

Appendix D: Compliance Monitoring Reports

**APPENDIX D.2: HOPE BAY PROJECT: 2023 WILDLIFE MITIGATION AND MONITORING
PROGRAM COMPLIANCE REPORT**



Hope Bay Project

2023 Wildlife Mitigation and Monitoring Program Compliance Report

PREPARED FOR



AGNICO EAGLE

Agnico Eagle Mines Limited

DATE

23 April 2024

REFERENCE

0685812-03





Hope Bay Project

2023 Wildlife Mitigation and Monitoring Program Compliance Report

23 April 2024

ERM Consultants Canada Ltd.
#2700-685 Center Street S
Calgary, AB
Canada T2G 1S5
T +1 403 705 1926
F +1 604 687 4277

ACKNOWLEDGEMENTS

This report was prepared for Agnico Eagle Mines Limited by ERM Consultants Canada Inc. (ERM). On-site field and office work was completed by Agnico Eagle Staff: Guillaume Dumont-Vandewinkel, Brett Fairbairn, William Nalley, Tyler Lausch, Joyce Nartok, Jonathan Lidd, Kailey Painchaud-Neimi, Sarah Swiderski and Guy Dufour. The report was prepared and written by Andy Pustina (B.Sc., RPBio), Dylan Brassard (M.Sc), Kylie Beninger (B.Sc.), and Alice Merondun (M.Sc., RPBio). Technical review was conducted by Hannah Visty (M.Sc., RPBio) and Greg Sharam (Ph.D.). The compliance program was managed by Madison Jerhoff (B.Sc.). Craig Neufeld (B.Sc., P.Biol.) was the Partner in Charge. Graphics production was coordinated by Jason Widdes (B.A.), Geographical Information System (GIS) production was coordinated by Luke Powell (M.Sc., ADP GIS), and report publishing was coordinated by Agnes Untz (B.A.).

Field-related logistics support was provided by Agnico Eagle Mines Limited, Acasta HeliFlight, and Braden Burry Expediting.

EXECUTIVE SUMMARY

Wildlife mitigation and monitoring requirements for the Hope Bay Project, which is currently in care and maintenance, are included in the Doris Project Certificate No. 003 (NIRB 2016), the Madrid-Boston Project Certificate No. 009 (NIRB 2018) and the Framework Agreement with the Kitikmeot Inuit Association (KIA) (the Framework Agreement, 2015). Monitoring activities are summarized in the Wildlife Mitigation and Monitoring Program Plan (WMMP), which is revised regularly. In 2023, monitoring data were collected as outlined in the WMMP (Agnico Eagle Mines Limited 2023). Results from the 2023 Wildlife Mitigation and Monitoring Program (hereafter referred to as the Program) are summarized in Table 1.

TABLE 1 SUMMARY OF 2023 WILDLIFE MITIGATION AND MONITORING PLAN (WMMP) COMPLIANCE REPORT RESULTS

Program Component	Reason for Program	Results	Comparison to Terms and Conditions, Predictions, and Program Objectives	Report Section
Habitat Loss	Addresses commitments in WMMP (Agnico Eagle Mines Limited 2023)	<ul style="list-style-type: none"> There was no habitat loss in 2023. The cumulative total of habitat loss remains at 141.15 ha overall. No additions to the project footprint were completed in 2023. 	<ul style="list-style-type: none"> The Madrid-Boston Final Environmental Impact Statement (FEIS) predicted a negligible magnitude effect of habitat loss for caribou, grizzly bear, and wolverine and a low magnitude effect for upland breeding birds, waterbirds, and raptors. The magnitude of habitat loss in 2023 remains at 3% of the Madrid-Boston FEIS predictions. Hence, the conclusions of the Madrid-Boston FEIS remain valid. 	2.1
Road Traffic Monitoring	Addresses commitments in WMMP (Agnico Eagle Mines Limited 2023) and Project Term and Condition 20 (NIRB 2018)	<ul style="list-style-type: none"> The daily and monthly road traffic in 2023 was summarized between Roberts Bay and Doris/Madrid North and between Doris and Madrid North. Hauling traffic including trips in the Madrid area. Average daily traffic from wildlife camera 18 (monitoring Roberts Bay to Doris) and camera 35 (between Doris and Madrid North) was summarized during the period of highest caribou activity across years (December/January, May, and July). Traffic leaving Roberts Bay averaged 32% of predicted maximum levels. Traffic between Doris and Madrid averaged 23% of predicted maximum levels. 	<ul style="list-style-type: none"> Traffic levels between Roberts Bay, Doris, Madrid North, and Windy Lake were 23-32% of the predicted maximum levels in the Madrid-Boston FEIS. Therefore, the conclusions of the Madrid-Boston FEIS remain valid. 	2.2

Program Component	Reason for Program	Results	Comparison to Terms and Conditions, Predictions, and Program Objectives	Report Section
Helicopter and Fixed-wing Flight Monitoring	Addresses commitments in WMMP (Agnico Eagle Mines Limited 2023) and Project Commitment #GN-60 from Project Certificate No. 009 (NIRB 2018)	<ul style="list-style-type: none"> Helicopter trips around Boston, Doris, and between Boston and Doris were summarized from 2023 flight records. Helicopters logs were summarized from June through September 2023. Fixed-wing aircraft flights were active in all months from the Doris airstrip. Helicopter trips between Boston and Doris and around Boston occurred at an average of 15% - 29% of the daily predicted maximum frequencies predicted in the Madrid-Boston FEIS. Daily maximum activity in the Doris area was only marginally higher than predicted in the Madrid-Boston FEIS. Fixed-wing aircraft flights occurred on average at 12% of the frequencies modelled for noise disturbance in the Madrid-Boston FEIS. 	<ul style="list-style-type: none"> The majority of helicopter and fixed-wing aircraft flight traffic levels were below levels predicted in the Madrid-Boston FEIS. Helicopter traffic in the Doris area matched daily predicted maximums. Current levels of potential noise disturbance from helicopters and fixed wing aircraft are generally within modelled predictions from the FEIS. A drilling program in the Madrid area resulted in higher helicopter activity, however this program is outside of the operations included in the Madrid-Boston FEIS. 	2.3
Snowbank Height Monitoring	Addresses Project Commitment #GN-49 from Project Certificate No. 009 (NIRB 2018)	<ul style="list-style-type: none"> Snowbank heights along the All Weather Road (AWR) were monitored monthly in the winter (January through May, and October to December). Snowbank heights averaged 12.6 cm across all monitoring stations and periods. Snowbank heights were generally < 20 cm. Although some snowbank measurements were higher (i.e., > 75 cm), photos indicate that banks were bladed back from the roadway and were at low inclines rather than steep banks. Areas with higher snowbanks were isolated to small portions of the road, i.e., across a few meters. These areas would therefore not pose a crossing barrier to caribou or other wildlife at the roadway. 	<ul style="list-style-type: none"> Snowbank heights were monitored along the AWR in 2023. Snowbank height along the road was measured at an overall average of 12.6 cm. The measured levels do not pose a barrier to wildlife crossing the road. Snowbank heights across all years of monitoring (2020-2023) indicate that the AWR has been consistently well managed for wildlife passage across all years of monitoring. 	2.4



Program Component	Reason for Program	Results	Comparison to Terms and Conditions, Predictions, and Program Objectives	Report Section
Snowbank Height Monitoring (cont'd)		<ul style="list-style-type: none"> Snowbank height was compiled and compared across all monitoring years (2020-2023). The average height across years was 9.8 cm with a range in average height between 0.0 – 25.3 cm. 		
Caribou Kernel Density Analysis of Beverly/Ahiak Calving Range	Addresses commitments in WMMP (Agnico Eagle Mines Limited 2023)	<ul style="list-style-type: none"> Collar data from the Beverly and Ahiak sub-populations were analysed for their core calving range (50% kernel density) and the 95% kernel density calving range. Neither the Beverly or Ahiak core calving ranges or 95% calving ranges overlapped with the Study Area in 2023. Generally, the calving ranges were consistent with previous years (2001-2022), with some portions of both calving areas varying in their spatial extent. 	<ul style="list-style-type: none"> The Beverly and Ahiak populations calving grounds have shown variation between years, but the core areas remain consistent and do not overlap the Project Study Area. 	3.4
Caribou Kernel Density Analysis of Dolphin and Union Winter Range	Addresses comments on 2016 Compliance Report (ERM 2017)	<ul style="list-style-type: none"> Collar data from the Dolphin Union herd was analyzed for their core (50% kernel density) and 95% kernel density winter range. Neither the core winter range nor 95% winter ranges overlapped with the Study Area in 2023. The core winter range was largely similar to the long-term range in 2023, while the 95% range occurred almost exclusively on the west side of Bathurst Inlet and into the Coronation Gulf. 	<ul style="list-style-type: none"> The Dolphin Union herd winter range has shown some variability in 2023 but the core areas remain consistent and do not overlap the Project Study Area. 	3.4

Program Component	Reason for Program	Results	Comparison to Terms and Conditions, Predictions, and Program Objectives	Report Section
Caribou Collar Power Analysis	Addresses Project Commitment #GN-45 from Project Certificate No. 009 (NIRB 2018)	<ul style="list-style-type: none"> This work was completed in the 2019 WMMP and the condition is considered fulfilled (ERM 2020). This analysis is not being re-conducted because results indicated that a ZOI cannot be detected without overlap between the caribou calving ranges and the Project. 	<ul style="list-style-type: none"> Commitment #GN-45 requires an estimate on the number of collared caribou necessary to detect a ZOI around Phase 2 infrastructure. These analyses were conducted in 2019 and the condition is considered fulfilled. 	3.4
Wildlife Camera Monitoring – Caribou	Addresses commitments in WMMP (Agnico Eagle Mines Limited 2023)	<ul style="list-style-type: none"> Caribou observations at cameras occurred at moderate frequencies (compared to previous years) across the monitoring period from September 2022 to September 2023. Caribou occupancy increased in the Treatment Zone starting in 2019. Statistical analysis indicated that there was not a significant difference in caribou events between the Treatment and Control zones. Caribou modelling looked at caribou events as opposed to occupancy in 2023 to account for the influx of caribou events in the Treatment zone. In recent years, caribou events have become more common at some specific cameras in the Treatment zone near site roads and camp facilities, where caribou have been frequenting since roughly 2019 during peak biting insect season. 	<ul style="list-style-type: none"> The Madrid-Boston FEIS predicted potential minor effects on caribou due to change in movement and behaviour from avoidance of infrastructure within < 1 to 10 km² of the Project, and possible avoidance of the Hope Bay Belt, a 3-4 km wide band of low lying sedge meadows and rocky dykes. Camera data suggest that caribou are not avoiding the Project. In order to account for increased caribou events on specific treatment cameras caribou were modelled by the number of events as opposed to occupancy. 	3.4
Wildlife Camera Monitoring - Muskox	Addresses commitments in WMMP (Agnico Eagle Mines Limited 2023)	<ul style="list-style-type: none"> Detections of muskox by wildlife cameras continue to be rare. Eight muskox events were recorded during the recent monitoring period from September 2022 to September 2023. Two events occurred in the Treatment zone while the ZOI had five events and Control zone cameras had one. 	<ul style="list-style-type: none"> The Madrid-Boston FEIS predicted potential minor effects on muskox due to change in movement and behaviour from avoidance of infrastructure around the Project areas. 	3.5



Program Component	Reason for Program	Results	Comparison to Terms and Conditions, Predictions, and Program Objectives	Report Section
			<ul style="list-style-type: none"> Muskox are rarely recorded in the Project Study Area. 	
Wildlife Camera Monitoring – Muskox (cont'd)		<ul style="list-style-type: none"> The small sample size across years prevented statistical analysis; however, the raw data indicate that muskox are more common closer to the Project (in the Treatment zone) than farther away (in the Control zone) in all years. This indicates that muskox are likely not avoiding the Project. 	<ul style="list-style-type: none"> The muskox camera data do not indicate avoidance of the Project. The conclusions of the Madrid-Boston FEIS remain valid. 	
Wildlife Camera Monitoring – Grizzly Bear	Addresses commitments in WMMP (Agnico Eagle Mines Limited 2023)	<ul style="list-style-type: none"> Statistical analyses indicated that the chance of detecting a grizzly bear at Treatment cameras was no different than at Control cameras, suggesting that the Project is not influencing the distribution of grizzly bears by either attraction to or by avoidance of the Project. Current management practices, such as waste management practices and responses to grizzly bear interactions and incidents, appear to be effective at reducing potential Project effects to grizzly bears. Given that there were no differences in the predicted number of grizzly bear events between Treatment and Control cameras, a secondary analysis for a potential ZOI was not necessary. 	<ul style="list-style-type: none"> The Madrid-Boston FEIS predicted a potential minor effect due to grizzly bear altering their movement and behaviour to avoid the Project site. Statistical analyses of camera data suggest that grizzly bear are neither avoiding nor being attracted to the Project. Hence, the conclusions of the Madrid-Boston FEIS remain valid based on this monitoring method. 	3.6

Program Component	Reason for Program	Results	Comparison to Terms and Conditions, Predictions, and Program Objectives	Report Section
Wildlife Camera Monitoring – Wolverine	Addresses commitments in WMMP (Agnico Eagle Mines Limited 2023)	<ul style="list-style-type: none"> Wolverine were recorded in low numbers throughout the Study Area (i.e., across all camera zones) during the recent monitoring period (September 2022 – September 2023). Events were recorded in similar numbers to previous monitoring years, with 11 wolverine events recorded during the recent monitoring period. All wolverine camera events recorded were of one individual. Statistical analysis of wolverine occupancy indicated that wolverine occupancy differed in the Treatment zone compared both the Control zone and the potential ZOI (2 to 10 km from infrastructure). The follow up analysis for a ZOI does not indicate a distinct ZOI cut off. These results suggest that wolverine may avoid infrastructure within close distances (~2 km). This result is consistent with analysis from 2022, however this is only the second year with sufficient wolverine occurrence data to conduct a full analysis. 	<ul style="list-style-type: none"> The Madrid-Boston FEIS predicted potential minor effects on movement and behaviour of wolverine, including potential disruption of movement at the scale of the PDA or attraction to Project infrastructure. The wolverine data analysed to date indicate potential avoidance of Project infrastructure within 2 km. This is greater avoidance than predicted in the Madrid-Boston FEIS; predictions in the FEIS were uncertain due to sparse data and available research on wolverines in the area. However, using the criteria for residual effects ratings from the FEIS, the residual impact on wolverines remains the same (categorized as a low magnitude, medium duration, and reversible not significant effect). 	3.7
Wildlife Camera Monitoring – Nest Predators	Addresses commitments in WMMP (Agnico Eagle Mines Limited 2023)	<ul style="list-style-type: none"> Red fox, unspecified fox, and common raven were recorded in 18 events on wildlife cameras during the bird nesting season from May 15 to August 15 in 2023. Events were generally consistent across months, but were more common in the ZOI ($n = 10$) than the Treatment or Control zones ($n = 5$ and 4 respectively). There is no evidence that nest predators are more common closer to the Project area. 	<ul style="list-style-type: none"> The Madrid-Boston FEIS did not predict a residual effect for attraction of nest predators to Project infrastructure. Based on the camera monitoring program, there is no evidence that nest predators are more common closer to the Project area. 	3.8

Program Component	Reason for Program	Results	Comparison to Terms and Conditions, Predictions, and Program Objectives	Report Section
Wildlife surveys – Upland Breeding Birds	Addresses commitments in WMMP (Agnico Eagle Mines Limited 2023) and Project Term and Condition 26 (NIRB 2016)	<ul style="list-style-type: none"> No pre-clearing surveys for nesting birds were conducted in 2023 because no new areas were cleared during the bird breeding season. Ground-based surveys following the Program for Regional and International Shorebird Monitoring (PRISM) protocol were not completed in 2023 due to logistical constraints created by the Project being in care and maintenance. The second round of surveys will be completed in 2024. 	<ul style="list-style-type: none"> Pre-clearing surveys are conducted between May 15 and August 15 to avoid construction in areas with migratory bird nesting or the presence of young. No construction was completed in 2023 so no pre-clearing surveys were conducted. Upland breeding bird monitoring is scheduled to occur in two of every five years to contribute to a regional Arctic monitoring initiative by CWS. These surveys occurred for the first year in 2022 and will be completed again in 2024. 	3.9
Wildlife surveys – Waterbirds (Ground Monitoring)	Addresses commitments in WMMP (Agnico Eagle Mines Limited 2023) and Project Term and Condition 26 (NIRB 2016)	<ul style="list-style-type: none"> Waterbird monitoring was conducted in 2022, and therefore was not repeated in 2023. Ground surveys for monitoring waterbirds and shorebirds will be continued in 2024. 	<ul style="list-style-type: none"> Waterbird monitoring is scheduled to occur via ground surveys at varying distances from the Project every two years. These surveys were conducted for the first time in 2022 and will be completed again in 2024. Multiple years of monitoring are necessary to establish trends in waterbird activity, so none are presented at this time. 	3.10
Waterbirds (TIA Monitoring)	Addresses commitments in WMMP (Agnico Eagle Mines Limited 2023) and Project Term and Condition 26 (NIRB 2018)	<ul style="list-style-type: none"> Water quality at the Tailings Impoundment Area (TIA) was monitored weekly and did not exceed relevant CCME guidelines, so no ecological risk assessment was conducted. 	<ul style="list-style-type: none"> Water quality was monitored at the TIA to examine if it was safe for waterbirds; water did not exceed quality guidelines. 	3.10

Program Component	Reason for Program	Results	Comparison to Terms and Conditions, Predictions, and Program Objectives	Report Section
Wildlife surveys – Raptors	Addresses commitments in WMMP (Agnico Eagle Mines Limited 2023) and Project Term and Condition 27 (NIRB 2018)	<ul style="list-style-type: none"> No construction of the Madrid North area occurred in 2023 and as such no pre construction surveys were conducted. Peregrine falcon was the only raptor species of conservation concern recorded at the Project in 2023 from incidental wildlife sightings reports. 	<ul style="list-style-type: none"> Pre-construction monitoring in Madrid North was not necessary in 2023. 	3.11
Marine Mammals	Addresses commitments in WMMP (Agnico Eagle Mines Limited 2023) and Project Terms and Conditions 31, 32, and 33 (NIRB 2018)	<ul style="list-style-type: none"> In 2023, the monitoring program from the 2023 Shipping Management Plan started. In total, 15 surveys in September recorded 4 seals exhibiting normal behaviour during shipping activity in the Bay. No marine wildlife incidents were reported along shipping routes. Vessel tracks from 2023 were summarized to confirm that mitigations for setbacks and designated routes were followed. Incidental sightings were reported from the Qamutik: five seals (two hooded, one harbour and two bearded), and a whale observed diving at sea. In 2023, incidental sightings were recorded for two seals were observed in Roberts Bay from the shore. 	<ul style="list-style-type: none"> The monitoring program for marine mammals in Roberts Bay was conducted in accordance with the procedures detailed in the 2023 Shipping Management Plan. 	3.12
Plants	Addresses commitments in WMMP (Agnico Eagle Mines Limited 2023) and Project Terms and Conditions 17 and Commitment #GN-04 (NIRB 2018)	<ul style="list-style-type: none"> Invasive plant surveys were conducted July 26 to August 1, 2023 across existing Project infrastructure and disturbed areas. No invasive or non-native plant species were observed in 2023; however, two native species which closely resemble invasive species were identified: seaside chamomile (<i>Tripleurospermum maritimum</i> subsp. <i>phaeocephalum</i>) and horned dandelion (<i>Taraxacum ceratophorum</i>). 	<ul style="list-style-type: none"> No specific predictions around effects on plants were included in the Madrid-Boston FEIS. Monitoring for invasive plants occurs every 5 years and will occur again 2029. 	3.13

Program Component	Reason for Program	Results	Comparison to Terms and Conditions, Predictions, and Program Objectives	Report Section
Facilities Camera Monitoring	Addresses Project Term and Condition 25 (NIRB 2016)	<ul style="list-style-type: none"> Ten grizzly bear events were recorded at facility cameras. Nine of the ten events were at the ERM fish fence. A grizzly bear sow with a cub was recorded at camera 51 moving across the TIA. They appeared to be moving across the TIA without stopping or directly interacting with the ground. There were 21 events of caribou detections at specific monitoring cameras. All events were recorded on camera 51 on the TIA. One event showed an individual stopping on the TIA with its head down to the ground. Otherwise, all events were of caribou walking or trotting. However, caribou do not appear attracted to the TIA, as indicated by the low number of caribou events relative to the rest of the Project. 	<ul style="list-style-type: none"> The FEIS predicted bears and wolverine would be attracted to the site at a 'low' magnitude. No wolverines or bears were observed on the Waste Management Facility cameras in 2023, indicating bears are not generally attracted to the waste site; therefore current mitigation is effective and the FEIS prediction is valid. One of the two cameras installed at the TIA recorded 21 caribou events, one red fox, and one grizzly bear event. Events do not appear to indicate an attraction to the TIA specifically. No wolverine or muskox were recorded on cameras at the TIA. The overall low levels of wildlife recorded indicates that wildlife are not frequently using the TIA area. 	3.4 to 3.8 (Results within each Section)
Wildlife Interactions	Addresses Project Term and Condition 25 (NIRB 2016), Framework Agreement Schedule 3.1, J. Wildlife, Items 2, 7.	<ul style="list-style-type: none"> There were six grizzly bear interactions recorded in 2023. Five involved diverting of bears away from the site using drones or helicopters. There was one interaction where a grizzly bear entered a waste sorting facility and accessed food and hygiene waste. The site reviewed their waste separation procedures as a result. In all interactions, the bears left the site without incident. There was one interaction to divert a caribou from the runway of the airport. One interaction involved an unspecified ptarmigan species being flushed from their nest accidentally by site personnel. The ptarmigan and its nest was not harmed during the interaction. 	<ul style="list-style-type: none"> Attraction to the Project was predicted as low in the Madrid-Boston FEIS for grizzly bear and wolverine due to smells associated with the camp. There were six grizzly bear interactions and no wolverine interactions in 2023. Grizzly bears were successfully deterred. The conclusions of the Madrid-Boston FEIS regarding attraction to infrastructure remain valid for the valued components assessed i.e. grizzly bear and wolverine. 	3.4 to 3.11 (Results within each Section)



Program Component	Reason for Program	Results	Comparison to Terms and Conditions, Predictions, and Program Objectives	Report Section
Wildlife Incidents	Addresses Project Term and Condition 25 (NIRB 2016), Framework Agreement Schedule 3.1, J. Wildlife, Items 2, 7	<ul style="list-style-type: none"> There were no wildlife incidents in 2023. 	<ul style="list-style-type: none"> Direct mortality of raptors and upland birds was predicted as a low magnitude effect at the extent of the PDA. 	3.4 to 3.11 (Results within each Section)
Wildlife Mortalities	Addresses Project Term and Condition 25 (NIRB 2016), Framework Agreement Schedule 3.1, J. Wildlife, Items 2, 7	<ul style="list-style-type: none"> There were three wildlife mortalities recorded in 2023. None of the mortalities can be attributed to Project activity, all were due to natural causes. 	<ul style="list-style-type: none"> Wildlife mortalities were predicted to be negligible for all Valued Ecosystem Components (VECs). The conclusions of the Madrid-Boston FEIS remain valid. 	3.4 to 3.11 (Results within each Section)
Federal or Territorial Species at Risk		<ul style="list-style-type: none"> There were six federal or territorial species at risk observed during 2023 including: Beverly/Ahiak herd caribou, which are barren ground caribou (Threatened by COSEWIC and Vulnerable in Nunavut); Dolphin Union herd caribou (Endangered by COSEWIC, Special Concern Schedule 1 of SARA and Vulnerable in Nunavut); Wolverine (Special Concern by COSEWIC, Special Concern Schedule 1 of SARA and Vulnerable in Nunavut); Grizzly bear (Special Concern by COSEWIC, Special Concern Schedule 1 of SARA and Vulnerable in Nunavut); Snow Bunting (Vulnerable in Nunavut); Golden eagle (Vulnerable in Nunavut). 	<ul style="list-style-type: none"> Results of monitoring activities for these species are summarized in other sections. 	Caribou – 3.4 Grizzly bear – 3.6 Upland breeding birds – 3.9 Raptors – 3.11

CONTENTS

EXECUTIVE SUMMARY	I
1. INTRODUCTION	1
1.1 PROJECT REQUIREMENTS AND MONITORING OBJECTIVES	1
1.1.1 Project Requirements	1
1.1.2 Inclusion of Inuit Qauajimajatuqangit	2
1.1.3 Program Audit Process	4
1.2 PROGRAM COMPONENTS	5
1.3 PROGRAM STUDY AREA	6
2. HABITAT LOSS AND SITE ACTIVITY MONITORING	8
2.1 HABITAT LOSS	8
2.1.1 FEIS Predictions	8
2.1.2 Methods	8
2.1.3 Discussion	10
2.2 TRAFFIC MONITORING	10
2.2.1 FEIS Predictions	10
2.2.2 Methods	11
2.2.3 Results	11
2.2.4 Discussion	13
2.3 HELICOPTER AND FIXED-WING AIRCRAFT MONITORING	13
2.3.1 FEIS Predictions	13
2.3.2 Methods	14
2.3.3 Results	14
2.3.4 Discussion	15
2.4 SNOWBANK MONITORING	16
2.4.1 FEIS Predictions	16
2.4.2 Methods	16
2.4.3 Results	18
2.4.4 Discussion	21
2.5 NOISE MONITORING	23
3. VEC AND OTHER SPECIES MONITORING AND MITIGATION	24
3.1 OBJECTIVES	24
3.2 METHODS COMMON TO MULTIPLE VECS	24
3.2.1 Wildlife Camera Monitoring	24
3.2.2 Wildlife Interactions, Incidents, and Mortalities	26
3.2.3 Incidental Wildlife Observations	26
3.2.4 Species of Conservation Concern	28
3.3 RESULTS COMMON TO MULTIPLE VECS	28
3.3.1 Camera Effort	28
3.3.2 Baseline Results of Boston Camera Program	32
3.3.3 Non-VEC Wildlife Sightings Log and Incidental Observations	32

