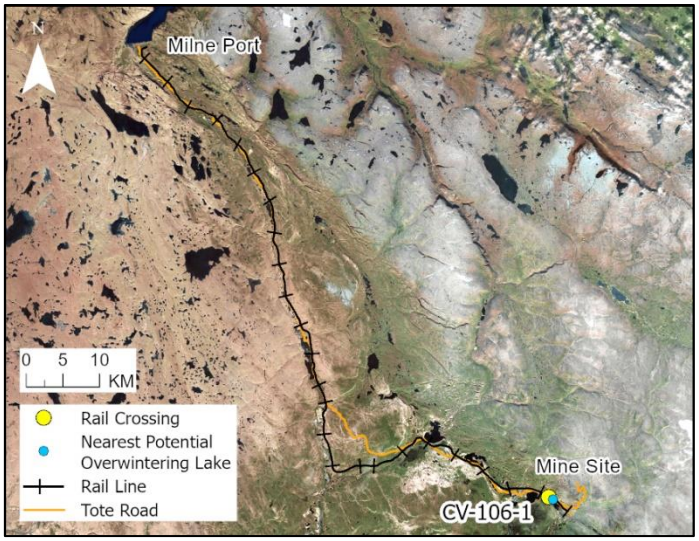
RAIL CV-106-1

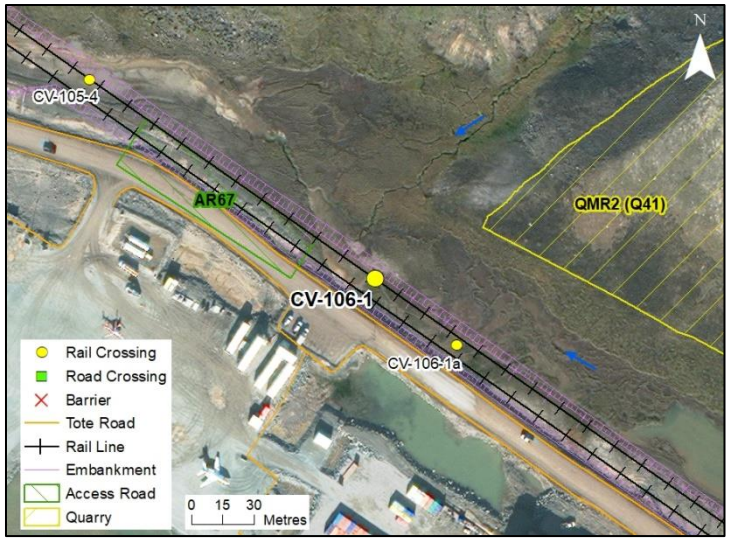
LOCATION AND CROSSING DESCRIPTION

Site ID:	CV-105-3	**Dates Surveyed:**	22-Jun-19; 19-Aug-19	**Waterbody Type:**	Pond
Project Interaction:	Pond Infilling + Culvert	**Centreline UTM Coordinates:**	17W 559360 E 7914263 N	**Culvert Length (m):**	44
Number of Barrels:	1	**Culvert Diameter/Span (mm):**	1200	**Slope (%):**	1

GENERAL PHYSICAL CHARACTERISTICS

Surface Area (m^2):	706	**Shoreline Length (m):**	139	**Drainage Basin Area (m^2):**	1.495
Maximum Depth (m):	0.1 (measured)			**Mean Depth (m):**	-





SUMMARY

The rail crosses and infills a portion of a small, unnamed seasonal pond at culvert CV-106-1 that is part of a system that flows northwest to a larger stream crossed by the rail at CV-104-5 approximately 1.1 km downstream from the centreline. It then flows west to the Tote Road crossing BG-01 and then south to Camp Lake (approximately 2.2 km from CV-105-4). The stream is also crossed by the rail at CV-105-2, 105-3, 105-4, 106-1a, 106-2, and 106-3. This system is generally shallow and slow-moving pool/run habitat over cobble/gravel/fines substrate throughout, interspersed with larger, connected ponds and some deep, narrow runs. The CV-106-1 site is at a confluence between a small pond and stream in the system. This assessment describes pond habitat only. Upstream stream habitat is covered by the CV-106-1a site assessment and downstream by the CV-105-4 site assessment.

There is a small lake (CV-106-3) with sufficient depth to provide overwintering for Ninespine Stickleback and possibly also juvenile char approximately 550 m upstream of the site. There are no upstream or downstream barriers in this system between the potential overwintering waterbodies.

This pond provides some open-water season rearing habitat for juvenile Arctic Char, but most are found in the deeper runs upstream and downstream of the pond. The pond does not provide overwintering or spawning habitat for char due to lack of flow and sufficient depth in winter. This pond also provides open-water season rearing and spawning habitat for Ninespine Stickleback. The pond lacks sufficient depths to support overwintering for the species.

