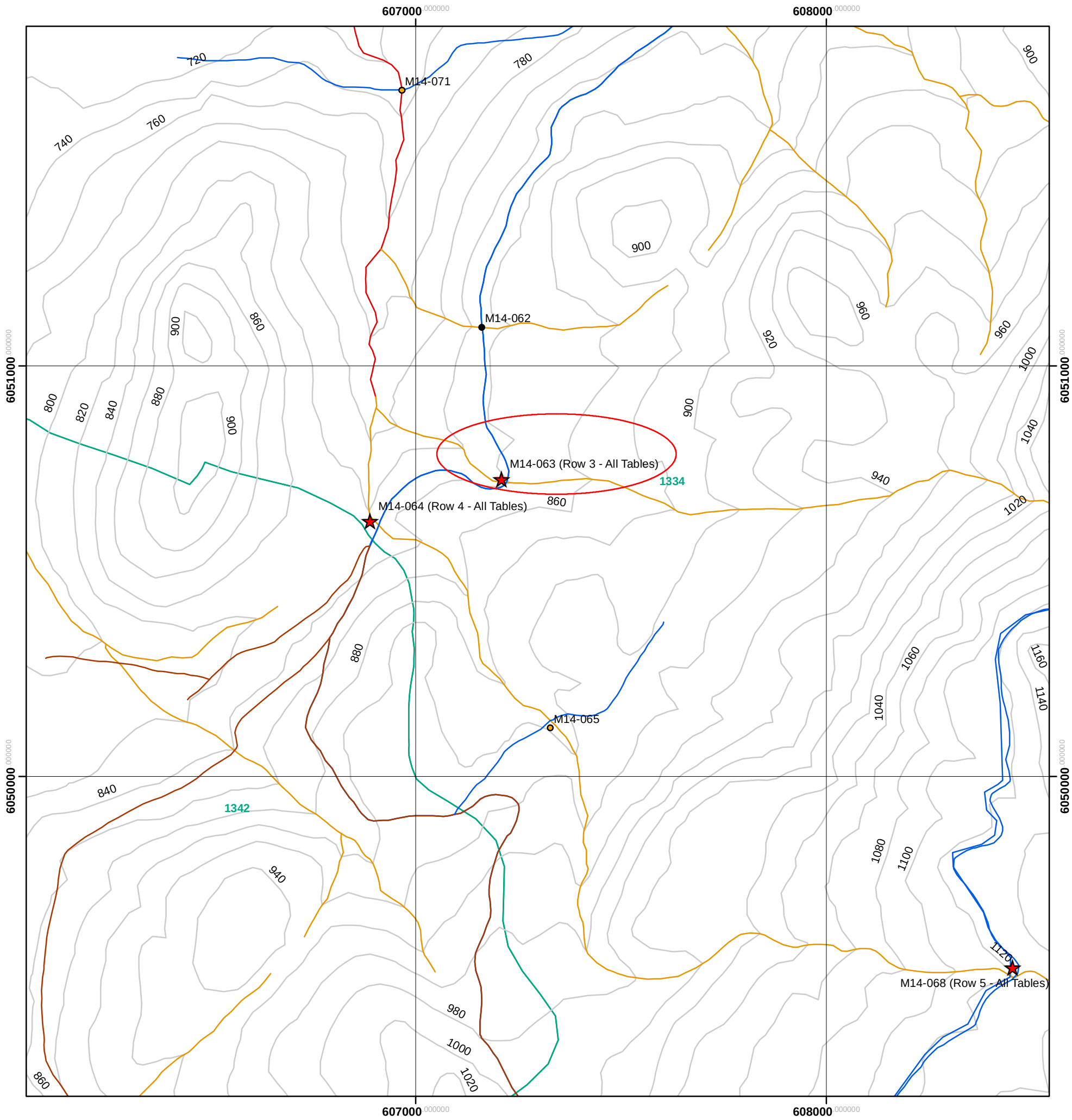

PLEASE NOTE Data points as mapped correspond to field data while road and stream layers were obtained through the Land and Resource Data Warehouse. Field data points do not always match up exactly with mapped streams and roads. Duplicate road layers in the maps created by Marlim are due to using both FTEN and DRA road layers, in order to map the complete road network. Some overlap is present between the layers.

Legend

Crossing Status by Year

2012	2013	2014
Barrier	Barrier	Barrier
Priority	Priority	Priority
Passable	Passable	Passable
Potential	Potential	Potential
Unknown	Unknown	Unknown
DNE	DNE	DNE
		No Assessment Required*
		Access Data

Roads

- Unassessed
- Inaccessible
- Assessed 2012
- Assessed 2013
- Assessed 2014

Contours

- 20m Interval

Fish Habitat

- None
- Inferred
- Observed
- Lakes

Watersheds

- Boundary
- 5005 Label

N

0 75 150 300 450 600 Meters

1:10,000

*Sites that are either: inaccessible due to overgrown roads or denied permission from landowner, or have no downstream channel.

MARLIM ECOLOGICAL CONSULTING LTD

Fish Passage Culvert Investigations - Babine TSA

Contract: EN15TAH414

Date: February 2015

Map Title: M14-063

MarLim Ecological Consulting Ltd.

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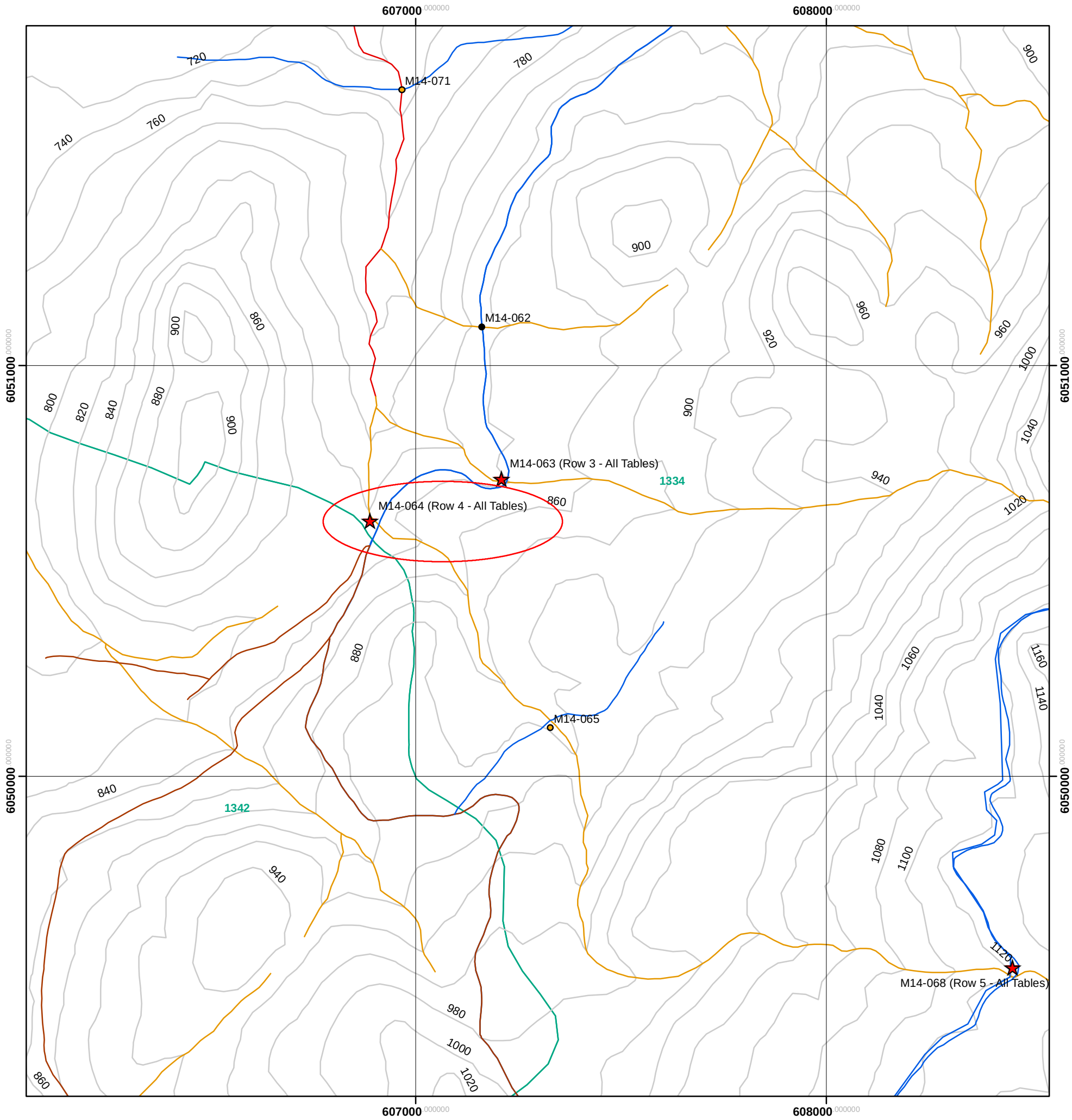
Project: 327.14.01

Page: 3



PLEASE NOTE Data points as mapped correspond to field data while road and stream layers were obtained through the Land and Resource Data Warehouse. Field data points do not always match up exactly with mapped streams and roads. Duplicate road layers in the maps created by Marlim are due to using both FTEN and DRA road layers, in order to map the complete road network. Some overlap is present between the layers.

Legend

Crossing Status by Year

2012	2013	2014
Barrier	Barrier	Barrier
Priority	Priority	Priority
Passable	Passable	Passable
Potential	Potential	Potential
Unknown	Unknown	Unknown
DNE	DNE	DNE

× No Assessment Required*

Access Data

Roads

- Unassessed
- Inaccessible
- Assessed 2012
- Assessed 2013
- Assessed 2014

Contours

- 20m Interval

Fish Habitat

- None
- Inferred
- Observed
- Lakes

Watersheds

- Boundary
- 5005 Label

N

0 75 150 300 450 600 Meters

1:10,000

*Sites that are either: inaccessible due to overgrown roads or denied permission from landowner, or have no downstream channel.

MARLIM ECOLOGICAL CONSULTING LTD

Fish Passage Culvert Investigations - Babine TSA

Contract: EN15TAH414

Date: February 2015

Map Title: M14-064

MarLim Ecological Consulting Ltd.

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Project: 327.14.01

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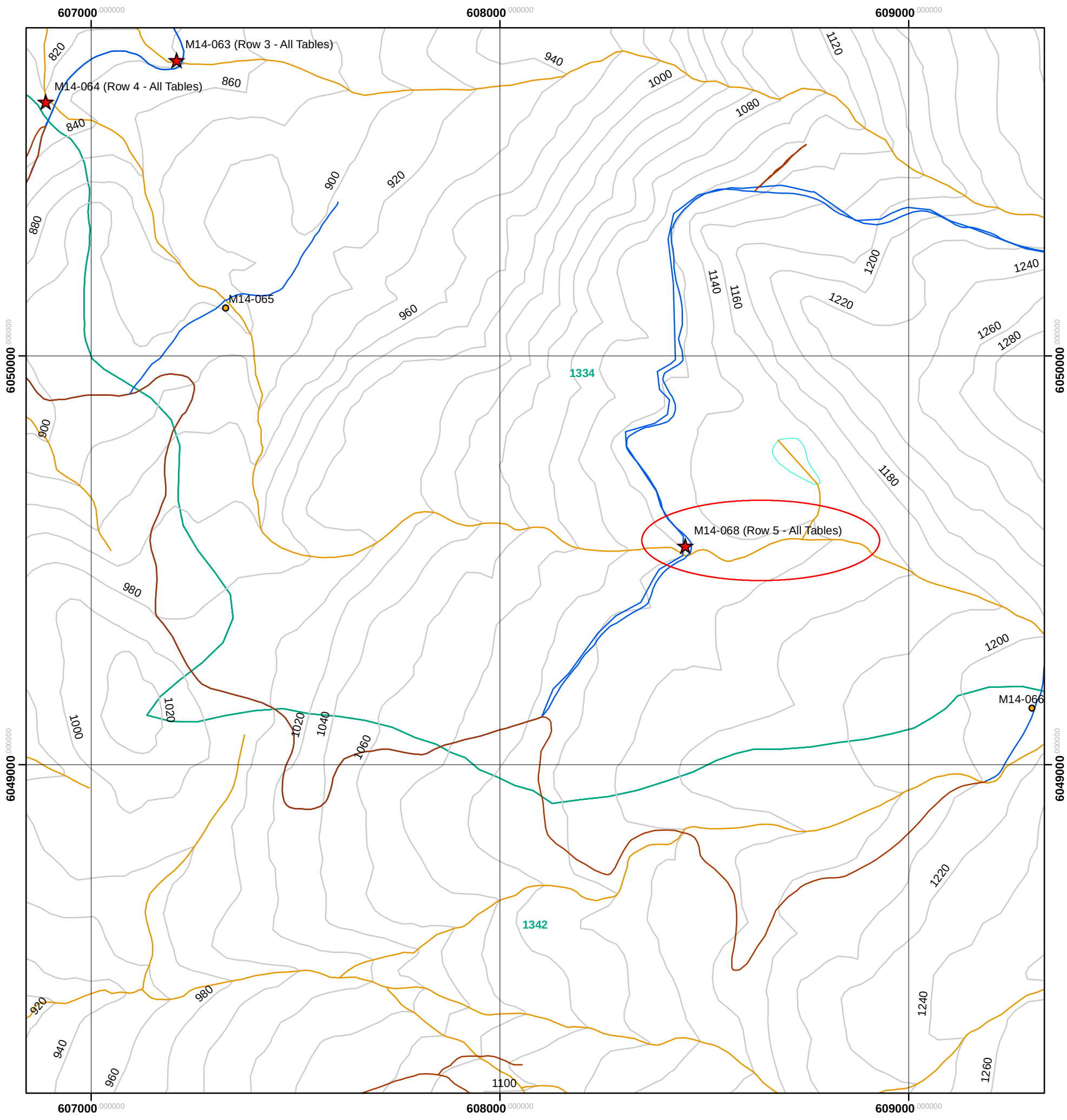

PLEASE NOTE Data points as mapped correspond to field data while road and stream layers were obtained through the Land and Resource Data Warehouse. Field data points do not always match up exactly with mapped streams and roads. Duplicate road layers in the maps created by Marlim are due to using both FTEN and DRA road layers, in order to map the complete road network. Some overlap is present between the layers.

Legend

Crossing Status by Year

2012	2013	2014
Barrier	Barrier	Barrier
Priority	Priority	Priority
Passable	Passable	Passable
Potential	Potential	Potential
Unknown	Unknown	Unknown
DNE	DNE	DNE
		No Assessment Required*
		Access Data

Roads

- Unassessed
- Inaccessible
- Assessed 2012
- Assessed 2013
- Assessed 2014

Contours

- 20m Interval

Fish Habitat

- None
- Inferred
- Observed
- Lakes

Watersheds

- Boundary
- 5005 Label

N

0 75 150 300 450 600 Meters

1:10,000

*Sites that are either: inaccessible due to overgrown roads or denied permission from landowner, or have no downstream channel.

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Fish Passage Culvert Investigations - Babine TSA

Contract: EN15TAH414

Date: February 2015

Map Title: M14-068

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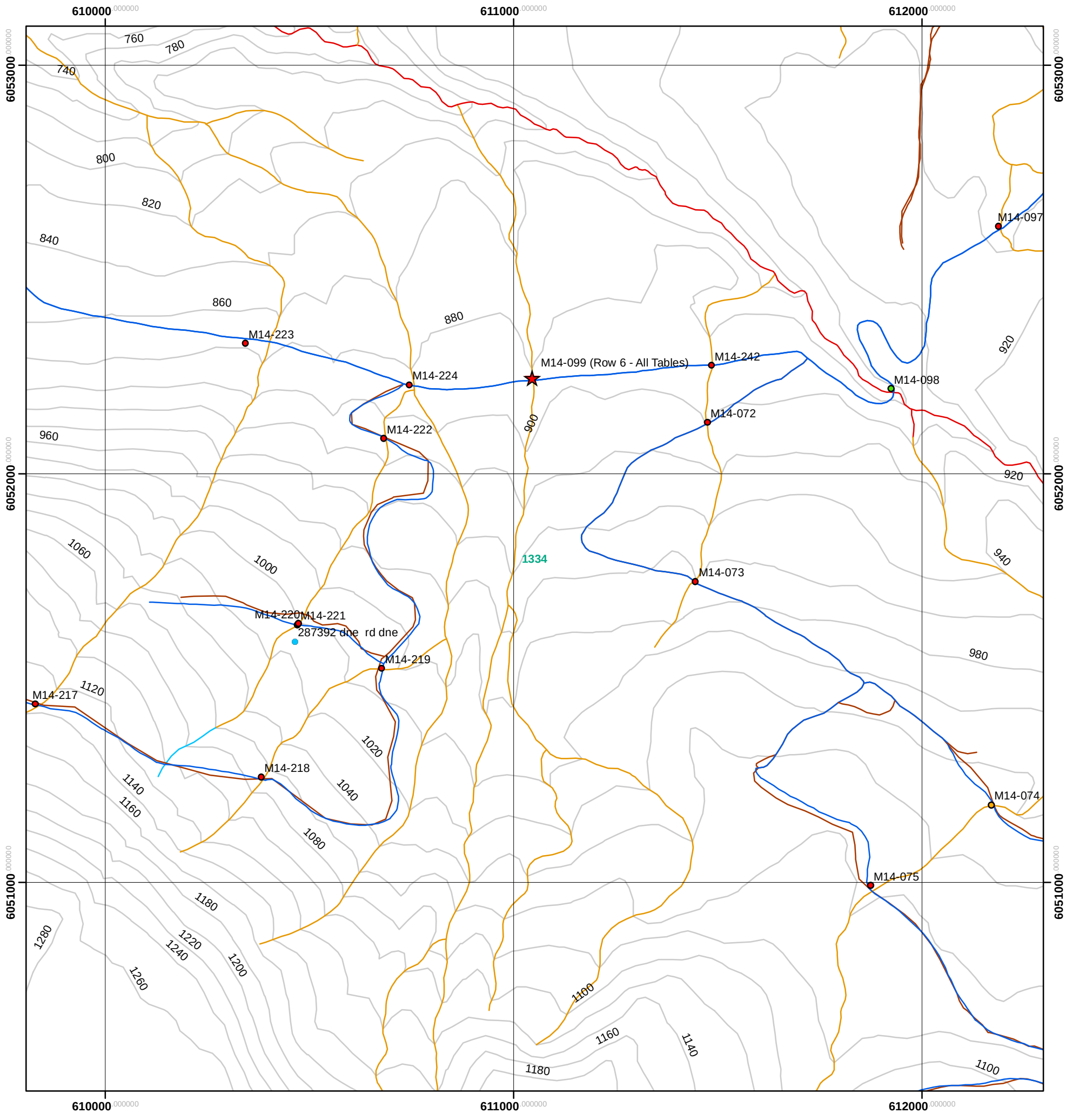

PLEASE NOTE Data points as mapped correspond to field data while road and stream layers were obtained through the Land and Resource Data Warehouse. Field data points do not always match up exactly with mapped streams and roads. Duplicate road layers in the maps created by Marlim are due to using both FTEN and DRA road layers, in order to map the complete road network. Some overlap is present between the layers.