3.4	CARIBOU	34
3.4.1	FEIS Predictions	35
3.4.2	Methods	35
3.4.3	Results	37
3.4.4	Discussion	54
3.5	MUSKOX	58
3.5.1	FEIS Predictions	58
3.5.2	Methods	59
3.5.3	Results	59
3.5.4	Discussion	65
3.6	GRIZZLY BEAR	65
3.6.1	FEIS Predictions	66
3.6.2	Methods	66
3.6.3	Results	66
3.6.4	Discussion	73
3.7	WOLVERINE	75
3.7.1	FEIS Predictions	76
3.7.2	Methods	76
3.7.3	Results	76
3.7.4	Discussion	83
3.8	NEST PREDATORS	84
3.8.1	FEIS Predictions	84
3.8.2	Methods	86
3.8.3	Results	86
3.8.4	Discussion	90
3.9	UPLAND BREEDING BIRDS	92
3.9.1	FEIS Predictions	92
3.9.2	Methods	92
3.9.3	Results	93
3.9.4	Discussion	93
3.10	WATERBIRDS	94
3.10.1	FEIS Predictions	94
3.10.2	Methods	94
3.10.3	Results	94
3.10.4	Discussion	96
3.11	RAPTORS	97
3.11.5	FEIS Predictions	98
3.11.6	Methods	98
3.11.7	Results	98
3.11.8	Discussion	99
3.12	MARINE MAMMALS	99
3.12.1	FEIS Predictions	99
3.12.2	Methods	99
3.12.3	Results	100
3.12.4	Discussion	101
3.13	PLANTS	103
3.13.1	FEIS Predictions	103
3.13.2	Methods	103



3.13.3	Results	105
3.13.4	Discussion	105

4. REFERENCES 108

APPENDIX A	DETAILED METHODOLOGY FOR THE HOPE BAY PROJECT PROGRAMS, 2023
APPENDIX B	HOPE BAY ROADSIDE SNOWBANK MONITORING DATA 2023
APPENDIX C	HOPE BAY QUARRY BLAST NOISE MONITORING SOP
APPENDIX D	WILDLIFE CAMERA LOCATIONS AND CAMERA EFFORT BY MONTH, DORIS AND MADRID AREAS, JUNE 2016 TO SEPTEMBER 2023
APPENDIX E	CAMERA SUMMARY OF WILDLIFE IMAGES AND EVENTS, DORIS AND MADRID AREAS, SEPTEMBER 2021 TO SEPTEMBER 2023
APPENDIX F	WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2021 TO SEPTEMBER 2023
APPENDIX G	WILDLIFE INTERACTIONS, INCIDENTS, AND MORTALITIES RECORDED AT THE PROJECT IN 2023
APPENDIX H	HOPE BAY INCIDENTAL WILDLIFE OBSERVATIONS 2023
APPENDIX I	SUMMARY OF WILDLIFE RECORDED INCIDENTALLY BY BIOLOGISTS AT THE PROJECT, 1996 TO 2023
APPENDIX J	SUMMARY OF THE HOPE BAY PROJECT WILDLIFE SIGHTINGS LOG AND INCIDENTAL SIGHTINGS, 2011 - 2023
APPENDIX K	MONTHLY AVERAGE OF PERSONNEL ON SITE, HOPE BAY PROJECT, 2009 TO 2023
APPENDIX L	WILDLIFE EVENTS RECORDED BY WILDLIFE CAMERAS, BOSTON PROJECT, SEPTEMBER 2021 TO SEPTEMBER 2023
APPENDIX M	SUMMARY OF CARIBOU CAMERA EVENTS FOR ZOI ANALYSIS, JUNE 2016 TO SEPTEMBER 2023
APPENDIX N	CARIBOU OBSERVATIONS FROM THE WILDLIFE SIGHTINGS LOG CORRECTED FOR PERSONNEL, HOPE BAY PROJECT, 2009 TO 2023
APPENDIX O	SUMMARY OF MUSKOX CAMERA EVENTS, JUNE 2016 TO SEPTEMBER 2023
APPENDIX P	SUMMARY OF GRIZZLY BEAR CAMERA EVENTS FOR ZOI ANALYSIS, JUNE 2016 TO SEPTEMBER 2023
APPENDIX Q	GRIZZLY BEAR OBSERVATIONS FROM THE WILDLIFE SIGHTINGS LOG CORRECTED FOR PERSONNEL, HOPE BAY PROJECT, 2009 TO 2023
APPENDIX R	SUMMARY OF WOLVERINE CAMERA EVENTS FOR ZOI ANALYSIS, JUNE 2016 TO SEPTEMBER 2023
APPENDIX S	WOLVERINE OBSERVATIONS FROM THE WILDLIFE SIGHTINGS LOG CORRECTED FOR PERSONNEL, HOPE BAY PROJECT, 2009 TO 2023
APPENDIX T	WATER QUALITY DATA AT THE TIA IN 2023 FOR PARAMETERS WITH GUIDELINES RELEVANT TO WILDLIFE
APPENDIX U	MARINE MAMMAL MONITORING IN ROBERTS BAY, 2023
APPENDIX V	INVASIVE PLANT SPECIES TARGETED FOR MONITORING IN 2023
APPENDIX W	INVASIVE PLANT SPECIES MONITORING ATTRIBUTES
APPENDIX X	INVASIVE PLANT SPECIES SURVEY123 FIELD FORM

APPENDIX Y	INVASIVE PLANT SPECIES SURVEY PRESENTATION & PLANT IDENTIFICATION 2023
APPENDIX Z	CARIBOU HEIGHT OF LAND MONITORING SOP
APPENDIX AA	CARIBOU IDENTIFICATION PRESENTATION 2023
APPENDIX AB	MARINE MAMMAL MONITORING SOP
APPENDIX AC	SUMMARY OF THE AT SEA VESSEL WILDLIFE SIGHTINGS LOG AND INCIDENTAL SIGHTINGS, 2023
APPENDIX AD	INVASIVE PLANT SPECIES SURVEY GRID AND SURVEY LOCATIONS JULY 26 TO AUGUST 1,2023

LIST OF TABLES

TABLE 1	SUMMARY OF 2023 WILDLIFE MITIGATION AND MONITORING PLAN (WMMP) COMPLIANCE REPORT RESULTS	II
TABLE 2	MAGNITUDE OF MADRID-BOSTON PROJECT 2017 FEIS RESIDUAL IMPACT PREDICTIONS	2
TABLE 3	WMMP PROGRAM AUDIT PROCESS RECORDS, 2023	4
TABLE 4	WILDLIFE MONITORING IN 2023	5
TABLE 5	PREDICTED MAXIMUM PROJECT VEHICLE TRAFFIC IN YEARS 1 TO 5	10
TABLE 6	DAILY VEHICLE TRAFFIC FROM WILDLIFE CAMERAS IN 2023	13
TABLE 7	DAILY HELICOPTER TRAFFIC IN 2023	15
TABLE 8	DAILY FIXED-WING AIRCRAFT TRAFFIC IN 2023	15
TABLE 9	2023 SNOWBANK HEIGHT SUMMARY	18
TABLE 10	SUMMARY OF SNOWBANK HEIGHT ACROSS MONITORING YEARS, 2020-2023	20
TABLE 11	SPECIES OF CONSERVATION CONCERN KNOWN TO OCCUR IN THE HOPE BAY STUDY AREA	29
TABLE 12	SUMMARY OF CAMERA EFFORT RECORDED AT TREATMENT, ZOI, AND CONTROL CAMERAS BY MONTH, SEPTEMBER 2022 TO SEPTEMBER 2023	31
TABLE 13	CAMERA TRIPOD REPAIRS, DURING 2023 CAMERA CHECKS	32
TABLE 14	CAMERA EFFORT AND VEC SPECIES SUMMARIES FOR BOSTON CAMERAS SEPTEMBER 2022 – SEPTEMBER 2023	33
TABLE 15	CARIBOU EVENTS RECORDED BY MONTH AT TREATMENT, ZOI, AND CONTROL CAMERAS, JANUARY 2020 TO SEPTEMBER 2023	44
TABLE 16	SUMMARY OF TREATMENT VS. CONTROL MODEL COEFFICIENTS AND SIGNIFICANCE LEVEL FOR CARIBOU CAMERA OCCUPANCY DATA	50
TABLE 17	SUMMARY OF MONTHS AND CAMERAS AND CARIBOU OCCUPANCY SINCE THE START OF THE MONITORING PROGRAM	51
TABLE 18	BEVERLY/AHIAK AND DOLPHIN AND UNION CARIBOU HERD IDENTIFICATION, 2022-2023	53
TABLE 19	CARIBOU SIGHTINGS AND INCIDENTAL OBSERVATIONS 2023	54

TABLE 20	MUSKOX EVENTS RECORDED BY MONTH AT TREATMENT, ZOI, AND CONTROL CAMERAS, SEPTEMBER 2022 TO SEPTEMBER 2023	60
TABLE 21	MUSKOX SIGHTINGS 2023	63
TABLE 22	GRIZZLY BEAR EVENTS RECORDED BY MONTH AT TREATMENT, ZOI, AND CONTROL CAMERAS, SEPTEMBER 2022 TO 2023	67
TABLE 23	SUMMARY OF TREATMENT VS. CONTROL MODEL COEFFICIENTS AND SIGNIFICANCE LEVEL FOR GRIZZLY BEAR CAMERA EVENT DATA	71
TABLE 24	SUMMARY OF CAMERAS WITH MONTHS ≥ 7 DAYS EFFORT AND TOTAL GRIZZLY BEAR EVENTS RECORDED	71
TABLE 25	GRIZZLY BEAR SIGHTINGS AND INCIDENTAL OBSERVATIONS 2022	72
TABLE 26	WOLVERINE EVENTS RECORDED BY MONTH AT TREATMENT, ZOI, AND CONTROL CAMERAS, JANUARY 2020 TO SEPTEMBER 2023	77
TABLE 27	SUMMARY OF TREATMENT VS. CONTROL MODEL COEFFICIENTS AND SIGNIFICANCE LEVEL FOR WOLVERINE CAMERA OCCUPANCY DATA	80
TABLE 28	SUMMARY OF SMOOTHED TERM OUTPUTS AND SIGNIFICANCE LEVEL FOR THE POTENTIAL ZOI MODEL FOR WOLVERINE CAMERA OCCUPANCY DATA	81
TABLE 29	SUMMARY OF CAMERAS WITH EFFORT ≥ 7 DAYS IN A MONTH AND WOLVERINE OCCUPANCY	81
TABLE 30	NEST PREDATOR EVENTS RECORDED BY MONTH AT TREATMENT, ZOI, AND CONTROL CAMERAS, MAY 15 TO AUGUST 15, 2023	87
TABLE 31	NEST PREDATOR SIGHTINGS LOG AND INCIDENTAL OBSERVATIONS 2023	89
TABLE 32	UPLAND BREEDING BIRDS SIGHTINGS AND INCIDENTAL OBSERVATIONS 2022	93
TABLE 33	SUMMARY STATISTICS FOR WATER QUALITY PARAMETERS WITH CCME GUIDELINES AT THE TIA (TL1)	95
TABLE 34	WATERBIRD SIGHTINGS AND INCIDENTAL OBSERVATIONS 2023	96
TABLE 35	RAPTOR SIGHTINGS AND INCIDENTAL OBSERVATIONS (2023)	98
TABLE 36	MARINE MAMMAL MONITORING, 2023	100

LIST OF FIGURES

FIGURE 1	2023 WILDLIFE STUDY AREA	7
FIGURE 2	WILDLIFE REGIONAL AND LOCAL STUDY AREAS FOR THE PHASE 2 PROJECT FINAL ENVIRONMENTAL IMPACT STATEMENT	9
FIGURE 3	INFRASTRUCTURE DEVELOPMENT OF THE PHASE 2 PROJECT AS OF 2023	12
FIGURE 4	SNOWBANK MONITORING LOCATIONS	17
FIGURE 5	SNOWBANK HEIGHTS IN 2023	19
FIGURE 6	SNOWBANK HEIGHT COMPILED FOR ALL MONITORING YEARS, 2020-2023	22
FIGURE 7	WILDLIFE CAMERA LOCATIONS, DORIS AND MADRID AREAS, JUNE 2016 TO SEPTEMBER 2023	25

FIGURE 8	WILDLIFE CAMERA LOCATIONS, BOSTON AREA, SEPTEMBER 2018 TO SEPTEMBER 2023	27
FIGURE 9	50% KERNEL DENSITY ESTIMATES OF CALVING HOME RANGE ON BEVERLY AND AHIK SUB POPULATIONS COLLAR DATA, 2001-2022 AND 2023	39
FIGURE 10	95% KERNEL DENSITY ESTIMATES OF CALVING HOME RANGE ON BEVERLY AND AHIK SUB POPULATIONS COLLAR DATA, 2001-2022 AND 2023	40
FIGURE 11	50% KERNEL DENSITY ESTIMATES OF CALVING HOME RANGE ON DOLPHIN-UNION SUB POPULATIONS COLLAR DATA, 2001-2022 AND 2023	41
FIGURE 12	95% KERNEL DENSITY ESTIMATES OF CALVING HOME RANGE ON DOLPHIN-UNION SUB POPULATIONS COLLAR DATA, 2001-2022 AND 2023	42
FIGURE 13	DETECTIONS OF CARIBOU ON MOTION-TRIGGERED PHOTOS RECORDED BY WILDLIFE CAMERAS, DORIS, AND MADRID AREAS, JUNE 2016 TO SEPTEMBER 2023	46
FIGURE 14	NUMBER OF CARIBOU INDIVIDUALS RECORDED PER PERSONNEL PRESENT, HOPE BAY PROJECT, 2009 TO 2023	55
FIGURE 15	DETECTIONS OF MUSKOX ON MOTION-TRIGGERED PHOTOS RECORDED BY REMOTE CAMERAS, DORIS AND MADRID AREAS, JUNE 2016 TO SEPTEMBER 2023	62
FIGURE 16	NUMBER OF MUSKOX INDIVIDUALS RECORDED PER PERSONNEL PRESENT, HOPE BAY PROJECT, 2009 TO 2023	64
FIGURE 17	DETECTIONS OF GRIZZLY BEAR ON MOTION-TRIGGERED PHOTOS RECORDED BY REMOTE CAMERAS, DORIS AND MADRID AREAS, JUNE 2016 TO SEPTEMBER 2023	69
FIGURE 18	NUMBER OF GRIZZLY BEAR INDIVIDUALS RECORDED PER PERSONNEL PRESENT, HOPE BAY PROJECT, 2009 TO 2023	74
FIGURE 19	DETECTIONS OF WOLVERINE ON MOTION-TRIGGERED PHOTOS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, JUNE 2016 TO SEPTEMBER 2023	78
FIGURE 20	PROBABILITY OF WOLVERINE OCCUPANCY AT WILDLIFE CAMERAS BY DISTANCE FROM INFRASTRUCTURE	82
FIGURE 21	NUMBER OF WOLVERINE INDIVIDUALS RECORDED PER PERSONNEL PRESENT, HOPE BAY PROJECT, 2009 TO 2023	85
FIGURE 22	DETECTIONS OF NEST PREDATORS ON MOTION-TRIGGERED PHOTOS RECORDED BY REMOTE CAMERAS, DORIS AND MADRID AREAS, SEPTEMBER 2018 TO SEPTEMBER 2023	88
FIGURE 23	NUMBER OF NEST PREDATOR INDIVIDUALS RECORDED PER PERSONNEL PRESENT BETWEEN MAY AND AUGUST, HOPE BAY PROJECT, 2009 TO 2023	91
FIGURE 24	VESSEL TRACKS DURING SHIPPING SEASON, SEPTEMBER 2023	102

LIST OF PHOTOS

PHOTO 1	HIGHEST SNOWBANKS MEASUREMENTS AT SITE SB3 INDICATING GENTLE SLOPES, FEBRUARY 28, 2023.	20
PHOTO 2	MOOSE RECORDED ON BOSTON CAMERA 82. OCTOBER 13, 2023.	34
PHOTO 3	CARIBOU ON TIA MONITROING CAMERA 51 JULY 22, 2023.	47
PHOTO 4	CARIBOU AT TREATMENT ZONE CAMERA 60. JULY 27, 2023.	48
PHOTO 5	CARIBOU AT CONTROL CAMERA 43. MAY 7, 2023.	48



PHOTO 6	AERIAL VIEW OF CARIBOU CROSSING RAMP WITH TRAILS (LEFT), AND CULVERT WHERE TWO ADDITIONAL CAMERAS WERE DEPLOYED TO MONITOR CARIBOU ACTIVITY IN RELATION TO CROSSING RAMP (RIGHT) ON WINDY ROAD, AUGUST 2022.	49
PHOTO 7	CARIBOU BELONGING TO THE BEVERLY/AHAIK HERD CAPTURED ON CAMERA 24 JULY 2, 2023.	52
PHOTO 8	CARIBOU BELONGING TO THE DOLPHIN-UNION HERD CAPTURED ON CAMERA 10 JUNE 9 2023.	52
PHOTO 9	MUSKOX CAPTURED ON ZOI ZONE CAMERA 25. MAY 5, 2023.	63
PHOTO 10	GRIZZLY BEAR CAPTURED ON CONTROL ZONE CAMERA 33 ON AUGUST 18, 2023.	68
PHOTO 11	GRIZZLY BEAR SOW AND CUB WALKING ACROSS TIA CAPTURED ON TREATMENT CAMERA 51. JUNE 22, 2023.	70
PHOTO 12	WOLVERINE CAPTURED ON CONTROL ZONE CAMERA 43. MAY 19, 2023.	79
PHOTO 13	WOLVERINE CAPTURED ON ZOI ZONE CAMERA 23. SEPT 25, 2022.	79
PHOTO 14	RED FOX CAPTURED ON ZOI ZONE CAMERA 25. APRIL 5, 2023.	86
PHOTO 15	LOOK-ALIKE NATIVE PLANT SPECIES OBSERVED DURING 2023 HOPE BAY INVASIVE PLANT SURVEYS	106

GLOSSARY, ACRONYMS, AND ABBREVIATIONS

Agnico Eagle	Agnico Eagle Mines Limited
AWR	All-Weather-Road
COSEWIC	Committee on the Status of Endangered Wildlife in Canada – A federal committee of experts that assesses and designates the level of threat to wildlife and vegetation species in Canada
CWS	Canadian Wildlife Service
ECCC	Environment and Climate Change Canada
ELC	Ecosystem Land Classification
Environment Personnel	On-site environment technicians, wildlife biologists and environment contractors
ERM	ERM Consultants Canada Ltd.
FEIS	Final Environmental Impact Statement
Framework Agreement, the	The Framework Agreement between the Kitikmeot Inuit Association and Agnico Eagle
GIS	Geographical Information System
GN	Government of Nunavut
GN DOE	Government of Nunavut Department of Environment
Hectare (ha)	10,000 m ² or 0.01 km ² or 2.47 acres
Home Range	The area used by a wildlife species for living and moving. Home ranges can represent annual ranges (e.g., for animals such as caribou and grizzly bear) or seasonal ranges (e.g., for birds).
IEAC	Inuit Environment Advisory Group
KIA	Kitikmeot Inuit Association
LSA	Local Study Area. The permitted Madrid-Boston footprint of the Project plus a buffer averaging 1,000 m radius around infrastructure and roads.
Migration	The regular seasonal or daily movement of animal populations to and from different areas, often considerable distances apart. Migration often occurs in corridors between preferred habitat types.
<i>Migratory Birds Convention Act (1994)</i>	A federal government commitment established in 1917 to protect most migrating birds found in Canada. The Act fulfilled the terms of the Migratory Birds Convention of 1916 between Canada and the US. The Canadian government has the authority to pass and enforce regulations to protect those species of migratory birds that are included in the Convention.
Miramar	Miramar Mining Corporation
MOU	Memorandum of Understanding
NIRB	Nunavut Impact Review Board
PDA	Project Development Area. The permitted Madrid-Boston footprint of the Project plus a buffer averaging 250 m radius around infrastructure and 100 m radius around roads.
PRISM	Program for Regional and International Shorebird Monitoring, used to monitor Arctic shorebird populations
Program, the	The Wildlife Mitigation and Monitoring Program. Refers to the current WMMP, the monitoring that occurs, and the associated report for any given year.
Project, the	The Hope Bay Project, including the Doris North Project and the Phase 2 expansion of Madrid and Boston

Project Certificate, the	Phase 2 Hope Bay Belt Project Certificate Nunavut Impact Review Board No. 009, issued November 18, 2018.
Phase 2 Project, the	Phase 2 development of the Madrid and Boston deposits.
Raptor	Birds of prey including hawks, eagles, falcons, and owls. Common raven is considered a functional raptor based on similar nesting preferences to other true raptor species in the Arctic.
Report, the	The Wildlife Mitigation and Monitoring Plan Compliance Report
RSA	Regional Study Area. This is the largest study area around the Madrid-Boston permitted infrastructure. The wildlife RSA encompasses an area large enough to characterize potential effects to species which may come into contact with the Hope Bay Project or Project-related activities, approximately 30 km from Project infrastructure.
SARA	<i>Species at Risk Act</i> (2002) – A Canadian federal statute which is designed to meet one of Canada's commitments under the International Convention on Biological Diversity. The goal of the Act is to protect endangered or threatened organisms and their habitats. It also manages species which are not yet threatened, but whose existence or habitat is in jeopardy.
Shorebird	Any bird that lives, breeds, or forages on or near the shores of coastal or inland waters; also known as waders of the order Charadriiformes, such as a sandpiper or a plover. It excludes gull species.
Standard Deviation (SD)	A statistical measure of the spread or variability of a set of data
Standard Error (SE)	A statistical measure of the spread or variability of a set of data
Study Area	The Wildlife Mitigation and Monitoring Program Study Area.
T	Time-triggered photos from wildlife cameras
TIA	Tailings Impoundment Area. A lake that has been dammed and is the location of the tailings deposition.
TLR	Tail Lake road. The access road to the TIA.
TMAC	TMAC Resources Inc.
Upland Breeding Bird	Passerines (with the exception of common raven, which is included as a functional raptor), shorebirds, and ptarmigan
UD	Utilization distribution
VECs	Valued Ecosystem Components
WMMP	Wildlife Mitigation and Monitoring Plan. The WMMP is the official document that outlines the program to be conducted to mitigate and monitor wildlife for the Doris Project.
Waterbird	Umbrella term used to encompass all birds that exclusively use water habitat for foraging, breeding, or staging during the year.
ZOI	Zone of Influence

1. INTRODUCTION

This document presents the results of wildlife monitoring activities for the Hope Bay Project (the Project) conducted by Agnico Eagle Mines Limited (Agnico Eagle) in 2023. The wildlife monitoring program for the Project is described in the Wildlife Mitigation and Monitoring Plan (Agnico Eagle Mines Limited 2023) which is discussed with the Inuit Environmental Advisory Committee (IEAC) and circulated to the Kitikmeot Inuit Association (KIA) and various stakeholders for discussion before implementation. The WMMP identifies the activities to be undertaken in the WMMP Compliance Program (the Program). The results of monitoring activities are described in the WMMP Compliance Report (the Report), this document, which is required to be submitted annually.

The introduction of the Report provides a description of:

- The Project Certificate No. 003 and No. 009 requirements, the Framework Agreement, and the objectives for the WMMP (Agnico Eagle Mines Limited 2023) (Section 1.1);
- The 2023 Program components (Section 1.2); and
- The 2023 Program Study Area (Section 1.3).

The WMMP is designed to assess potential Project-related effects on Valued Ecosystem Components (VECs) as predicted in the Madrid-Boston Project Final Environmental Impact Statement (FEIS; TMAC Resources 2017) and to meet the commitments of Nunavut Impact Review Board (NIRB) Project Certificates No. 003, Amendment No. 2 (NIRB 2016) and No. 009 (NIRB 2018), and the Framework Agreement (2015) with the KIA.

The Report describes the results of the monitoring activities designed to test these predictions including:

- Habitat loss due to the Project (Section 2);
- VEC-specific monitoring (Section 3);
- Wildlife use of the Project site, including any interactions, incidents and mortalities (Section 3); and
- Traffic, helicopter and aircraft, and noise monitoring to confirm estimates used in the FEIS (Section 2).

The Report also describes monitoring conducted to guide adaptive management, such as:

- Incidental observations (within VEC subsections, Section 3), and
- Snowbank monitoring on roadways (Section 2).

1.1 PROJECT REQUIREMENTS AND MONITORING OBJECTIVES

1.1.1 PROJECT REQUIREMENTS

The wildlife mitigation and monitoring requirements for the Project were set out in the Doris Project Certificate No. 003 (NIRB 2006, 2013, 2016), the Madrid-Boston Project Certificate No. 009 (NIRB 2018) and the Framework Agreement (2015) and commitments made during the review of each Environmental Impact Statement.