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BARRIERS

Upstream/ Downstream	UTM		Barrier Type			Height (m)	Gradient (°)	Description	Site Label
	Easting	Northing	1	2	3				
Inflowing Stream	NO BARRIERS								
Outflowing Stream	NO BARRIERS								

FISH HABITAT POTENTIAL

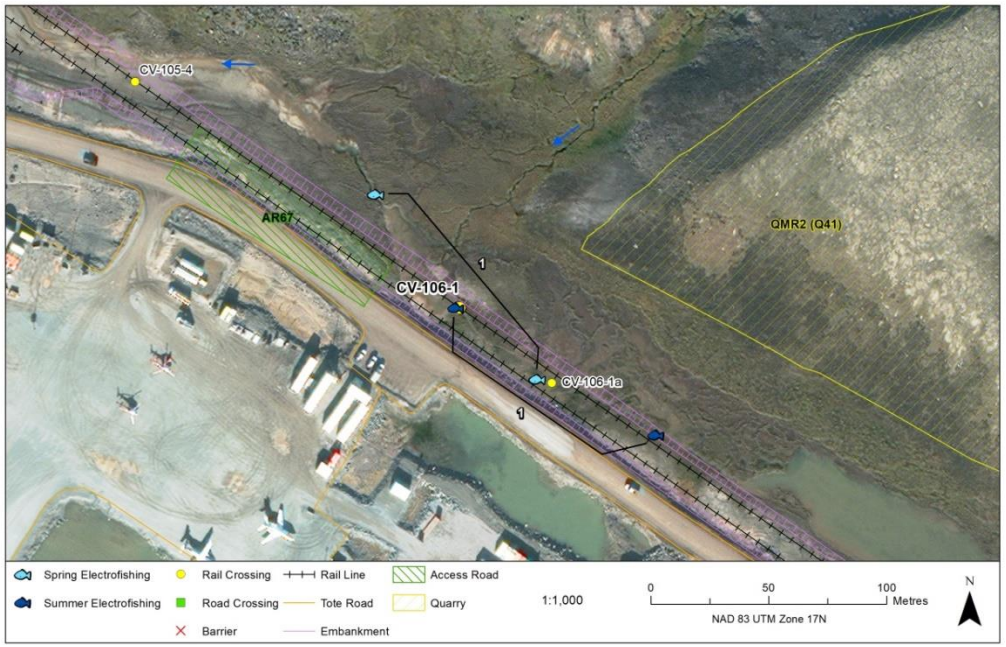
Nearest Potential Overwintering Habitat - ARCH: Unnamed pond at CV-106-3/Camp Lake

Distance to Nearest Potential Overwintering Habitat - ARCH (km): 0.55/2.2

Overwintering Habitat Upstream of Site - ARCH (Y/N): Unnamed pond at CV-106-3

Species	Spawning	Overwintering	Rearing	Adults Present
ARCH	N	N	Y	N
NNST	Y	N	Y	Y

FISHING SITES



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FISHERIES DATA

Date: 22-Jun-19 **Temperature (°C):** 20.0 **Gear Used:** Backpack Electrofisher/Visual

Distance Fished (m): 100 **Duration Fished (seconds):** 196

Species	Season	Pass	Effort (Seconds)	Fish Captured	Fish Observed	CPUE (No. Fish/60 Seconds)	Length Range (mm)
ARCH	Spring	1	196	1	0	0.31	90 (measured)
NNST	Spring	1	196	12	0	3.67	33 – 51 (measured)

Date: 19-Aug-19 **Temperature (°C):** 13.0 **Gear Used:** Backpack Electrofisher/Visual

Distance Fished (m): 100 **Duration Fished (seconds):** 135

Species	Season	Pass	Effort (Seconds)	Fish Captured	Fish Observed	CPUE (No. Fish/60 Seconds)	Length Range (mm)
ARCH	Summer/Fall	1	135	3	0	1.33	89 – 160(measured)
NNST	Summer/Fall	1	135	13	0	5.78	28 – 66 (measured)

INFILL HABITAT

Habitat Use – ARCH: Juvenile rearing **Habitat Use – NNST:** Rearing; Spawning (probable) **Maximum Water Depth (m):** 0.10

Area	Fines (%)	Gravel (%)	Small Cobble (%)	Large Cobble (%)	Boulders (%)
Nearshore	70	10	20	0	0
Offshore	70	10	20	0	0

OTHER NOTES/OBSERVATIONS

Electrofishing in spring and summer/fall included both the pond at 106-1 and some of the stream habitat assessed by the CV-106-1a site. As both habitat types are covered, the data are shared between sites. In both seasons, stickleback were captured exclusively in pond habitat (shallow, silt/sand with vegetation) and char in the narrower, deeper runs upstream from the pond.

RAIL CV-106-1

22-JUN-19 & 19-AUG-19

A

B

C

D

Photos 1. Photos taken of: (A) across the pond facing west during spring; (B) across the pond facing southwest during spring; and (C) looking from the inflow towards the northwest during summer/fall; (D) the confluence between pond and inflow facing north during summer/fall.