Legend

Crossing Status by Year

2012	2013	2014
Barrier	Barrier	Barrier
Priority	Priority	Priority
Passable	Passable	Passable
Potential	Potential	Potential
Unknown	Unknown	Unknown
DNE	DNE	DNE

× No Assessment Required*

Access Data

Roads

- Unassessed
- Inaccessible
- Assessed 2012
- Assessed 2013
- Assessed 2014

Contours

- 20m Interval

Fish Habitat

- None
- Inferred
- Observed
- Lakes

Watersheds

- Boundary
- 5005 Label

N

0 75 150 300 450 600 Meters

1:10,000

*Sites that are either: inaccessible due to overgrown roads or denied permission from landowner, or have no downstream channel.

MARLIM ECOLOGICAL CONSULTING LTD

Fish Passage Culvert Investigations - Babine TSA

Contract: EN15TAH414

Date: February 2015

Map Title: M14-099

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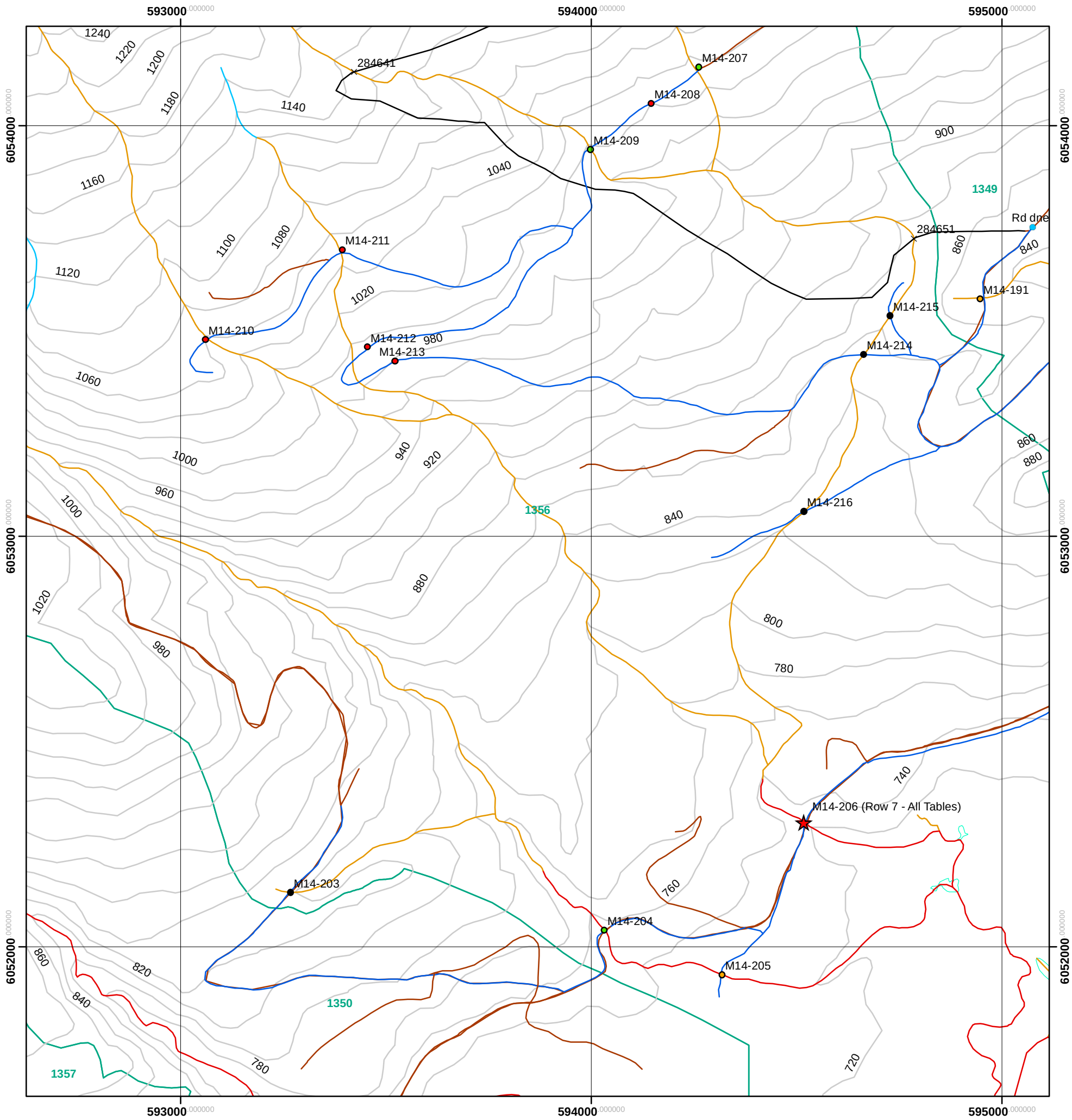

PLEASE NOTE Data points as mapped correspond to field data while road and stream layers were obtained through the Land and Resource Data Warehouse. Field data points do not always match up exactly with mapped streams and roads. Duplicate road layers in the maps created by Marlim are due to using both FTEN and DRA road layers, in order to map the complete road network. Some overlap is present between the layers.

Legend

Crossing Status by Year

2012	2013	2014
Barrier	Barrier	Barrier
Priority	Priority	Priority
Passable	Passable	Passable
Potential	Potential	Potential
Unknown	Unknown	Unknown
DNE	DNE	DNE
		No Assessment Required*
		Access Data

Roads

- Unassessed
- Inaccessible
- Assessed 2012
- Assessed 2013
- Assessed 2014

Contours

- 20m Interval

Fish Habitat

- None
- Inferred
- Observed
- Lakes

Watersheds

- Boundary
- 5005 Label

N

0 75 150 300 450 600 Meters

1:10,000

*Sites that are either: inaccessible due to overgrown roads or denied permission from landowner, or have no downstream channel.

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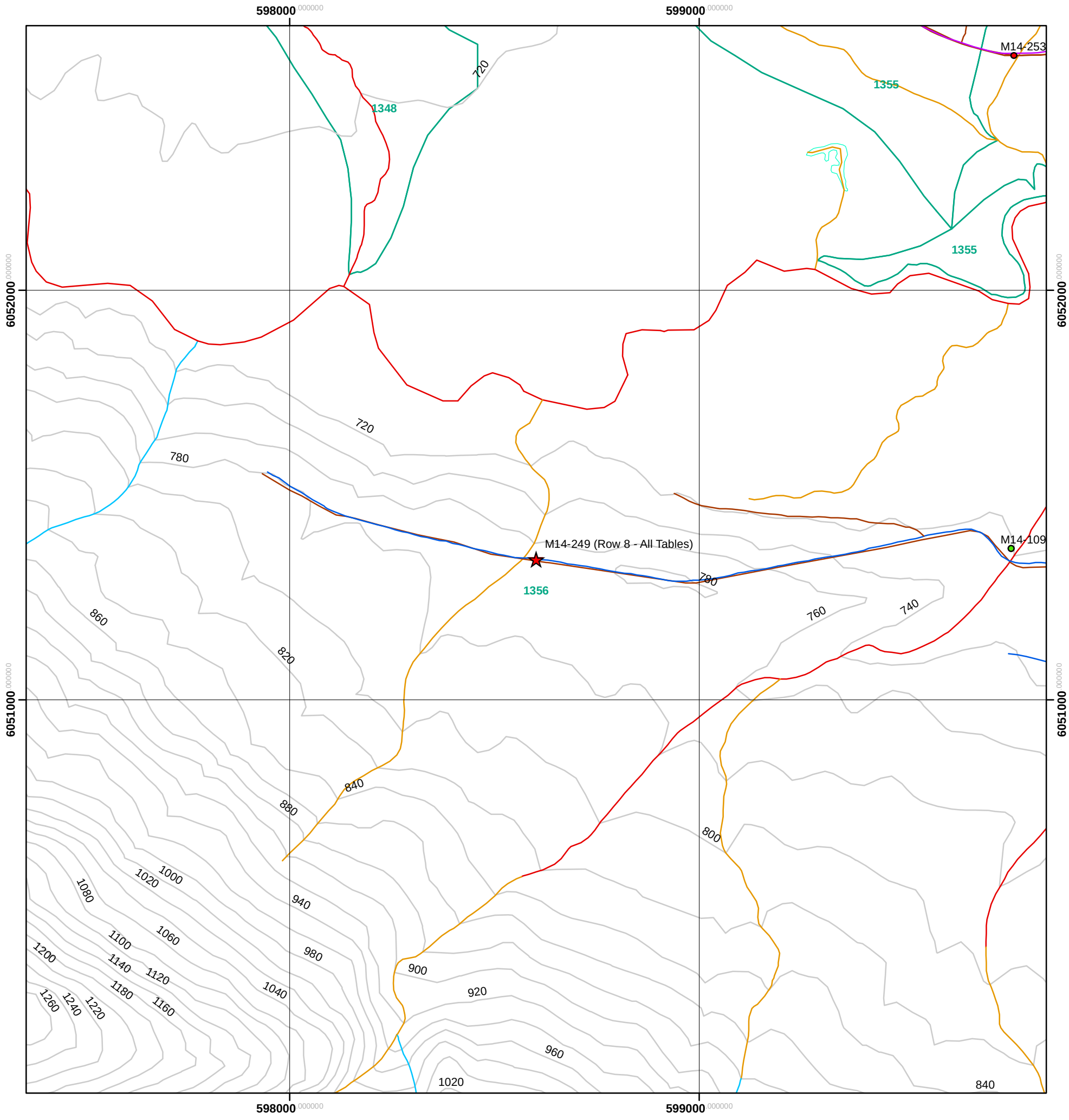

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Legend

Crossing Status by Year

2012	2013	2014
Barrier	Barrier	Barrier
Priority	Priority	Priority
Passable	Passable	Passable
Potential	Potential	Potential
Unknown	Unknown	Unknown
DNE	DNE	DNE
		No Assessment Required*
		Access Data

Roads

- Unassessed
- Inaccessible
- Assessed 2012
- Assessed 2013
- Assessed 2014

Contours

- 20m Interval

Fish Habitat

- None
- Inferred
- Observed
- Lakes

Watersheds

- Boundary
- 5005 Label

N

0 75 150 300 450 600 Meters

1:10,000

*Sites that are either: inaccessible due to overgrown roads or denied permission from landowner, or have no downstream channel.

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Fish Passage Culvert Investigations - Babine TSA

Contract: EN15TAH414

Date: February 2015

Map Title: M14-249

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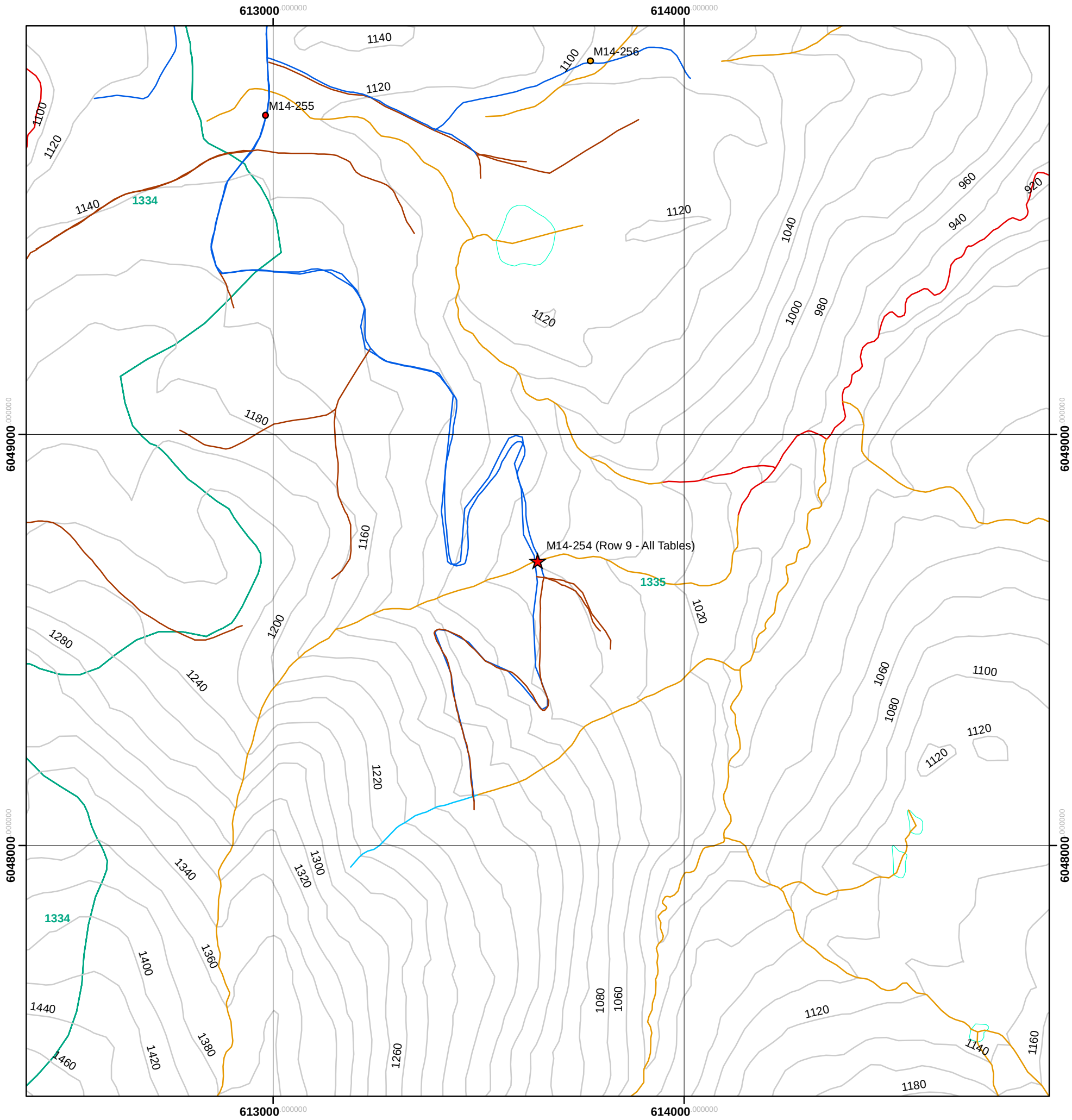

PLEASE NOTE Data points as mapped correspond to field data while road and stream layers were obtained through the Land and Resource Data Warehouse. Field data points do not always match up exactly with mapped streams and roads. Duplicate road layers in the maps created by Marlim are due to using both FTEN and DRA road layers, in order to map the complete road network. Some overlap is present between the layers.

Legend

Crossing Status by Year

2012	2013	2014
Barrier	Barrier	Barrier
Priority	Priority	Priority
Passable	Passable	Passable
Potential	Potential	Potential
Unknown	Unknown	Unknown
DNE	DNE	DNE
		No Assessment Required*
		Access Data

Roads

- Unassessed
- Inaccessible
- Assessed 2012
- Assessed 2013
- Assessed 2014

Contours

- 20m Interval

Fish Habitat

- None
- Inferred
- Observed
- Lakes

Watersheds

- Boundary
- 5005 Label

N

0 75 150 300 450 600 Meters

1:10,000

*Sites that are either: inaccessible due to overgrown roads or denied permission from landowner, or have no downstream channel.

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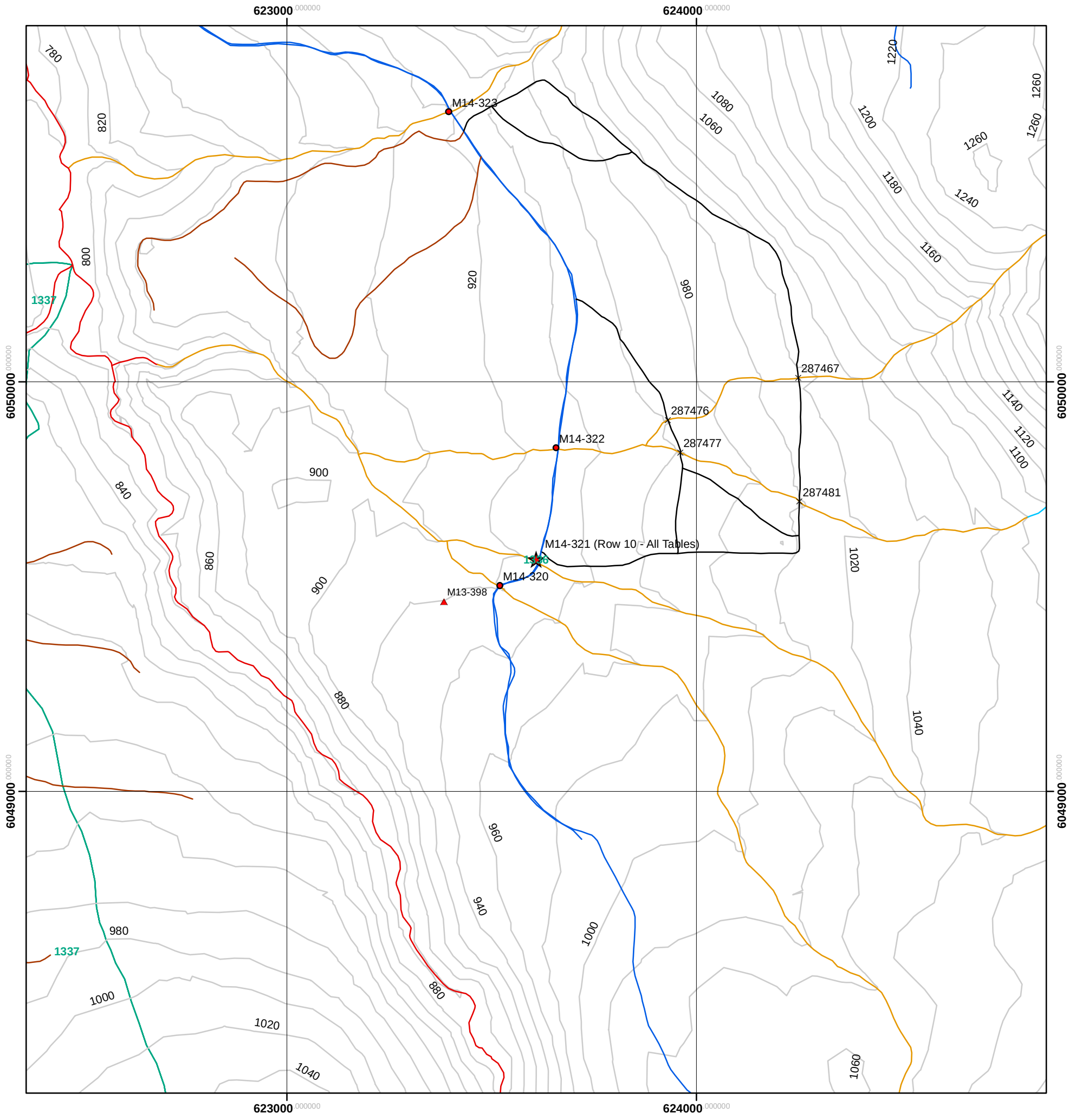

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Legend

Crossing Status by Year

2012	2013	2014
Barrier	Barrier	Barrier
Priority	Priority	Priority
Passable	Passable	Passable
Potential	Potential	Potential
Unknown	Unknown	Unknown
DNE	DNE	DNE

× No Assessment Required*

Access Data

Roads

- Unassessed
- Inaccessible
- Assessed 2012
- Assessed 2013
- Assessed 2014

Contours

- 20m Interval

Fish Habitat

- None
- Inferred
- Observed
- Lakes

Watersheds

- Boundary
- 5005 Label

N

0 75 150 300 450 600 Meters

1:10,000

*Sites that are either: inaccessible due to overgrown roads or denied permission from landowner, or have no downstream channel.