The Madrid-Boston FEIS identified seven terrestrial wildlife VECs, including caribou (*Rangifer tarandus*), muskox (*Ovibos moschatus*), grizzly bear (*Ursus arctos*), wolverine (*Gulo gulo*), upland breeding birds, waterbirds, and raptors. The 2017 Phase 2 FEIS predicted five residual Project effects on wildlife VECs, none of which were predicted to be significant and all with negligible or low magnitude (Table 2):

- Habitat loss;
- Disturbance;
- Disruption of movement;
- Attraction to the Project; and
- Direct mortality.

TABLE 2 MAGNITUDE OF MADRID-BOSTON PROJECT 2017 FEIS RESIDUAL IMPACT PREDICTIONS

VEC	Habitat Loss	Disturbance	Disruption of Movement	Attraction	Direct Mortality
Caribou	Negligible	Low	Low	Not residual	Not residual
Muskox	Low	Low	Low	Not residual	Not residual
Grizzly Bear	Negligible	Not residual	Low	Low	Not residual
Wolverine	Negligible	Not residual	Low	Low	Not residual
Upland Breeding Birds	Low	Negligible	Not residual	Not residual	Low
Waterbirds	Low	Negligible	Not residual	Not residual	Low
Raptors	Low	Low	Not residual	Not residual	Low
Marine Mammals	Not residual	Not residual	Not residual	Not residual	Not residual
Rare Plants	Low	NA	NA	NA	NA

The Program also includes input from the NIRB, Environment and Climate Change Canada (ECCC), the Government of Nunavut Department of the Environment (GN DOE), the Canadian Wildlife Service (CWS), the KIA, and the IEAC. The annual reports are also provided to the NIRB who distributes them to stakeholders for review and comments. The WMMP is updated as needed during the life of the Project, in part based on these review comments.

1.1.2 INCLUSION OF INUIT QAUAJIMAJATUQANGIT

Agnico Eagle is committed to considering and incorporating Inuit Qauajimajatuqangit, or Traditional Knowledge into all stages of the WMMP, including identification of mitigation measures, monitoring study design, data collection, and follow-up programs to obtain feedback. Agnico Eagle includes Traditional Knowledge through several mechanisms:

- The IEAC was formed under the Hope Bay Project's Inuit Impact and Benefit Agreement (IIBA) with the KIA. The IEAC is comprised of Inuit who are Elders and/or active land users with extensive knowledge of wildlife and the environment, and with experience in the Hope Bay study area. Typically, two meetings are held annually with the IEAC to review existing and proposed mitigation and monitoring for wildlife, describe monitoring results to date, discuss adaptive management for wildlife and fish, and gain Inuit perspectives and local knowledge on the Project site.
- A series of workshops was held with Elders and harvesters familiar with the Project area prior to the Madrid-Boston FEIS application. Further detail on the caribou workshops is provided below.
- The Inuit Traditional Knowledge report (Banci and Spicker 2016) has also been reviewed and information regarding trends in VEC species or group populations have been included in Sections 3.4 to 3.11.
- The KIA presents perspectives of Inuit and scientific review when they comment on WMMP Plans and Reports and FEIS documents, and during their regular site visits. Examples include the construction and monitoring of road crossing structures on the Doris-Windy All-Weather-Road (AWR), using incinerators for food waste management to mitigate the attraction of bears, and assistance by land users in selecting the locations for site monitoring cameras. The WMMP and the Report are circulated to the KIA and IEAC for review and comment.

A site visit and workshop with the IEAC was held in March 2023. One day of meetings was held in Cambridge Bay to review and discuss Project updates and annual compliance results from 2022. A site visit was conducted the following day which focused on reviewing the methods for Height of Land (HOL) monitoring. An HOL survey was conducted by the IEAC, site environment team members, and a wildlife biologist. A second IEAC meeting was held in Cambridge Bay in August 2023. The wildlife portion of the program focused on follow-up discussion from action items that came out of the March 2023 meeting, and included a caribou ID workshop which aimed at identifying Dolphin Union and Beverly-Ahiak caribou based on remote camera photos at Hope Bay site. The IEAC noted interest in determining whether Dolphin-Union caribou are remaining on the main land during summer months, rather than return to Victoria Island for calving. The IEAC requested that herd identification be included in camera data reporting. The caribou ID workshop presented many photos of caribou from the remote camera program, and the IEAC worked to help develop an ID guide that could be used to categorize future caribou data by herd ID (see Section 3.4 for details and results).

Three workshops were held with Elders and harvesters in September 2016, and April and August 2017 in Cambridge Bay. Elders and harvesters visited the Doris site and reviewed the mitigations used at Doris for caribou. Participants were able to see the application of many of the caribou protection measures during the site visit to Doris. For example, workshop participants viewed markers at 250 m from the airstrip and at 2.8 km from a quarry. Caribou cannot be present within these distances for aircraft to land or take-off and blasting to occur. Participants also stopped repeatedly along the Doris to Madrid Windy Lake Road to determine how far away a person can hear the Project.



Workshop participants agreed with established protection measures and suggested additional protection measures to aid in the protection of caribou during the construction and operation of the Project. For example, participants reiterated that workers should stay in their vehicles when wildlife are observed, as getting out of the vehicle will cause animals to feel as though they are being pursued. Participants also noted that caribou are only disturbed by noise if they can see the source of the noise. Additionally, workshop participants indicated that caribou are more likely to be disturbed by a sudden, loud, and irregular noise as opposed to a constant regular noise that is not in view. The August 2017 workshop was brought to a close with a facilitated activity through which participants decided whether they were able to support and confirm the caribou protection measures proposed for the Phase 2 Project. The group reached consensus on the workshop conclusions, with participants agreeing that caribou protection measures would keep caribou safe.

1.1.3 PROGRAM AUDIT PROCESS

Project Certificate No. 009 Term and Condition 19 requires an audit process for the WMMP to identify updates that may be required (NIRB 2018). Agnico Eagle fulfills this requirement through submission of annual reports and updated management to regulators and the IEAC, and through consultation and discussion at regular meetings with the IEAC and KIA. In 2023, Agnico Eagle held two in person IEAC meetings with relevant review as part of the audit process. The specific engagement for this audit process in 2023, the feedback provided, and updates to the WMMP are included in Table 3 below.

TABLE 3 WMMP PROGRAM AUDIT PROCESS RECORDS, 2023

Audit Process	Parties Included	Program Feedback	Program Updates
IEAC Meeting April 12 2023	IEAC, KIA, DFO	IEAC members had questions about caribou health at the Project	ERM to forward information of existing University of Alberta caribou health monitoring program to IEAC members. To be provided by April 30, 2023. (Completed)
	IEAC, KIA, DFO	IEAC members indicated concerns about noise disturbances at site in relation to temperature	ERM to review noise modelling at the airstrip and confirm whether different temperatures were considered. To be completed prior to next meeting. (Completed)
	IEAC, KIA, DFO	IEAC members indicated concern that Dolphin Union caribou are declining on the island	ERM and Agnico Eagle to host a caribou ID workshop with the IEAC to help determine whether reliable identification of Dolphin Union caribou is possible in photos. ID workshop hosted at next meeting. (Completed)

Audit Process	Parties Included	Program Feedback	Program Updates
IEAC Meeting August 9 2023	IEAC, KIA, DFO	IEAC members had questions about caribou health at the Project	ERM presented an overview of the Caribou Health Study led by the University of Calgary regarding observations from last IEAC meeting of an unhealthy caribou observed by a community member
		IEAC members indicated concerns about noise disturbances at site in relation to temperature	ERM presented findings of noise modelling procedures as a follow-up from the previous IEAC meeting where an inquiry by IEAC members was made about the noise study relevance in colder temperatures. ERM explained methodology of noise study and standardization of calculations which provide conservative estimates and account for many types of sound. ERM also provided summary of noise mitigations and recommendations.
		IEAC members indicated concern that Dolphin Union caribou are declining on the island	ERM led a caribou ID workshop aimed at seeking technical input from IEAC members to distinguish between Dolphin-Union (DU) and mainland (Beverly and Ahiak) caribou. ERM created caribou ID and included herd ID from photos in the 2023 WMMP Compliance Report (Section 3.4.3.2)
		IEAC indicated they would like to observe the dolphin Union collar data	DU collar data was not shared for several years but has resumed in 2023 and was included in the 2023 WMMP Compliance Report (Section 3.4.3.1)

1.2 PROGRAM COMPONENTS

The 2023 WMMP Plan (Agnico Eagle Mines Limited 2023) identifies the monitoring and mitigation programs. The Project went into Care and Maintenance for Doris processing and underground production in February 2022; however exploration activities have continued in the Madrid area. Construction at Madrid North did not occur in 2023 after it was paused in March 2020. Associated mitigation and monitoring that occurred are outlined in Table 4.

TABLE 4 WILDLIFE MONITORING IN 2023

Monitoring Objective and Method	2023 - Doris Care and Maintenance
<i>Project Infrastructure Development and Activities</i>	
a. Habitat Loss - No data in 2023	Section 2.1
b. Traffic Monitoring	Section 2.2
c. Helicopter and Fixed Wing Aircraft Monitoring	Section 2.3
d. Snowbank Monitoring	Section 2.4
e. Noise Monitoring	Section 2.5

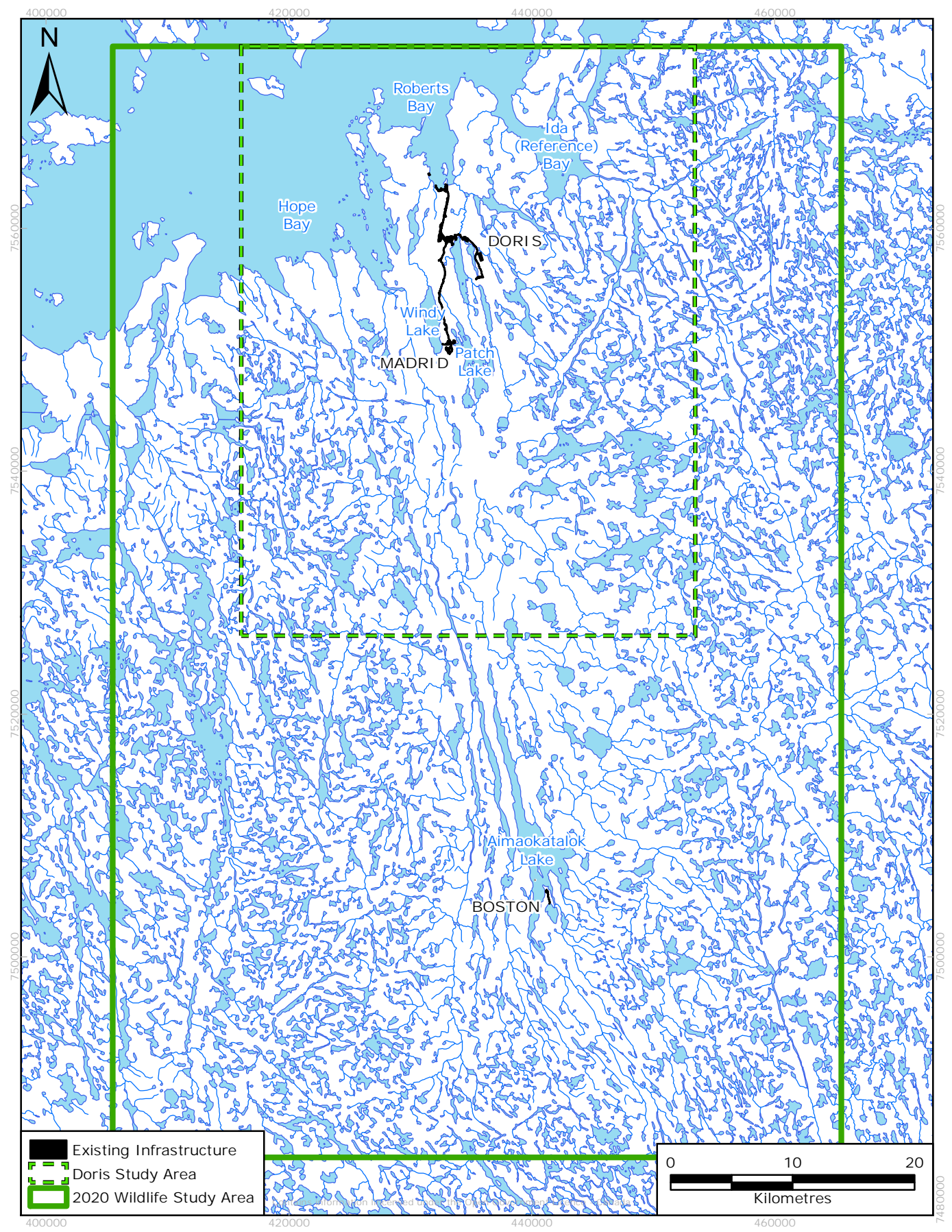


Monitoring Objective and Method	2023 - Doris Care and Maintenance
<i>VEC and Other Species Monitoring and Mitigation</i>	
a. Monitoring Methods and Results Common Across VECs	Section 3.2 and 3.3
b. Caribou	Section 3.4
<i>VEC and Other Species Monitoring and Mitigation (cont'd)</i>	
c. Muskox	Section 3.5
d. Grizzly Bear	Section 3.6
e. Wolverine	Section 3.7
f. Nest Predators	Section 3.8
g. Upland Breeding Birds	Section 3.9
h. Waterbirds	Section 3.10
i. Raptors	Section 3.11
j. Marine Mammals	Section 3.12
k. Plants	Section 3.13

1.3 PROGRAM STUDY AREA

The 2023 Wildlife Study Area (the Study Area) used a similar area as the Madrid-Boston Project Regional Study Area (RSA; Figure 1). The Doris Study Area used in previous years is also included on Figure 1 for comparative purposes. The camera program occurs within focal areas of the Study Area, as described in Section 3.2.1.

FIGURE 1 2023 WILDLIFE STUDY AREA



2. HABITAT LOSS AND SITE ACTIVITY MONITORING

2.1 HABITAT LOSS

Direct loss of wildlife habitat may occur through site clearing, infrastructure construction, and facility expansion. The amount of direct habitat loss due to the development and production phases of the Project has been monitored annually since 2006.

There were no changes to the Project footprint in 2023; therefore, habitat loss was not calculated for this report. Detailed results are available in the 2022 WMMP Report (ERM 2023a) for previous calculations. A summary of the monitoring requirements and discussion of the program to date is included here for the sake of completeness.

2.1.1 FEIS PREDICTIONS

In the Madrid-Boston FEIS (TMAC Resources 2017), wildlife habitat was predicted to be lost within a Project Development Area (PDA), which extended 500-1,500 m surrounding planned infrastructure. This larger PDA allowed for future development and operational flexibility. Infrastructure construction was predicted to result in the reduction of existing wildlife habitat. Habitat loss was predicted to not be a significant residual effect and the magnitude was classified as negligible for caribou, grizzly bear, and wolverine and low for muskox, upland breeding birds, waterbirds, and raptors. The geographic extent of habitat loss was the PDA for all wildlife VECs.

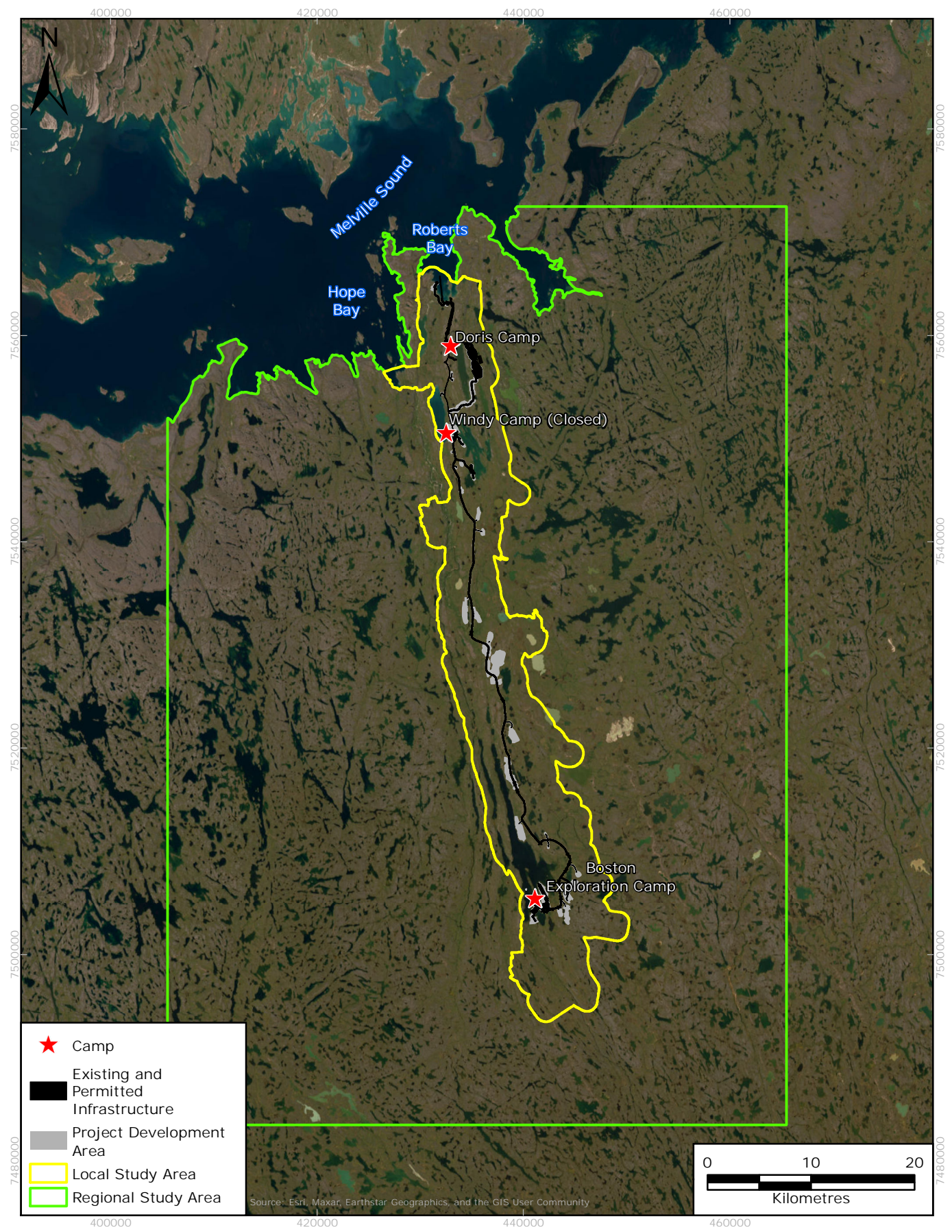
Habitat loss for rare plants was not assessed directly in the Madrid-Boston FEIS (TMAC Resources Inc. 2017) but instead was evaluated by determining the loss of special landscape features. Special landscape features include riparian ecosystems, rare or sensitive wetlands, ecosystems that can contain eskers, cliffs, bedrock lichen and outcrop ecosystems, and beaches and marine intertidal areas. Loss of special landscape features was predicated to be an effect with low magnitude that is not significant and at the geographic scale of the PDA.

2.1.2 METHODS

Habitat loss is evaluated as the direct loss of vegetation communities due to the Project footprint. Habitat loss is evaluated annually and is compared to the amount of habitat available within the relevant study area using Ecological Land Classification (ELC) for the Slave Geological Province and Terrestrial Ecosystem Mapping (TEM) ecosystem units (Figure 2).

To evaluate the loss of suitable habitat for VEC species or groups, the loss is expressed as a proportion of available suitable habitat within the relevant study area as determined in the FEIS. Any loss of special landscape features designated as potential rare plant habitat (i.e., riparian areas, rare wetlands, eskers, cliffs, or marine beaches) is reported directly as number of hectares lost. Further details on methodology for this monitoring program, including how suitable habitat for each VEC species or group is identified, can be found in Appendix A.

FIGURE 2 WILDLIFE REGIONAL AND LOCAL STUDY AREAS FOR THE PHASE 2 PROJECT
FINAL ENVIRONMENTAL IMPACT STATEMENT



2.1.3 DISCUSSION

There were no changes to the Project footprint in 2023 (Figure 3). Collectively, the Project footprint covers 141.15 ha to date, which is 3% of the area predicted to be lost in the Madrid-Boston FEIS (4,177 ha). Current levels of disturbed suitable habitat for mammalian VECs are < 0.1% of the suitable habitat within the RSA, and for bird VECs, are 0.33% or less of the Local Study Area (LSA). These percentages are considered minimal, and well below critical threshold levels.

The magnitude of predicted habitat loss was classified as negligible for caribou, grizzly bear, and wolverine and low for muskox, upland breeding birds, waterbirds, and raptors (TMAC Resources 2017). The predictions of the Madrid-Boston FEIS on the VECs remain valid with respect to the constructed Project footprint.

2.2 TRAFFIC MONITORING

Road traffic is monitored as part of the Madrid-Boston FEIS. Traffic was evaluated in the FEIS for its potential to pose a hazard to wildlife crossing roads or due to noise. Mitigation includes: conservative speed limits, road signage, and employee training for wildlife avoidance. The WMMP also includes a Road Management Plan, which describes road safety, design, and monitoring practices (Agnico Eagle Mines Limited 2023).

2.2.1 FEIS PREDICTIONS

Peak vehicle traffic between Project areas (Roberts Bay, Doris, Madrid, Windy Lake, and Boston in future years) was predicted in the FEIS and is summarized in Table 5. Estimates of Peak Years were based on planned Project development starting in 2019. However, Madrid and Boston development has been paused, delaying the date estimates presented in the FEIS. This means traffic is currently at a rate lower than what was predicted in the FEIS for the first 5 years of development.

Traffic levels are reported in accordance with Project Certificate No. 009 commitment 20 and Final Hearing Commitment 52 (NIRB 2018).

TABLE 5 PREDICTED MAXIMUM PROJECT VEHICLE TRAFFIC IN YEARS 1 TO 5

Transport Areas ¹	Peak Years ²	No. of Daily Return Trips	Transport Categories	Vehicle Type
Roberts Bay to Doris/Madrid North	Year 1 to Year 13 (2019 to 2030)	10	Fuel, supplies, service vehicles	60 m ³ tanker, Flatbed trucks, Misc. vehicles
Doris to Madrid North	Year 1 to Year 13 (2019 to 2030)	51	Supplies, explosives, employees, service vehicles	Flatbed trucks, 40 person bus, Misc. vehicles
Windy Lake to Doris	Year 1 to Year 13 (2019 to 2030)	8	Transport of water	20 m ³ tanker

Transport Areas ¹	Peak Years ²	No. of Daily Return Trips	Transport Categories	Vehicle Type
Roberts Bay to Boston ³	Year 4 to Year 12 (2022 to 2023)	2	Fuel, supplies	60 m ³ tanker, Flatbed trucks
Boston to Doris ³	Year 4 to Year 13 (2022 to 2024)	33	Hauling, fuel, supplies, service vehicles	55 t. haul truck, 60 m ³ tanker, Flatbed trucks, Misc. vehicles

¹ Traffic volume estimates relevant to Year 1 through 5 provided. Multiply return trips by 2 for number of transits. Volume taken from the Madrid-Boston FEIS (Vol. 3, Section 4.5, Table 4.5-1; TMAC Resources 2017).

² Peak Years and Dates are from the Madrid-Boston FEIS and do not represent current Project progress.

³ Indicates portions of road which have not been constructed as of the current reporting year.

2.2.2 METHODS

In 2023 traffic data was summarized for daily average traffic volumes from two wildlife cameras stationed along transit routes. For each month, one week of motion-triggered photos were summarized by total daily traffic volume at camera 18 (route from Roberts Bay to Doris) and 35 (Doris to Madrid North; see Section 3.2 for camera placement information and methods). Data are not available after September due to the timing of camera checks. The traffic logs from 2023 were summarized for the maximum, minimum, and average monthly traffic levels between each transport area: Roberts Bay to Doris/Madrid North and Doris to Madrid North.

The site is currently in care and maintenance with exploration activities. The traffic observed on the cameras is not attributed or differentiated if it is for the care and maintenance or exploration. There were no notes provided in 2023 indicating what the vehicles or equipment observed were for which activity.

2.2.3 RESULTS

Based on vehicle traffic captured on wildlife cameras 18 (between Roberts Bay and Doris) and 35 (between Doris and Madrid North), overall traffic levels were well below predictions from the FEIS (Table 6). Traffic between Roberts Bay and Doris averaged 6.5 daily transits, compared to a predicted peak of 20 transits (Table 6). Traffic levels were highest in January at an average of 11 transits per day. Camera data were not available along the Roberts Bay to Doris/Madrid North route (camera 18) in February-April and September due to snow occlusion and camera card malfunctions.

Traffic between Doris and Madrid North was well below the predicted levels, with the overall average at 23.4 daily transits, compared to a predicted peak of 102 transits (Table 6). The highest monthly average was in March with 35 transits per day (Table 6). Camera data were not available along the Doris to Madrid route (camera 35) in September 2023 due to a camera card malfunction.

