

C. Portt and Associates, Fisheries Consultants

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October 5, 2017.

Robin Allard
Environmental Senior Coordinator
Agnico Eagle Mines Limited
Meadowbank Division
Baker Lake, Nunavut, Canada
XOC 0A0

Dear Robin:

Re: Determining the presence/absence of fish in Goose Pit.

Introduction

C. Portt and Associates was engaged by Agnico Eagle Mines Limited, Meadowbank Division, to determine if there were fish residing in Bay Goose Pit (Lat. N65.005498°; Long. W096.057549°), a former open pit mine site located at Meadowbank Division in Nunavut, Canada. The deep portion of the pit has been flooded through the seepage of water from the surrounding areas and through the deliberate transfer of water from other parts of the Meadowbank Division site. There is no surface connection to other waterbodies. The surface area of the flooded portion of Bay Goose Pit was approximately 4.2 ha at the time of the investigation, with a shoreline perimeter of approximately 884 m, and a maximum depth in excess of 50 m based on depth measurements taken during net deployment. Access to the pit was via a road at the pit's south end, with the remainder of the pit having either shear bedrock or steep boulder sides.

Methods

Gill nets were set continuously in Bay Goose Pit, from September 22, 2017, at approximately 10:00, to September 27, 2017, at approximately 10:00. GPS coordinates and water depth, determined with a hand-held GPS unit and a depth-sounder, were recorded for both ends of each net. The nets were lifted and checked for fish each day between 8:00 and 10:00, and immediately reset at approximately the same location. Neither backpack electrofishing nor seining was attempted due to the very steep pit sides and the absence of wadeable shallow water. Active rock falls necessitated the avoidance of some nearshore areas due to safety concerns.

Five small-mesh river index gill nets (Jones, N.E., and G. Yunker. 2009. *Riverine Index Netting Manual of Instructions V.2. Ontario Ministry of Natural Resources, River and Stream Ecology Laboratory. 36 pp.*), with which we have successfully captured small-bodied and young-of-the-year fishes at other locations, were set roughly parallel to shore in near-shore areas of Bay Goose Pit in the shallowest locations that could be found (Table 1: gill nets 1 to 5). Four longer gill nets, with larger mesh sizes, were set across the pit in an attempt to catch fishes in deeper water (Table 1: gill nets 6 to 9). Two of these were stretched almost completely across the pit (gill nets 6 and 8), and one was set parallel to the loose rock south shore to target fish that might move between the deeper pit areas and the shallower nearshore (gill net 9).

Table 1. Goose Pit gill net set details.

Gill net #	Dimensions (m)	Panel Length (m)	Panel mesh sizes (mm; stretch measurement)	Start depth (m)	End depth (m)
1	0.9 x 12.5	2.5	38, 32, 25, 19, and 13	8.1	1.5
2	0.9 x 12.5	2.5	38, 32, 25, 19, and 13	2.9	2.4
3	0.9 x 12.5	2.5	38, 32, 25, 19, and 13	1.4	1.6
4	0.9 x 12.5	2.5	38, 32, 25, 19, and 13	2.4	2.6
5	0.9 x 12.5	2.5	38, 32, 25, 19, and 13	4.7	2.9
6	1.8 x 137.2	22.9	126, 102, 76, 51, 38, and 25	21.0	18.0
7	1.8 x 91.4	22.9	126, 102, 76, and 51	19.0	48.0
8	1.8 x 137.2	22.9	126, 102, 76, 51, 38, and 25	5.4	18.0
9	1.8 x 91.4	22.9	126, 102, 76, and 51	2.0	16.0

Results

A total length of 520 m of gill net of various mesh sizes was set continuously for 120 hours (5 days). No fish were captured or observed during the gill netting operation. Based on these results, it appears that there are no fish present in Bay Goose Pit.

Sincerely,



C. Portt and Associates
George A. Coker