MARLIM ECOLOGICAL CONSULTING LTD

Fish Passage Culvert Investigations - Babine TSA

Contract: EN15TAH414

Date: February 2015

Map Title: M14-321

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Project: 327.14.01

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APPENDIX IV

FIELD ASSESSMENT FOR DETERMINING FISH PASSAGE STATUS OF CLOSED BOTTOM STRUCTURES – SCORING AND DATA COLLECTION SHEETS

Appendix 1: Closed Bottom Structure (CBS) Field Measurement Form

Closed Bottom Structure (CBS) Field Measurement Form

Location and Overview Data					**Field Observations and Assessment Measurements**			
Date of Assessment					*Crossing Type*	*OBS CBS Other*		
PSCIS Crossing ID *(only needed if this is a re-assessment)*					*Crossing Subtype*	*Bridge, Pipe Arch, Wood Box Culvert, Round Culvert, Oval Culvert, Concrete Box, Ford*		
My Crossing Reference					*Culvert Diameter or Span for OBS (m)*			
Crew Members					*Culvert Length or Width for OBS (m)*			
UTM/GPS (NAD 83)	*Zone*	*Easting*	*Northing*		*Continuous Embeddedment?*	*Yes No*		
Stream Name					*If Embedded, Average Depth of Embeddedment*	*Inlet* _____m	*Outlet* _____m	*Average* _____m
Road Name								
Road Km Mark					*Resemble Channel?*	*Yes No*		
Road Tenure					*Backwatered?*	*Yes No*		
					If Backwatered, to what Percentage			
Stream Information					*Fill Depth (m)*			
Channel Width *Stream Width Ratio*	*Avg. Channel Width*	*Culvert Dia.*	*SWR*		*Outlet Drop (A+B)*	*Invert-ToP (A)*	*ToP – BoC (B)*	*OD*
Stream Slope (%)					*Outlet Pool Depth (m) (C-B)*	*ToP –BoP (C)*	*ToP – BoC (B)*	*OPD*
Beaver Activity	*Yes No*				*Inlet drop*	*Yes No*		
Fish Sighted?	*Yes No*				*Culvert Slope (%)*			
Valley Fill	*DF SF BR*				**Recommendations**			
Habitat Value	*Low Medium High*				*Culvert Fix*	*RM OBS SS ASM BW*		
					Recommended Diameter or Span (m)			

Comments:

Fish Barrier Scoring[1]

Risk	Embedded[2]	value	Outlet drop	value	Slope	value	SWR	value	Length	value
low	> 30 cm. or > 20% of Diameter and continuous	0	< 15	0	< 1	0	< 1.0	0	< 15	0
mod	< 30 cm. or 20% of Diameter but continuous	5	15 - 30	5	1 - 3	5	1.0 - 1.3	3	15 – 30	3
high	No embeddment or discontinuous	10	> 30	10	> 3	10	> 1.3	6	> 30	6

Notes

1. For the barrier determination of multiple culverts, use the metrics from the pipe lowest in elevation at the outlet. For pipes installed at the same elevation at the outlet, add diameters for SWR criteria and use the highest slope, and length measurement.

2 Properly embedded culverts are considered passable as per natural stream channel. No further consideration of other surrogates is required.

Cumulative Score	Result
0 - 14	passable
15 - 19	potential barrier
> 20	barrier

APPENDIX V

PSCIS DATA TABLES

Date of Assessment (YYYY-MM-DD)	PSCIS Crossing ID	My Crossing Reference	Crew Members	UTM Zone	Easting	Northing	Stream Name	Road Name	Road KM Mark	Road Tenure	Crossing Type	Crossing Subtype	Diameter or Span (meters)	Length or Width (meters)	Continuous Embeddedment? Yes/No	Average Depth Embededdment (meters)	Resemble Channel? Yes / No	Backwatered ? Yes / No	Percentage Backwatered	Fill Depth (meters)	Outlet Drop (meters)	Outlet Pool Depth (0.01m)
2014-09-09		M14-001	MG	9	607119.00	6112356.00	Tributary to Bulkley River	R03710 2	0.37		Closed Bottom Structure	Round Culvert	0.40	7.00	No		No	No		0.42	0	0.00
2014-09-09		M14-002	MG	9	607069.00	6112474.00	Tributary to Bulkley River	R03710 2	0.55		Closed Bottom Structure	Round Culvert	1.4	14.15	No		No	No		1.10	0.16	0.10
2014-09-09		M14-003	MG	9	607014.00	6112557.00	Tributary to Bulkley River	R03710 2	0.68		Open Bottom Structure	Bridge	12.30	4.80								
2014-09-09		M14-006	MG	9	606832.00	6112221.00	Tributary to Bulkley River	R03710 1	1.72		Other	Ford										
2014-09-09		M14-007	MG	9	606788.00	6112310.00	Tributary to Bulkley River	R03710 1	1.84		Other	Ford										
2014-09-09		M14-008	MG	9	606760.00	6112325.00	Tributary to Bulkley River	R03710 1	1.96		Other	Ford										
2014-09-09		M14-009	MG	9	606527.00	6113036.00	Tributary to Bulkley River	R03710 1	2.69		Open Bottom Structure	Wood Box Culvert	13.00	2.80								
2014-09-09		M14-010	MG	9	592731.00	6126781.00	Tributary to Bulkley River	Unnamed	0.80		Other	Ford										
2014-09-10		M14-011	MG	9	602440.00	6057170.00	Tributary to Telkwa River	Unnamed	3.67		Closed Bottom Structure	Round Culvert	0.60	7.20	No		No	No		1.25	0.16	0.06
2014-09-10		M14-012	MG	9	602385.00	6057163.00	Tributary to Telkwa River	Unnamed	0.01		Closed Bottom Structure	Round Culvert	0.60	9.25	No		No	No		1.15	0.5	0.15
2014-09-10		M14-015	MG	9	602955.00	6059876.00	Tributary to Winfield Creek	Unnamed	7.30		Other	Ford										
2014-09-10		M14-017	MG	9	600302.00	6061546.00	Tributary to Winfield Creek	Unnamed	10.64		Other	Ford										
2014-09-10		M14-018	MG	9	599954.00	6061661.00	Tributary to Winfield Creek	Unnamed	11.03		Other	Ford										
2014-09-11		M14-023	MG	9	605263.00	6117385.00	Tributary to Corduroy Creek	Unnamed	0.11		Other	Ford										
2014-09-11		M14-024	MG	9	605590.00	6117295.00	Tributary to Corduroy Creek	Unnamed	0.35		Open Bottom Structure	Wood Box Culvert	10.50	1.50								
2014-09-11		M14-025	MG	9	605834.00	6117083.00	Tributary to Corduroy Creek	Unnamed	0.64		Closed Bottom Structure	Round Culvert	0.60	6.00	No		No	No		0.72	0.35	0.33
2014-09-12		M14-026	MG	9	607127.00	6053412.00	Tributary to Telkwa River	R09521 116	0.43		Closed Bottom Structure	Round Culvert	0.60	9.05	No		No	No		0.40	0.19	0.34
2014-09-12		M14-027	MG	9	607544.00	6055187.00	Tributary to Telkwa River	R09521 116	3.39		Closed Bottom Structure	Round Culvert	0.60	9.25	No		No	No		1.10	0.14	0.13
2014-09-12		M14-028	MG	9	607177.00	6055086.00	Tributary to Telkwa River	Unnamed	0.12		Other	Ford										
2014-09-12		M14-029	MG	9	607572.00	6054806.00	Tributary to Telkwa River	Unnamed	0.16		Other	Ford										
2014-09-12		M14-030	MG	9	606542.00	6054265.00	Tributary to Telkwa River	Unnamed	1.00		Other	Ford										
2014-09-12		M14-031	MG	9	606453.00	6054069.00	Tributary to Telkwa River	Unnamed	0.86		Other	Ford										
2014-09-12		M14-032	MG	9	608647.00	6054503.00	Tributary to Telkwa River	Unnamed	1.51		Other	Ford										
2014-09-12		M14-033	MG	9	606563.00	6053600.00	Tributary to Telkwa River	Unnamed	0.73		Closed Bottom Structure	Round Culvert	0.90	8.00	No		No	No		0.60	0.34	0.20
2014-09-12		M14-034	MG	9	606453.00	6053813.00	Tributary to Telkwa River	Unnamed	0.81		Other	Ford										
2014-09-29		M14-041	MG	9	598147.00	6055001.00	Tributary to Winfield Creek	R09521 126	2.22		Open Bottom Structure	Wood Box Culvert	2.20	14.50								
2014-09-29		M14-042	MG	9	596762.00	6056006.00	Tributary to Sinclair Creek	Unnamed	0.73		Other	Ford										
2014-09-29		M14-043	MG	9	597706.00	6055969.00	Tributary to Sinclair Creek	R09521 126	3.81		Closed Bottom Structure	Oval Culvert	1.70	14.30	Yes	0.20	Yes	No		0.70	0	0.00
2014-09-29		M14-044	MG	9	597009.00	6056687.00	Tributary to Winfield Creek	Unnamed	0.47		Open Bottom Structure	Wood Box Culvert	2.10	8.40								
2014-09-29		M14-045	MG	9	596610.00	6056490.00	Tributary to Sinclair Creek	Unnamed	0.49		Closed Bottom Structure	Round Culvert	0.40	9.25	No		No	No		0.65	0	0.00
2014-09-29		M14-046	MG	9	596366.00	6058135.00	Tributary to Sinclair Creek	R09251 126	7.56		Closed Bottom Structure	Round Culvert	0.60	8.25	No		No	Yes	25.00	1.20	0	0.21
2014-09-29		M14-047	MG	9	596054.00	6058526.00	Tributary to Sinclair Creek	R09521 13	0.29		Closed Bottom Structure	Round Culvert	0.40	8.15	No		No	No		0.82	0	0.00
2014-09-29		M14-048	MG	9	595842.00	6058322.00	Tributary to Sinclair Creek	Unnamed	0.29		Closed Bottom Structure	Round Culvert	0.60	11.00	No		No	No		1.10	0	0.00
2014-09-29		M14-049	MG	9	595687.00	6058391.00	Tributary to Sinclair Creek	Unnamed	0.49		Closed Bottom Structure	Round Culvert	0.40	8.25	Yes	0.30	Yes	No		1.25	0	0.00
2014-09-29		M14-050	MG	9	595200.00	6058432.00	Tributary to Sinclair Creek	Unnamed	1.50		Closed Bottom Structure	Round Culvert	1.80	16.50	No		No	No		4.20	0.41	0.46
2014-09-29		M14-052	MG	9	594680.00	6058691.00	Tributary to Sinclair Creek	Unnamed	1.57		Closed Bottom Structure	Round Culvert	0.60	12.50	No		No	No		2.20	0	0.18
2014-09-30		M14-055	MG	9	604917.00	6116236.00	Tributary to Bulkley River	Unnamed	1.41		Other	Ford										
2014-09-30		M14-056	MG	9	598620.00	6085311.00	Tributary to Trout Creek	Unnamed	0.61		Other	Ford										
2014-10-01		M14-057	MG	9	614438.00	6074291.00	Tributary to Simpson Creek	Slack Road	1.49		Open Bottom Structure	Bridge	7.35	4.85								
2014-10-01		M14-058	MG	9	609024.00	6052583.00	Tributary to Telkwa River	R09521 103	2.78		Closed Bottom Structure	Round Culvert	0.60	12.25	No		No	No		2.40	1.25	0.00
2014-10-01		M14-059	MG	9	608341.00	6052301.00	Tributary to Telkwa River	R09521 103	3.59		Closed Bottom Structure	Round Culvert	0.40	12.50	No		No	No		1.40	0.12	0.00
2014-10-01		M14-060	MG	9	607842.00	6052058.00	Tributary to Telkwa River	R09521 103	4.18		Closed Bottom Structure	Round Culvert	0.90	18.50	No		No	No		4.25	1.07	0.03
2014-10-01		M14-061	MG	9	607704.00	6051905.00	Tributary to Telkwa River	R09521 103	4.45		Closed Bottom Structure	Round Culvert	0.60	13.25	No		No	No		1.15	1.45	0.00

Date of Assessment (YYYY-MM-DD)	PSCIS Crossing ID	My Crossing Reference	Crew Members	UTM Zone	Easting	Northing	Stream Name	Road Name	Road KM Mark	Road Tenure	Crossing Type	Crossing Subtype	Diameter or Span (meters)	Length or Width (meters)	Continuous Embeddedment? Yes/No	Average Depth Embededdment (meters)	Resemble Channel? Yes / No	Backwatered ? Yes / No	Percentage Backwatered	Fill Depth (meters)	Outlet Drop (meters)	Outlet Pool Depth (0.01m)
2014-10-02		M14-063	MG	9	607209.00	6050724.00	Tributary to Telkwa River	R09521 103	5.91		Closed Bottom Structure	Round Culvert	1.20	18.25	No		No	No		2.15	0.71	0.31
2014-10-02		M14-064	MG	9	606889.00	6050621.00	Tributary to Telkwa River	R09521 103	6.30		Closed Bottom Structure	Round Culvert	1.80	30.90	No		No	No		6.00	1.45	0.29
2014-10-02		M14-065	MG	9	607329.00	6050117.00	Tributary to Telkwa River	Unnamed	0.31		Other	Ford										
2014-10-02		M14-066	MG	9	609302.00	6049138.00	Tributary to Telkwa River	Unnamed	2.22		Other	Ford										
2014-10-02		M14-067	MG	9	609390.00	6049299.00	Tributary to Telkwa River	Unnamed	2.33		Other	Ford										
2014-10-02		M14-068	MG	9	608454.00	6049535.00	Tributary to Telkwa River	R09521 103	9.89		Closed Bottom Structure	Round Culvert	1.20	18.25	No		No	No		1.62	0.6	0.16
2014-10-02		M14-069	MG	9	609663.00	6050300.00	Tributary to Telkwa River	R09521 103	12.05		Closed Bottom Structure	Round Culvert	0.60	9.25	No		No	No		1.10	0.01	0.07
2014-10-02		M14-070	MG	9	607663.00	6051970.00	Tributary to Telkwa River	Unnamed	0.15		Other	Ford										
2014-10-02		M14-071	MG	9	606967.00	6051670.00	Tributary to Telkwa River	Unnamed	0.98		Other	Ford										
2014-10-02		M14-072	MG	9	611475.00	6052125.00	Tributary to Telkwa River	R10836 1003-5-1	0.30		Closed Bottom Structure	Round Culvert	0.60	10.00	No		No	No		1.05	0.22	0.00
2014-10-02		M14-073	MG	9	611446.00	6051736.00	Tributary to Telkwa River	R10836 1003-5-1	0.95		Closed Bottom Structure	Round Culvert	0.45	13.00	No		No	No		0.52	0	0.00
2014-10-02		M14-074	MG	9	612170.00	6051189.00	Tributary to Telkwa River	R10836 1003-5A	0.49		Other	Ford										
2014-10-02		M14-075	MG	9	611875.00	6050992.00	Tributary to Telkwa River	R10836 1003-5-2	0.76		Closed Bottom Structure	Round Culvert	1.80	18.00	No		No	Yes	50.00	1.25	0	0.31
2014-10-02		M14-076	MG	9	612058.00	6049687.00	Tributary to Telkwa River	R10836 1003-5-2	2.83		Other	Ford										
2014-10-02		M14-077	MG	9	611284.00	6049417.00	Tributary to Telkwa River	R10836 1003-5-2	4.49		Other	Ford										
2014-10-02		M14-078	MG	9	610802.00	6049525.00	Tributary to Telkwa River	R10836 1003-5-2	5.20		Other	Ford										
2014-10-02		M14-079	MG	9	614774.00	6053715.00	Tributary to Telkwa River	Unnamed	0.13		Closed Bottom Structure	Round Culvert	0.45	11.50	No		No	No		0.80	0.24	0.00
2014-10-02		M14-080	MG	9	616265.00	6053833.00	Tributary to Telkwa River	Unnamed	1.76		Closed Bottom Structure	Round Culvert	0.60	13.00	No		No	No		1.60	0.22	0.00
2014-10-02		M14-081	MG	9	616265.00	6053832.00	Tributary to Telkwa River	Unnamed	1.77		Closed Bottom Structure	Round Culvert	0.60	13.25	No		No	No		1.65	0.15	0.00
2014-10-03		M14-085	MG	9	615353.00	6052918.00	Tributary to Telkwa River	Unnamed	0.47		Other	Ford										
2014-10-03		M14-086	MG	9	615520.00	6052895.00	Tributary to Telkwa River	Unnamed	0.58		Other	Ford										
2014-10-03		M14-087	MG	9	615012.00	6052976.00	Tributary to Telkwa River	Unnamed	0.11		Other	Ford										
2014-10-03		M14-088	MG	9	614999.00	6052960.00	Tributary to Telkwa River	Unnamed	0.00		Other	Ford										
2014-10-03		M14-089	MG	9	615036.00	6052616.00	Tributary to Telkwa River	Unnamed	0.39		Other	Ford										
2014-10-03		M14-092	MG	9	614515.00	6052680.00	Tributary to Telkwa River	R09521 103-1	2.39		Closed Bottom Structure	Round Culvert	0.60	12.20	No		No	No		0.65	0	0.00
2014-10-03		M14-095	MG	9	614544.00	6054043.00	Tributary to Telkwa River	R09521 103-1	0.65		Closed Bottom Structure	Round Culvert	0.60	10.50	No		No	No		0.48	0	0.00
2014-10-03		M14-096	MG	9	612307.00	6052722.00	Tributary to Telkwa River	R09521 103	2.75		Closed Bottom Structure	Round Culvert	0.50	12.25	No		No	No		1.35	0	0.00
2014-10-03		M14-097	MG	9	612188.00	6052605.00	Tributary to Telkwa River	R09521 103	3.02		Closed Bottom Structure	Round Culvert	0.50	12.50	No		No	No		2.05	0	0.00
2014-10-03		M14-098	MG	9	611925.00	6052208.00	Tributary to Telkwa River	R09521 103	3.75		Open Bottom Structure	Bridge	12.00	4.40								
2014-10-03		M14-099	MG	9	611046.00	6052234.00	Tributary to Telkwa River	R09521 103	4.61		Closed Bottom Structure	Round Culvert	0.60	12.50	No		No	No		3.50	1.02	0.12
2014-10-04		M14-101	MG	9	602776.00	6046934.00	Tributary to Telkwa River	R09521 118-7	1.32		Closed Bottom Structure	Round Culvert	0.60	10.50	No		No	No		0.65	0.05	0.11
2014-10-04		M14-102	MG	9	604138.00	6047038.00	Tributary to Telkwa River	R09521 118-7	0.34		Closed Bottom Structure	Round Culvert	1.00	14.25	No		No	No		0.80	0.09	0.11
2014-10-04		M14-103	MG	9	605232.00	6048903.00	Tributary to Telkwa River	R09521 118-1	0.37		Closed Bottom Structure	Round Culvert	0.60	14.00	No		No	No		0.34	0.34	0.00
2014-10-04		M14-104	MG	9	603872.00	6049526.00	Tributary to Telkwa River	Unnamed	0.31		Other	Ford										
2014-10-04		M14-109	MG	9	599726.00	6051369.00	Tributary to Telkwa River	R09521 1018-2	0.89		Open Bottom Structure	Bridge	9.15	5.00								
2014-09-21		M14-110	JG	9	608260.00	6061408.00	Tributary to Pine Creek	R09521 710-2A	2.36		Closed Bottom Structure	Round Culvert	0.60	11.00	No		No	No		1.50	0.17	0.00
2014-09-21		M14-111	JG	9	608050.00	6061031.00	Tributary to Pine Creek	R09521 710-2A	1.89		Closed Bottom Structure	Round Culvert	1.00	14.00	No		No	No		3.00	1.37	0.00
2014-09-21		M14-112	JG	9	607920.00	6062471.00	Tributary to Pine Creek	R09521 710-2A	1.71		Closed Bottom Structure	Round Culvert	1.20	13.00	No		No	No		2.00	0	0.00
2014-09-21		M14-113	JG	9	609068.00	6063061.00	Tributary to Pine Creek	R09521 710	0.18		Closed Bottom Structure	Round Culvert	0.45	10.00	No		No	No		1.00	0	0.00
2014-09-21		M14-114	JG	9	609032.00	6063198.00	Tributary to Pine Creek	R09521 710	0.14		Closed Bottom Structure	Round Culvert	1.40	10.00	No		No	No		2.00	0.15	0.00
2014-09-21		M14-115	JG	9	609036.00	6063255.00	Tributary to Pine Creek	R09521 710	0.10		Closed Bottom Structure	Round Culvert	0.60	10.00	No		No	No		1.50	0.07	0.00
2014-09-21		M14-116	JG	9	609048.00	6063339.00	Tributary to Pine Creek	R09521 710	0.00		Closed Bottom Structure	Round Culvert	0.45	8.00	No		No	No		1.00	0.4	0.00
2014-09-22		M14-117	JG	9	611679.00	6057559.00	Tributary to Pine Creek	R09521 710-1	4.20		Closed Bottom Structure	Round Culvert	0.45	10.00	No		No	No		0.60	0.22	0.00