FIGURE 3 INFRASTRUCTURE DEVELOPMENT OF THE PHASE 2 PROJECT AS OF 2023

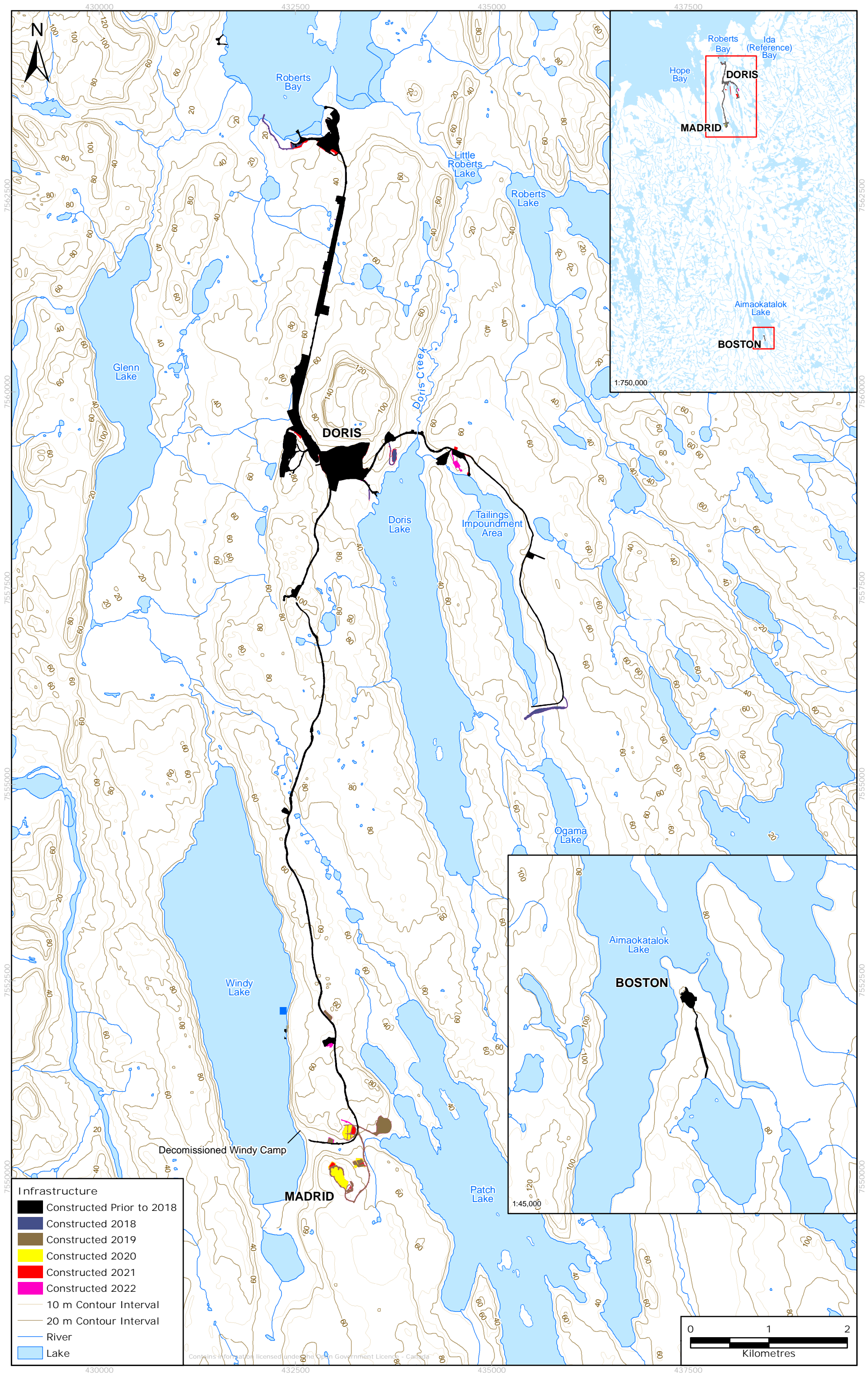


TABLE 6 DAILY VEHICLE TRAFFIC FROM WILDLIFE CAMERAS IN 2023

Transport Areas	Peak Daily Predicted Transits ¹	2023 Daily Avg	Daily Avg Jan-Mar 2023*	Daily Avg Apr-Jun 2023*	Daily Avg Jul-Sep 2023*
Roberts Bay to Doris/Madrid North	20	6.3	10.6	6.1	4.3
Doris to Madrid North	102	23.4	25.7	No Data	5.5

¹ Maximum predicted daily transits were calculated from 2 x maximum daily return trips.

* Vehicle traffic data unavailable for Roberts Bay to Doris in February-April and September, and for Doris to Madrid North in July

2.2.4 DISCUSSION

Traffic levels were compiled from the vehicles recorded on wildlife cameras 18 between Roberts Bay and Doris and 35 between Doris and Madrid North. The portion of the proposed AWR from Madrid North to Boston have not yet been constructed, therefore there is no traffic to Boston.

Transits between Roberts Bay and Doris moved supplies from the sealift to the mine site. Traffic recorded on wildlife camera 18 indicated average activity between Roberts Bay and Doris was well below (32%) predicated peak levels throughout the year. Traffic between Doris and Madrid North included daily vehicle traffic recorded on wildlife camera 35. Daily vehicle traffic between Doris and Madrid in 2023 averaged 23% of predicted levels.

Final Hearing Commitment 52 establishes the need to compare current traffic levels to predictions in the FEIS; *"if the annual or season traffic rates estimated from Project monitoring exceed the established thresholds by greater than 25% in two (2) consecutive monitoring periods, the Proponent shall conduct a revised assessment of the potential impacts of this excess traffic on wildlife"*. Term and Condition 20 indicates that wildlife protection measures will be enhanced if traffic levels exceed the FEIS predictions. Traffic levels have been consistently lower than predicted since reporting began.

The Road Management Plan was followed throughout 2023. No wildlife mortalities, incidents or interactions occurred along the road in 2023.

2.3 HELICOPTER AND FIXED-WING AIRCRAFT MONITORING

Helicopters and fixed-wing aircraft currently operate from Doris and Boston areas. Helicopters make trips between Doris and Boston areas as well as taking supplies (e.g., drilling gear) and crews to other areas. Fixed-wing aircraft service crew and supplies movement in and out of the regional area. Aircraft noise can pose a disturbance risk to wildlife (Manci et al. 1988), but the level of disturbance depends on both the frequency and altitude of aircraft (e.g., more noise during take-off and landing).

2.3.1 FEIS PREDICTIONS

Helicopter flight traffic levels were modelled in the Madrid-Boston FEIS according to predicted frequency of routes, noise levels based on altitude, and flight duration (TMAC Resources 2017).



Helicopter traffic is monitored and reported annually in accordance with Project Certificate No. 009 Commitment #GN-45 (NIRB 2018). Helicopter flight frequencies were predicted and modelled by area; travel between Doris and Boston helipads were predicted at eight daily one-way trips (four round-trips), as well as eight daily trips of general activity in the area of each Doris and Boston helipad (four round trips each). Since the site is in care and maintenance, predictions of helicopter activity are no longer aligned with the FEIS predictions which were made based on the year of Project development, assuming ongoing construction and operation of Madrid and Boston. However, helicopter activity at site is ongoing for general site maintenance and monitoring activities, as well as for exploration (outside of Project compliance). Exploration activities such as drill support and movement were excluded from the 2023 helicopter monitoring where possible.

The wildlife chapter of the FEIS (Volume 4, Chapter 9, Section 9.8.3.2) evaluated the potential effects of noise from fixed wing aircraft using a standard noise model estimating if a 737-200 and a Dash 8 took off and landed at both Doris and Boston airstrips in both directions for a total of four take-offs and four landings per day at each airstrip. The modeling concluded that noise levels due to aircraft would reach a level of annoyance and disruption of sleep for humans at 300-600 m from the runways (Health Canada 2016). The predicted Zone of Influence (ZOI) for other Project effects on caribou was 4 km, which is much wider than the estimated effects of aircraft noise.

2.3.2 METHODS

Helicopter flight logs were summarized by the origin and destination from Doris and Boston helipads. No helipad is currently in use at Windy Camp. All trips were summarized by the total flight distance and duration while the engine was running. Trips starting and ending in the same location are considered one round trip (two one-way trips) for activity in the area. Trips between a helipad and other destination are considered a one-way trip for activity in the area. Helicopter data was analyzed from machines associated with site maintenance and monitoring programs (i.e., not machines dedicated to exploration and drill support). However, some flights may have been made as part of exploration and drilling scopes.

Trip distances and duration were summarized monthly during months when helicopters were active on site, then averaged to daily values for the period.

Fixed-wing aircraft flights were summarized by the number of take-offs and landings each day. Values were summarized for 2023 and compared to the predicted levels in the Madrid-Boston FEIS.

2.3.3 RESULTS

2.3.3.1 HELICOPTER FLIGHTS

In 2023, data from 1,049 one-way helicopter trips were logged around the Hope Bay Project. Activity was logged on one helicopter from June 02 through September 26, 2023. Helicopter trips between Boston and Doris and around Boston occurred at an average of 29% and 15% of the daily predicted maximum frequency, respectively (Table 7). Trips around Doris occurred at the level predicted in the FEIS. The FEIS predictions no longer align with Project development progress given that the site was in care and maintenance in 2023 (Table 7).

TABLE 7 DAILY HELICOPTER TRAFFIC IN 2023

Transport Areas	Max Predicted One-way trips ¹	Average Daily Trips	Average Distance per Trip (km)	Average Duration per Trip (HH:MM)
Between Doris and Boston	8	2.3	75.57	00:40
Around Boston ²	8	1.2	76.77	00:46
Around Doris ²	8	8.4	49.40	00:44

¹ Maximum predicted daily transits based on the Madrid-Boston FEIS, see Section 2.3.1.

² The base scenario predicted 8 one-way trips each in the vicinity of Doris and Boston

2.3.3.2 FIXED-WING AIRCRAFT FLIGHTS

Fixed-wing aircraft flights were active throughout 2023, with an overall frequency of 0.47 one-way flights (i.e., take-off or landing) per day. Daily flights were overall around 12% of predicted levels in the FEIS (Table 8). Flight frequency was very consistent throughout the year, ranging from 0.42 – 0.52 one-way flights per day (Table 8).

TABLE 8 DAILY FIXED-WING AIRCRAFT TRAFFIC IN 2023

Airstrip	Predicted One-way Trips ¹	Average Daily Trips	Average Daily Trips Jan-Mar	Average Daily Trips Apr-Jun	Average Daily Trips Jul-Sept	Average Daily Trips Oct-Dec
Doris	4	0.47	0.52	0.45	0.49	0.42
Boston	4	0	0	0	0	0

¹Maximum predicted daily take-offs and landings, based on the Madrid-Boston FEIS. See Section 2.3.1.

2.3.4 DISCUSSION

Helicopter and fixed-wing aircraft traffic levels were monitored in 2023 to confirm that flight activity around the Project was within predicted levels. Fixed-wing flights occurred year-round into the Doris airstrip, while helicopter activity occurred only in June through September in both the Doris and Boston areas. Aircraft activity levels were lower in 2023 than predicted in the Madrid-Boston FEIS, except for helicopter trips around Doris which matched the predicted level of 8 one-way flights per day (TMAC Resources 2017). Fixed-wing aircraft flights occurred throughout the year, but daily activity was on average 0% - 12% of the level predicted in the FEIS. Since the Project is in care and maintenance, aircraft activity is lower than predicted in the FEIS, which was based on active construction and operations years. Helicopter activity around the Doris/Madrid area is difficult to distinguish between site maintenance and monitoring activities compared to exploration activities, which are not included in Project compliance. Therefore, reported helicopter activity levels are likely higher than the specific activity for care and maintenance.

Under all circumstances, helicopters avoid caribou by 300 m vertically and 600 m horizontally, following the WMMP Plan (Agnico Eagle 2023). Should caribou not be present, helicopters are allowed to fly lower than 300 m above ground. Fixed-wing aircraft have standard flight altitudes

and are only expected to pose a potential noise disturbance during take-off and landing. Therefore, this report does not examine average or daily flight elevations above ground.

2.4 SNOWBANK MONITORING

Road maintenance includes plowing and then blading snowbanks down to reduce snow drifting across the road. This procedure minimizes snowbank height along the roadway and allows accessible crossing for caribou and other wildlife along the entire length of the roadway.

Monitoring snowbank heights along Project roads is conducted to fulfill commitment #GN-49 in Project Certificate No. 009. The commitment states that the snowbank monitoring program “will continue until operational snow management is characterized”. In 2023, all four years of snowbank monitoring data (2020-2023) were compiled to assess whether snow management has been sufficiently characterized, and if so, to allow completion of the monitoring program.

2.4.1 FEIS PREDICTIONS

No specific predications were included in the FEIS for potential risks to wildlife related to snowbanks. The FEIS described plowing procedures which are designed to prevent snowbank accumulation which may pose a barrier to wildlife crossing the road.

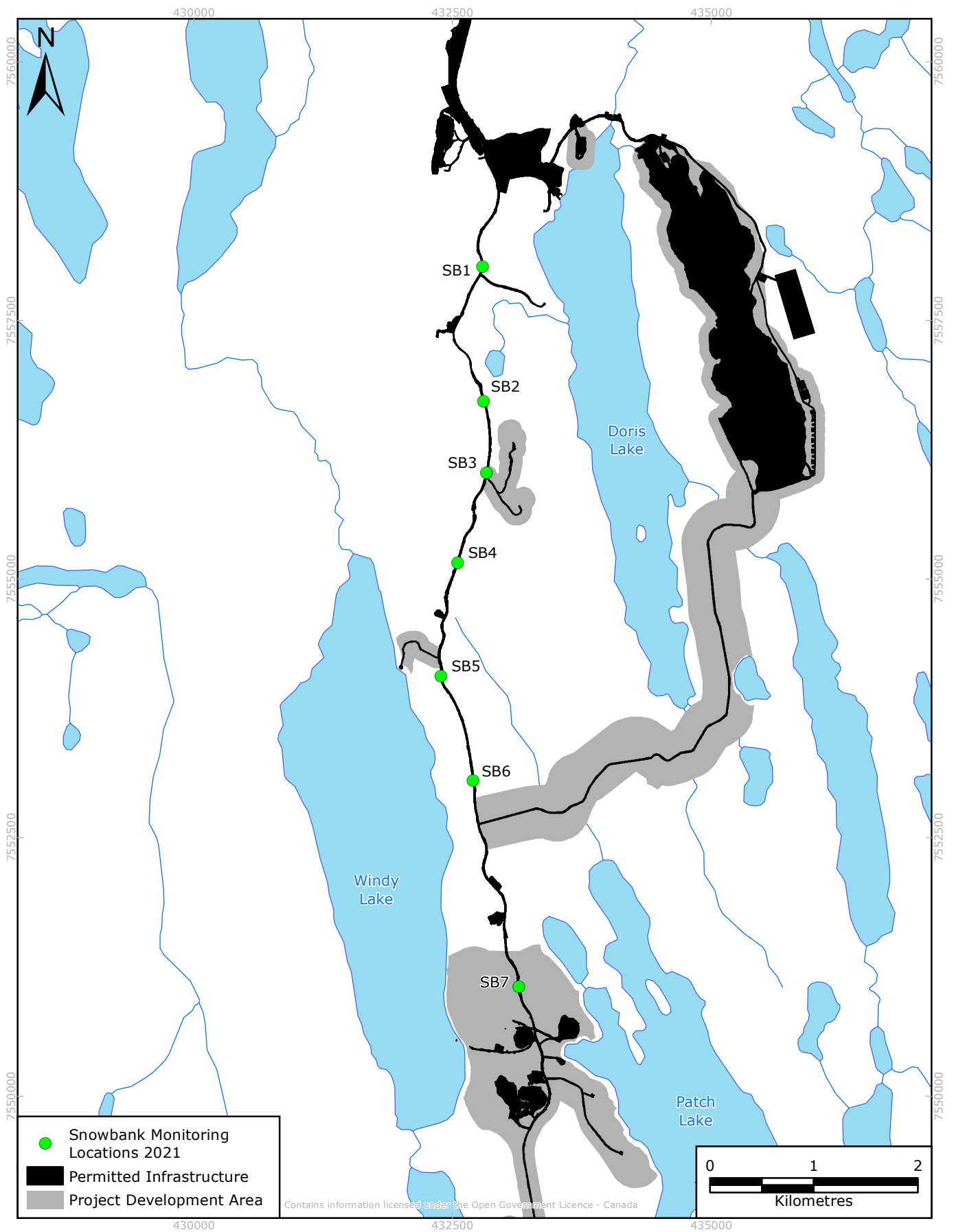
2.4.2 METHODS

Snowbank height was monitored monthly from January through early May and October through December 2023. Monitoring locations were consistent with those from previous years; locations were selected to produce a representative sample of snowbank conditions and took into account ease of access and crew safety (Figure 4).

All monitoring locations were surveyed within a single day. Crews drove to the site locations by road. Data collection included temperature and weather conditions, number of days since last snow, photo numbers, comments, and measurement data (Appendix B). At each site, crews measured the snowbanks in five places, spread 5 m apart, and on both sides of the road. Measurements were taken across a 20 m tag line laid parallel to the snowbank with one end at the monitoring station location. Crews measures the snowbank in 5 m intervals along the tag line, using a measuring stick or tape. Snowbank height was measured from the road surface to the top of the snowbank. Measurements were recorded as “0 cm” in locations with no snowbank. The same process was repeated on the opposite side of the road.

Therefore, each monitoring site had 10 measurements (five on each side of the road) for a given survey. The multiple measurements were averaged into a single measurement for data summary, and all measurements were plotted as boxplots for each month to show the variability of measurements.

FIGURE 4 SNOWBANK MONITORING LOCATIONS



2.4.2.1 COMPILED SNOWBANK PROGRAM DATA

All four years (2020-2023) of snowbank monitoring data were compiled and assessed for broad-scale trends and consistency in snowbank management at Hope Bay site. The first monitoring period (January-March 2020) was excluded, because the monitoring locations changed after this period. The initial monitoring locations were chosen to occur at road signs (e.g., km markers), which accumulate snow drifts within 1-2 meters of the sign and artificially inflated the snowbank height measurements (see ERM 2021 for details). The compiled data represents all monitoring from October 2020 – December 2023.

2.4.3 RESULTS

2.4.3.1 2023 SNOWBANK MONITORING

Measured snowbank height averaged 12.6 cm across the survey period (Table 9; Figure 5; Photo 1). Several snowbank height measurements in 2023 included monitoring locations where roadside signage prevented blading and allowed snow to accumulate for small distances (see Photo 1). Therefore, some sites had sections with higher snowbank measurements, despite the surrounding areas maintaining very low banks; for example, the highest average snowbank height was 74.2 cm on February 28th at station SB3. Photo 1 shows the accumulation of snow near the roadside flag, and the accessible roadway immediately adjacent. This affect only occurred during the first monitoring period, from January – April, along the East side of the road.

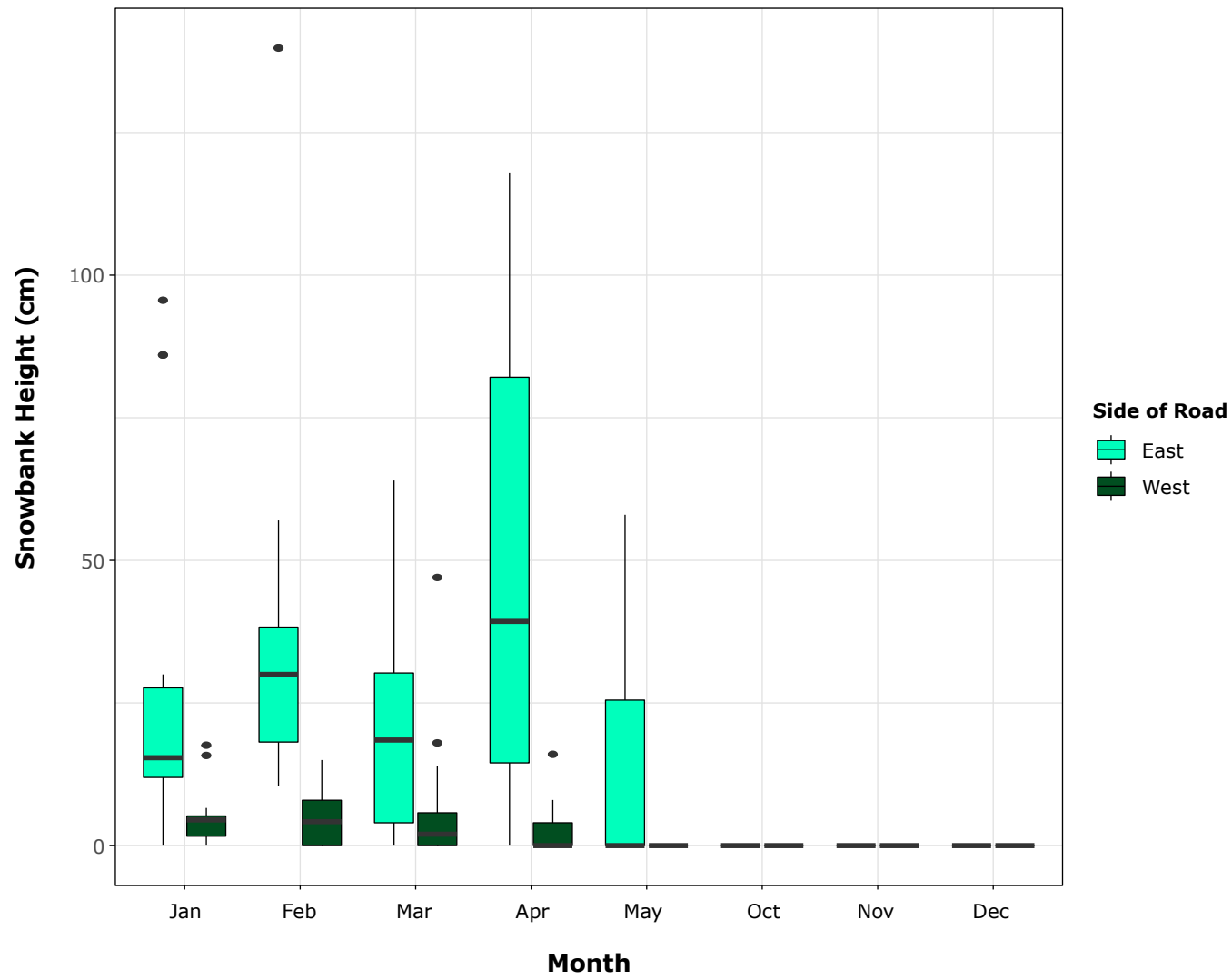
TABLE 9 2023 SNOWBANK HEIGHT SUMMARY

Location	Month								Total	
	Jan	Feb	Mar	Apr	May	Oct	Nov	Dec	Mean	St.Dev.
SB1	7.5	8.55	11	8.5	0	0	0	0	5.5	8.6
SB2	21.95	19.8	2.5	1	25.5	0	0	0	9.0	21.3
SB3	32.2	47.85	7.75	49	0	0	0	0	21.0	38.1
SB4	8.45	6.85	12.5	31.5	0	0	0	0	9.1	17.8
SB5	11.25	12.95	2.5	11.15	0	0	0	0	5.8	10.6
SB6	7.65	25.95	24.75	52.2	29	0	0	0	19.2	31.5
SB7	32.35	25.6	37.75	24	0	0	0	0	18.4	22.0
Mean	17.3	21.1	14.1	25.3	7.8	0	0	0	-	-
St. Dev	26.4	28.1	17.5	36.1	19.8	0	0	0	-	-

Notes:

All values are in cm. Values are averaged from multiple snowbank measurements on both sides of the road.

FIGURE 5 SNOWBANK HEIGHTS IN 2023



The measured variability in snowbank heights are indicated in Figure 5 by boxplots. The longer boxplots in January and in particular April indicate more variability among the measurements, with the bold horizontal line in the middle of each box indicating the median measurement for that month, and the outlier measurements from the distributions plotted as dots. Although some measurements in January, February, and April were recorded above 75 cm (Figure 5), site photo data were manually reviewed to confirm that higher snowbanks were isolated to small portions of the road, i.e., across a few meters (Photo 1).



Photo 1 Highest snowbanks measurements at Site SB3 indicating gentle slopes, February 28, 2023.

2.4.3.2 COMPILED SNOWBANK PROGRAM DATA

Snowbank heights were compiled across all years of monitoring from October 2020 – December 2023. The overall average snowbank height was 9.8 cm (Table 10). By year, snowbank height varied from 4.5 cm – 12.6 cm (Table 10). The average snowbank height for individual years were 4.5 cm (2020), 3.0 cm (2021), 12.4 cm (2022), and 12.6 cm (2023). The variability in snow height by month and year are indicated in Figure 6 boxplot; with the bold horizontal line in the middle of each box indicating the median measurement for that month, and the outlier measurements from the distributions plotted as dots. The range in average height of snowbanks from all years and months was 0.0 – 25.3 cm, indicating consistent management for wildlife passage across the AWR since 2020.

TABLE 10 SUMMARY OF SNOWBANK HEIGHT ACROSS MONITORING YEARS, 2020-2023

Year	Monitoring Period	Mean Height (cm)	St. Dev.
2020	Oct – Dec	4.5	6.9
2021	Jan - May	0.9	4.1
	Oct - Dec	5.8	11.2
	Compiled 2021	2.3	8.3

Year	Monitoring Period	Mean Height (cm)	St. Dev.
2022	Jan – Apr	14.1	19.7
	Oct - Dec	10.6	18.5
	Compiled 2022	12.4	19.2
2023	Jan – May	18.2	34.5
	Oct- Dec	0.0	0.0
	Compiled 2023	12.6	29.9
All Years Compiled		9.6	22.5

2.4.4 DISCUSSION

Snowbank heights along the Windy All Weather Road (AWR) were monitored monthly during winter months (January to May and October to December 2023). Monitoring locations were consistent with sites permanently established in October 2020.

Overall, snowbanks along the AWR were measured at an average of 12.6 cm height. Although some snowbank measurements exceeded 75 cm, photos indicate that banks were bladed back from the roadway and were at low inclines rather than steep banks (Photo 1). Additionally, areas with higher snowbanks were isolated to small portions of the road, i.e., across a few meters (Photo 1). These areas would therefore not pose a crossing barrier to caribou or other wildlife at the roadway.

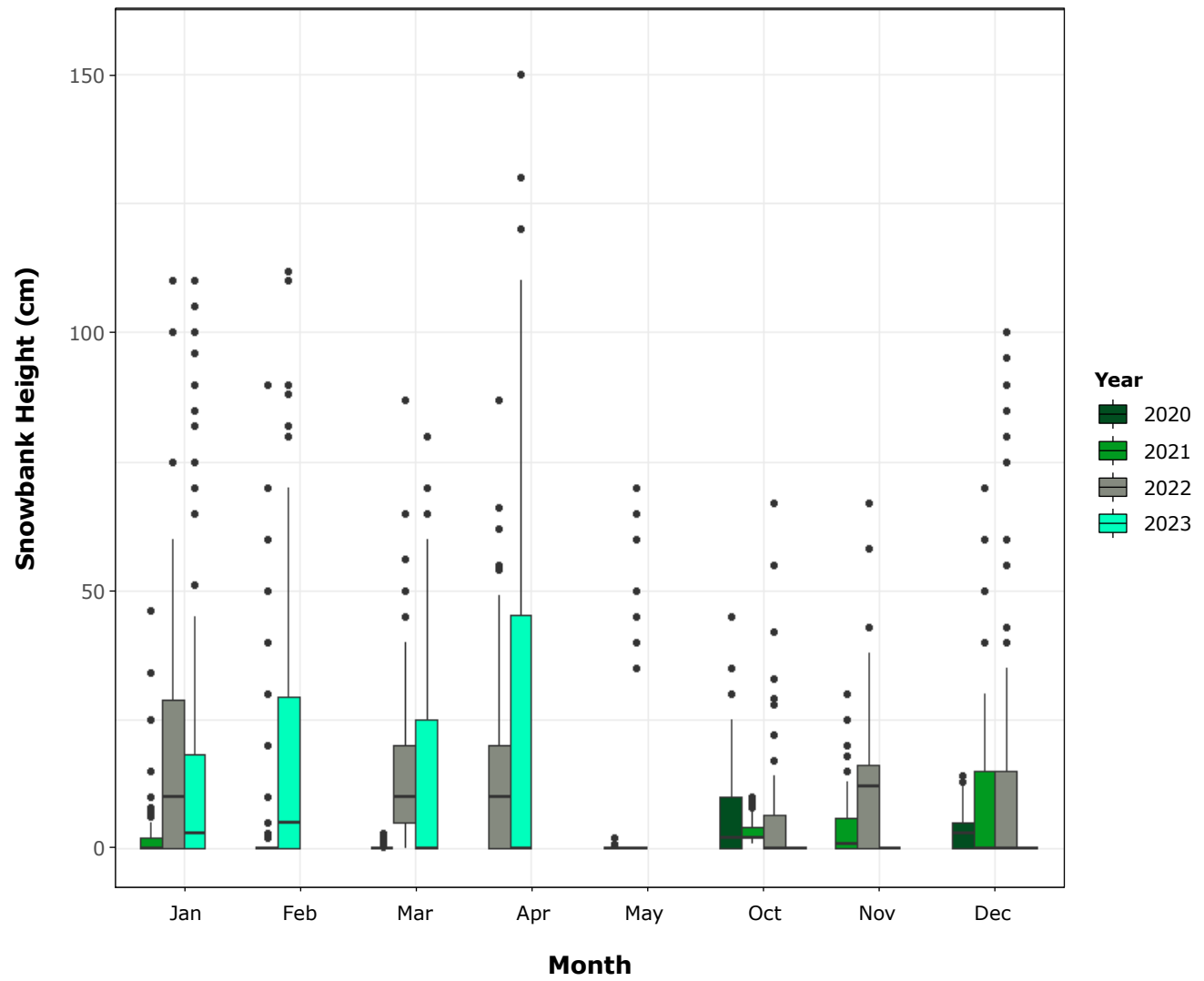
The FEIS did not predict or establish measurement numbers for snowbank height. However, a caribou workshop for Elders and land users held as part of the FEIS assessment included road clearing and snowbank observations, after which the group concluded that snowbanks of “several cm” would not pose a barrier to caribou crossing roads (FEIS Vol. 4, Section 9.8.3.3; TMAC Resources 2017).

2.4.4.1 COMPILED SNOWBANK PROGRAM DATA

The snowbank height monitoring program was implemented as per commitment #GN-49 in Project Certificate No. 009. The commitment states that the snowbank monitoring program “will continue until operational snow management is characterized”.

Snowbank heights were summarized across years for the duration of standardized snowbank monitoring efforts (October 2020 through December 2023; Figure 6; Table 10). The average snowbank height across all years and months was 9.8 cm, and the range in average height was 0.0 – 18.2 cm across the monitoring periods (Oct – Dec and Jan – May) for all years of snowbank monitoring, 2020 through 2023. Often for a given monitoring event, snowbank heights are near 0 cm at all locations. The greatest variability in snowbank heights is due to roadside signage and poles, which create small areas of banks where the bladers cannot access. However, these higher banks are consistently recorded with photo data as only lasting a few meters along the road, and are often only present on one side of the road at a time. Taken as a whole, these results indicate that snowbank height has been consistently well managed for wildlife passage along the AWR across all years of monitoring.

FIGURE 6 SNOWBANK HEIGHT 2020-2023



Agnico Eagle proposes to discontinue the formal monthly snowbank height monitoring program in favour of passive incidental monitoring. Passive monitoring would be in the form of incidental reporting from site employees if snowbanks are seen higher than 20 cm and longer than 3 m. Incidental reporting would go to the Environment department for follow-up management. Incidental reports of snowbank heights and follow-up management actions will be recorded and reported in the annual WMMP compliance report. This update in the WMMP program will be included in an updated 2024 WMMP Plan, and discussed at the first IEAC meeting in 2024 prior to changes being implemented.

2.5 NOISE MONITORING

Noise monitoring during blasting may be conducted to refine the setback distances required for caribou presence near a blast, which was set at 2.8 km based on noise modelling conducted in the FEIS (NIRB 2018). The 2.8 km was deemed as extremely conservative as an estimate of the distance where a blast may produce 96 dB Lpeak noise with potential to produce a freeze or startle response in caribou. However, testing for the actual distance at which 96 dB Lpeak noise is produced will provide a more precise estimate of a setback distance from caribou during blasts. However, this monitoring is not required as a compliance activity.

A standard operating procedure (SOP) for noise measurement during quarry blasts has been in development and testing since 2018. The current draft of this SOP is provided in Appendix C. Noise monitoring testing was conducted on three occurrences of quarry blasting, October 5, 14 and 16, in 2023. Tests were conducted using a SoundAdvisor™ Model 831C.

On the dates of the blasting, the Lpeak that was recorded exceeded the predicted 96 dB. All three blasts occurred at 17:00 on each of the days. On October 5th, the Lpeak (111 dB) occurred at 16:58, it was noted on the field data sheet for that date the blast was not audible. On October 14th, the Lpeak (117 dB) occurred at 17:01. On October 16th, the Lpeak (120 dB) occurred at 17:00, and in the data sheet the blast noise was noted as audible. Based on the notes written about the conditions near the monitoring location and timings of the Lpeak recordings, the Lpeak recordings could have been from other noise sources noted at the time of the blasts (talking, footsteps, vehicle movement, doors closing, noise from the workshop, backup alarms, ravens and wind gusting). The location of the monitor on October 5th also had camp buildings between it and the blast location. Due to the data outputs from the noise monitoring device, it is not possible to tell the specific noise level at the time of each blast.

The 2023 results indicate that equipment is functional but additional work is required to obtain results sufficient for testing the sound level at the exact time of the blasts.

3. VEC AND OTHER SPECIES MONITORING AND MITIGATION

3.1 OBJECTIVES

The objective of this section is to test the FEIS predictions of Project effects on VECs (TMAC Resources 2017). The wildlife VECs identified in the FEIS included caribou, muskox, grizzly bear, wolverine, upland breeding birds, waterbirds, and raptors. Nest predators are not considered a VEC but are monitored in the Project area during the bird breeding season (May 15 – August 15) to detect possible attraction to the Project and indirect impact on upland breeding birds. Marine mammals and plants are also included in this section for conformity with Project Certificate No. 009 (NIRB 2018) commitments.

3.2 METHODS COMMON TO MULTIPLE VECs

3.2.1 WILDLIFE CAMERA MONITORING

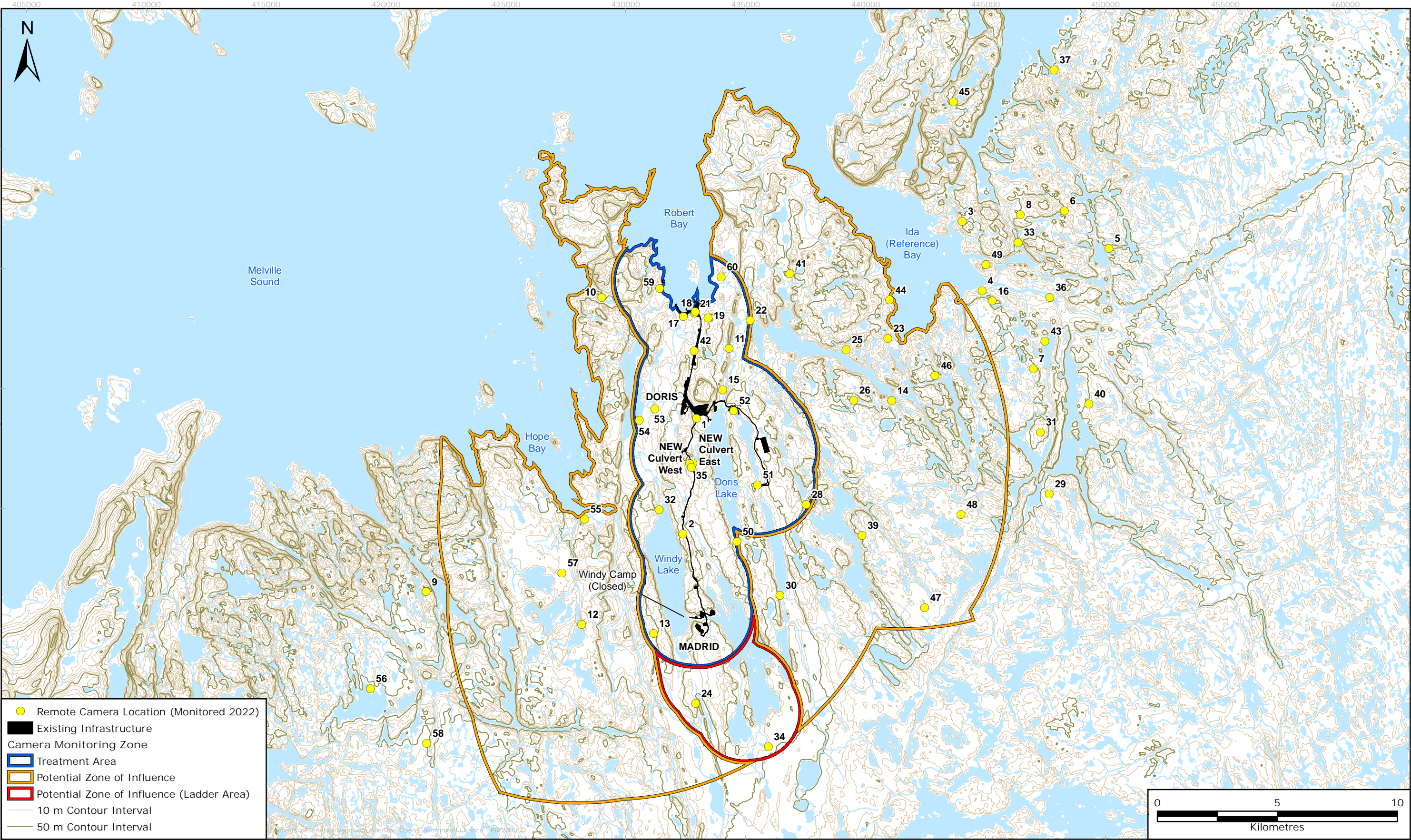
A total of 60 Reconyx PC800 HyperFire Professional wildlife cameras are being used to monitor caribou, muskox, grizzly bear, wolverine, nest predators, and other wildlife in the Doris and Madrid areas. Cameras are currently placed in three primary zones, including a Treatment zone within 2 km of the Project, a ZOI zone from 2 to 10 km from the Project, and a Control zone beyond 10 km from the Project (Figure 7). There is also the Ladder area which is part of the ZOI zone and will be included in the Treatment zone once Madrid is developed. Some cameras also have site specific monitoring objectives and monitor specific Project facilities.

Camera monitoring has been conducted at the Project for over 12 years, with cameras first installed in September 2012. The camera program study design was revised in June 2016 in collaboration with representatives of the KIA and the GN at a workshop held in Vancouver, BC, following comments from these parties on the initial 2012 study design. The study design was updated to have three experimental areas; Treatment, ZOI, and Control zones. The camera study design was evaluated in 2016 for balance in terms of distances to water features for cameras in all zones (Treatment, ZOI, and Control) as well as spatial distance among cameras (ERM 2017b Appendix A2). Two additional wildlife cameras were deployed near a culvert on Windy Road to investigate potential caribou use (as an alternative road crossing) in August 2022.

Wildlife events (and the number of individuals recorded on events) were corrected for a monthly darkness factor supplied by the KIA (Table A-5; KIA 2017). This correction is used to make events and individuals recorded during the months with shorter day length more comparable to events recorded in the summer with long day length, as the reported detection radius of the Reconyx™ PC800 HyperFire camera is smaller in the dark relative to the daylight. This correction factor was used when qualitatively comparing between events and individuals recorded between cameras in the three monitoring zones.

Further details on methodology for this monitoring program, details on study design (including descriptions of cameras with site specific monitoring objectives) and data analyses, can be found in Appendix A. Further details on camera locations and effort, as well as detection event data, can be found in Appendices D to F.

FIGURE 7 WILDLIFE CAMERA LOCATIONS, DORIS AND MADRID AREAS, JUNE 2016 TO SEPTEMBER 2023



Twenty-six wildlife cameras were deployed in the Boston camera study area in September 2017. An additional three cameras were deployed in June of 2018. Five cameras were deployed in the Treatment zone, five in the ZOI, five in the Control zone, and 14 along the proposed AWR route (Figure 7). The data from these cameras are currently considered baseline data.

The Boston camera program (Figure 8) will be discontinued in spring 2024. There is currently no planned construction in the Boston area, so no monitoring will be required. The cameras will be redeployed prior to the onset of any construction in the Boston area. Summaries of the current Boston baseline data from September 2022 to September 2023 are provided in Section 3.3 below.

3.2.2 WILDLIFE INTERACTIONS, INCIDENTS, AND MORTALITIES

Wildlife interactions, incidents, and mortalities are recorded as part of the Wildlife Sightings/Reporting program by Agnico Eagle and are reported to the NIRB.

An **interaction** occurs when wildlife interacts with people or Project infrastructure (e.g., a bear being observed from a road); deterrents may be used, but direct harm, injury, damage, or wildlife mortality does not take place.

An **incident** is an interaction where there is active deterrent and direct harm, injury, damage, or wildlife mortality occurs.

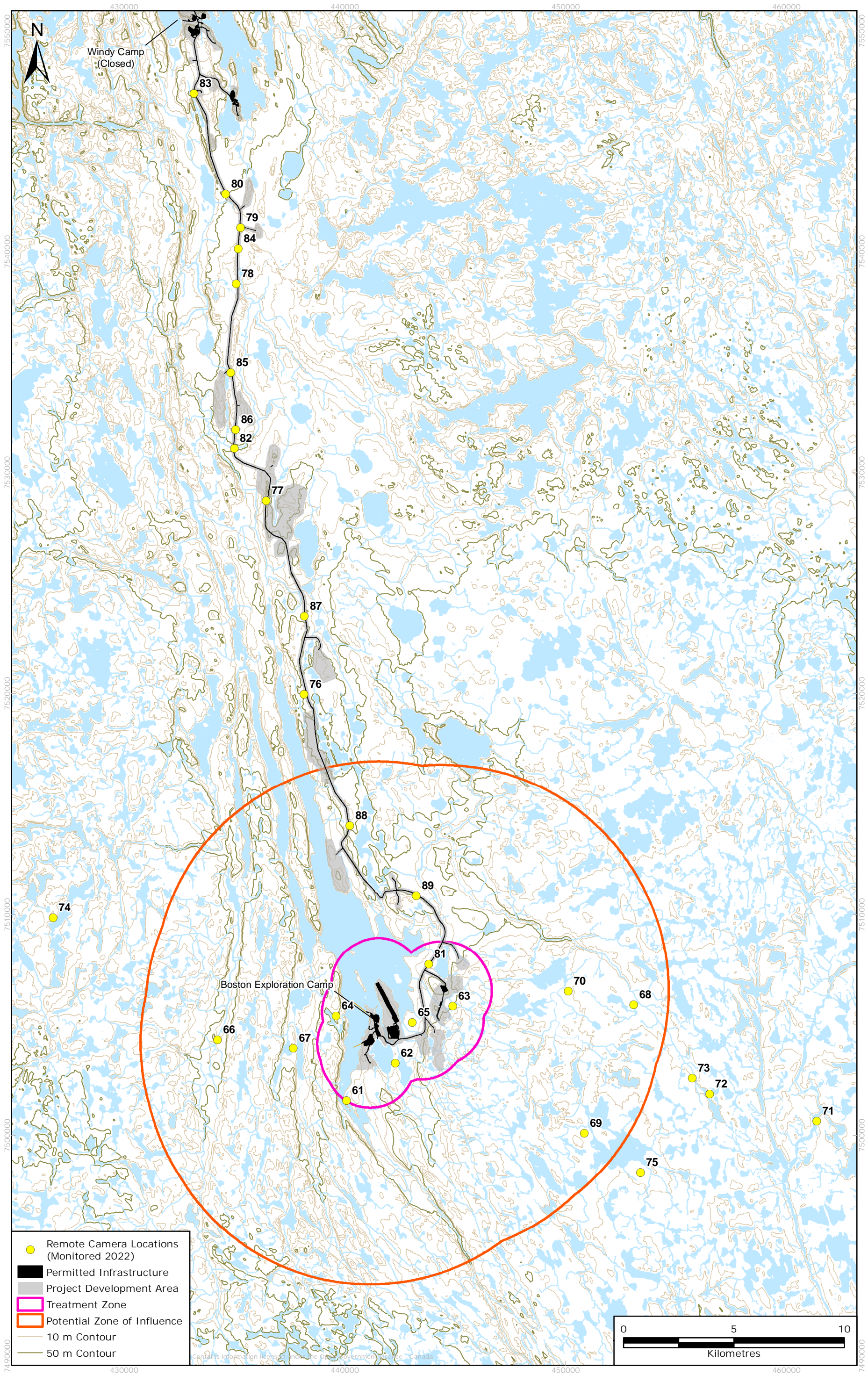
Various processes are in place and are undertaken by Agnico Eagle to mitigate for interactions, incidents, and mortalities. Information about interactions, incidents, and mortalities recorded in the 2023 calendar year are included with the relevant section for each VEC (Sections 3.4 to 3.11); data are summarized in Appendix G. Further details on methodology for this monitoring program, including lists of on-site mitigation and monitoring undertaken by Agnico Eagle, can be found in Appendix A.

3.2.3 INCIDENTAL WILDLIFE OBSERVATIONS

Incidental observations of wildlife are collected through various sources, which include the Agnico Eagle wildlife sightings log (as part of the Wildlife Sightings/Reporting process), and by environment personnel including wildlife biologists (Appendices H and I). Incidental observations collected by wildlife biologists have been collected since 1996 and the wildlife sightings log has been maintained since 2009 (Appendix J). Incidental observations recorded in the 2023 calendar year are summarized in the relevant VEC section.

Incidental wildlife observations are summarized and qualitative temporal trends are investigated. Agnico Eagle wildlife sightings log data are corrected for the average number of employees and contractors on site as a measure of standardization (Appendix K). However, incidental wildlife data cannot be used more quantitatively (e.g., to estimate population sizes or density). Further details on methodology for this monitoring program, including a full list of limitations on incidental data, can be found in Appendix A.

FIGURE 8 WILDLIFE CAMERA LOCATIONS, BOSTON PROJECT, SEPTEMBER 2018 TO SEPTEMBER 2023



3.2.4 SPECIES OF CONSERVATION CONCERN

Annual observations of species of conservation concern (i.e., species listed federally or territorially in Nunavut), are summarized in the relevant section of each VEC. Species of conservation concern are assessed through the use of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), Species at Risk Act (SARA) and the report series *Wild Species: The General Status of Species in Canada* to identify the concern federally or territorially in Nunavut. The species of conservation concern at the Project are listed in Table 11. In 2023 these data were summarized from wildlife camera data, the incidental wildlife sightings log, and the interactions, incidents, and mortalities program as described in Sections 3.2.1 to 3.2.3. Records of species of conservation concern observed at the Project since 1996 are reported in Appendix J.

3.3 RESULTS COMMON TO MULTIPLE VECs

3.3.1 CAMERA EFFORT

Camera effort is determined to correct for periods when cameras are knocked down or obscured by snow/fog. Effort is summarized by the number of functional days for each camera in each month from September 2022 to September 2023.

The range and the average number of camera days (\pm standard deviation) for available cameras are presented in Table 12. The total number of camera days observed for individual cameras is provided in Appendix D, as well as summaries of the average camera days (\pm standard deviation) by individual camera.

Consistent with previous years of the camera program, effort was low during winter from December through February due to snow occluding the camera lenses, resulting in loss of effort for most days (Table 12). Effort was generally consistent across the three zones, with slightly higher effort in winter in the Treatment and ZOI zones. This typically occurs because some Treatment zone cameras are easily accessible from site facilities or roads, so the cameras can be cleared of snow more frequently.

Based on 2019 data, it was noted that an increasing number of cameras were knocked down each period, typically by grizzly bears. This issue was discussed with the IEAC in 2020 and 2021 along with plans to improve the camera tripod infrastructure to reduce the instances of grizzly bear damage. In 2023, four camera tripods were repaired and rebuilt as needed (based on visual assessment) during camera checks. Of the 60 Doris cameras, seven were found knocked down during camera checks in September 2023; this is a 12% knock-down rate, lower than the 30% knock-down rate noted in 2019. An additional two stands were found broken and subsequently repaired (Table 13). Camera tripod repairs will continue on an as-needed basis.