Date of Assessment (YYYY-MM-DD)	PSCIS Crossing ID	My Crossing Reference	Crew Members	UTM Zone	Easting	Northing	Stream Name	Road Name	Road KM Mark	Road Tenure	Crossing Type	Crossing Subtype	Diameter or Span (meters)	Length or Width (meters)	Continuous Embeddedment? Yes/No	Average Depth Embededdment (meters)	Resemble Channel? Yes / No	Backwatered ? Yes / No	Percentage Backwatered	Fill Depth (meters)	Outlet Drop (meters)	Outlet Pool Depth (0.01m)
2014-09-22		M14-118	JG	9	613726.00	6056780.00	Tributary to Telkwa River	Unnamed	2.55		Other	Ford										
2014-09-22		M14-120	JG	9	612309.00	6057150.00	Tributary to Pine Creek	Unnamed	0.13		Other	Ford										
2014-09-22		M14-121	JG	9	612063.00	6057989.00	Tributary to Pine Creek	R09521 710-1	2.95		Closed Bottom Structure	Round Culvert	0.45	8.00	No		No	No		0.50	0.09	0.06
2014-09-22		M14-122	JG	9	612854.00	6057794.00	Tributary to Pine Creek	R09521 710 D	0.14		Closed Bottom Structure	Round Culvert	0.60	9.00	No		No	No		1.00	0.3	0.00
2014-09-22		M14-125	JG	9	611941.00	6058732.00	Tributary to Pine Creek	R09521 710-1	2.19		Closed Bottom Structure	Round Culvert	0.50	8.00	No		No	No		1.00	0.09	0.00
2014-09-22		M14-126	JG	9	610348.00	6061789.00	Tributary to Pine Creek	R09521 710	2.10		Open Bottom Structure	Bridge	10.00	5.00								
2014-09-23		M14-129	JG	9	612423.00	6064423.00	Tributary to Pine Creek	R16534 25	0.84		Other	Ford										
2014-09-23		M14-130	JG	9	612619.00	6064077.00	Tributary to Pine Creek	R16534 25	0.45		Other	Ford										
2014-09-23		M14-131	JG	9	612977.00	6064467.00	Tributary to Pine Creek	R16534 24	2.98		Other	Ford										
2014-09-23		M14-132	JG	9	612968.00	6064085.00	Tributary to Pine Creek	R16534 24	1.91		Other	Ford										
2014-09-23		M14-134	JG	9	614493.00	6062687.00	Tributary to Pine Creek	R11260 2B	0.18		Closed Bottom Structure	Round Culvert	1.00	8.00	No		No	No		2.00	0	0.00
2014-09-23		M14-135	JG	9	614092.00	6060375.00	Tributary to Pine Creek	R11260 8	0.55		Closed Bottom Structure	Round Culvert	1.00	8.00	No		No	No		1.30	0.05	0.00
2014-09-23		M14-136	JG	9	614143.00	6060739.00	Tributary to Pine Creek	R11260 8	0.20		Closed Bottom Structure	Round Culvert	0.60	9.00	No		No	No		1.50	0.19	0.00
2014-09-24		M14-137	JG	9	614207.00	6061083.00	Tributary to Pine Creek	Unnamed	0.33		Other	Ford										
2014-09-24		M14-138	JG	9	614128.00	6060951.00	Tributary to Pine Creek	R16534 1	0.17		Other	Ford										
2014-09-24		M14-139	JG	9	614518.00	6061219.00	Tributary to Pine Creek	R11260 5	0.75		Other	Ford										
2014-09-24		M14-140	JG	9	614249.00	6061278.00	Tributary to Pine Creek	Unnamed	0.01		Other	Ford										
2014-09-24		M14-141	JG	9	614403.00	6061185.00	Tributary to Pine Creek	Unnamed	0.10		Other	Ford										
2014-09-24		M14-142	JG	9	614489.00	6061185.00	Tributary to Pine Creek	R11260 5	0.78		Other	Ford										
2014-09-24		M14-145	JG	9	613282.00	6062124.00	Tributary to Pine Creek	R16534 1	1.65		Other	Ford										
2014-09-24		M14-146	JG	9	613481.00	6061698.00	Tributary to Pine Creek	R16534 1	1.21		Other	Ford										
2014-09-25		M14-148	JG	9	612199.00	6059393.00	Tributary to Pine Creek	R09521 710-10	0.94		Other	Ford										
2014-09-25		M14-149	JG	9	611666.00	6059815.00	Tributary to Pine Creek	R09521 710-10A	0.35		Other	Ford										
2014-09-25		M14-151	JG	9	611591.00	6059071.00	Tributary to Pine Creek	R09521 710-1	1.08		Closed Bottom Structure	Round Culvert	0.60	10.00	No		No	No		0.80	0.07	0.00
2014-09-25		M14-153	JG	9	611253.00	6059621.00	Tributary to Pine Creek	R09521 710-1	1.04		Closed Bottom Structure	Round Culvert	0.60	10.00	No		No	No		2.00	0.1	0.00
2014-09-25		M14-154	JG	9	611134.00	6059877.00	Tributary to Pine Creek	R09521 710-1	0.84		Closed Bottom Structure	Round Culvert	0.45	10.00	No		No	No		1.50	0.17	0.00
2014-09-25		M14-155	JG	9	611031.00	6060356.00	Tributary to Pine Creek	R09521 710-1	0.29		Closed Bottom Structure	Round Culvert	1.80	9.00	No		No	No		2.00	0.07	0.00
2014-09-25		M14-156	JG	9	610936.00	6060826.00	Tributary to Pine Creek	R09521 710	3.32		Closed Bottom Structure	Round Culvert	1.20	10.00	No		No	No		2.00	0.1	0.00
2014-09-25		M14-157	JG	9	610891.00	6060874.00	Tributary to Pine Creek	R09521 710	3.22		Closed Bottom Structure	Round Culvert	1.00	10.00	No		No	No		1.50	0.26	0.00
2014-09-25		M14-159	JG	9	611047.00	6062215.00	Tributary to Pine Creek	R09521 710-7A	0.22		Other	Ford										
2014-09-25		M14-160	JG	9	610355.00	6062647.00	Tributary to Pine Creek	R09521 710-6	0.53		Other	Ford										
2014-09-25		M14-161	JG	9	610373.00	6063259.00	Tributary to Pine Creek	R09521 710-6A	0.57		Other	Ford										
2014-09-25		M14-162	JG	9	609139.00	6063636.00	Tributary to Pine Creek	703 Rd	5.05		Closed Bottom Structure	Round Culvert	1.40	8.00	Yes	0.15	Yes	No		2.00	0	0.00
2014-09-26		M14-164	JG	9	609525.00	6063177.00	Tributary to Pine Creek	R09521 710-E	0.52		Other	Ford										
2014-09-26		M14-165	JG	9	609118.00	6063362.00	Tributary to Pine Creek	R09521 710-E	0.05		Other	Ford										
2014-09-26		M14-166	JG	9	609057.00	6063444.00	Tributary to Pine Creek	703 Rd	5.03		Closed Bottom Structure	Round Culvert	0.45	8.00	No		No	No		0.80	0	0.00
2014-09-26		M14-168	JG	9	608907.00	6064026.00	Tributary to Pine Creek	R16534 7	0.26		Other	Ford										
2014-09-27		M14-172	JG	9	643853.00	6066147.00	Burbridge Creek	Deception Lake FSR	2.49		Other	Ford										
2014-09-27		M14-173	JG	9	643682.00	6066134.00	Burbridge Creek	Deception Lake FSR	2.14		Closed Bottom Structure	Round Culvert	1.00	9.00	No		No	Yes	15.00	2.00	0.08	0.01
2014-09-27		M14-174	JG	9	643303.00	6065867.00	Burbridge Creek	Unnamed	0.01		Open Bottom Structure	Wood Box Culvert	1.50	6.00								
2014-09-27		M14-175	JG	9	642892.00	6065752.00	Burbridge Creek	Unnamed	0.28		Open Bottom Structure	Wood Box Culvert	1.50	6.00								
2014-09-27		M14-176	JG	9	642246.00	6065222.00	Burbridge Creek	Deception Lake FSR	0.41		Closed Bottom Structure	Round Culvert	0.50	6.00	No		No	Yes	20.00	1.00	0.15	0.20
2014-09-28		M14-177	JG	9	639757.00	6067160.00	Tributary to Burbridge Creek	R11232 7	0.31		Closed Bottom Structure	Round Culvert	1.00	11.00	No		No	No		1.40	0.07	0.00

Date of Assessment (YYYY-MM-DD)	PSCIS Crossing ID	My Crossing Reference	Crew Members	UTM Zone	Easting	Northing	Stream Name	Road Name	Road KM Mark	Road Tenure	Crossing Type	Crossing Subtype	Diameter or Span (meters)	Length or Width (meters)	Continuous Embeddedment? Yes/No	Average Depth Embededdment (meters)	Resemble Channel? Yes / No	Backwatered ? Yes / No	Percentage Backwatered	Fill Depth (meters)	Outlet Drop (meters)	Outlet Pool Depth (0.01m)
2014-09-28		M14-178	JG	9	640235.00	6066964.00	Tributary to Burbridge Creek	R11232 1	2.98		Closed Bottom Structure	Round Culvert	1.20	9.00	No		No	No		1.50	0.06	0.00
2014-09-28		M14-179	JG	9	640752.00	6065727.00	Tributary to Burbridge Creek	R11232 1	1.13		Closed Bottom Structure	Round Culvert	1.40	10.00	No		No	Yes	75.00	2.00	0.3	0.00
2014-09-28		M14-180	JG	9	641798.00	6065611.00	Tributary to Burbridge Creek	Deception Creek FSR	5.16		Closed Bottom Structure	Round Culvert	2.60	12.00	No		No	No		4.10	0	0.00
2014-09-28		M14-181	JG	9	641563.00	6066870.00	Tributary to Burbridge Creek	Deception Creek FSR	3.77		Closed Bottom Structure	Round Culvert	0.80	10.00	No		No	No		1.60	0.07	0.00
2014-09-28		M14-182	JG	9	641746.00	6066180.00	Tributary to Burbridge Creek	Deception Creek FSR	4.44		Closed Bottom Structure	Round Culvert	0.50	10.00	No		No	No		1.20	0.03	0.00
2014-09-28		M14-183	JG	9	641730.00	6066498.00	Tributary to Burbridge Creek	Deception Creek FSR	4.03		Closed Bottom Structure	Round Culvert	1.20	10.00	No		No	No		1.20	0.03	0.07
2014-09-28		M14-184	JG	9	640806.00	6067681.00	Tributary to Burbridge Creek	Unnamed	0.86		Other	Ford										
2014-09-28		M14-185	JG	9	641556.00	6067168.00	Tributary to Burbridge Creek	Deep Creek FSR	3.53		Closed Bottom Structure	Round Culvert	1.20	10.00	Yes	0.15	Yes	No		1.30	0	0.00
2014-09-28		M14-186	JG	9	641555.00	6067817.00	Tributary to Burbridge Creek	Deep Creek FSR	2.65		Closed Bottom Structure	Round Culvert	0.80	11.00	No		No	No		1.30	0	0.00
2014-09-28		M14-187	JG	9	641366.00	6068015.00	Tributary to Burbridge Creek	Deep Creek FSR	2.34		Closed Bottom Structure	Round Culvert	0.80	10.00	Yes	0.10	Yes	No		1.50	0	0.00
2014-09-29		M14-191	JG	9	594947.00	6053577.00	Tributary to Sinclair Creek	R09521 128	2.10		Other	Ford										
2014-09-29		M14-192	JG	9	595756.00	6053703.00	Tributary to Sinclair Creek	Unnamed	0.15		Other	Ford										
2014-09-29		M14-193	JG	9	595742.00	6053571.00	Tributary to Sinclair Creek	R09521 128	0.59		Closed Bottom Structure	Round Culvert	0.80	10.00	No		No	No		2.80	0	0.00
2014-09-29		M14-194	JG	9	595905.00	6053891.00	Tributary to Sinclair Creek	Unnamed	0.19		Other	Ford										
2014-09-29		M14-195	JG	9	596127.00	6053397.00	Tributary to Sinclair Creek	Telkwa River Road	29.06		Open Bottom Structure	Bridge	10.20	4.20								
2014-09-29		M14-196	JG	9	597238.00	6053369.00	Tributary to Telkwa River	Telkwa River Road	4.71		Closed Bottom Structure	Round Culvert	0.60	12.00	No		No	No		1.50	0.18	0.00
2014-09-30		M14-199	JG	9	597960.00	6052828.00	Winfield Creek	Unnamed	0.57		Other	Ford										
2014-09-30		M14-204	JG	9	594032.00	6052040.00	Tributary to Telkwa River	R09521 1000	2.86		Open Bottom Structure	Bridge	18.70	4.30								
2014-09-30		M14-205	JG	9	594319.00	6051931.00	Tributary to Telkwa River	Unnamed	0.26		Other	Ford										
2014-09-30		M14-206	JG	9	594517.00	6052303.00	Tributary to Telkwa River	R09521 1000	2.12		Closed Bottom Structure	Round Culvert	1.20	25.00	No		No	No		4.00	0.71	0.38
2014-10-01		M14-207	JG	9	594262.00	6054142.00	Tributary to Telkwa River	Unnamed	0.49		Open Bottom Structure	Bridge	16.00	4.90								
2014-10-01		M14-208	JG	9	594146.00	6054053.00	Tributary to Telkwa River	Unnamed	0.33		Closed Bottom Structure	Round Culvert	1.00	12.00	No		No	No		2.15	0.25	0.00
2014-10-01		M14-209	JG	9	593998.00	6053941.00	Tributary to Telkwa River	Unnamed	0.07		Open Bottom Structure	Bridge	9.70	4.90								
2014-10-01		M14-210	JG	9	593061.00	6053478.00	Tributary to Telkwa River	Unnamed	1.04		Closed Bottom Structure	Round Culvert	1.40	13.00	No		No	No		2.00	0.05	0.00
2014-10-01		M14-211	JG	9	593394.00	6053697.00	Tributary to Telkwa River	Unnamed	0.65		Closed Bottom Structure	Round Culvert	1.80	12.00	No		No	No		2.25	0.3	0.00
2014-10-01		M14-212	JG	9	593455.00	6053460.00	Tributary to Telkwa River	Unnamed	1.63		Closed Bottom Structure	Round Culvert	1.20	12.00	No		No	No		1.75	0.12	0.03
2014-10-01		M14-213	JG	9	593522.00	6053426.00	Tributary to Telkwa River	Unnamed	1.55		Closed Bottom Structure	Round Culvert	1.10	12.00	No		No	No		2.75	0.06	0.00
2014-10-02		M14-217	JG	9	609829.00	6051436.00	Tributary to Telkwa River	R09521 103D	1.29		Closed Bottom Structure	Round Culvert	0.60	9.00	No		No	Yes	25.00	1.00	0.53	0.00
2014-10-02		M14-218	JG	9	610383.00	6051257.00	Tributary to Telkwa River	R09521 103D	0.72		Closed Bottom Structure	Round Culvert	0.60	10.00	No		No	No		2.10	0.36	0.04
2014-10-02		M14-219	JG	9	610678.00	6051523.00	Tributary to Telkwa River	R09521 103D	0.03		Closed Bottom Structure	Round Culvert	0.60	10.00	No		No	No		1.20	0.12	0.05
2014-10-02		M14-220	JG	9	610474.00	6051633.00	Tributary to Telkwa River	R09521 103-4	0.21		Closed Bottom Structure	Round Culvert	0.40	10.00	No		No	No		2.00	0.26	0.05
2014-10-02		M14-222	JG	9	610683.00	6052086.00	Tributary to Telkwa River	R09521 23	0.22		Closed Bottom Structure	Round Culvert	0.45	10.00	No		No	No		1.80	0.54	0.00
2014-10-02		M14-223	JG	9	610344.00	6052319.00	Tributary to Telkwa River	R09521 03	5.42		Closed Bottom Structure	Round Culvert	0.45	10.00	No		No	No		1.00	0.25	0.00
2014-10-02		M14-224	JG	9	610745.00	6052217.00	Tributary to Telkwa River	R09521 03	5.07		Closed Bottom Structure	Round Culvert	0.60	18.00	No		No	No		3.05	1.06	0.15
2014-10-02		M14-225	JG	9	612663.00	6054017.00	Tributary to Telkwa River	Unnamed	1.83		Other	Ford										
2014-10-02		M14-230	JG	9	612473.00	6052775.00	Tributary to Telkwa River	Unnamed	0.12		Other	Ford										
2014-10-02		M14-233	JG	9	612306.00	6053116.00	Tributary to Telkwa River	R09521 103-3	0.45		Closed Bottom Structure	Round Culvert	0.64	13.00	No		No	No		2.65	0.37	0.00
2014-10-03		M14-234	JG	9	615934.00	6054797.00	Tributary to Telkwa River	Unnamed	0.64		Other	Ford										
2014-10-03		M14-235	JG	9	615800.00	6055073.00	Tributary to Telkwa River	Unnamed	0.33		Other	Ford										
2014-10-03		M14-236	JG	9	615801.00	6055049.00	Tributary to Telkwa River	Unnamed	0.39		Other	Ford										
2014-10-03		M14-237	JG	9	615284.00	6055162.00	Tributary to Telkwa River	Unnamed	0.78		Closed Bottom Structure	Round Culvert	0.30	6.00	No		No	No		0.50	0	0.00
2014-10-03		M14-238	JG	9	615248.00	6055191.00	Tributary to Telkwa River	Unnamed	0.00		Closed Bottom Structure	Round Culvert	0.47	12.00	No		No	No		1.80	0	0.00
2014-10-03		M14-239	JG	9	615200.00	6055171.00	Tributary to Telkwa River	R09521 103	6.34		Closed Bottom Structure	Round Culvert	0.60	10.00	No		No	No		1.30	0	0.00

Date of Assessment (YYYY-MM-DD)	PSCIS Crossing ID	My Crossing Reference	Crew Members	UTM Zone	Easting	Northing	Stream Name	Road Name	Road KM Mark	Road Tenure	Crossing Type	Crossing Subtype	Diameter or Span (meters)	Length or Width (meters)	Continuous Embeddedment? Yes/No	Average Depth Embededdment (meters)	Resemble Channel? Yes / No	Backwatered ? Yes / No	Percentage Backwatered	Fill Depth (meters)	Outlet Drop (meters)	Outlet Pool Depth (0.01m)
2014-10-03		M14-242	JG	9	611485.00	6052265.00	Tributary to Telkwa River	R09521 103	11.56		Closed Bottom Structure	Round Culvert	0.45	12.00	No		No	No		1.75	0.3	0.00
2014-10-04		M14-243	JG	9	601293.00	6050327.00	Tributary to Telkwa River	R09521 1018	3.65		Open Bottom Structure	Bridge	21.80	4.85								
2014-10-04		M14-245	JG	9	600796.00	6050990.00	Tributary to Telkwa River	R09521 1018-2	0.33		Open Bottom Structure	Bridge	6.10	3.70								
2014-10-04		M14-247	JG	9	599983.00	6051255.00	Tributary to Telkwa River	R09521 1018-2	1.33		Open Bottom Structure	Bridge	6.50	4.00								
2014-10-04		M14-249	JG	9	598602.00	6051343.00	Tributary to Telkwa River	R09521 1018-2	2.70		Closed Bottom Structure	Round Culvert	1.00	15.00	No		No	No		2.55	0.38	0.17
2014-10-04		M14-252	JG	9	598716.00	6053726.00	Tributary to Telkwa River	Unnamed	0.22		Other	Ford										
2014-10-04		M14-253	JG	9	599769.00	6052572.00	Tributary to Telkwa River	Telkwa River Road	24.77		Closed Bottom Structure	Round Culvert	0.50	12.00	No		No	No		1.30	0.05	0.00
2014-10-05		M14-254	JG	9	613644.00	6048692.00	Tributary to Tenas Creek	R09521 103-1	9.21		Closed Bottom Structure	Round Culvert	1.80	18.20	No		No	No		3.05	0.13	0.33
2014-10-05		M14-255	JG	9	612982.00	6049777.00	Tributary to Tenas Creek	R09521 103-1	6.69		Closed Bottom Structure	Round Culvert	0.60	8.00	No		No	No		1.00	0.09	0.04
2014-10-05		M14-256	JG	9	613773.00	6049909.00	Tributary to Tenas Creek	R09521 103-10	0.39		Other	Ford										
2014-10-05		M14-259	JG	9	614110.00	6050343.00	Tributary to Tenas Creek	R09521 103-1	5.06		Closed Bottom Structure	Round Culvert	0.60	11.00	No		No	No		1.50	0.35	0.12
2014-10-05		M14-260	JG	9	614349.00	6050439.00	Tributary to Tenas Creek	R09521 103-1	4.81		Closed Bottom Structure	Round Culvert	0.90	12.00	No		No	No		2.00	0.16	0.35
2014-10-05		M14-261	JG	9	614821.00	6051058.00	Tributary to Tenas Creek	Unnamed	1.14		Other	Ford										
2014-10-05		M14-262	JG	9	616911.00	6056075.00	Tributary to Telkwa River	R09521 103	4.61		Closed Bottom Structure	Round Culvert	0.90	14.00	No		No	No		3.30	0.49	0.00
2014-10-06		M14-268	JG	9	616719.00	6053694.00	Tributary to Tenas Creek	Unnamed	0.12		Closed Bottom Structure	Round Culvert	0.90	13.00	No		No	No		1.70	0	0.00
2014-10-06		M14-269	JG	9	616636.00	6056284.00	Tributary to Telkwa River	Unnamed	0.33		Other	Ford										
2014-10-06		M14-273	JG	9	618576.00	6055130.00	Tributary to Telkwa River	Unnamed	1.20		Other	Ford										
2014-10-06		M14-274	JG	9	619109.00	6054969.00	Trib to Goathorn Creek	Unnamed	0.59		Other	Ford										
2014-10-06		M14-275	JG	9	619165.00	6054980.00	Trib to Goathorn Creek	Unnamed	0.57		Other	Ford										
2014-10-06		M14-276	JG	9	619679.00	6054938.00	Trib to Goathorn Creek	Unnamed	0.37		Closed Bottom Structure	Round Culvert	0.50	5.00	No		No	No		1.30	0.32	0.00
2014-10-06		M14-277	JG	9	620053.00	6054093.00	Goathorn Creek	120 Road	5.79		Closed Bottom Structure	Round Culvert	1.80	17.00	No		No	No		3.35	0.04	0.28
2014-10-06		M14-278	JG	9	620488.00	6053804.00	Goathorn Creek	120 Road	5.22		Other	Ford										
2014-10-07		M14-279	JG	9	618961.00	6049362.00	Tributary to Cabinet Creek	Unnamed	3.92		Other	Ford										
2014-10-07		M14-280	JG	9	619157.00	6045786.00	Tributary to Cabinet Creek	Unnamed	1.57		Other	Ford										
2014-10-07		M14-281	JG	9	619249.00	6046193.00	Tributary to Cabinet Creek	Unnamed	1.12		Other	Ford										
2014-10-07		M14-282	JG	9	619364.00	6046340.00	Tributary to Cabinet Creek	Unnamed	0.77		Other	Ford										
2014-10-07		M14-283	JG	9	619430.00	6046549.00	Tributary to Cabinet Creek	Unnamed	0.55		Other	Ford										
2014-10-07		M14-286	JG	9	620097.00	6047816.00	Tributary to Cabinet Creek	R09521 120-6	1.51		Closed Bottom Structure	Round Culvert	0.60	12.00	No		No	No		1.35	0.08	0.00
2014-10-07		M14-287	JG	9	620099.00	6047926.00	Tributary to Cabinet Creek	R09521 120-6	1.37		Closed Bottom Structure	Round Culvert	1.00	13.00	No		No	No		2.05	0.18	0.00
2014-10-07		M14-290	JG	9	621686.00	6046490.00	Tributary to Cabinet Creek	Unnamed	0.20		Other	Ford										
2014-10-07		M14-291	JG	9	622260.00	6047426.00	Tributary to Cabinet Creek	R09521 120-7	3.55		Closed Bottom Structure	Round Culvert	1.00	12.00	No		No	No		1.70	0.14	0.03
2014-10-07		M14-292	JG	9	622066.00	6047829.00	Tributary to Cabinet Creek	R09521 120-7A	0.17		Closed Bottom Structure	Round Culvert	1.00	12.00	No		No	No		1.45	0.22	0.28
2014-10-07		M14-293	JG	9	621807.00	6048228.00	Tributary to Cabinet Creek	R09521 120-7	2.45		Closed Bottom Structure	Round Culvert	0.60	13.00	No		No	No		1.60	1.65	0.53
2014-10-07		M14-294	JG	9	622092.00	6049343.00	Tributary to Cabinet Creek	Unnamed	0.84		Closed Bottom Structure	Round Culvert	0.50	8.00	No		No	No		0.72	0.35	0.00
2014-10-07		M14-295	JG	9	621420.00	6048348.00	Tributary to Cabinet Creek	R09521 120-7	1.02		Closed Bottom Structure	Round Culvert	0.90	10.00	No		No	No		1.40	1.85	0.12
2014-10-07		M14-296	JG	9	620820.00	6047709.00	Cabinet Creek	R09521 120-1	9.37		Open Bottom Structure	Bridge	18.00	4.20								
2014-10-07		M14-297	JG	9	620494.00	6047282.00	Cabinet Creek	R09521 120-1C	0.72		Open Bottom Structure	Bridge	14.00	4.00								
2014-10-07		M14-298	JG	9	620594.00	6047931.00	Tributary to Cabinet Creek	R09521 120-1	9.03		Closed Bottom Structure	Round Culvert	0.60	12.00	No		No	No		2.60	0.29	0.21
2014-10-08		M14-301	JG	9	618896.00	6048664.00	Trib to Goathorn Creek	R09521 120-5C	0.47		Closed Bottom Structure	Round Culvert	0.60	9.00	No		No	No		1.25	0.12	0.11
2014-10-08		M14-302	JG	9	618234.00	6049229.00	Trib to Goathorn Creek	R09521 120-5	2.61		Closed Bottom Structure	Round Culvert	1.00	5.00	No		No	No		4.60	0.28	0.16
2014-10-08		M14-303	JG	9	618567.00	6049048.00	Trib to Goathorn Creek	R09521 120-5	2.24		Closed Bottom Structure	Round Culvert	0.90	15.00	No		No	No		1.90	0.84	0.14
2014-10-08		M14-304	JG	9	618944.00	6049250.00	Trib to Goathorn Creek	R09521 120-5	1.85		Closed Bottom Structure	Round Culvert	0.90	15.00	No		No	No		2.55	0.27	0.10
2014-10-08		M14-305	JG	9	619328.00	6051225.00	Trib to Goathorn Creek	R09521 120-1	4.61		Closed Bottom Structure	Round Culvert	1.5	18.00	No		No	No		2.65	0.8	0.50

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2014-10-08		M14-306	JG	9	617916.00	6050709.00	Trib to Goathorn Creek	R09521 120-4	1.39		Closed Bottom Structure	Round Culvert	0.45	10.00	No		No	No		1.65	0.54	0.20
2014-10-08		M14-307	JG	9	618500.00	6050739.00	Trib to Goathorn Creek	R09521 120-4	0.73		Closed Bottom Structure	Round Culvert	0.60	11.00	No		No	Yes	100.00	1.00	0	0.07
2014-10-08		M14-308	JG	9	618280.00	6051809.00	Trib to Goathorn Creek	R09521 120-3	0.37		Closed Bottom Structure	Round Culvert	0.90	11.00	No		No	No		2.25	0.33	0.31
2014-10-08		M14-309	JG	9	618627.00	6052985.00	Trib to Goathorn Creek	R09521 120-1	1.81		Closed Bottom Structure	Round Culvert	0.50	6.00	No		No	No		0.95	0.7	0.00
2014-10-08		M14-310	JG	9	618396.00	6054393.00	Tributary to Tenas Creek	Unnamed	1.61		Other	Ford										
2014-10-08		M14-311	JG	9	619334.00	6053504.00	Trib to Goathorn Creek	Unnamed	0.45		Other	Ford										
2014-10-09		M14-318	JG	9	624593.00	6051017.00	Trib to Goathorn Creek	R09521 100-1D	0.71		Closed Bottom Structure	Round Culvert	1.00	11.00	No		No	No		2.20	0.86	0.05
2014-10-09		M14-319	JG	9	624251.00	6051658.00	Trib to Goathorn Creek	R09521 100-1C	0.10		Closed Bottom Structure	Round Culvert	1.00	8.00	No		No	No		1.90	0.1	0.20
2014-10-09		M14-320	JG	9	623521.00	6049502.00	Trib to Goathorn Creek	R09521 120-1A	7.64		Closed Bottom Structure	Round Culvert	0.64	16.00	No		No	No		3.50	1.3	0.00
2014-10-09		M14-321	JG	9	623609.00	6049566.00	Trib to Goathorn Creek	R09521 120-1A	7.71		Closed Bottom Structure	Round Culvert	0.94	16.00	No		No	No		3.30	1.39	0.52
2014-10-09		M14-322	JG	9	623658.00	6049838.00	Trib to Goathorn Creek	R09521 120-1A	7.32		Closed Bottom Structure	Round Culvert	0.92	13.00	No		No	No		1.80	0.53	0.00
2014-10-09		M14-323	JG	9	623396.00	6050658.00	Trib to Goathorn Creek	R09521 120-1A	6.40		Closed Bottom Structure	Oval Culvert	3.20	24.00	No		No	No		5.40	0.28	0.04
2014-10-17		M14-329	JG	9	635354.00	6075586.00	Tributary to Canyon Creek	Unnamed	1.90		Other	Ford										
2014-10-17		M14-330	JG	9	636904.00	6076088.00	Tributary to Canyon Creek	Unnamed	0.69		Closed Bottom Structure	Round Culvert	0.45	6.00	No		No	No		1.10	0.27	0.28
2014-10-17		M14-331	JG	9	637147.00	6075910.00	Tributary to Canyon Creek	Unnamed	0.45		Other	Ford										
2014-10-17		M14-332	JG	9	636534.00	6075743.00	Tributary to Canyon Creek	Unnamed	0.08		Closed Bottom Structure	Round Culvert	0.60	5.00	No		No	No		0.95	0.04	0.00
2014-10-17		M14-333	JG	9	636802.00	6075373.00	Tributary to Canyon Creek	Unnamed	0.31		Other	Ford										
2014-10-17		M14-334	JG	9	637091.00	6075295.00	Tributary to Canyon Creek	Unnamed	0.65		Other	Ford										
2014-10-18		M14-339	JG	9	602244.00	6053332.00	Tributary to Jonas Creek	Unnamed	0.75		Other	Ford										
2014-10-18		M14-343	JG	9	604337.00	6053077.00	Tributary to Telkwa River	Unnamed	0.41		Other	Ford										
2014-10-18		M14-344	JG	9	604964.00	6052911.00	Tributary to Telkwa River	Unnamed	0.59		Other	Ford										
2014-10-18		M14-345	JG	9	604485.00	6053191.00	Tributary to Telkwa River	Unnamed	0.55		Other	Ford										
2014-10-18		M14-346	JG	9	609987.00	6054935.00	Tributary to Telkwa River	Unnamed	0.39		Other	Ford										
2014-10-19		M14-349	JG	9	610669.00	6055325.00	Tributary to Telkwa River	Unnamed	0.70		Other	Ford										
2014-10-19		M14-353	JG	9	611782.00	6055459.00	Tributary to Telkwa River	Telkwa River Road	11.10		Closed Bottom Structure	Round Culvert	1.05	14.00	No		No	Yes	25.00	1.45	0	0.40
2014-10-19		M14-354	JG	9	615830.00	6056714.00	Tributary to Telkwa River	Telkwa River Road	2.94		Closed Bottom Structure	Round Culvert	0.60	10.00	No		No	Yes	100.00	1.00	0	0.40
2014-10-19		M14-359	JG	9	605415.00	6052412.00	Telkwa River	R09521 118	0.00		Open Bottom Structure	Bridge	46.00	5.00								
2014-10-20		M14-360	JG	9	616537.00	6052778.00	Tributary to Tenas Creek	Unnamed	0.24		Other	Ford										
2014-10-20		M14-361	JG	9	616440.00	6052558.00	Tributary to Tenas Creek	Unnamed	0.28		Closed Bottom Structure	Round Culvert	0.45	10.00	No		No	Yes	25.00	1.00	0.05	0.01
2014-10-20		M14-365	JG	9	618003.00	6052526.00	Tributary to Tenas Creek	R09521 120-2	0.71		Closed Bottom Structure	Round Culvert	0.45	14.00	No		No	Yes	100.00	1.50	0	0.20
2014-10-20		M14-369	JG	9	617398.00	6052545.00	Tributary to Tenas Creek	Unnamed	0.57		Other	Ford										
2014-10-21		M14-375	JG	9	609355.00	6057775.00	Tributary to Telkwa River	Unnamed	1.63		Closed Bottom Structure	Round Culvert	0.45	8.00	No		No	No		1.20	0.12	0.00
2014-10-21		M14-380	JG	9	609508.00	6056205.00	Tributary to Telkwa River	Unnamed	1.08		Other	Ford										
2014-10-21		M14-384	JG	9	610021.00	6056251.00	Tributary to Telkwa River	Unnamed	0.53		Other	Ford										
2014-10-21		M14-386	JG	9	610540.00	6055950.00	Tributary to Telkwa River	Unnamed	0.72		Other	Ford										
2014-10-21		M14-387	JG	9	610464.00	6056302.00	Tributary to Telkwa River	Unnamed	1.04		Other	Ford										
2014-10-21		M14-389	JG	9	611111.00	6057250.00	Tributary to Telkwa River	R09521 710-1	1.33		Closed Bottom Structure	Round Culvert	0.60	10.00	No		No	No		1.30	0.2	0.03
2014-10-22		M14-390	JG	9	626471.00	6053691.00	Tributary to Bulkley River	Unnamed	1.68		Other	Ford										
2014-10-22		M14-391	JG	9	626397.00	6053832.00	Tributary to Bulkley River	Unnamed	1.55		Other	Ford										
2014-10-22		M14-392	JG	9	625901.00	6054281.00	Tributary to Bulkley River	Unnamed	0.86		Other	Ford										
2014-10-22		M14-394	JG	9	626524.00	6054214.00	Tributary to Bulkley River	Unnamed	0.56		Other	Ford										
2014-10-22		M14-395	JG	9	626509.00	6054333.00	Tributary to Bulkley River	Unnamed	0.06		Other	Ford										
2014-10-22		M14-396	JG	9	626515.00	6054338.00	Tributary to Bulkley River	Unnamed	0.69		Other	Ford										