TABLE 11 SPECIES OF CONSERVATION CONCERN KNOWN TO OCCUR IN THE HOPE BAY STUDY AREA

Species Group	Common Name	Species Name	Federal (General Status)	Nunavut (General Status)	SARA	COSEWIC	Recorded in 2023?
Mammals	Caribou (Dolphin and Union)	<i>Rangifer tarandus</i>	Vulnerable (N3N4)	Vulnerable (S3S4)	Special Concern	Endangered	Y
	Caribou (Beverly/ Ahiak)	<i>Rangifer tarandus</i>	Vulnerable (N3N4)	Vulnerable (S3S4)	N/A	Threatened	Y
	Grizzly Bear	<i>Ursus arctos</i>	Vulnerable (N3)	Vulnerable (S3)	Special Concern	Special Concern	Y
	Wolverine	<i>Gulo gulo</i>	Vulnerable (N3N4)	Vulnerable (S3)	Special Concern	Special Concern	Y
Upland Birds	American Golden-plover	<i>Pluvialis dominica</i>	Vulnerable (N3N4B, N5M)	Vulnerable (S3S4B)	N/A	N/A	N
	Common Eider	<i>Somateria mollissima</i>	Secure (N5B, N5N)	Vulnerable (S3B, S3N)	N/A	N/A	N
	Harris's Sparrow	<i>Zonotrichia querula</i>	Apparently Secure (N4B, NUN, N5M)	Apparently Secure (S4B)	Special Concern	Special Concern	N
	Hoary Redpoll	<i>Acanthis hornemanni</i>	Apparently Secure (N4N5B, N5N)	Vulnerable (S3)	N/A	N/A	N
	King Eider	<i>Somateria spectabilis</i>	Apparently Secure (N4N5B, NUN, N5M)	Vulnerable (S3S4B,SUN)	N/A	N/A	N
	Red-necked Phalarope	<i>Phalaropus lobatus</i>	Apparently Secure (N4B, N3N4N)	Vulnerable (S3B)	Special Concern	Special Concern	N

Species Group	Common Name	Species Name	Federal (General Status)	Nunavut (General Status)	SARA	COSEWIC	Recorded in 2023?
Upland Birds (cont'd)	Semipalmated Sandpiper	<i>Calidris pusilla</i>	Apparently Secure (N3N5B, N4M)	Vulnerable (S3B)	N/A	N/A	N
	Snow Bunting	<i>Plectrophenax nivalis</i>	Secure (N5B, N5N)	Vulnerable (S3S4B)	N/A	N/A	Y
Raptors	Golden Eagle	<i>Aquila chrysaetos</i>	Apparently Secure (N4N5B, N4N5N)	Vulnerable (S3B)	N/A	Not at Risk	Y
	Short-eared Owl	<i>Asio flammeus</i>	Vulnerable (N3N4B, NUN, N4M)	Vulnerable (S3B)	Special Concern	Threatened	N
Marine Mammals	Beluga (Eastern High Arctic-Baffin)	<i>Delphinapterus leucas</i>	Secure (N5B, N4N)	Not Present	Under Consideration	Special Concern	N
	Bowhead Whale (Bering-Chukchi-Beaufort)	<i>Balaena mysticetus</i>	Vulnerable (N3B, N3N)	Not Present	Special Concern	Special Concern	N
	Bowhead Whale (Eastern Canada- West Greenland)	<i>Balaena mysticetus</i>	Vulnerable (N3B, N3N)	Not Present	Under Consideration	Special Concern	N
	Killer Whale	<i>Orcinus orca</i>	Vulnerable (N3B, N3N, NNRM)	Not Present	Under Consideration	Special Concern	N
	Narwhal	<i>Monodon monoceros</i>	Vulnerable (N3B)	Not Present	Under Consideration	Special Concern	N
	Ringed Seal	<i>Pusa hispida</i>	Apparently Secure (N4N5B, N5N)	Not Present	N/A	Special Concern	N
	Walrus (High Arctic)	<i>Odobenus rosmarus</i>	Vulnerable (N3)	Vulnerable (S3)	Under Consideration	Special Concern	N

TABLE 12 SUMMARY OF CAMERA EFFORT RECORDED AT TREATMENT, ZOI, AND CONTROL CAMERAS BY MONTH, SEPTEMBER 2022 TO SEPTEMBER 2023

Year	Month	Treatment					ZOI					Control				
		No. Cameras ¹		Camera Days			No. Cameras ¹		Camera Days			No. Cameras ¹		Camera Days		
		Active	Unobscured	Avg. ²	± SD ²	Range	Active	Unobscured	Avg. ²	± SD ²	Range	Active	Unobscured	Avg. ²	± SD ²	Range
2022	Sept	21	20	24.05	9.50	0-30	17	17	24.17	9.91	1-30	19	18	16.89	11.67	0-30
	Oct	21	18	23.29	10.90	0-31	17	17	26.51	5.36	16-31	19	14	13.68	12.32	0-31
	Nov	21	18	18.57	8.87	0-30	17	16	19.94	10.29	0-30	19	6	6.95	11.20	0-30
	Dec	21	10	2.67	3.90	0-13	17	7	2.71	5.86	0-23	18	3	1.55	5.44	0-23
2023	Jan	21	12	5.05	6.16	0-20	17	8	3.88	7.37	0-30	18	3	1.11	2.56	0-7
	Feb	21	10	4.57	7.57	0-27	17	8	6.06	9.07	0-28	18	3	2.39	5.75	0-20
	Mar	21	15	17.76	13.96	0-31	17	14	21.94	13.05	0-31	18	7	8.00	12.50	0-31
	Apr	21	13	17.86	14.54	0-30	17	15	24.47	10.36	0-30	18	12	14.72	12.44	0-30
	May	21	18	19.19	14.48	0-31	17	16	21.88	13.07	0-31	18	18	19.17	11.16	3-31
	Jun	21	18	20.00	11.41	0-30	17	16	21.88	9.09	0-30	18	18	24.11	6.08	13-30
	Jul	21	16	16.62	11.96	0-31	17	15	18.88	10.30	0-31	18	17	20.89	8.72	0-31
	Aug	21	19	18.19	11.48	0-31	17	13	17.65	11.87	0-31	18	17	19.11	11.21	0-31
	Sep	21	2	0.10	0.30	0-1	17	5	0.29	0.47	0-1	18	4	1.22	4.45	0-19

Notes:

¹ Represents the number of cameras within a month that were set out and recorded images (active) and were not knocked over or obscured by snow for the entire month.

² Averages and Standard Deviation (SD) are based on the number of cameras that are active in a given month.



CLIENT: Agnico Eagle Mines Limited

CLIENT: Agnico Eagle Mines Limited

PROJECT NO: 0685812-03

DATE: 23 April 2024

VERSION: C.1

Page 31

TABLE 13 **CAMERA TRIPOD REPAIRS, DURING 2023 CAMERA CHECKS**

Camera Number	Repair Notes
June 2023	
CM06	Found Broken and repaired
CM12	Partially broken but working
September 2023	
CM36	Found broken and repaired
CM41	Found broken and repaired

3.3.2 BASELINE RESULTS OF BOSTON CAMERA PROGRAM

Boston cameras were checked in September 2022 and June 2023. A total of 23 cameras were properly functioning after the fall 2022 check, and 16 cameras were functional at the June 2023 check (Table 14; Appendix L). Boston camera event and effort data are recorded in Appendix L.

Consistent with the Doris and Madrid camera program, camera effort was lowest in winter months, particularly from December 2022-March 2023 (Table 14). Across all VECs, caribou were recorded the most frequently in the Boston area (Appendix L). Caribou activity was highest in spring and summer, with the most active month being June and July 2023 during which 72 total caribou events were recorded (Appendix L). Grizzly bear were recorded in low numbers in late spring through early fall with 21 events in May 2023 through August 2023 (Table 14; Photo 2). Four new wolverine events were recorded, including one in September 2022, two in March 2023, and one in May 2023. Only four other wolverine events have been recorded since the beginning of the Boston baseline monitoring in 2018. Muskox were recorded for the third time on Boston cameras, with two events recorded in July 2023 (Table 14).

The baseline data collection will be discontinued in Spring 2024. The baseline program will resume once construction is planned in the Boston area; in-depth analyses of camera detections of each VEC in the Boston area will be conducted once data have been collected during both baseline and construction phases.

3.3.3 NON-VEC WILDLIFE SIGHTINGS LOG AND INCIDENTAL OBSERVATIONS

Moose (*Alces alces*) were sighted in the Hope Bay area for the first time in 2021, with a single moose sighting recorded in 2021. Between September 2022 and September 2023, six moose were recorded in four separate events by Boston cameras. These events occurred in September 2022 and again June 2023 through October 2023 (Photo 2). An additional three moose events were captured on Doris cameras in this time period including two events with two adult moose each on June 25th, 2022 and one lone adult moose on July 11th, 2023.

In 2023, three incidental sightings of five moose were recorded in the wildlife sightings log in February, March and September, a single sighting in each month. Two of the sightings occurred in the Boston area and the other along the Windy Road.

TABLE 14 CAMERA EFFORT AND VEC SPECIES SUMMARIES FOR BOSTON CAMERAS SEPTEMBER 2022 – SEPTEMBER 2023

Year	Month	Camera Effort ¹	Caribou			Grizzly Bear			Wolverine			Muskox		
			Cameras with Events ²	No. Events	No. Images ²	Cameras with Events ²	No. Events	No. Images ²	Cameras with Events ²	No. Events	No. Images ²	Cameras with Events ²	No. Events	No. Images ²
2022	Sept	531 (21)	5	17	347	-	-	-	1	1	100	-	-	-
	Oct	572 (27)	2	3	21	-	-	-	-	-	-	-	-	-
	Nov	306 (16)	-	-	-	-	-	-	-	-	-	-	-	-
	Dec	192 (9)	-	-	-	-	-	-	-	-	-	-	-	-
2023	Jan	221 (11)	-	-	-	-	-	-	-	-	-	-	-	-
	Feb	153 (7)	-	-	-	-	-	-	-	-	-	-	-	-
	Mar	362 (17)	1	1	71	-	-	-	2	2	6	-	-	-
	Apr	549 (21)	-	-	-	-	-	-	-	-	-	-	-	-
	May	552 (19)	1	1	26	2	4	95	1	1	10	-	-	-
	Jun	587 (28)	13	17	344	2	2	43	-	-	-	-	-	-
	Jul	773 (27)	14	55	355	8	10	221	-	-	-	1	2	354
	Aug	659 (23)	5	8	206	5	5	49	-	-	-	-	-	-
	Sep	146 (18)	-	-	-	-	-	-	-	-	-	-	-	-
Total³		-	64	149	2522	24	30	568	5	14	137	3	356	96

Notes:

¹ Camera effort is presented as the total number of camera days by month; number of cameras with at least one camera day (i.e., unobscured) presented in parenthesis.

² Number of images represents the total number of images that are recorded from cameras that are upright and facing the detection area; images recorded when cameras are knocked over are not included.

³ Total number of cameras with events represents the number of unique cameras with events across the entire monitoring period. Total number of events is the cumulative total across the entire monitoring period.



CLIENT: Agnico Eagle Mines Limited

CLIENT: Agnico Eagle Mines Limited

PROJECT NO: 0685812-03

DATE: 23 April 2024

VERSION: C.1



Photo 2 Moose recorded on Boston camera 82. October 13, 2023.

3.4 CARIBOU

Two caribou herds use habitat near the Project area. The Project overlaps with the winter range of the Dolphin and Union herd and is near the summer, fall, and winter range of the Beverly/Ahiak herd.

The Dolphin and Union herd winters on the mainland near the coast, both east and west of Bathurst Inlet, and travels on the sea ice in spring to Victoria Island to calve and spend the summer and fall (Poole et al. 2010). They return across the sea ice following freeze-up in November. The Dolphin and Union herd are listed as Special Concern under Schedule 1 of the *Species at Risk Act* (SARA) and as Endangered by the Committee on the Status of Wildlife in Canada (COSEWIC; Government of Canada 2021b). Territorially, caribou are a vulnerable species (S3S4) suggesting they are at moderate risk of extirpation (CESCC 2022).

The Beverly/Ahiak herd calves to the east of the Project area in the Queen Maude Gulf Bird Sanctuary and the herd then spreads south and west from the Queen Maude Gulf for the late summer and fall (Gunn, Fournier, and Nishi 2000; Banci and Spicker 2016). The Beverly/Ahiak herd are barren ground caribou assessed as Threatened by COSEWIC (Government of Canada 2021b) but not yet listed under SARA. Caribou of the Beverly/Ahiak herd winter above the tree-line on the tundra and also below the tree-line in the Northwest Territories and northern Saskatchewan.

Currently there is some disagreement over whether Beverly/Ahiak herd should be referred to separately or together. The Government of Nunavut surveys the two herds separately and refers to them as two sub-populations in their population survey reports rather than a distinct herd or separate herds. This document refers to these caribou either separately (as sub-populations)

or together as the Beverly/Ahiak herd where relevant. Calving areas for these two sub-populations are calculated separately, in response to a request from the Government of Nunavut on a previous Report.

Traditional Knowledge and land users from the IEAC indicate that Dolphin and Union caribou now cross the sea-ice to the west of Cambridge Bay, near Wellington Bay. IEAC members also indicated that Dolphin and Union caribou are no longer wintering on the northern part of the Kent peninsula. Other than these shifts, which began before 2019, the Dolphin and Union caribou have maintained a consistent usage of the area surrounding the Hope Bay Project area for over 20 years, with some animals transiting the area during spring and fall migration and low numbers of caribou in the area during winter.

Agnico Eagle and the GN have signed a new Memorandum of Understanding (MOU) for collaborative monitoring for Dolphin and Union caribou as of March 2023, after the previous MOU with TMAC expired in 2019. Agnico Eagle has donated fuel for caribou work in 2020, directly donated to the muskox program in 2022, and provided in-kind support by shipping fuel and lumber to Hope Bay in 2023 to assist with the GN's DNA Hair Snagging barren Ground Grizzly Bear population survey.

3.4.1 FEIS PREDICTIONS

The Madrid-Boston FEIS predictions included not significant and low magnitude residual effects of disturbance and disruption of movement on caribou at a geographical extent of the RSA (TMAC Resources Inc. 2017).

3.4.2 METHODS

Monitoring for caribou is conducted using multiple approaches. The first approach is through analysis of collar data during specific seasonal periods for the two herds that use habitat near the Project. This approach is for the purpose of monitoring for shifts in the calving range for the Beverly/Ahiak herd, which may trigger additional mitigation measures for caribou should the calving grounds shift towards or overlap the Project. For Dolphin and Union caribou, winter range analyses are conducted to examine the amount of overlap between the Project and this seasonal range, following a request from the KIA to do so (KIA 2017). These collar data are analysed using kernel density analyses (ERM 2016b).

The second approach is using wildlife cameras (see general camera Methods in Section 3.2.1). Camera data are statistically analysed to investigate for potential ZOI-type effects on caribou.

Wildlife cameras are also used to better understand seasonal use of the Project area split by the Beverly/Ahiak and Dolphin and Union herds. Caribou camera detections were identified by herd for the first time in 2023, based on a request by the IEAC to understand potential changes in the presence of Dolphin Union caribou on the mainland year-round.

Height of Land (HOL) protocols were implemented for the first time in 2023 as a monitoring method for caribou. This monitoring protocol is triggered based on reported caribou activity on site. However, the monitoring was not triggered in 2023.

Lastly, the Wildlife Sightings/Reporting program documents caribou reported by personnel on site, including environmental technicians and wildlife biologists; these data are summarized and qualitatively assessed for trends (see Methods Sections 3.2.2, 3.2.3).

3.4.2.1 ANALYSIS OF CARIBOU COLLAR DATA

An analysis of the calving range of the Beverly and Ahiak sub-populations was performed using caribou collar data supplied by the Government of Northwest Territories (GNWT) Department of Environment and Natural Resources (ENR) for both the current year (2023) as well a compilation of historical years (2001 to 2022).

For the Dolphin and Union herd, an analysis of the winter range was performed using caribou collar data supplied by the Government of Nunavut (GN) Department of Environment (DOE) for the current year (December 8, 2022 to April 16, 2023) as well as a compilation of years (2001-2022). This analysis has resumed in 2023 after data were unavailable for the 2019-2022 reports. The data were compiled to provide a perspective on the overlap between the winter range and the Study Area in the most recent winter as well as the degree of overlap relative to the larger extent of the winter range by combining all available data. This analysis was guided by requests made by the KIA in 2017 (KIA 2017). Overlap in the winter grounds of the Dolphin and Union caribou herd with the Program Study Area/Project activities does not trigger any additional mitigation for caribou, as there are mitigation measures for caribou employed year-round (Agnico Eagle 2023).

The kernel density and utilization distribution (UD) methods assess caribou use of space through a bivariate probability function. This analysis generates UD surface for calving ranges for each sub-population. Kernel density estimates were created and the 50% UD, which represents the "core" range, as well as the 95% UD representing the overall range are presented. Further details on the methodology for this monitoring program can be found in Appendix A.

3.4.2.2 ANALYSIS OF WILDLIFE CAMERA DATA

An analysis was carried out to investigate differences between the number of caribou events at cameras located in the Treatment zone (< 2 km from existing infrastructure) and in the Control zone (> 10 km from existing infrastructure). There were a sufficient number of events per month to permit statistical analyses of the predicted number of events recorded rather than predicted occupancy (probability of at least one event per month). In the final model the number of events was log-transformed, and the model used a quasi-poisson distribution. A secondary analysis was completed to assess a potential ZOI should a significant difference in the number of events between Treatment zone and Control zone cameras be detected. The models accounted for spatiotemporal variation in the number of events by including smoothed terms for Northing and Easting as well as Month, and random variables for Camera ID and Year where these terms improved model fit to the data. In previous years, caribou modelling was conducted by camera occupancy (i.e., a binomial distribution) due to insufficient data for number of event models. However, with additional years of data and ongoing caribou occurrence across cameras, models have been updated to reflect the more robust abundance modelling.

Camera data were corrected for daily effort, where the camera was considered to have no effort during periods of more than 24 hours with snow obscuring the camera or if the camera was

knocked over. Camera effort in December and January was deemed to be too low across cameras for inclusion in the analysis, so these months were removed from the regression analyses in all years. Additionally, to account for variable effort per camera, data were removed for individual cameras during months with effort less than seven days. A sensitivity analysis conducted in 2017 did not indicate any difference when using lower effort cut points (i.e., effort ≥ 4 days or ≥ 1 day per month) because few caribou events were recorded on cameras when effort was less than seven days (ERM 2018b).

Further details on methodology for this monitoring program can be found in Appendix A and in Methods Section 3.2. Datasets of 2023 camera effort and detection events are presented in Appendices D to F. Compiled datasets of caribou detection events from June 2016 to September 2023 are presented in Appendix M.

Caribou Herd Identification

Caribou camera detections were classified by herd, which was determined based on the Project's Caribou ID Guide (Appendix AA) developed via a caribou ID workshop with the IEAC. Caribou from each herd in the Project area have distinct physical features and can be identified to herd level with clear photos of the whole animal. Identifications were made considering all consecutive images taken of each caribou event. Classification of caribou herd was conducted by ERM staff trained to identify Beverly/Ahiak and Dolphin and Union herd characteristics. Any caribou detections with uncertain herd characteristics will be provided to the IEAC for additional input.

3.4.2.3 HEIGHT OF LAND

HOL surveys were requested by the IEAC as a traditional Inuit way to identify caribou from a distance; surveyors stand at high points and search for caribou across the landscape. Surveys are triggered based on reported caribou sightings. If 25 or more individual caribou are observed within 5 km of Project infrastructure over a 24-hour time period, HOL surveys are completed for a one-week period (Appendix Z). Surveys are preferentially completed by an Inuit Monitor chosen by the Cambridge Bay Hunters and Trappers Organization. The monitoring SOP was developed during several workshops with the IEAC in 2021-2023, including determining the monitoring locations and conducting and onsite training in March 2023. The SOP was finalized in March 2023 and is provided in Appendix Z. However, caribou activity was never high enough to trigger monitoring in 2023.

3.4.3 RESULTS

3.4.3.1 CARIBOU COLLAR DATA

Calving Ground Locations

The results of the range analyses for the 2023 calving season show that the 50% UD of the Ahiak sub-population extends south of the long-term (2001 to 2022) 50% UD for the sub-population, with a region of overlap on the eastern side of the long-term 50% UD (Figure 9). The core calving range in 2023 occurs further south of the Queen Maud Gulf compared to the long-term range (Figure 9). The 95% UD for the Ahiak sub-population has contracted in 2023 but occurs primarily

within the boundaries of the long-term range from 2001 to 2022 (Figure 10). The 95% UD has expanded in recent years to overlap the long-term ranges of the Beverly herd. The long-term range of the Ahiaik sub-population also includes a portion northeast of the Queen Maud Gulf (Figure 10). Neither the 2023 core 50% nor the 95% UD for the Ahiaik sub-population overlap the Project Study Area.

For the Beverly sub-population, the 2023 calving season 50% UD expands further southeast than the long-term calving range (Figure 9). The 2023 50% UD shows extensive overlap between the Beverly and Ahiaik sub-populations (Figure 9). There is also a portion of the 2023 Beverly sub-population 50% UD that occurs to the west of the core range by roughly 120 km (Figure 9). The 2023 95% UD for the Beverly sub-population shows a broader south and eastern expansion outside of the long-term range, with extensive overlap in 2023 between the two sub-populations (Figure 10). Additionally, the long-term 95% Beverly UD shows some overlap with the Project Study Area, due to some westward presence of collared individuals in 2021 (Figure 10). The 2021 calving range was not consistent with previous years of analysis, however these changes do not appear to have carried into 2022 or 2023, given that no overlap with the Study Area is seen in either the 2022 or 2023 50% or 95% UDs (ERM, 2023a; Figures 9 and 10). Changes between years can represent relatively few females outside of the typical core calving range and does not necessarily indicate a permanent shift in the calving range.

Winter Range Locations

For the winter (December 8 to April 16) of 2022-2023 caribou collar data was available from 155 individuals belonging to the Dolphin Union herd. The long-term (2001-2022) 95% UD winter range of Dolphin and Union caribou is located across an area on both the east and west sides of Bathurst Inlet, with the winter range on the east side of Bathurst Inlet encompassing the Project site (Figure 11). In comparison, both the long-term and most recent 2022-2023 50% UDs are solely located on the westside of Bathurst Inlet (Figure 12). The 95% UD winter range based on 2001-2022 data included the entire Study Area while the 95% UD winter range for 2022-2023 did not overlap the Study Area and contracted to occur almost exclusively on the west side of Bathurst Inlet (Figure 12). An isolated area of 95% UD also occurred further north on Victoria Island in the 2023 winter season. The 50% UD core area for winter 2022-2023 primarily overlapped the 50% UD core area calculated from 2001-2022 data (Figure 11). The 95% UD range for winter 2022-2023 was mostly contained within the 95% UD range from 2001-2022 data but additionally expanded northwest of the main range on the Coronation Gulf (Figure 12).

The extent of the winter range for 2022-2023 is consistent with areas used in the long-term wintering range, as represented by the 50% UD (Figure 11). Prior Dolphin Union winter range analyses for 1999-2007 and 2015-2018 showed the wintering range occurring in a variety of locations on both sides of Bathurst Inlet (ERM 2019), however, the 50% UD for both long-term (2001-2022) and 2022-2023 wintering ranges are exclusively located on the westside of the Bathurst Inlet. This suggests that Dolphin Union herd has wintered further west in recent years (i.e., since the previous analysis, from 2019 – 2023) than previously documented (ERM 2019). The 95% UD across years encompass wider variation in the distribution of wintering range since 2001.

FIGURE 9 50% KERNAL DENSITY ESTIMATES OF CALVING HOME RANGE ON BEVERLY AND AHIK SUB-POPULATIONS COLLAR DATA, 2001-2022 AND 2023

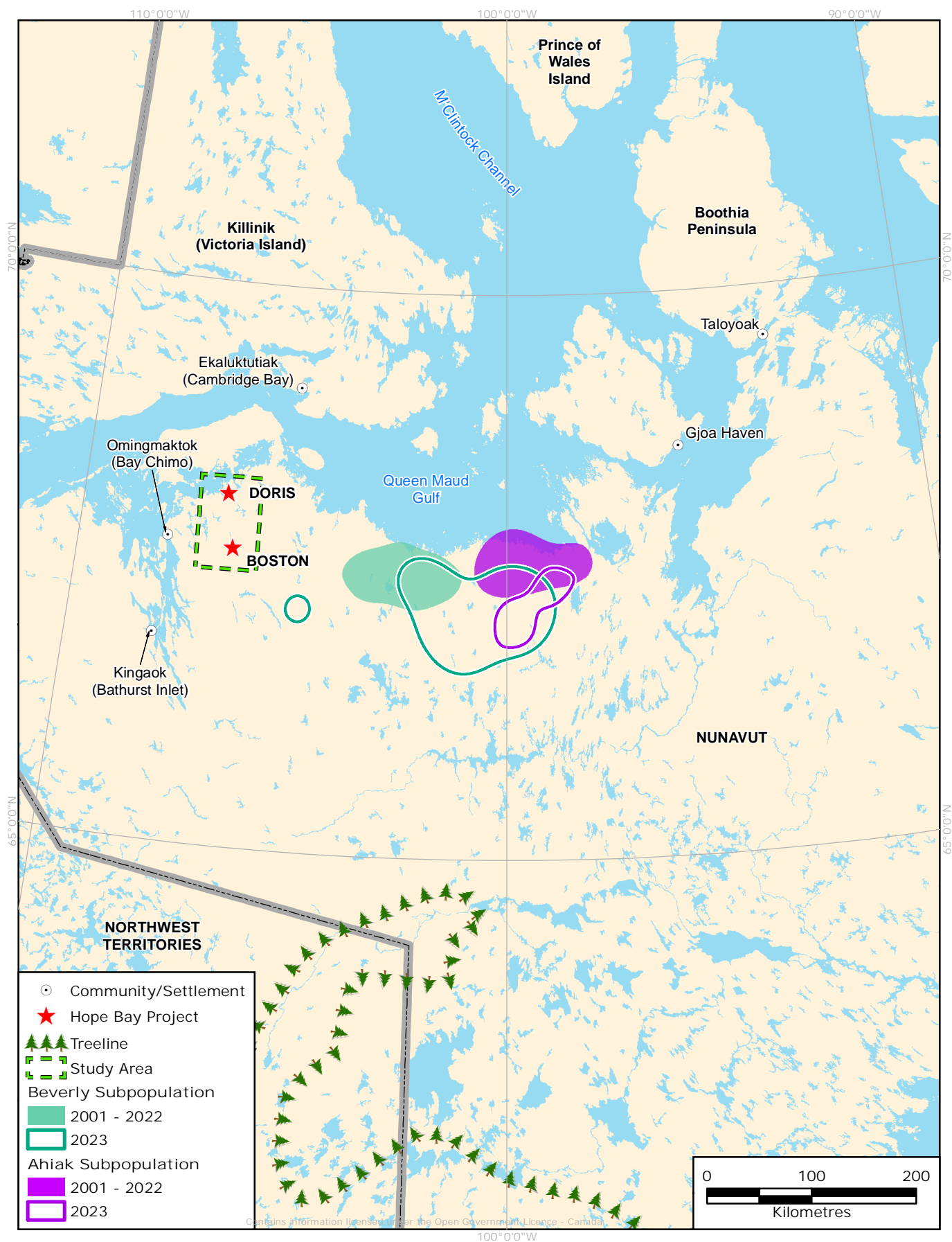


FIGURE 10 95% KERNEL DENSITY ESTIMATES OF CALVING HOME RANGE ON BEVERLY AND AHIK SUB-POPULATIONS COLLAR DATA, 2001-2021 AND 2023