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2014-10-22		M14-397	JG	9	626378.00	6055334.00	Tributary to Bulkley River	Unnamed	0.59		Other	Ford										
2014-10-22		M14-398	JG	9	629048.00	6054444.00	Tributary to Bulkley River	Unnamed	0.02		Other	Ford										
2014-10-22		M14-399	JG	9	629225.00	6054458.00	Tributary to Bulkley River	Unnamed	0.05		Closed Bottom Structure	Round Culvert	0.60	8.00	No		No	No		1.50	0.28	0.22
2014-10-22		M14-401	JG	9	626978.00	6056754.00	Tributary to Bulkley River	Unnamed	0.22		Other	Ford										
2014-10-22		M14-403	JG	9	630674.00	6054048.00	Tributary to Bulkley River	Unnamed	1.40		Closed Bottom Structure	Round Culvert	0.60	5.00	No		No	No		0.01	0	0.00
2014-10-23		M14-404	JG	9	628479.00	6049901.00	Tributary to Coffin Creek	R09521 4	7.28		Closed Bottom Structure	Round Culvert	0.60	10.00	No		No	No		1.30	0.27	0.12
2014-10-23		M14-408	JG	9	629467.00	6052028.00	Tributary to Bulkley River	R09521 4	3.14		Closed Bottom Structure	Round Culvert	0.90	10.00	No		No	No		1.50	0.55	0.00
2014-10-23		M14-409	JG	9	629657.00	6052193.00	Tributary to Bulkley River	R09521 4	2.65		Closed Bottom Structure	Round Culvert	0.90	10.00	No		No	No		0.80	0	0.00
2014-10-23		M14-411	JG	9	631728.00	6051511.00	Tributary to Bulkley River	Unnamed	0.12		Other	Ford										
2014-10-23		M14-412	JG	9	631472.00	6051578.00	Tributary to Bulkley River	Unnamed	0.37		Other	Ford										
2014-10-23		M14-413	JG	9	631951.00	6052138.00	Tributary to Bulkley River	Unnamed	1.00		Closed Bottom Structure	Round Culvert	0.50	8.00	No		No	Yes	100.00	1.00	0	0.10
2014-10-23		M14-415	JG	9	634278.00	6052600.00	Coffin Creek	Unnamed	0.08		Other	Ford										
2014-10-23		M14-416	JG	9	632995.00	6053489.00	Tributary to Bulkley River	Unnamed	0.25		Closed Bottom Structure	Round Culvert	0.45	8.00	No		No	Yes	100.00	0.80	0	0.10
2014-10-24		M14-420	JG	9	620975.00	6055954.00	Trib to Goathorn Creek	Unnamed	0.26		Other	Ford										
2014-10-24		M14-421	JG	9	620907.00	6056124.00	Trib to Goathorn Creek	Unnamed	0.17		Closed Bottom Structure	Round Culvert	0.60	8.00	No		No	No		1.00	0	0.00
2014-10-24		M14-422	JG	9	628646.00	6058137.00	Tributary to Bulkley River	Walcott FSR	5.87		Closed Bottom Structure	Round Culvert	0.60	12.00	No		No	No		2.20	0.12	0.10
2014-10-24		M14-423	JG	9	629719.00	6055397.00	Tributary to Bulkley River	Unnamed	1.29		Other	Ford										
2014-10-24		M14-426	JG	9	633479.00	6046161.00	Tributary to Coffin Lake	Unnamed	0.65		Other	Ford										
2014-10-24		M14-427	JG	9	633396.00	6046460.00	Tributary to Coffin Lake	Unnamed	0.33		Other	Ford										
2014-10-24		M14-429	JG	9	632217.00	6047467.00	Tributary to Coffin Lake	Unnamed	0.29		Other	Ford										
2014-10-25		M14-442	JG	9	640471.00	6070300.00	Trib to Canyon Creek	Unnamed	0.12		Closed Bottom Structure	Round Culvert	0.50	8.00	No		No	No		1.50	0.2	0.29
2014-10-25		M14-443	JG	9	640715.00	6069293.00	Tributary to Canyon Creek	Hector FSR	0.35		Other	Ford										
2014-10-25		M14-444	JG	9	641076.00	6069364.00	Tributary to Canyon Creek	Unnamed	0.47		Open Bottom Structure	Wood Box Culvert	1.00	2.50								
2014-10-25		M14-448	JG	9	640799.00	6069316.00	Tributary to Canyon Creek	Hector FSR	0.14		Closed Bottom Structure	Round Culvert	0.90	10.00	No		No	No		1.20	0.14	0.20
2014-10-25		M14-450	JG	9	640597.00	6069658.00	Canyon Creek	Unnamed	0.37		Open Bottom Structure	Bridge	20.00	4.00								
2014-10-25		M14-451	JG	9	640581.00	6070005.00	Tributary to Canyon Creek	Canyon Creek FSR	1.73		Closed Bottom Structure	Round Culvert	1.00	10.00	No		No	No		1.40	1.09	0.31
2014-10-26		M14-453	JG	9	652257.00	6043626.00	Tributary to McQuarrie Creek	Hidden East FSR	2.16		Other	Ford										
2014-10-26		M14-455	JG	9	652348.00	6042888.00	Tributary to McQuarrie Creek	Unnamed	0.92		Open Bottom Structure	Wood Box Culvert	0.50	5.00								
2014-10-26		M14-457	JG	9	652092.00	6043216.00	Tributary to McQuarrie Creek	Unnamed	0.53		Other	Ford										
2014-10-26		M14-459	JG	9	652238.00	6044333.00	Tributary to McQuarrie Creek	Hidden East FSR	1.43		Other	Ford										
2014-10-26		M14-460	JG	9	652236.00	6044307.00	Tributary to McQuarrie Creek	Hidden East FSR	1.37		Closed Bottom Structure	Round Culvert	0.60	8.00	No		No	No		1.60	0.08	0.40
2014-10-26		M14-464	JG	9	652987.00	6045659.00	Tributary to McQuarrie Creek	Unnamed	1.06		Other	Ford										
2014-10-26		M14-465	JG	9	652672.00	6045503.00	Tributary to McQuarrie Creek	Unnamed	0.65		Other	Ford										
2014-10-26		M14-470	JG	9	651999.00	6045252.00	Tributary to McQuarrie Creek	Hidden East FSR	0.29		Closed Bottom Structure	Round Culvert	1.50	12.00	No		No	No		1.60	0.13	0.32
2014-10-26		M14-471	JG	9	651108.00	6044865.00	Tributary to McQuarrie Creek	Hidden Lake FSR	4.38		Closed Bottom Structure	Round Culvert	0.60	8.00	No		No	No		1.40	0.02	0.07
2014-10-26		M14-472	JG	9	651057.00	6044830.00	Tributary to McQuarrie Creek	Hidden Lake FSR	3.65		Closed Bottom Structure	Round Culvert	0.50	8.00	No		No	No		1.30	0.03	0.00
2014-10-26		M14-473	JG	9	650542.00	6044800.00	Tributary to McQuarrie Creek	Hidden Lake FSR	4.22		Closed Bottom Structure	Round Culvert	2.00	10.00	No		No	No		2.60	0.07	0.01
2014-10-27		M14-474	JG	9	645152.00	6052681.00	Tributary to Deep Creek	9059 02	5.00		Closed Bottom Structure	Round Culvert	0.45	8.00	No		No	No		1.60	0.41	0.07
2014-10-27		M14-475	JG	9	644866.00	6053830.00	Tributary to Deep Creek	9059 02	4.16		Closed Bottom Structure	Round Culvert	1.00	10.00	No		No	No		1.90	0.08	0.12
2014-10-27		M14-478	JG	9	645166.00	6054503.00	Tributary to Deep Creek	9059 02	2.69		Closed Bottom Structure	Round Culvert	1.00	10.00	No		No	No		1.80	0.12	0.04
2014-10-27		M14-481	JG	9	644824.00	6054476.00	Tributary to Deep Creek	R1876 701	0.49		Closed Bottom Structure	Round Culvert	0.60	8.00	No		No	No		1.50	0.09	0.04
2014-10-27		M14-482	JG	9	644931.00	6054553.00	Tributary to Deep Creek	R1876 701	0.37		Closed Bottom Structure	Round Culvert	0.80	12.00	No		No	No		1.50	0.16	0.04
2014-10-27		M14-484	JG	9	645465.00	6055111.00	Tributary to Deep Creek	9050 02	2.47		Closed Bottom Structure	Round Culvert	0.08	8.00	No		No	No		2.00	0.27	0.04

Date of Assessment (YYYY-MM-DD)	PSCIS Crossing ID	My Crossing Reference	Crew Members	UTM Zone	Easting	Northing	Stream Name	Road Name	Road KM Mark	Road Tenure	Crossing Type	Crossing Subtype	Diameter or Span (meters)	Length or Width (meters)	Continuous Embeddedment? Yes/No	Average Depth Embededdment (meters)	Resemble Channel? Yes / No	Backwatered ? Yes / No	Percentage Backwatered	Fill Depth (meters)	Outlet Drop (meters)	Outlet Pool Depth (0.01m)
2014-10-27		M14-485	JG	9	645703.00	6055376.00	Tributary to Deep Creek	9050 02	2.25		Closed Bottom Structure	Round Culvert	1.20	15.00	No		No	No		4.40	0.45	0.02
2014-10-27		M14-488	JG	9	646969.00	6056908.00	Deep Creek	9050 02	0.10		Open Bottom Structure	Bridge	12.00	4.30								
2014-10-27		M14-489	JG	9	644776.00	6058882.00	Tributary to Deep Creek	Unnamed	0.57		Other	Ford										
2014-10-27		M14-491	JG	9	645004.00	6059459.00	Tributary to Deep Creek	Deep Creek FSR	14.08		Open Bottom Structure	Bridge	8.00	4.00								
2014-10-27		M14-492	JG	9	644919.00	6059393.00	Tributary to Deep Creek	Unnamed	0.90		Other	Ford										
2014-10-27		M14-493	JG	9	644869.00	6059664.00	Tributary to Deep Creek	Deep Creek FSR	13.79		Closed Bottom Structure	Round Culvert	0.50	8.00	No		No	No		1.00	0.12	0.00
2014-10-27		M14-495	JG	9	644612.00	6060260.00	Tributary to Deep Creek	Deep Creek FSR	13.47		Closed Bottom Structure	Round Culvert	0.50	8.00	No		No	No		1.70	0.17	0.05
2014-10-27		M14-496	JG	9	644570.00	6060414.00	Tributary to Deep Creek	Deep Creek FSR	13.00		Open Bottom Structure	Bridge	8.00	4.00								
2014-10-27		M14-499	JG	9	637185.00	6066178.00	Trib to Vanderven Creek	R02960 1	2.27		Closed Bottom Structure	Round Culvert	0.60	8.00	No		No	No		1.00	0.13	0.00
2014-10-28		M14-500	JG	9	636943.00	6065863.00	Trib to Vanderven Creek	Unnamed	0.31		Closed Bottom Structure	Round Culvert	0.50	8.00	No		No	No		1.00	0.05	0.00
2014-10-28		M14-502	JG	9	637187.00	6065737.00	Trib to Vanderven Creek	R02960 1	1.63		Closed Bottom Structure	Round Culvert	0.45	8.00	No		No	No		1.30	0.04	0.12
2014-10-28		M14-503	JG	9	638390.00	6065873.00	Trib to Vanderven Creek	R02960 4	2.67		Closed Bottom Structure	Round Culvert	0.60	8.00	No		No	No		1.50	0.1	0.10
2014-10-28		M14-506	JG	9	637841.00	6065790.00	Trib to Vanderven Creek	R02960 11	0.51		Closed Bottom Structure	Round Culvert	0.60	8.00	No		No	No		1.00	0.1	0.08
2014-10-28		M14-507	JG	9	637050.00	6065101.00	Trib to Vanderven Creek	R16680 01	0.98		Other	Ford										
2014-10-28		M14-508	JG	9	637103.00	6064942.00	Trib to Vanderven Creek	R02960 1	0.80		Closed Bottom Structure	Round Culvert	0.60	8.00	No		No	No		1.30	0.2	0.09
2014-10-28		M14-510	JG	9	637164.00	6064745.00	Trib to Vanderven Creek	R02960 1	0.72		Closed Bottom Structure	Round Culvert	1.05	8.00	No		No	No		1.30	0.25	0.26
2014-10-28		M14-512	JG	9	638614.00	6064582.00	Trib to Vanderven Creek	Unnamed	0.37		Other	Ford										
2014-10-28		M14-513	JG	9	638636.00	6064484.00	Trib to Vanderven Creek	Unnamed	0.23		Other	Ford										
2014-10-28		M14-514	JG	9	638636.00	6064458.00	Trib to Vanderven Creek	Unnamed	0.31		Other	Ford										
2014-11-06		M14-515	JG	9	640899.00	6051559.00	Gibson Creek	Snider Road	0.63		Closed Bottom Structure	Round Culvert	1.20	12.00	No		No	No		1.80	0.27	1.00
2014-11-06		M14-516	JG	9	639869.00	6051747.00	Deep Creek	Highway 16			Closed Bottom Structure	Oval Culvert	3.80	24.00	No		No	No		3.70	0.3	1.10
2014-11-06		M14-517	JG	9	640014.00	6051697.00	Gibson Creek	Highway 16			Closed Bottom Structure	Round Culvert	0.80	24.00	No		No	No		4.00	0.6	0.60
2014-11-06		M14-519	JG	9	641866.00	6053489.00	Deep Creek	Unnamed	0.94		Closed Bottom Structure	Round Culvert	0.90	8.00	No		No	No		2.00	0.5	0.33
2014-11-06		M14-520	JG	9	640774.00	6053439.00	Deep Creek	Wakefield Road	1.69		Open Bottom Structure	Bridge	5.00	5.00								
2014-11-06		M14-521	JG	9	635891.00	6054657.00	Tributary to Bulkley River	Quick West Road	2.55		Closed Bottom Structure	Round Culvert	0.90	20.00	No		No	No		2.40	2.4	0.00
2014-11-06		M14-522	JG	9	635599.00	6054371.00	Bulkley River	Unnamed	0.33		Open Bottom Structure	Bridge	80.00	4.10								
2014-11-06		M14-525	JG	9	637819.00	6064758.00	Trib to Vanderven Creek	Unnamed	0.58		Other	Ford										
2014-11-06		M14-529	JG	9	638371.00	6064454.00	Trib to Vanderven Creek	Unnamed	0.29		Other	Ford										
2014-11-07		M14-531	JG	9	639115.00	6064830.00	Trib to Vanderven Creek	R11232 4A	1.18		Other	Ford										
2014-11-07		M14-532	JG	9	639507.00	6064832.00	Trib to Vanderven Creek	R11232 4	2.18		Closed Bottom Structure	Round Culvert	0.60	8.00	No		No	No		0.80	0.63	0.12
2014-11-07		M14-533	JG	9	640728.00	6065611.00	Trib to Vanderven Creek	R11232	0.26		Closed Bottom Structure	Round Culvert	1.20	8.00	No		No	No		2.00	0.05	0.10
2014-11-07		M14-534	JG	9	640966.00	6065478.00	Trib to Vanderven Creek	R11232 3	0.27		Closed Bottom Structure	Round Culvert	0.90	11.50	No		No	No		1.50	0.08	0.04
2014-11-08		M14-535	JG	9	646993.00	6057041.00	Tributary to Deep Creek	Deep Creek FSR	8.10		Open Bottom Structure	Bridge	10.00	4.00								
2014-11-08		M14-536	JG	9	646644.00	6057425.00	Tributary to Deep Creek	Deep Creek FSR	17.50		Closed Bottom Structure	Round Culvert	0.80	12.00	No		No	No		1.80	0.08	0.04
2014-11-08		M14-537	JG	9	646636.00	6057423.00	Tributary to Deep Creek	Deep Creek FSR	17.51		Open Bottom Structure	Pipe Arch	1.60	12.00								
2014-11-08		M14-538	JG	9	646031.00	6057660.00	Tributary to Deep Creek	Deep Creek FSR	16.75		Open Bottom Structure	Bridge	10.00	4.00								

Inlet Drop? Yes / No	Culvert Slope (%)	Downstream Channel Width (meters)	Stream Slope	Beaver Activity? Yes / No	Fish Observed? Yes / No	Valley Fill	Habitat Value	Stream Width Ratio	Culvert Length Score	Embed Score	Outlet Drop Score	Culvert Slope Score	Stream Width Ratio Score	Final Score	Barrier Result	Crossing Fix	Recommended Diameter or Span (meters)	Assessment Comment
No	1.00	0.41	2	No	No	Deep Fill	Low	1.03	0	10	0	5	3	18	Potential	Streambed Simulation	0.45	Fish presence very unlikely, no action required
Yes	6.00	1.28	8	No	No	Deep Fill	High	0.91	0	10	5	10	0	25	Barrier	Open Bottom Structure	1.30	Remove and replace with an OBS, CV is a barrier
				No	No			0.00	0	0	0	0	0	0	Passable			Passable, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Fish presence very unlikely, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Good habitat present, no barriers
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		High value habitat, no barriers
				No	No			0.00	0	0	0	0	0	0	Passable			Box CV has collapsed, should be removed
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Good habitat present, no barriers
Yes	5.00	0.62	8	No	No	Shallow Fill	Low	1.03	0	10	5	10	3	28	Barrier	Streambed Simulation	0.65	Seasonal channel, replace CV if fish present in lake
Yes	9.00	1.29	28	No	No	Shallow Fill	Low	2.15	0	10	10	10	6	36	Barrier	Open Bottom Structure	1.3	Seasonal channel, replace CV if fish present in lake
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Fish presence very unlikely, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Fish presence very unlikely, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Fish presence very unlikely, no action required
				No	Yes			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Good habitat present, no barriers
				No	Yes			0.00	0	0	0	0	0	0	Passable			'Blue' channel, fish observed - remove crossing
Yes	6.50	2.67	14	No	Yes	Deep Fill	High	4.45	0	10	10	10	6	36	Barrier	Open Bottom Structure	2.70	Substantial logging debris, replace with OBS
No	2.00	1.56	8	No	No	Deep Fill	High	2.60	0	10	5	5	6	26	Barrier	Open Bottom Structure	1.60	CV is a barrier, replace with OBS
No	4.50	0.79	5	No	No	Deep Fill	Low	1.32	0	10	0	10	6	26	Barrier	Streambed Simulation	0.80	Seasonal channel, should be passable as is
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Fish presence very unlikely, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Fish presence very unlikely, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Fish presence very unlikely, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Fish presence very unlikely, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Fish presence very unlikely, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Seasonal channel, low habitat value present
No	3.00	1.21	24	No	No	Deep Fill	Medium	1.34	0	10	10	10	6	36	Barrier	Open Bottom Structure	1.30	CV a barrier, replace if fish present
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Fish presence very unlikely, no action required
				No	No			0.00	0	0	0	0	0	0	Passable			Collapsed - remove
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		No barrier present
No	3.50	1.86	3	No	No	Deep Fill	Low	1.09	0	5	0	10	3	18	Potential	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Passable			Collapsed - remove
No	4.00	0.86	2	No	No	Deep Fill	Low	2.15	0	10	0	10	6	26	Barrier	Streambed Simulation		No habitat present
No	2.50	1.30	4	No	No	Deep Fill	Medium	2.17	0	10	0	5	6	21	Barrier	Streambed Simulation		Fish access unlikely, no action required
No	3.50	0.31	3	No	No	Deep Fill	Low	0.78	0	10	0	10	0	20	Barrier	Streambed Simulation		Fish access unlikely, no action required
No	7.00	0.58	8	No	No	Deep Fill	Low	0.97	0	10	0	10	0	20	Barrier	Streambed Simulation		Fish access unlikely, no action required
Yes	8.00	0.89	6	No	No	Deep Fill	Low	2.23	0	0	0	10	6	16	Potential	Streambed Simulation		Passable if fish present, no action required
No	4.00	2.54	6	No	No	Deep Fill	High	1.41	3	10	10	10	6	39	Barrier	Removal	2.6	Remove, or replace with OBS (2.6)
No	6.00	0.62	8	No	No	Deep Fill	Low	1.03	0	10	0	10	3	23	Barrier	Streambed Simulation		Fish access unlikely, no action required
				Yes	No			0.00	0	0	0	0	0	0	Unkown	Open Bottom Structure	2.60	Road flagged, will require OBS
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Fish access unlikely, no action required
				No	No			0.00	0	0	0	0	0	0	Passable			Creosote timbers leaching into water
No	11.00	0.68	22	No	No	Deep Fill	Low	1.13	0	10	10	10	3	33	Barrier	Streambed Simulation		Fish access unlikely, no action required
Yes	8.00	0.43	14	No	No	Deep Fill	Low	1.08	0	10	0	10	3	23	Barrier	Streambed Simulation		Fish access unlikely, no action required
No	5.50	0.94	12	No	No	Deep Fill	Low	1.04	3	10	10	10	3	36	Barrier	Streambed Simulation		Access unlikley from downstream, very steep
No	12.00	0.72	16	No	No	Deep Fill	Low	1.20	0	10	10	10	3	33	Barrier	Streambed Simulation		Fish access unlikely, no action required

Inlet Drop? Yes / No	Culvert Slope (%)	Downstream Channel Width (meters)	Stream Slope	Beaver Activity? Yes / No	Fish Observed? Yes / No	Valley Fill	Habitat Value	Stream Width Ratio	Culvert Length Score	Embed Score	Outlet Drop Score	Culvert Slope Score	Stream Width Ratio Score	Final Score	Barrier Result	Crossing Fix	Recommended Diameter or Span (meters)	Assessment Comment
No	6.50	2.80	9	No	No	Deep Fill	High	2.33	3	10	10	10	6	39	Barrier	Open Bottom Structure	2.80	Replace with OBS and restore channel
No	5.00	4.13	12	No	No	Deep Fill	High	2.29	6	10	10	10	6	42	Barrier	Open Bottom Structure	4.20	Replace with OBS, water overflowing CV inlet
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
No	8.00	1.72	11	No	No	Shallow Fill	Medium	1.43	3	10	10	10	6	39	Barrier	Open Bottom Structure	1.75	Replace with OBS if fish present
No	6.50	0.68	8	No	No	Shallow Fill	Low	1.13	0	10	0	10	3	23	Barrier	Streambed Simulation		Fish access unlikely, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Streambed Simulation		Fish access unlikely, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Streambed Simulation		Passable if fish present, no action required
No	11.00	1.25	9	No	No	Deep Fill	Low	2.08	0	10	5	10	6	31	Barrier	Streambed Simulation		Fish access unlikely, no action required
No	7.50	0.45	14	No	No	Deep Fill	Low	1.00	0	10	0	10	3	23	Barrier	Streambed Simulation		Fish access unlikely, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Streambed Simulation		Passable if fish present, no action required
No	4.50	2.16	11	No	No	Deep Fill	High	1.20	3	10	0	10	3	26	Barrier	Open Bottom Structure	2.20	Replace with OBS if fish present
				No	No			0.00	0	0	0	0	0	0	Unkown	Streambed Simulation		Intermittent channel, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Streambed Simulation		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Streambed Simulation		Passable if fish present, no action required
No	5.50	0.30	6	No	No	Deep Fill	Low	0.67	0	10	5	10	0	25	Barrier	Streambed Simulation		Fish access unlikely, no action required
Yes	5.00	1.79	6	No	No	Deep Fill	Medium	2.98	0	10	5	10	6	31	Barrier	Open Bottom Structure	1.80	Good habitat, likely seasonal access - replace
No	5.50	1.79	6	No	No	Deep Fill	Medium	2.98	0	10	5	10	6	31	Barrier	Open Bottom Structure	1.80	Good habitat, likely seasonal access - replace
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
Yes	6.00	1.14	8	No	No	Deep Fill	Low	1.90	0	10	0	10	6	26	Barrier	Streambed Simulation		Passable if fish present, no action required
No	2.00	0.50	2	No	No	Deep Fill	Low	0.83	0	10	0	5	0	15	Potential	Streambed Simulation	0.50	Fish presence unlikely, culvert damaged - replace
Yes	2.00	1.09	2	No	No	Deep Fill	Low	2.18	0	10	0	5	6	21	Barrier	Streambed Simulation	1.10	Fish presence unlikely, culvert damaged - replace
Yes	3.00	2.70	3	No	No	Deep Fill	Low	5.40	0	10	0	10	6	26	Barrier	Streambed Simulation		Passable if fish present, no action required
				No	Yes			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no action required
No	14.00	2.26	6	No	No	Deep Fill	High	3.77	0	10	10	10	6	36	Barrier	Open Bottom Structure	2.30	Replace with OBS if fish present
Yes	6.50	0.51	9	No	No	Deep Fill	Low	0.85	0	10	0	10	0	20	Barrier	Streambed Simulation		Fish access unlikely, no action required
No	1.50	1.36	6	No	Yes	Deep Fill	Medium	1.36	0	10	0	5	6	21	Barrier	Streambed Simulation		Fish observed, culvert passable as is
No	8.00	1.33	5	No	No	Deep Fill	Medium	2.22	0	10	10	10	6	36	Barrier	Removal		Remove and restore channel
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Fish access unlikely, no action required
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no action required
No	17.00	1.23	47	No	No	Deep Fill	Low	2.05	0	10	5	10	6	31	Barrier	Streambed Simulation		Fish access unlikely, no action required
Yes	15.00	1.03	32	No	No	Deep Fill	Low	1.03	0	10	10	10	3	33	Barrier	Streambed Simulation		Fish access unlikely, no action required
No	12.00	1.43	25	No	No	Deep Fill	Low	1.19	0	10	0	10	3	23	Barrier	Streambed Simulation		Fish access unlikely, no action required
No	3.00	0.57	5	No	No	Deep Fill	Low	1.27	0	10	0	10	3	23	Barrier	Streambed Simulation		Passable if fish present, no action required
No	3.00	1.73	4	No	No	Deep Fill	Medium	1.24	0	10	5	10	3	28	Barrier	Streambed Simulation		Passable if fish present, no action required
No	3.00	1.03	4	No	No	Deep Fill	Low	1.72	0	10	0	10	6	26	Barrier	Streambed Simulation	1.05	Likely passable at high water, replace if barrier
Yes	3.00	1.03	3	No	No	Deep Fill	Medium	2.29	0	10	10	10	6	36	Barrier	Streambed Simulation	1.05	Culvert out of line with natural channel - replace
No	3.00	1.23	4	No	No	Deep Fill	Medium	2.73	0	10	5	10	6	31	Barrier	Open Bottom Structure	1.25	Likely passable at high water, replace if barrier

Inlet Drop? Yes / No	Culvert Slope (%)	Downstream Channel Width (meters)	Stream Slope	Beaver Activity? Yes / No	Fish Observed? Yes / No	Valley Fill	Habitat Value	Stream Width Ratio	Culvert Length Score	Embed Score	Outlet Drop Score	Culvert Slope Score	Stream Width Ratio Score	Final Score	Barrier Result	Crossing Fix	Recommended Diameter or Span (meters)	Assessment Comment
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
No	2.00	1.60	3	No	No	Deep Fill	Low	3.56	0	10	0	5	6	21	Barrier	Open Bottom Structure	1.60	Outlet damaged - replace
Yes	3.00	1.30	12	No	No	Deep Fill	Medium	2.17	0	10	10	10	6	36	Barrier	Streambed Simulation		Passable if fish present, no action required
No	3.00	1.20	3	No	No	Deep Fill	Low	2.40	0	10	0	10	6	26	Barrier	Open Bottom Structure	1.20	Likely passable at high water, replace if barrier
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
No	1.00	0.57	3	No	No	Deep Fill	Low	0.57	0	10	0	5	0	15	Potential	Streambed Simulation	0.60	Replace with embedded CV if fish present
Yes	5.00	1.47	4	No	No	Deep Fill	Medium	1.47	0	10	0	10	6	26	Barrier	Open Bottom Structure	1.50	Likely passable at high water, replace if barrier
No	3.00	1.83	3	No	No	Deep Fill	Low	3.05	0	10	5	10	6	31	Barrier	Open Bottom Structure	1.85	Likely passable at high water, replace if barrier
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
Yes	6.00	0.73	5	No	No	Deep Fill	Medium	1.22	0	10	0	10	3	23	Barrier	Streambed Simulation	0.75	Replace with embedded CV if fish present
No	3.00	0.87	4	No	No	Deep Fill	Medium	1.45	0	10	0	10	6	26	Barrier	Streambed Simulation	0.90	Replace with embedded CV if fish present
No	3.00	0.58	6	No	No	Deep Fill	Medium	1.29	0	10	5	10	3	28	Barrier	Streambed Simulation	0.60	Replace with embedded CV if fish present
No	3.00	2.00	4	No	No	Deep Fill	High	1.11	0	10	0	10	3	23	Barrier	Open Bottom Structure	2.00	Replace with OBS if fish present
No	5.00	1.57	5	No	No	Deep Fill	High	1.31	0	10	0	10	6	26	Barrier	Open Bottom Structure	1.60	Replace with OBS if fish present
No	4.00	1.67	4	No	No	Deep Fill	Medium	1.67	0	10	5	10	6	31	Barrier	Open Bottom Structure	1.70	Replace with OBS if fish present
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
No	4.00	1.83	3	No	No	Deep Fill	High	1.31	0	5	0	10	6	21	Barrier	Streambed Simulation		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
No	3.00	0.50	4	No	No	Deep Fill	Low	1.11	0	10	0	10	3	23	Barrier	Streambed Simulation	0.5	Culvert out of line with natural channel - replace
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Poorly deactivated, currently a barrier - restore
				No	No			0.00	0	0	0	0	0	0	Unkown	Streambed Simulation	0.55	Install a culvert or restore channel
No	0.00	0.83	5	No	No	Deep Fill	Medium	0.83	0	10	0	0	0	10	Passable			Replace with embedded CV if fish present
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Passable			Remove and construct ford if access required
No	3.00	0.73	4	No	No	Deep Fill	Low	1.46	0	10	5	10	6	31	Barrier	Streambed Simulation	0.75	Replace with embedded CV if fish present
No	2.00	0.72	7	No	No	Deep Fill	Medium	0.72	0	10	0	5	0	15	Potential	Streambed Simulation	0.75	Replace with embedded CV if fish present

Inlet Drop? Yes / No	Culvert Slope (%)	Downstream Channel Width (meters)	Stream Slope	Beaver Activity? Yes / No	Fish Observed? Yes / No	Valley Fill	Habitat Value	Stream Width Ratio	Culvert Length Score	Embed Score	Outlet Drop Score	Culvert Slope Score	Stream Width Ratio Score	Final Score	Barrier Result	Crossing Fix	Recommended Diameter or Span (meters)	Assessment Comment
No	3.00	0.23	5	No	No	Deep Fill	Medium	0.19	0	10	0	10	0	20	Barrier	Streambed Simulation	0.30	Replace with embedded CV if fish present
No	2.00	0.90	3	No	No	Deep Fill	Medium	0.64	0	10	10	5	0	25	Barrier	Streambed Simulation	0.90	Replace with embedded CV if fish present
No	2.00	1.90	4	No	No	Deep Fill	High	0.73	0	10	0	5	0	15	Potential	Streambed Simulation		Passable if fish present, no action required
No	3.00	0.72	5	No	No	Deep Fill	Low	0.90	0	10	0	10	0	20	Barrier	Streambed Simulation		Passable if fish present, no action required
No	3.00	0.68	5	No	No	Deep Fill	Low	1.36	0	10	0	10	6	26	Barrier	Streambed Simulation		Passable if fish present, no action required
Yes	1.00	0.78	3	No	No	Deep Fill	Medium	0.65	0	10	0	5	0	15	Potential	Streambed Simulation	0.80	Replace with embedded CV if fish present
				No	Yes			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
No	5.00	0.83	4	No	No	Deep Fill	Medium	0.69	0	5	0	10	0	15	Potential	Streambed Simulation		Passable if fish present, no action required
No	3.00	1.37	6	No	No	Deep Fill	Medium	1.71	0	10	0	10	6	26	Barrier	Open Bottom Structure	1.40	Culvert out of line with natural channel - replace
No	3.00	0.73	4	No	No	Deep Fill	Medium	0.91	0	5	0	10	0	15	Potential	Streambed Simulation		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Install boulders to prevent ATV access
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
Yes	9.00	0.58	22	No	No	Deep Fill	Low	0.73	0	10	0	10	0	20	Barrier	Streambed Simulation	0.60	Replace with embedded CV if fish present
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				Yes	No			0.00	0	0	0	0	0	0	Passable			Bridge is not a barrier, but beaver dams restrict access
No	1.00	1.45	3	No	No	Deep Fill	Low	2.42	0	10	5	5	6	26	Barrier	Streambed Simulation		Fish access unlikely, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Streambed Simulation		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Streambed Simulation		Passable if fish present, no action required
No	3.00	2.13	7	No	No	Deep Fill	Medium	1.78	3	10	10	10	6	39	Barrier	Open Bottom Structure	2.15	Replace with OBS if fish present
				No	No			0.00	0	0	0	0	0	0	Passable			Bridge not a barrier, remove logging debris
No	16.00	1.02	30	No	No	Deep Fill	Medium	1.02	0	10	5	10	3	28	Barrier	Streambed Simulation	1.05	Replace with embedded CV if fish present
				No	No			0.00	0	0	0	0	0	0	Passable			Remove if no access required, footings eroding slightly
No	4.00	3.00	22	No	No	Deep Fill	High	2.14	0	10	0	10	6	26	Barrier	Removal	3.00	Remove if no access required, or replace with OBS
No	3.00	2.10	25	No	No	Deep Fill	High	1.17	0	10	10	10	3	33	Barrier	Removal	2.10	Remove if no access required, or replace with OBS
No	18.00	1.60	25	No	No	Deep Fill	High	1.33	0	10	0	10	6	26	Barrier	Removal	1.60	Remove if no access required, or replace with OBS
No	16.00	1.37	25	No	No	Deep Fill	High	1.25	0	10	0	10	3	23	Barrier	Removal	1.40	Remove if no access required, or replace with OBS
No	6.00	0.55	11	No	No	Deep Fill	Low	0.92	0	10	10	10	0	30	Barrier	Removal	0.60	Remove or replace if access required
No	4.00	0.52	30	No	No	Deep Fill	Low	0.87	0	10	10	10	0	30	Barrier	Streambed Simulation	0.55	Replace with embedded CV if fish present
No	3.00	0.55	7	No	No	Deep Fill	Low	0.92	0	10	0	10	0	20	Barrier	Streambed Simulation	0.55	Replace with embedded CV if fish present
No	13.00	0.52	15	No	No	Deep Fill	Low	1.30	0	10	5	10	6	31	Barrier	Streambed Simulation	0.55	Replace with embedded CV if fish present
No	3.00	0.67	17	No	No	Deep Fill	Low	1.49	0	10	10	10	6	36	Barrier	Streambed Simulation	0.70	Replace with embedded CV if fish present
No	1.00	0.52	10	No	No	Deep Fill	Low	1.16	0	10	5	5	3	23	Barrier	Streambed Simulation		Fish access unlikely, no action required
No	12.00	1.55	15	No	No	Deep Fill	Medium	2.58	3	10	10	10	6	39	Barrier	Open Bottom Structure	1.60	Replace with OBS if fish present
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no action required
No	0.00	0.97	4	No	No	Deep Fill	Low	1.52	0	10	10	0	6	26	Barrier	Streambed Simulation	1.00	Replace with embedded CV if fish present
				No	No			0.00	0	0	0	0	0	0	Unkown	Streambed Simulation	1.00	Will require embedded 1m CV when rd built
				No	No			0.00	0	0	0	0	0	0	Unkown	Streambed Simulation	0.90	Will require embedded 0.9m CV when rd built
				No	No			0.00	0	0	0	0	0	0	Unkown	Streambed Simulation	1.00	Will require embedded 1.1m CV when rd built
Yes	1.00	0.58	3	No	No	Shallow Fill	Medium	1.93	0	10	0	5	6	21	Barrier	Streambed Simulation	0.60	Replace with properly embedded culvert
No	4.00	0.58	2	No	No	Shallow Fill	Medium	1.23	0	10	0	10	3	23	Barrier	Streambed Simulation	0.60	Replace with properly embedded culvert
No	1.00	1.20	4	No	No	Shallow Fill	Medium	2.00	0	10	0	5	6	21	Barrier	Open Bottom Structure	1.20	Replace with OBS if fish present

Inlet Drop? Yes / No	Culvert Slope (%)	Downstream Channel Width (meters)	Stream Slope	Beaver Activity? Yes / No	Fish Observed? Yes / No	Valley Fill	Habitat Value	Stream Width Ratio	Culvert Length Score	Embed Score	Outlet Drop Score	Culvert Slope Score	Stream Width Ratio Score	Final Score	Barrier Result	Crossing Fix	Recommended Diameter or Span (meters)	Assessment Comment
Yes	6.00	0.93	4	No	No	Deep Fill	Medium	2.07	0	10	10	10	6	36	Barrier	Streambed Simulation	0.95	Replace with properly embedded culvert
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no action required
				Yes	No			0.00	0	0	0	0	0	0	Passable			Remove, deck unsafe - will create barrier if collapses
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no action required
No	3.00	1.10	14	No	No	Deep Fill	Medium	1.10	3	10	10	10	3	36	Barrier	Streambed Simulation	1.10	Replace with properly embedded culvert
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Crossing passable as is, no concerns
No	6.00	1.02	6	No	No	Deep Fill	Medium	2.04	0	10	0	10	6	26	Barrier	Streambed Simulation	1.05	Likely passable at high water
No	14.00	1.50	13	No	No	Deep Fill	High	0.83	3	10	0	10	0	23	Barrier	Open Bottom Structure	1.50	Replace with OBS if fish present
No	3.00	0.52	6	No	No	Deep Fill	Low	0.87	0	10	0	10	0	20	Barrier	Streambed Simulation		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	9.00	0.57	19	No	No	Deep Fill	Medium	0.95	0	10	10	10	0	30	Barrier	Streambed Simulation	0.60	Culvert should be properly embedded
No	4.00	1.23	4	No	No	Deep Fill	Medium	1.37	0	10	5	10	6	31	Barrier	Streambed Simulation		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Streambed Simulation		Passable if fish present, no concerns
No	3.00	1.47	8	No	No	Deep Fill	Medium	1.63	0	10	10	10	6	36	Barrier	Open Bottom Structure	1.50	Replace with OBS if fish present
No	3.00	0.54	3	No	No	Deep Fill	Low	0.60	0	10	0	10	0	20	Barrier	Streambed Simulation	0.60	Likely passable at high water
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
Yes	2.00	0.63	9	No	No	Deep Fill	Medium	1.26	0	10	10	5	3	28	Barrier	Removal		Remove culvert and restore channel
Yes	3.00	9.67	12	No	No	Deep Fill	High	5.37	3	10	0	10	6	29	Barrier	Streambed Simulation		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Road starting to wash out , passable if fish present
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Road washed out, still fish passable
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	9.00	1.23	16	No	No	Deep Fill	Medium	2.05	0	10	0	10	6	26	Barrier	Open Bottom Structure	1.30	Likely passable at high water
No	8.00	1.10	17	No	No	Deep Fill	Medium	1.10	0	10	5	10	3	28	Barrier	Streambed Simulation	1.10	Likely passable at high water
				No	No			0.00	0	0	0	0	0	0	Unkown	Streambed Simulation		Passable if fish present, no concerns
No	3.00	1.03	2	No	No	Deep Fill	Low	1.03	0	10	0	10	3	23	Barrier	Streambed Simulation		Passable if fish present, no concerns
No	3.00	1.07	4	No	No	Deep Fill	Medium	1.07	0	10	5	10	3	28	Barrier	Streambed Simulation	1.10	Likely passable at high water
No	3.00	1.08	5	No	No	Deep Fill	Medium	1.80	0	10	10	10	6	36	Barrier	Open Bottom Structure	1.10	Replace with properly embedded CV or OBS
No	1.00	0.57	5	No	No	Deep Fill	Low	1.14	0	10	10	5	3	28	Barrier	Streambed Simulation	0.60	Replace with a properly embedded CV
No	2.00	1.27	5	No	No	Deep Fill	Medium	1.41	0	10	10	5	6	31	Barrier	Open Bottom Structure	1.30	Replace with properly embedded CV or OBS
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Passable			North footing washed out - remove
No	10.00	1.40	5	No	No	Deep Fill	High	2.33	0	10	5	10	6	31	Barrier	Streambed Simulation		Passable if fish present, no concerns
No	3.00	0.75	8	No	No	Deep Fill	Medium	1.25	0	10	0	10	3	23	Barrier	Streambed Simulation		Passable if fish present, no concerns
No	10.00	1.22	11	No	No	Deep Fill	Medium	1.22	0	10	5	10	3	28	Barrier	Streambed Simulation		Passable if fish present, no concerns
No	4.00	0.74	5	No	No	Deep Fill	Medium	0.82	3	10	10	10	0	33	Barrier	Streambed Simulation		Passable if fish present, no concerns
No	4.00	0.72	6	No	No	Deep Fill	Medium	0.80	3	10	5	10	0	28	Barrier	Streambed Simulation		Passable if fish present, no concerns
No	5.00	1.43	5	No	No	Deep Fill	Medium	0.95	3	10	10	10	0	33	Barrier	Streambed Simulation		Passable if fish present, no concerns