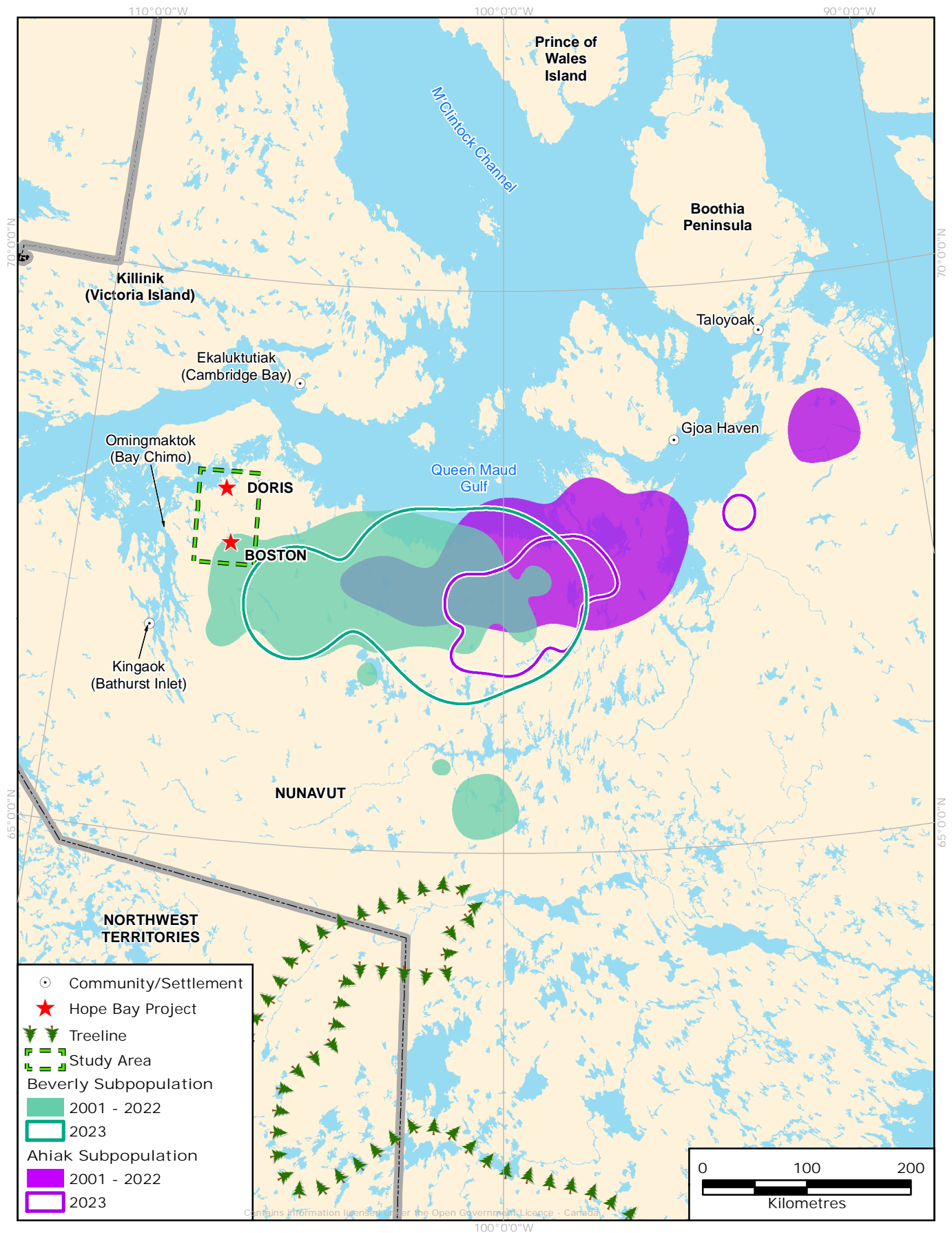


FIGURE 11 50% KERNEL DENSITY ESTIMATES OF CALVING HOME RANGE ON DOLPHIN-UNION SUB-POPULATIONS COLLAR DATA, 2001-2022 AND 2023

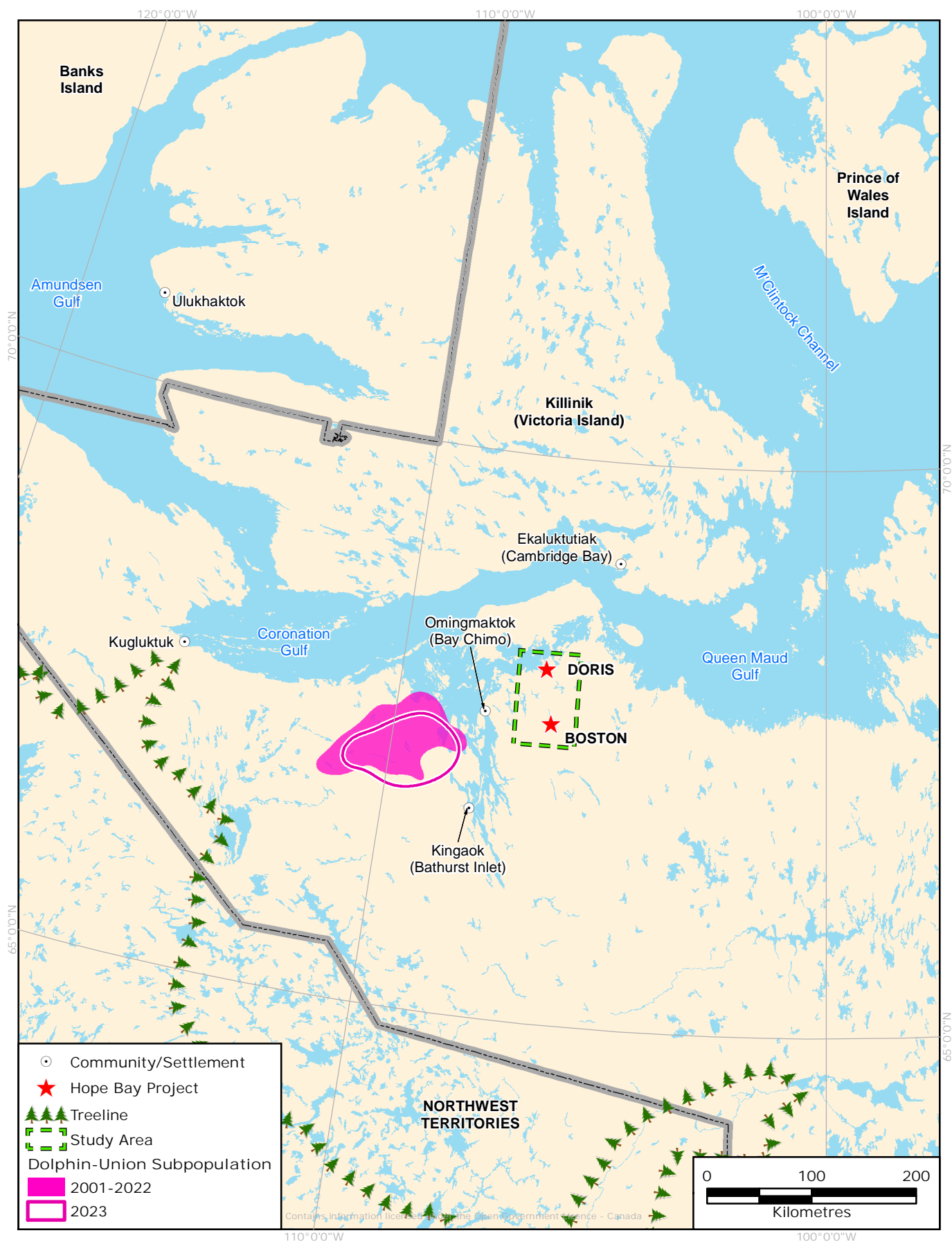
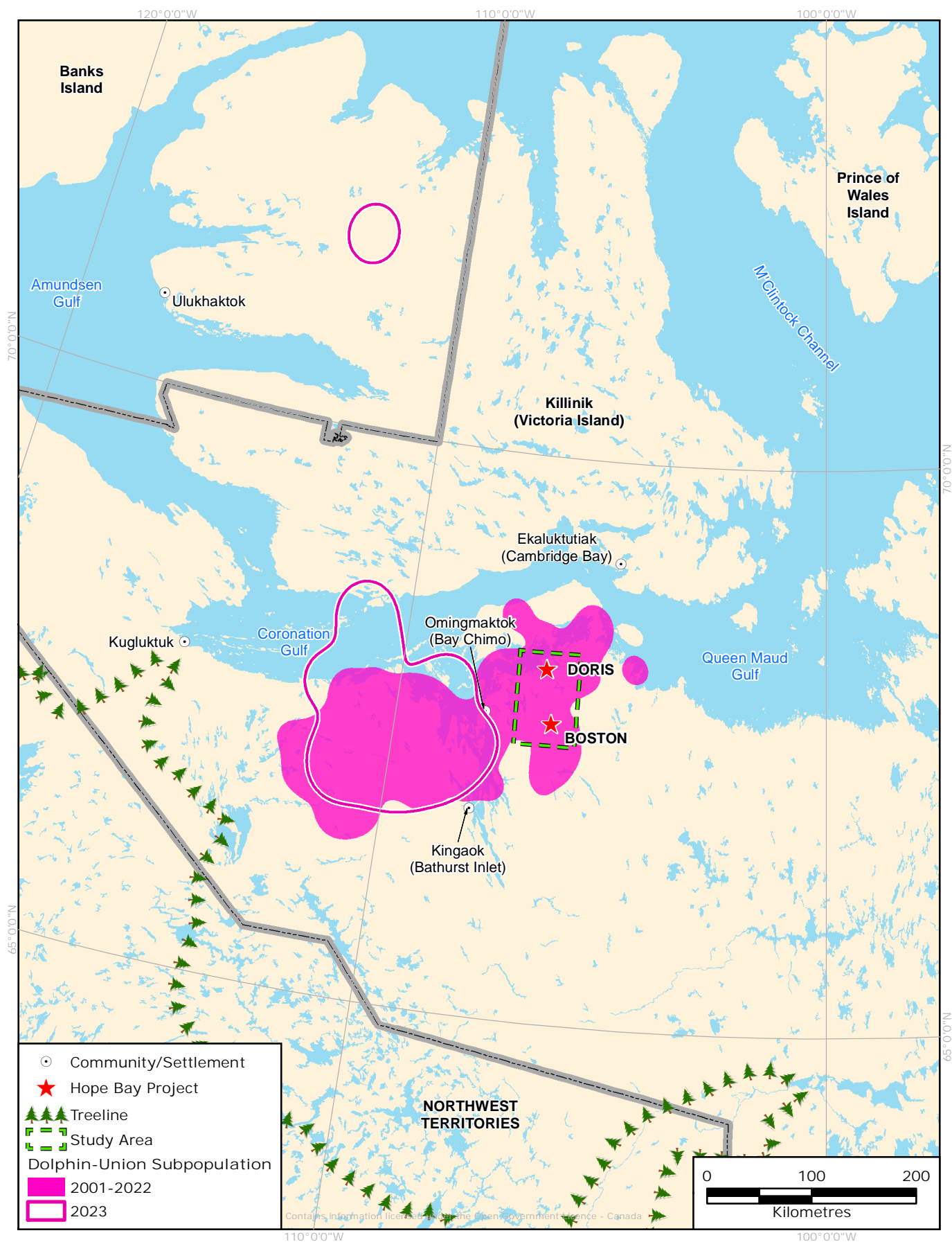


FIGURE 12 95% KERNEL DENSITY ESTIMATES OF CALVING HOME RANGE ON DOLPHIN-UNION SUB-POPULATIONS COLLAR DATA, 2001-2022 AND 2023



3.4.3.2 CAMERA MONITORING

Across all years of the camera monitoring program from June 2016 to September 2023, cameras were active and recording for a total of approximately 69,140 camera days (Table 15; Figure 13; and Appendix D). Camera effort within monitoring zones for the most recent year is summarized by month in Table 9; effort summaries per camera are provided in Appendix D. A brief summary of the images and caribou events recorded across all cameras during the current periods is provided below. Data from cameras 2 and 35 (the cameras responsible for monitoring the road crossing ramps) are also included in the summary below.

From the recent monitoring periods (September 2022 - September 2023), 326 caribou events were recorded (Table 15; Appendix F). Caribou events in this monitoring period primarily occurred from May through August but were most common in July (Table 15; Photos 3, 4, 5, 7, and 8). July 2023 had the highest number of caribou events in a single month since monitoring started. Caribou events in this month were relatively evenly distributed across monitoring zones, however, the ZOI had the highest number of events followed by the treatment zone, and lastly the control zone. Overall, in the most recent monitoring period the ZOI had the highest number of events (133), followed by the treatment zone (104) and control zone (89). Occasional events were also recorded in winter and spring months which is consistent with previous monitoring years.

Facilities Camera Monitoring

Under the current camera program design, there are four cameras that have site specific monitoring objectives for caribou. These are cameras 2 and 35 installed at the two caribou crossing ramps along the Doris-Windy AWR, and cameras 51 and 52 installed at the north and south end of the Tailings Impoundment Area (TIA). Individual camera effort information is provided in Appendix D. Camera effort varied greatly across facility monitoring cameras in 2023 with camera 51 having the most effort (178 active days), followed by camera 52 (47 active days), camera 3 (26 active days), and camera 35 (14 active days).

During the monitoring period from September 2022 to September 2023, only one site specific monitoring camera recorded caribou. Twenty-one events occurred at camera 51 on the south end of the TIA in 2023. Events occurred on 17 individual days primarily from June through August, with one event in early September 2023. A total of 19 events involved a lone adult caribou while the remaining 2 events were comprised of 2 adult caribou, for a total of 23 individuals. Most caribou photos at the TIA show individuals walking or trotting, potentially to escape insect swarms as noted for incidental behavioural observations. One event lasting approximately three minutes showed a lone adult male caribou stopped with its head down in front of the camera. Due to its location in the camera field of view it is unclear what the caribou was doing in the event (Photo 3). A lack of camera data on the remaining site-specific cameras at the caribou crossing ramps may be due to lack of camera functionality throughout 2023 rather than lack of caribou activity. Caribou presence around site may also be noted through the Wildlife Sightings/Reporting process, discussed in Section 3.4.3.4.

TABLE 15 CARIBOU EVENTS RECORDED BY MONTH AT TREATMENT, ZOI, AND CONTROL CAMERAS, JANUARY 2020 TO SEPTEMBER 2023

Year	Month	Treatment Cameras				ZOI Cameras				Control Cameras			
		Camera Effort ¹	No. Cameras with Events	No. Events ²		Camera Effort ¹	No. Cameras with Events	No. Events ²		Camera Effort ¹	No. Cameras with Events	No. Events ²	
				Raw	Corrected			Raw	Corrected			Raw	Corrected
2022	Sept.	505 (20)	2	2	2.28	410 (16)	7	15	17.10	321 (18)	6	9	10.26
	Oct.	489 (18)	-	-	-	451 (17)	-	-	-	259 (13)	-	-	-
	Nov.	390 (18)	-	-	-	339 (16)	1	1	1.24	132 (6)	1	1	1.24
	Dec.	55 (9)	-	-	-	44 (5)	-	-	-	27 (2)	-	-	-
2023	Jan.	105 (11)	-	-	-	66 (8)	-	-	-	20 (2)	-	-	-
	Feb.	94 (8)	-	-	-	102 (7)	-	-	-	43 (3)	-	-	-
	Mar.	373 (15)	-	-	-	372 (13)	1	1	1.15	144 (7)	-	-	-
	April	375 (13)	-	-	-	416 (15)	2	2	2.20	265 (12)	1	1	1.10
	May	401 (16)	1	2	2.08	372 (16)	1	1	1.04	345 (18)	4	7	7.28

Year	Month	Treatment Cameras				ZOI Cameras				Control Cameras			
		Camera Effort ¹	No. Cameras with Events	No. Events ²		Camera Effort ¹	No. Cameras with Events	No. Events ²		Camera Effort ¹	No. Cameras with Events	No. Events ²	
				Raw	Corrected			Raw	Corrected			Raw	Corrected
2023 (cont'd)	June	420 (18)	10	29	29.00	372 (16)	11	27	27.00	434 (18)	8	16	16.00
	July	349 (16)	13	57	58.71	321 (15)	10	70	72.10	376 (17)	9	44	45.32
	Aug.	381 (18)	5	14	15.26	300 (13)	8	16	17.44	344 (17)	7	11	11.99
	Sept.	-	-	-	-		-	-	-	19 (1)	-	-	-
Total ³		-	31	104	107.33	-	41	133	139.27	-	36	89	93.19

¹ Camera effort is presented as the total number of camera days by month; number of cameras with at least one camera day (i.e., unobscured) presented in parenthesis.

² Events are presented as the number recorded by cameras (raw) as well as the number of events corrected for the monthly darkness factor (corrected).

³ Total number of cameras with events represents the number of unique cameras with events across the monitoring period. Total number of events is the cumulative total across the monitoring period.



CLIENT: Agnico Eagle Mines Limited

CLIENT: Agnico Eagle Mines Limited

PROJECT NO: 0685812-03

DATE: 23 April 2024

VERSION: C.1

FIGURE 13 DETECTIONS OF CARIBOU ON MOTION-TRIGGERED PHOTOS RECORDED BY WILDLIFE CAMERAS, DORIS AND MADRID AREAS, JUNE 2016 TO SEPTEMBER 2023

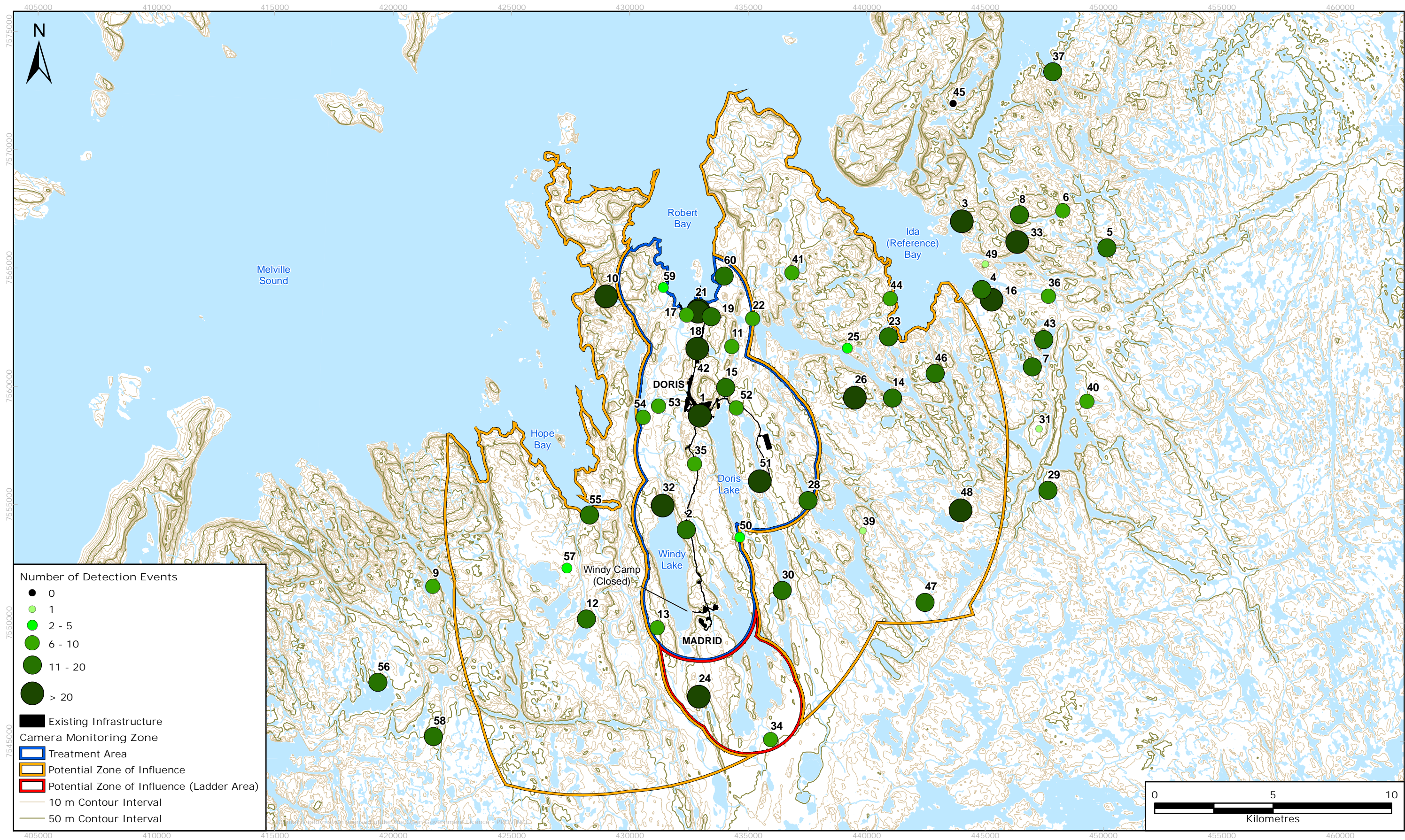




Photo 3 Caribou on TIA monitoring camera 51 July 22, 2023.

During the monitoring period from September 2022 to September 2023, only one site specific monitoring camera recorded caribou. Twenty-one events occurred at camera 51 on the south end of the TIA in 2023. Events occurred on 17 individual days primarily from June through August, with one event in early September 2023. A total of 19 events involved a lone adult caribou while the remaining 2 events were comprised of 2 adult caribou, for a total of 23 individuals. Most caribou photos at the TIA show individuals walking or trotting, potentially to escape insect swarms as noted for incidental behavioural observations. One event lasting approximately three minutes showed a lone adult male caribou stopped with its head down in front of the camera. Due to its location in the camera field of view it is unclear what the caribou was doing in the event (Photo 3). A lack of camera data on the remaining site-specific cameras at the caribou crossing ramps may be due to lack of camera functionality throughout 2023 rather than lack of caribou activity. Caribou presence around site may also be noted through the Wildlife Sightings/Reporting process, discussed in Section 3.4.3.4.



Photo 4 Caribou at Treatment zone camera 60. July 27, 2023.



Photo 5 Caribou at control camera 43. May 7, 2023.

During the August 2022 IEAC site visit, it was noted that caribou trails may be present around a culvert under Windy Road (Photo 6). The culvert is roughly 160 m north of one of the caribou crossing ramps, which also has visible trails from caribou use (Photo 6). Two additional wildlife cameras were deployed on either side of the culvert on August 21, 2022 to record potential caribou activity using the culvert as a road crossing alternative (camera position and deployment details in Appendix A). Data from these cameras were not included in other camera summaries due to the difference in deployment timing. Between September 2022 and September 2023 one caribou event of a single male caribou was recorded on a culvert camera on September 11, 2022. No other wildlife events were recorded on these cameras.



Photo 6 Aerial view of caribou crossing ramp with trails (left), and culvert where two additional cameras were deployed to monitor caribou activity in relation to crossing ramp (right) on Windy Road, August 2022.

Statistical Analysis

A statistical analysis was conducted on caribou camera event data from 56 cameras. Cameras 2 and 35 were excluded from analysis because they were at caribou crossing ramps on the Doris-Windy AWR which may have higher caribou occurrence than other areas near the Project and beyond. Camera effort was deemed too low in December and January across years and therefore these months were removed from analysis altogether (see Methods Section 3.4.2.2.; Table 15). To account for additional periods of low effort which were variable across cameras, observations were only included if the monthly camera effort was ≥ 7 days per month. No caribou events were recorded on cameras with less than a week of effort (this is only considering events recorded when the camera was upright and unobscured) in 2023.

In 2023 the caribou camera statistical modelling approach changed from modelling caribou occupancy to modelling the number of caribou events captured by cameras. The occupancy model for caribou was designed when caribou events were less frequent (fewer events per month) and less common across the study area (fewer cameras with any event, measured by occupancy). With additional years of monitoring and increases in the number of caribou events in some portions of the study area, there is now sufficient data to model overall caribou events. This new model is more robust and provides a more accurate picture of caribou activity throughout the study area.

Predicted caribou abundance was not significantly different at Control cameras compared to Treatment cameras within 2 km of the Project ($p = 0.87$; Table 16). Similarly, there was not a significant difference in caribou occupancy at ZOI cameras compared to Treatment cameras ($p = 0.95$; Table 16). The model also included smooths for month, easting, and northing, which provided a better fit to the data despite the individual terms lacking significance (Table 16).

TABLE 16 SUMMARY OF TREATMENT VS. CONTROL MODEL COEFFICIENTS AND SIGNIFICANCE LEVEL FOR CARIBOU CAMERA OCCUPANCY DATA

Coefficient	β Value	Standard Error (se)	t-Value	p-Value
Camera Zone, ZOI	-0.05	0.27	-0.17	0.87
Camera Zone, Control	-0.02	0.29	-0.07	0.95
Smooth (Easting)	0.03	0.15	0.19	0.85
Smooth (Northing)	0.02	0.10	0.20	0.84
Smooth (Month)	2.07	2.37	0.87	0.38

Given that there were no differences in the predicted number of caribou events between Treatment and Control cameras, a secondary analysis for a potential ZOI was not necessary. The secondary analysis is performed when a statistical difference is obtained between Treatment and Control zones to determine at what distance the effect may be occurring. Modelling of all of camera monitoring data since June 2016 has shown that caribou are not avoiding the Project and therefore, 2023 is proposed to be the last year of conducting the camera ZOI analysis for caribou. The camera monitoring program will continue, and results of caribou detections will be summarized in the annual WMMP Report.

The number of events between zones is highest in the ZOI zone ($n = 133$ events), followed by the Treatment zone ($n = 104$), and then the Control ($n = 89$). In recent years, caribou activity has increased across all zones, but particularly in the Treatment zone (Table 15). Caribou occupancy calculated camera months in which one or more events occur is lowest in the treatment zone and highest in the control zone (Table 17). This suggests that caribou may be more concentrated in the treatment zone and events are limited to a smaller number of cameras and habitats than the ZOI or control zones.

TABLE 17 SUMMARY OF MONTHS AND CAMERAS AND CARIBOU OCCUPANCY SINCE THE START OF THE MONITORING PROGRAM

Occupancy¹		Treatment	ZOI	Control
Unoccupied (no events)	No. Camera*Months ²	856	558	562
	Percentage (%; of Total)	85	79	76
Occupied (1 or more events)	No. Camera*Months ²	147	144	179
	Percentage (%; of Total)	15	21	24
Total Events		624	537	547

Notes:

¹ Table summaries does not include event or effort data collected from Cameras 2 and 35. These data are included in Table 15 and therefore event summaries will be different.