Inlet Drop? Yes / No	Culvert Slope (%)	Downstream Channel Width (meters)	Stream Slope	Beaver Activity? Yes / No	Fish Observed? Yes / No	Valley Fill	Habitat Value	Stream Width Ratio	Culvert Length Score	Embed Score	Outlet Drop Score	Culvert Slope Score	Stream Width Ratio Score	Final Score	Barrier Result	Crossing Fix	Recommended Diameter or Span (meters)	Assessment Comment
No	4.00	0.90	6	No	No	Deep Fill	Low	2.00	0	10	10	10	6	36	Barrier	Streambed Simulation	0.9	Likely passable at high water
Yes	1.00	0.60	3	No	No	Deep Fill	Low	1.00	0	10	0	5	3	18	Potential	Streambed Simulation	0.60	Likely passable at high water
No	3.00	0.73	7	No	No	Deep Fill	Medium	0.81	0	10	10	10	0	30	Barrier	Streambed Simulation	0.75	Replace with a properly embedded CV
No	6.00	1.13	4	No	No	Deep Fill	Medium	2.26	0	10	10	10	6	36	Barrier	Open Bottom Structure	1.15	Replace with properly embedded CV or OBS
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Old skid trail crossing, still fish passable
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	10.00	0.58	14	No	No	Deep Fill	Medium	0.58	0	10	10	10	0	30	Barrier	Streambed Simulation		Passable if fish present, no concerns
No	9.00	0.73	9	No	No	Deep Fill	Medium	0.73	0	10	0	10	0	20	Barrier	Streambed Simulation		Passable if fish present, no concerns
No	8.00	1.40	8	No	No	Deep Fill	Medium	2.19	3	10	10	10	6	39	Barrier	Open Bottom Structure	1.40	Replace with OBS if fish present
No	7.00	1.63	13	No	No	Deep Fill	Medium	1.73	3	10	10	10	6	39	Barrier	Open Bottom Structure	1.65	Replace with OBS if fish present
Yes	7.00	1.00	18	Yes	No	Deep Fill	Medium	1.09	0	10	10	10	3	33	Barrier	Open Bottom Structure	1.00	Replace with OBS if fish present
No	4.00	2.23	8	No	No	Deep Fill	High	0.70	3	10	5	10	0	28	Barrier	Open Bottom Structure	2.25	Replace with OBS if fish present
				No	No			0.00	0	0	0	0	0	0	Unkown	Streambed Simulation		Passable if fish present, no concerns
No	5.00	1.00	28	No	No	Deep Fill	High	2.22	0	10	5	10	6	31	Barrier	Streambed Simulation	1.00	Likely passable at high water
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	6.00	0.62	7	No	No	Deep Fill	Medium	1.03	0	10	0	10	3	23	Barrier	Streambed Simulation		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	2.00	1.05	2	Yes	No	Deep Fill	Medium	1.00	0	10	0	5	3	18	Potential	Streambed Simulation	1.00	Replace with properly embedded CV with beaver stops
No	3.00	0.60	2	Yes	No	Deep Fill	Medium	1.00	0	10	0	10	3	23	Barrier	Streambed Simulation	1.00	Replace with properly embedded CV with beaver stops
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
Yes	6.00	0.80	9	Yes	No	Deep Fill	Medium	1.78	0	10	0	10	6	26	Barrier	Removal		Remove old crossing and BD, restore channel
No	3.00	0.68	4	No	No	Deep Fill	Low	1.51	0	10	0	10	6	26	Barrier	Streambed Simulation		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	30.00	1.07	26	No	No	Deep Fill	Medium	2.38	0	10	0	10	6	26	Barrier	Removal		Remove crossing and restore channel
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, very low habitat value
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, very low habitat value
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	3.00	0.55	2	No	No	Deep Fill	Low	0.92	0	10	5	10	0	25	Barrier	Streambed Simulation		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns

Inlet Drop? Yes / No	Culvert Slope (%)	Downstream Channel Width (meters)	Stream Slope	Beaver Activity? Yes / No	Fish Observed? Yes / No	Valley Fill	Habitat Value	Stream Width Ratio	Culvert Length Score	Embed Score	Outlet Drop Score	Culvert Slope Score	Stream Width Ratio Score	Final Score	Barrier Result	Crossing Fix	Recommended Diameter or Span (meters)	Assessment Comment
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	2.00	0.60	10	No	No	Deep Fill	Low	1.00	0	10	5	5	3	23	Barrier	Streambed Simulation		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Open Bottom Structure	2.20	Install OBS if high use, or restore channel
No	2.00	0.53	5	No	No	Deep Fill	Low	0.88	0	10	0	5	0	15	Potential	Removal		Remove and restore channel as a ford
No	3.00	0.65	6	No	No	Deep Fill	Medium	1.08	0	10	5	10	3	28	Barrier	Streambed Simulation		Passable if fish present, no concerns
No	10.00	1.05	28	No	No	Deep Fill	Medium	1.17	0	10	10	10	3	33	Barrier	Streambed Simulation		Passable if fish present, access unlikely
No	7.00	1.02	26	No	No	Deep Fill	Medium	1.13	0	10	0	10	3	23	Barrier	Streambed Simulation		Passable if fish present, access unlikely
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	2.00	1.10	3	Yes	No	Deep Fill	Medium	2.20	0	10	0	5	6	21	Barrier	Streambed Simulation		Passable if fish present, no concerns
				No	Yes			0.00	0	0	0	0	0	0	Unkown	Removal		Restore - blockage at outlet needs to be removed
No	2.00	0.52	3	No	No	Deep Fill	Low	1.16	0	10	0	5	3	18	Potential	Streambed Simulation	0.55	Likely passable at high water
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
Yes	3.00	0.98	3	No	No	Deep Fill	Medium	1.63	0	10	0	10	6	26	Barrier	Streambed Simulation	1.00	Replace with embedded CV, water running underneath
No	2.00	0.97	3	No	No	Deep Fill	Medium	1.62	0	10	0	5	6	21	Barrier	Streambed Simulation	1.00	Likely passable at high water
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Fish passable as is, but crossing site should be restored
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Likely passable at high water
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	3.00	0.62	4	No	No	Deep Fill	Medium	1.24	0	10	5	10	3	28	Barrier	Streambed Simulation		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Passable			Old bridge collapsed, blocking channel - remove
No	2.00	0.73	5	No	No	Deep Fill	Medium	0.81	0	10	0	5	0	15	Potential	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no concerns
Yes	5.00	0.53	5	No	No	Deep Fill	Low	0.53	0	10	10	10	0	30	Barrier	Streambed Simulation	0.60	Replace with properly embedded CV if fish present
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Passable			Collapsed, remove debris and restore channel
				No	No			0.00	0	0	0	0	0	0	Unkown	Removal		Previously Wood Box CV, blocked - Remove
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	7.00	0.85	12	No	No	Deep Fill	Medium	1.42	0	10	0	10	6	26	Barrier	Streambed Simulation	0.90	Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	0.00	1.80	3	No	No	Deep Fill	High	1.20	0	10	0	0	3	13	Passable			Passable if fish present, no concerns
No	2.00	0.63	2	No	Yes	Deep Fill	Low	1.05	0	10	0	5	3	18	Potential	Streambed Simulation	0.65	Passable if fish present, no concerns
No	2.00	0.55	3	No	No	Deep Fill	Low	1.10	0	10	0	5	3	18	Potential	Streambed Simulation	0.55	Passable if fish present, no concerns
No	2.00	2.20	3	No	No	Deep Fill	High	1.10	0	10	0	5	3	18	Potential	Open Bottom Structure	2.20	Passable if fish present, no concerns
No	18.00	0.67	14	No	No	Deep Fill	Medium	1.49	0	10	10	10	6	36	Barrier	Streambed Simulation	0.70	Replace with properly embedded CV
Yes	6.00	1.00	8	No	No	Deep Fill	High	1.00	0	10	0	10	3	23	Barrier	Streambed Simulation	1.00	Passable if fish present, no concerns
Yes	7.00	0.80	15	No	No	Deep Fill	Medium	0.80	0	10	0	10	0	20	Barrier	Streambed Simulation	0.80	Passable if fish present, no concerns
No	3.00	0.56	5	No	No	Deep Fill	Low	0.93	0	10	0	10	0	20	Barrier	Streambed Simulation	0.60	Passable if fish present, no concerns
No	3.00	0.83	7	No	No	Deep Fill	Medium	1.04	0	10	5	10	3	28	Barrier	Streambed Simulation	0.85	Passable if fish present, no concerns
Yes	9.00	0.70	9	No	No	Deep Fill	Medium	8.75	0	10	5	10	6	31	Barrier	Streambed Simulation	0.70	Replace with properly embedded CV

Inlet Drop? Yes / No	Culvert Slope (%)	Downstream Channel Width (meters)	Stream Slope	Beaver Activity? Yes / No	Fish Observed? Yes / No	Valley Fill	Habitat Value	Stream Width Ratio	Culvert Length Score	Embed Score	Outlet Drop Score	Culvert Slope Score	Stream Width Ratio Score	Final Score	Barrier Result	Crossing Fix	Recommended Diameter or Span (meters)	Assessment Comment
No	11.00	1.53	10	No	No	Deep Fill	High	1.28	3	10	10	10	3	36	Barrier	Open Bottom Structure	1.60	Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	2.00	0.77	10	No	No	Deep Fill	Low	1.54	0	10	0	5	6	21	Barrier	Streambed Simulation	0.80	Passable if fish present, no concerns
No	3.00	0.70	12	No	No	Deep Fill	Medium	1.40	0	10	5	10	6	31	Barrier	Streambed Simulation	0.70	Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no concerns
No	2.00	0.60	2	No	No	Deep Fill	Low	1.00	0	10	0	5	3	18	Potential	Streambed Simulation	0.60	Likely passable at high water
No	2.00	0.50	2	No	No	Deep Fill	Low	1.00	0	10	0	5	3	18	Potential	Streambed Simulation	0.50	Likely passable at high water
No	2.00	0.52	3	No	No	Deep Fill	Low	1.16	0	10	0	5	3	18	Potential	Streambed Simulation	0.55	Passable if fish present, no concerns
No	3.00	0.57	3	No	No	Deep Fill	Medium	0.95	0	10	0	10	0	20	Barrier	Streambed Simulation	0.60	Passable if fish present, no concerns
No	3.00	0.57	3	No	No	Deep Fill	Medium	0.95	0	10	0	10	0	20	Barrier	Streambed Simulation	0.60	Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	2.00	0.63	3	No	No	Deep Fill	Medium	1.05	0	10	5	5	3	23	Barrier	Streambed Simulation	0.65	Passable if fish present, no concerns
No	1.00	0.97	3	No	No	Deep Fill	Medium	0.92	0	10	5	5	0	20	Barrier	Streambed Simulation	1.00	Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	3.00	2.60	3	No	No	Deep Fill	High	2.17	0	10	5	10	6	31	Barrier	Open Bottom Structure	2.60	Passable if fish present, no concerns
No	2.00	5.30	2	No	No	Deep Fill	High	1.39	3	10	10	5	6	34	Barrier	Open Bottom Structure	5.30	Passable if fish present, no concerns
No	2.00	1.27	2	No	No	Deep Fill	Medium	1.59	3	10	10	5	6	34	Barrier	Open Bottom Structure	1.20	Passable if fish present, no concerns
Yes	14.00	3.80	5	No	No	Deep Fill	Medium	4.22	0	10	10	10	6	36	Barrier	Open Bottom Structure	3.80	Replace with OBS
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no concerns
Yes	2.00	0.97	22	No	No	Deep Fill	Low	1.08	3	10	10	5	3	31	Barrier	Streambed Simulation	1.00	Outlet bent, needs to be cut back to allow fish access
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Unkown	Additional Substrate Material		Passable if fish present, no concerns
No	2.00	0.53	3	No	No	Deep Fill	Medium	0.88	0	10	10	5	0	25	Barrier	Streambed Simulation	0.55	Passable if fish present, no concerns
No	6.00	0.68	4	No	No	Deep Fill	Medium	0.57	0	10	0	10	0	20	Barrier	Streambed Simulation	0.70	Passable if fish present, no concerns
No	3.00	0.73	5	No	No	Deep Fill	Medium	0.81	0	10	0	10	0	20	Barrier	Streambed Simulation	0.75	Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no concerns
No	12.00	0.67	15	No	No	Deep Fill	Medium	0.84	0	10	0	10	0	20	Barrier	Streambed Simulation	0.70	Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no concerns
				No	No			0.00	0	0	0	0	0	0	Passable			Passable if fish present, no concerns

APPENDIX VI

REASONING FOR SITES NOT ASSESSED

Watershed	Mapsheet	Site #	Reason Not Assessed
1267	93M.022	285747	Private, no one home - left note and business card in 2013
		285763	Downstream site does not exist - no channel present
		285769	Downstream site does not exist - no channel present
		285774	Downstream site does not exist - no channel present
		285775	Downstream site does not exist - no channel present
1269	93M.033	285701	Downstream site does not exist - no channel present
1303	93M.014	285853	Only 1 site present - double mapped
		285891	No access - road too overgrown
		285893	No access - road too overgrown
1314	93L.093	286339	No access as per MG map notes
1330	93L.084	286639	Downstream site does not exist
		286641	Downstream site does not exist
1334	93L.065	287048	Private, no one home
		287079	Private, no one home
		287111	Private, no one home
	93L.064	287145	No access - road too overgrown
		287160	No access - road too overgrown
		287161	No access - road too overgrown
		287162	No access - road too overgrown
		287166	No access - road too overgrown
		287181	No access - road too overgrown
		287241	No access - road too overgrown
1336	93L.055	287467	No access - road too overgrown
		287476	No access - road too overgrown
		287477	No access - road too overgrown
		287481	No access - road too overgrown
	93L.065	287198	Access road DNE
		287389	Access road DNE
1337	93L.055	284870	Double mapped site - only 1 present
1338	93L.055	284887	Bridge washed out before site, no further access
1339	93L.064	286932	Double mapped site - only 1 present
		286940	No access - road too overgrown
		286954	No access - road too overgrown
		286969	No access - road too overgrown
		286970	No access - road too overgrown
		286975	No access - road too overgrown
		286978	No access - road too overgrown
		286999	No access - road too overgrown
		287005	Private - no access
1340	93L.074	284463	Access road does not exist
		286807	Access road does not exist
		286811	Access road does not exist
		286842	Access road does not exist
		286864	Access road does not exist
1341	93L.064	287124	Access road does not exist
1348	93L.073	286885	Too steep for fish access
1354	93L.064	287315	No access to site
	93L.065	286944	Private - No Trespassing
		286981	Private - locked gate
		286982	Private - locked gate
		286989	Private - locked gate
		286996	Private - locked gate
		286997	Private - locked gate
		287003	Private - locked gate
		287009	Private - locked gate
		287012	Private - locked gate
		287013	Private - locked gate
		287018	Private - locked gate
		287026	Private - locked gate
		287028	Private - locked gate
		287031	Private - locked gate

Watershed	Mapsheet	Site #	Reason Not Assessed
1354	93L.065	287032	Private - locked gate
		287033	Private - locked gate
		287035	Private - locked gate
		287036	Private - locked gate
		287041	Private - locked gate
		287042	Private - locked gate
1355	93L.053	287402	Access road does not exist
		287427	Access road does not exist
	93L.054	287498	Access road does not exist
	93L.064	284622	Road ends ~300m before mapped site
1356	93L.063	284618	Road not built
		284641	Road not built
		284651	Road not built
1360	93L.065	287142	Access road DNE
1362	93L.066	287016	No address, left letter at gate
		286919	Left letter and spoke to both adult children - no response from landowner.
		286916	
		286905	Access road does not exist
		287045	Downstream site does not exist
		287054	Landowner says access road does not exist
		287056	Landowner says access road does not exist
		287058	Landowner says access road does not exist
		287167	Juniper Rd. ATV access if landowner contacts us. No address, letter left on gate
		287171	
		287172	Unable to determine who the landowner is
		287177	Unable to determine who the landowner is
		287196	Double-numbered site, only 1 crossing exists
		287252	Downstream site does not exist
1363	93L.056	287563	Road too brushed in for access
		287611	No access, road washed out
		287616	No access, road washed out
1366	93L.066	286927	Ranch on Deception Lake FSR. Landowner gave approval in fall 2013, but couldn't get back to sites before too much snow was present. Please contact Jennifer Heagan to discuss access prior to assessing sites. 250-846-5475
		287040	No one home, left note and business card
	93L.076	286927	Ranch on Deception Lake FSR. Landowner gave approval in fall 2013, but couldn't get back to sites before too much snow was present. Please contact Jennifer Heagan to discuss access prior to assessing sites. 250-846-5475
		286910	
1367	93L.067	284640	Road not built
		284645	Road not built
		284648	Road not built
		284649	Road not built
	93L.056	287447	access denied by landowner, says DNE
		287464	access denied by landowner, says DNE
	93L.066	287890	Locked gate, no access
1393	93L.057	284915	Double mapped site - only 1 present
		287533	Access to road previously denied by landowner at bottom
		287550	Access to road previously denied by landowner at bottom
1423	93L.066	286972	11495 Bree Rd. Unable to find phone number, left letter.
		286918	Neighbour says land belongs to John Bree 250-846-5684
		286920	
		286923	Access road does not exist
		286942	Private land, access denied by landowner
		287006	Downstream site does not exist
		287010	Downstream site does not exist
		287108	Downstream site does not exist

COPIES OF FIELD NOTES ARE AVAILABLE UPON REQUEST