² Represents individual camera and month combinations. For example, for a single camera that had over a week of camera effort for the monitoring period from June 2016 to September 2023 (except December and January, i.e., 62 months) and did not record a caribou event, this camera would have a total of 62 unoccupied camera*months. If the same camera were to have recorded caribou events in four months, the camera would have a total of four occupied camera*months and 58 unoccupied camera*months.

Caribou Herd Identification

Caribou were identified by herd (either Beverly/Ahiak or Dolphin and Union) for all camera data from June 2022 to August 2023 across a total of 431 caribou detections (Table 18). The Beverly/Ahiak herd accounted for the majority of events (78%; Photo 7), followed by unknown individuals (13%), and finally the Dolphin and Union herd (9%; Photo 8; Table 18). The majority of unknown classifications of caribou were due to poor photo capture such as caribou being too close or too far away from the camera to show identifiable physical features. Unknown identifications due to uncertainty in the herd will be provided to the IEAC for identification assistance.

The Beverly/Ahiak herd was observed from June to October in 2022 (n = 42) and between May and August in 2023 (n = 297). The month with the highest number of observations of the Beverly/Ahiak herd in both years was July, with 26 events in 2022 and 206 events in 2023 (Table 18). This peak in activity corresponds to the post-calving period for the Beverly/Ahiak. The Dolphin and Union herd had a singular detection in November of 2022, and 37 detections between March and July, 2023. The month with the highest number of events of the Dolphin and Union herd occurred in June of 2023 (n = 27; Table 18). These detections align with fall migration (November), winter (March-April) and spring migration (May/June). However, Dolphin and Union individuals present at the Project in later June and July 2023 may not be migrating to Victoria Island for calving, given the annual timing of sea ice melt.



Photo 7 Caribou belonging to the Beverly/Ahaik herd captured on camera 24 July 2, 2023.

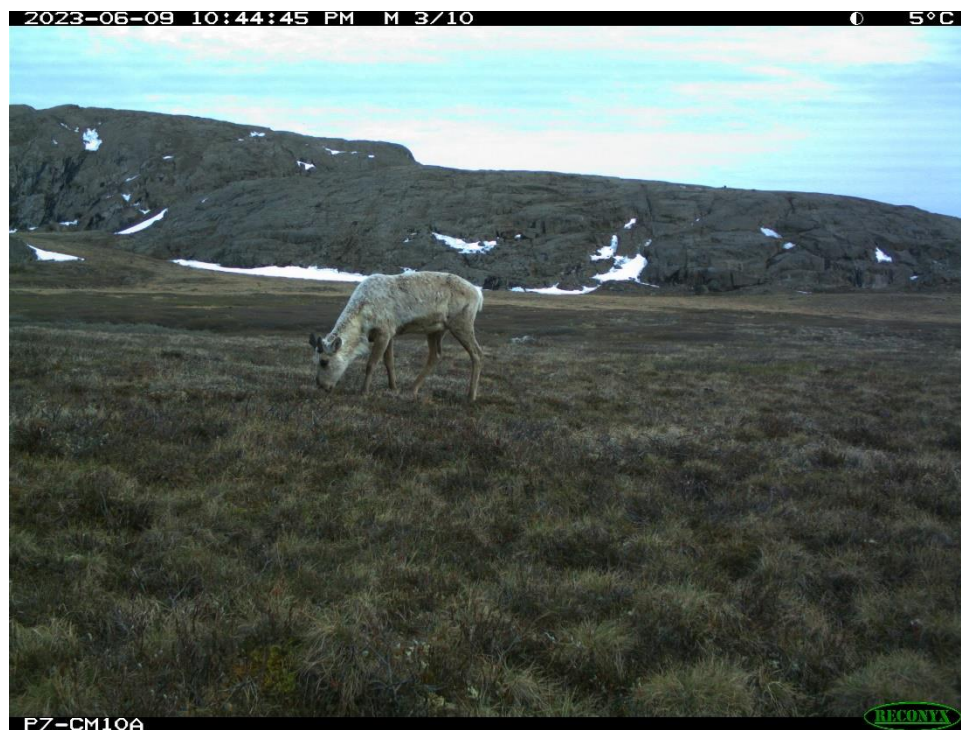


Photo 8 Caribou belonging to the Dolphin-Union herd captured on camera 10 June 9 2023.

TABLE 18 BEVERLY/AHIAK AND DOLPHIN AND UNION CARIBOU HERD IDENTIFICATION, 2022-2023

Date		Herd		
		Dolphin and Union	Beverly/Ahiak	Unknown
2022	June	-	3	-
	July	-	26	1
	August	-	8	-
	September	-	2	1
	October	-	3	-
	November	1	-	1
	December	-	-	-
2023	January	-	-	-
	February	-	-	-
	March	2	-	-
	April	1	-	4
	May	5	3	8
	June	27	43	18
	July	2	206	15
	August	-	45	6
Total		38	339	54

3.4.3.3 HEIGHT OF LAND

Height of Land surveys are triggered based on caribou activity level at the Project (Appendix Z). No HOL surveys were triggered in 2023 (Appendix Z).

3.4.3.4 INTERACTIONS, INCIDENTS, AND MORTALITIES

One caribou interaction occurred in 2023 to deter an individual, to clear the airstrip in advance of an approaching plane on July 19, 2023 (Appendix G). July is the peak time period when caribou frequent site in order to escape biting insects. Caribou are only deterred in situations where their presence poses risk of harm.

3.4.3.5 WILDLIFE SIGHTINGS LOG AND INCIDENTAL OBSERVATIONS

In 2023, 174 sightings of 363 caribou were recorded in the wildlife sightings log from June through October (Appendix H). Several reported sightings were likely the same individuals moving through the area (e.g., caribou reported in the same group size and on the same date along nearby kilometers of Windy Road; Appendix H). Most sightings took place in July (n = 104) and June (n = 33) and were mainly of single individuals. On June 21, 2023 there were two sightings of

a group of 16 caribou, both along Windy Road/ Madrid Area and can be assumed to be the same group. In 2022, no caribou were sighted in January through March. In 2023, sightings of single caribou were observed in January (n=9) and February (n=7).

The majority of caribou sightings occurred near or on Windy Road or in the Madrid area (n = 64) and in the Doris Area (n = 76; Table 19). Twenty-six sightings of caribou occurred near the TIA and the Tail Lake Road (TLR). Three sightings of 15 individuals were on the TIA footprint (Appendix H). Caribou seen near the TIA were monitored to ensure they left the area and none of the caribou were observed interacting with the tailings. Site personnel were made aware when caribou were sighted near active camp areas in order to avoid disturbing the caribou until they left the area.

TABLE 19 CARIBOU SIGHTINGS AND INCIDENTAL OBSERVATIONS 2023

General Location	Months	Total Sightings	Total Individuals
Doris Area	February, June-September	76	135
Windy Road/ Madrid	June-October	64	141
Airstrip	June-October	6	7
TLR/TIA area	January, April, June-September, December	26	77
Boston	N/A	-	-
Not Specified	July	1	2

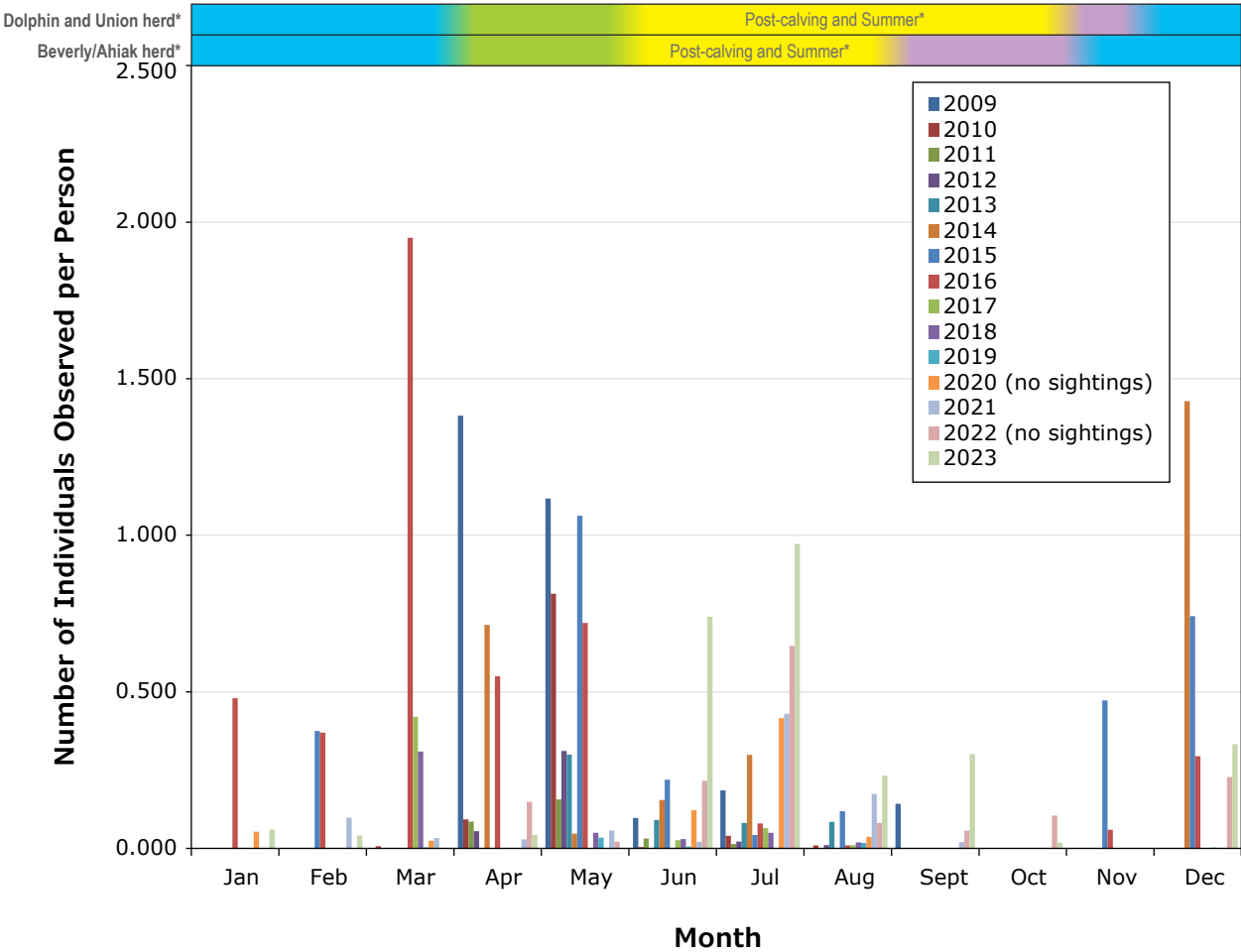
Generally, the largest numbers of caribou observed per personnel from 2009 to 2023 have been recorded from November to May, with the peak being in March 2016 (152 individuals, 1.95 caribou per personnel) and December 2014 (10 individuals, 1.43 caribou per personnel; Figure 14). In 2023, the largest number of caribou observed per personnel occurred in July, at 0.88 caribou per personnel (Figure 14).

3.4.4 DISCUSSION

3.4.4.1 CARIBOU COLLAR DATA

The 50% and 95% UD calving ranges of the Ahiak sub-population extended further south in 2023 compared to the long-term distribution from 2001-2022, but neither UD overlapped the Project Study Area. A small eastern shift in the Ahiak UD has also occurred in 2019 to 2022 (i.e., is indicated in the long-term distribution and the 2022 UD), while 2023 showed a contraction towards the middle of their long-term range. This suggests that some females have shifted to calving further east along the Queen Maud Gulf than previously recorded. The UD for the Beverly sub-population have varied through time, and the 2022 UD extended beyond the long-term range from 2001 to 2022 to both the south and the east. There is extensive overlap in calving areas between the two sub-populations in 2023, including core calving areas which did not previously overlap in the long-term range. The long-term 95% Beverly UD overlapped with the southern portions of the Study Area, around the Boston Project. This is driven by the 2021 data, which included this westward range extension for the first time. This difference from the 2021 calving range is likely due to annual variation, given that the change was not seen in 2022 or 2023.

FIGURE 14 NUMBER OF CARIBOU INDIVIDUALS RECORDED PER PERSONNEL PRESENT, HOPE BAY PROJECT, 2009 TO 2023



The 50% and 95% UD winter ranges for the Dolphin Union caribou herds in 2023 primarily overlapped with long term ranges with data compiled between 2001 and 2022. The core winter range (50% UD) in 2023 was very similar to the long-term range which occurred extensively on the western side of Bathurst Inlet (Figure 11). This differed from the results of the most recent previous analysis last completed in 2018 which used data from 1994-2007 and 2015-2018 (ERM 2018). This previous analysis indicated that core wintering range was located on both the western and eastern sides of Bathurst Inlet including core wintering range on the northeastern and southeastern corners of the Project Study Area. This suggests that the Dolphin Union wintering range has shifted westward and no longer use area within proximity to the Project Study Area. The 95% UD areas for the previous analysis, long-term range, and 2023 range show continuous variability in wintering range used by Dolphin Union caribou. There are mitigation measures for caribou that are in place year-round and serve to mitigate for effects to Dolphin and Union caribou when individuals from the herd overwinter in the vicinity of the Project (Agnico Eagle 2023).

3.4.4.2 CAMERA MONITORING

Caribou camera events occurred primarily from May through August but were most common in July. Caribou events also occurred sparsely in the fall and winter. In July 2023, caribou were recorded in higher numbers than any single month to date, including 104 events recorded in the Treatment zone. An increase in caribou around site roads and facilities in July were first noticed in 2019; based on the behavior of the animals, the gravel roads and pads are utilized to escape biting insects. No caribou incidents have occurred despite the increase in activity, indicating that current management and mitigation efforts are effective.

Statistical analyses were conducted to test whether the number of caribou events differed between cameras in the Treatment zone (< 2 km from existing infrastructure) and Control zone (> 10 km from existing infrastructure). In 2023, the model was run using the number of caribou events as opposed to occupancy as it had been in previous years, due to an increase in the number of caribou events captured by the cameras. The results of the statistical analyses indicated that the number of predicted caribou events was not significantly different between cameras in the Treatment zone and Control zone. It has been noted that in recent years, caribou events have become more common – particularly at some cameras in the Treatment zone near site roads and camp facilities, where caribou have been frequenting since roughly 2019 during peak biting insect season. Accounting for the influx of caribou events in the Treatment zone, camera data does not indicate caribou avoidance of Project infrastructure.

Other than caribou presence near the site in summer, caribou are more commonly recorded throughout other months in the ZOI and Control zone. This difference is likely attributed to the Project location and relative geography. The Project is located at the north end of the Greenstone Belt, which is a low-lying area surrounded by rocky upland areas to the east and west. The low-lying areas closest to the Project contain large, open sedge meadows that collect snow in winter. In contrast, on either side of the Project are low rocky hills which are wind-blown with snow during winter and make better winter habitat and travel corridors. These differences may cause caribou to avoid using habitat nearest the Project during the winter, spring, and fall seasons when deeper snow

makes forage less accessible and movement difficult compared to the surrounding areas. These natural differences in occurrence are difficult to disentangle from potential Project effects.

The Madrid-Boston FEIS predicted a geographic extent of caribou avoidance of Project infrastructure of 4 km² (with a 1.5 km² ZOI around the AWR). Camera monitoring in the current program has occurred since 2016 and modelling to analyze a potential ZOI has occurred since 2017. Early years of modelling suggested a potential ZOI for caribou within 2 km (ERM 2019, 2020). However, the complete dataset across the last 6 years does not indicate caribou avoidance of the Project. At this time, Agnico Eagle considers the caribou ZOI analysis sufficient to confirm that the effects of the Project on caribou are within predicated levels of potential avoidance (i.e., within 4 km²). Therefore, 2023 is proposed to be the last year of conducting the camera ZOI analysis for caribou. The camera monitoring program will continue, and results of caribou detections will be summarized in the annual WMMP Report. If patterns in caribou occurrence change (as evidenced by increased or decreased detections by camera zone or season), the ZOI analysis may be conducted again for further assessment of caribou occurrence patterns. This update in the WMMP program will be included in an updated 2024 WMMP Plan, and discussed at the first IEAC meeting in 2024 prior to changes being implemented.

Facilities Camera Monitoring

Twenty-one caribou events were recorded on only one of the four cameras with caribou-specific monitoring objectives in 2023, which included cameras at the crossing ramps along the Doris-Windy AWR and near the TIA. All twenty-one events were recorded on TIA monitoring camera 51 across 17 separate days. Events occurred between June and September 2023. Most of the caribou photos recorded at the TIA show individuals walking or trotting, potentially to escape insect swarms as noted for incidental behavioural observations. One event lasting approximately three minutes showed a lone adult male caribou stopped with its head down in front of the camera. The position of the caribou's head was out of frame in the photos, however, it appears that the caribou may be interacting with the ground below the camera. However, the majority of camera events and incidental sightings were not at the TIA, suggesting that caribou were not attracted to the TIA or more likely to interact with the TIA than other infrastructure. The KIA expressed concern during the review of the Boston-Madrid FEIS that caribou may frequent the TIA to drink water if it is salty, but this does not appear to be occurring.

Two additional cameras were deployed in August 2022 to specifically monitor potential caribou activity at a culvert under Windy Road after it was noted that caribou trails may be present around the culvert during an IEAC site visit. Between September 2022 and September 2023 one lone adult male caribou was captured by cameras.

Herd Identification

Caribou herd identification based on wildlife camera data was completed for the first time in 2023 to better determine the seasonal land use of the two herds that occur within the Project area. Camera data from June 2022 through August 2023 were reviewed. The Project area overlaps the Beverly/Ahiak herd summer, fall, and winter range and the Dolphin and Union herd's winter range.



Camera detections of the Beverly/Ahiak herd occurred primarily in the summer and fall, but no events occurred in the winter and early spring, between November and May. There were no recorded caribou events from December to February for either herd, though this may be affected by low camera effort in this period. The Dolphin and Union herd were detected in low numbers on cameras primarily in the late winter to spring (March – June). Two Dolphin and Union caribou were identified in July, potentially corroborating the idea that some individuals are not returning to Victoria Island for the calving period. Additional years of herd identification data will provide better trends in the seasonal occurrence of both herds, in particular the less common Dolphin and Union caribou.

3.4.4.3 HEIGHT OF LAND

A Standard Operating Procedure for HOL surveys was drafted and discussed with the IEAC, and on-site training for the HOL monitoring methods was provided in March 2023. This was the first year for HOL surveys, however, no surveys were completed because the triggers that initiated surveys (25 caribou occurring within 5 km of site within a 24-hour period) were never met.

3.4.4.4 WILDLIFE SIGHTINGS AND OBSERVATIONS LOG

In 2023, 166 sightings of 346 caribou were recorded in the wildlife sightings log. Most of these sightings took place in July ($n = 97$) and June ($n = 33$) and were mainly of individual caribou. The majority of caribou sightings occurred near or on Windy Road or in the Madrid area ($n = 59$) and in the Doris Area ($n = 73$).

Twenty-six sightings of caribou occurred near the TIA and TLR access road, however only three sightings of fifteen individuals were actually on the TIA footprint. Caribou seen near the TIA were monitored to ensure they left the area, observations recorded of the caribou interacting with the tailings. Site personnel were made aware when caribou were sighted near active camp areas in order to avoid disturbing the caribou until they left the area.

3.5 MUSKOX

Muskox inhabit Arctic tundra environments and occur in varying densities throughout Nunavut, including the northern islands archipelago (Leclerc 2015). Muskox are not migratory, but may vary in group size throughout the year, with larger herds forming through the winter (Leclerc 2015). In recent years, possible declines in some muskox populations have been reported; the cause and extent of these declines are still uncertain, but likely has to do with disease, climate, and anthropogenic pressures (Cuyler et al. 2020). These concerns have led to increased monitoring and research efforts throughout the Arctic, even though muskox are not listed as a species of conservation concern federally or in Nunavut.

3.5.1 FEIS PREDICTIONS

The Madrid-Boston FEIS predictions for muskox included a not significant residual effect of disturbance at a geographic extent of the RSA and a low magnitude residual effect for disruption of movement at the extent of the PDA (TMAC Resources Inc. 2017). The previous Doris FEIS did not include muskox as a VEC (Miramar 2005); inclusion in the Madrid-Boston FEIS is a reflection of increased interest in monitoring muskox throughout the Canadian Arctic.

3.5.2 METHODS

The potential effects of Project-related activities on muskox are monitored through the wildlife camera monitoring program as well as through the Wildlife Sightings/Reporting program, results of which are presented as wildlife interactions, incidents, and mortalities and incidental sightings (see Section 3.2). Summarized data are also provided in Appendices D through H, and O.

Although detections of muskox have been recorded since 2016, very few camera events are recorded each year. Modelling capabilities are restricted due to the low volume of muskox camera data available. Therefore, data from wildlife cameras are not sufficient for statistical analysis to test for possible effects on muskox distribution.

3.5.3 RESULTS

3.5.3.1 CAMERA MONITORING

Across the period from June 2016 to September 2023, cameras were active and recording for a total of approximately 69,140 camera days (Appendix D). Camera effort within monitoring zones by month is summarized in Table 12; effort summaries per camera are provided in Appendix D. A brief summary of the muskox events recorded across all cameras during the recent monitoring period is provided below.

From the monitoring period September 2022 – September 2023, a total of eight unique events of muskox were recorded (Table 20; Figure 15; Appendix F; Appendix O). These events occurred between the beginning of May and end of August 2023. Two events occurred at Treatment cameras, four at ZOI cameras and the Control cameras recorded one event (Table 20; Photo 9). Cameras captured a total of 53 individuals for an average group size of approximately 7 individuals. The small number of events overall proved inadequate for statistical modelling, particularly because of few control zone events.

Facilities Camera Monitoring

Two cameras have site specific monitoring objectives for muskox: cameras 51 and 52 installed at the north and south end of the TIA. No muskox were recorded on motion triggered or timed photo events at these two cameras from September 2022 to September 2023, which suggests that muskox use of the areas surrounding the TIA is infrequent. Camera effort varied across facility monitoring cameras in 2023 with camera 51 (178 active days) having almost 75% more active days than camera 52 (47 active days). Muskox presence in this area may also be noted through the Wildlife Sightings/Reporting process, presented in the following sections.

3.5.3.2 INTERACTIONS, INCIDENTS, AND MORTALITIES

No interactions, incidents or mortalities were recorded during 2023 (Appendix G).

TABLE 20 MUSKOX EVENTS RECORDED BY MONTH AT TREATMENT, ZOI, AND CONTROL CAMERAS, SEPTEMBER 2022 TO SEPTEMBER 2023

Year	Month	Treatment Cameras				ZOI Cameras				Control Cameras			
		Camera Effort ¹	No. Cameras with Events	No. Events ²		Camera Effort ¹	No. Cameras with Events	No. Events ²		Camera Effort ¹	No. Cameras with Events	No. Events ²	
				Raw	Corrected			Raw	Corrected			Raw	Corrected
2022	Sept.	505 (20)	-	-	-	410 (16)	-	-	-	321 (18)	-	-	-
	Oct.	489 (18)	-	-	-	451 (17)	-	-	-	259 (13)	-	-	-
	Nov.	390 (18)	-	-	-	339 (16)	-	-	-	132 (6)	-	-	-
	Dec.	55 (9)	-	-	-	44 (5)	-	-	-	27 (2)	-	-	-
2023	Jan.	105 (11)	-	-	-	66 (8)	-	-	-	20 (3)	-	-	-
	Feb.	94 (8)	-	-	-	102 (7)	-	-	-	43 (3)	-	-	-
	Mar.	373 (15)	-	-	-	372 (13)	-	-	-	144 (7)	-	-	-
	April	375 (13)	-	-	-	416 (15)	-	-	-	265 (12)	-	-	-
	May	401 (16)	-	-	-	372 (16)	4	4	4.16	345 (18)	-	-	-
	June	420 (18)	1	1	1	372 (16)	-	-	-	434 (18)	-	-	-

Year	Month	Treatment Cameras				ZOI Cameras				Control Cameras			
		Camera Effort ¹	No. Cameras with Events	No. Events ²		Camera Effort ¹	No. Cameras with Events	No. Events ²		Camera Effort ¹	No. Cameras with Events	No. Events ²	
				Raw	Corrected			Raw	Corrected			Raw	Corrected
2023 (cont'd)	July	349 (16)	1	1	1.03	321 (15)	-	-	-	376 (17)	-	-	-
	Aug.	381 (18)	-	-	-	300 (13)	1	1	1.09	344 (17)	-	-	-
	Sept.	-	-	-	-	-	-	-	-	19 (1)	1	1	1.09
Total ³		-	2	2	2.03	-	5	5	5.25	-	1	1	1.09

Notes:

¹ Camera effort is presented as the total number of camera days by month; number of cameras with at least one camera day (i.e., unobscured) presented in parenthesis.

² Events are presented as the number recorded by cameras (raw) as well as the number of events corrected for the monthly darkness factor (corrected).

³ Total number of cameras with events represents the number of unique cameras with events across the monitoring period. Total number of events is the cumulative total across the monitoring period.



CLIENT: Agnico Eagle Mines Limited

CLIENT: Agnico Eagle Mines Limited

PROJECT NO: 0685812-03

DATE: 23 April 2024

VERSION: C.1